



PAN AMERICAN
— SILVER —



SUSTAINABILITY REPORT

2018

ABOUT THIS REPORT

We are proud to release our ninth annual sustainability report. Our reports communicate our vision of sustainability, share how we address sustainable development in the context of our business, disclose how we manage environmental, workplace and social issues, and demonstrate progress toward our sustainability goals and initiatives.

Reporting also allows us and stakeholders to benchmark our performance against industry peers. Throughout this report, we refer to Pan American Silver Corp. as Pan American Silver, and use the terms we, us and our to refer to Pan American Silver Corp. and its subsidiaries.

AUDIENCE

The intended audience of this report is our stakeholders, referred to in this report as communities of interest or COIs. This group includes shareholders, employees and contractors, unions, local communities, governments, suppliers, industry associations and regulatory agencies, non-governmental organizations, and civil society.

ADDITIONAL DETAILS

Reporting Period	January 1 to December 31, 2018; reporting performed annually.
Date of Last Report	May, 2018
Reporting Framework	This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: core option and GRI Mining & Metals Sector Disclosures. The GRI content index can be found here .
Changes in Reporting	There are no significant changes in material topics or topic boundaries from the 2017 report.
Data and Assurance	Data contained in this report has been reviewed internally at both the site and corporate office level. Certain economic data has been extracted from our 2018 audited annual financial statements, which have been assured by our external financial auditors. Data is reported using the metric system and US dollars.
Additional Information	In addition to annual sustainability reports, we disclose our operating and financial results on a quarterly and annual basis, along with details of exploration and development projects that will sustain our future business. These reports are available on our website.
Contact	We welcome any feedback related to this report. Please direct your comments or questions to Matt Andrews, Vice President of Environment and Sustainability, or Monica Moretto, Vice President of Social Sustainability at csr@panamericansilver.com .

CONTENT AND SCOPE

We consult with COIs on an annual basis to identify the topics that are most material to them. This report describes our management approach and performance on these topics in the context of our overall sustainability and business strategies.

The scope of this report covers our six producing mines:

- La Colorada and Dolores in Mexico
- Huaron and Morococha in Peru
- San Vicente in Bolivia
- Manantial Espejo in Argentina

Our Alamo Dorado mine is nearing the end of active closure; however, certain operating, people management, economic, environmental, and social data is included in this report. With the exception of certain data and information related to safety and people management, our development projects and exploration are excluded from the scope of this report. When applicable, we include information regarding our headquarters in Vancouver and regional offices.

In 2018, Pan American Silver entered into a plan of arrangement to acquire all of the issued and outstanding shares of Tahoe Resources Inc. (Tahoe). As the acquisition was completed on February 22, 2019, this report does not include the assets acquired under this arrangement with Tahoe, except in respect to certain forward-looking statements and our 2019 goals stated herein.



TABLE OF CONTENTS

IFC	ABOUT THIS REPORT	25	COMMUNITY INVESTMENT AND SUSTAINABLE DEVELOPMENT
2	CHAIRMAN'S MESSAGE	29	BOLIVIA GREENHOUSE PROGRAM
3	PRESIDENT'S MESSAGE	30	HUMAN RIGHTS
4	ABOUT PAN AMERICAN SILVER	33	OUR PEOPLE
6	OUR COMPANY AT A GLANCE	34	HEALTH AND SAFETY
9	SUSTAINABILITY AND OUR BUSINESS	39	EMPLOYEE ATTRACTION, RETENTION AND DEVELOPMENT
10	OUR GOALS AND PERFORMANCE	43	WOMEN IN NON-TRADITIONAL ROLES
12	SUSTAINABILITY GOVERNANCE AND MANAGEMENT	44	ENVIRONMENT
14	STAKEHOLDER ENGAGEMENT	45	MANAGING ENVIRONMENTAL IMPACTS
15	MATERIALITY	47	WATER
17	BUSINESS ETHICS AND ANTI-CORRUPTION	50	AIR EMISSIONS AND ENERGY
20	COMMUNITIES	52	BIODIVERSITY AND MINE CLOSURE
21	MANAGING SOCIAL IMPACTS	54	TAILINGS AND WASTE MANAGEMENT
24	ECONOMIC BENEFITS	56	GRI DATA TABLES
		64	GRI INDEX

CHAIRMAN'S MESSAGE

Twenty-five years ago, I founded Pan American Silver with a simple mission: to become the world's best silver mining investment. I wanted to build a world-class mining company, providing solid returns to shareholders while creating value for all of our stakeholders. Our long history of building and operating mines throughout Latin America is a testament to our success in managing a sustainable business.

Everything we do as humans has an impact, and mining is no exception. However, these impacts can be minimized as much as possible with dedicated attention to the principles of sustainability. I am very proud of how Pan American Silver strives to do this at all of its operations. I recognize that the term "sustainable mining" is an oxymoron, in that mining is non-renewable. So, what does sustainable mining mean at Pan American Silver? It means recognizing where we need to mitigate the impacts of our operations, and working to protect the ecosystem in and around our mining sites. It means ensuring safe and healthy workplaces for employees and contractors. It means partnering with our employees, contractors, communities and host governments to create long-term economic benefits. And it means creating the best possible conditions for a community to thrive after our mines close. I am very proud of how Pan American Silver strives to do this at all of our operations.

We always ask ourselves: how can we mine better? One way we achieve this is through honest and transparent dialogue. Communicating and working with our peers, communities, and the NGO community enables us to create better solutions from diverse views. Open dialogue also helps us understand emerging issues, and develop tools and technologies to improve our business. In late 2016, we joined our peers in the Mining Association of Canada and began work on implementing the Towards Sustainable Mining frameworks and protocols. Our participation in this process will help us implement leading social and environmental practices, as well as strengthen our health and safety programs.

Another ambitious commitment we made was joining the World Economic Forum's Alliance of CEO Climate

Our long history of building and operating mines throughout Latin America is a testament to our success in managing a sustainable business.



Leaders in 2017. This global network of board chairs and CEOs is leading the transition to a low-carbon, climate-resilient economy. Mining operations are not immune to the impacts of climate change, or to the regulatory requirements of mitigation and adaptation. Our participation ensures that we are in dialogue with our peers, which makes us better prepared for the coming challenges and opportunities related to climate change. I also observe that silver plays an important role in the transition to a low-carbon economy. The largest single industrial use of silver today is in photovoltaic cells that produce solar energy, a profound part of the shift from fossil fuels to renewable energy.

We continue to look to applying the United Nations Sustainable Development Goals to shape our sustainability work. The 17 indicators enshrined in this framework are ambitious and comprehensive. They help ensure that we approach our work in a holistic fashion, aligned with identified global priorities, and that our efforts create lasting positive impacts in the places we operate.

A good company is one that rewards its shareholders. A great company is one that also looks after its employees, contractors, environment, countries, and communities where it works. I am very proud of our team's sustainability achievements. It is the collective efforts of all of those who work at Pan American Silver that enable us to maintain our stellar reputation - as a great silver mining company and a great leader in sustainability.

PRESIDENT'S MESSAGE

In 2019, Pan American Silver celebrates its silver anniversary - 25 years of growth and creating value for our shareholders, employees, host countries, and communities. We are committed to building a world-class mining company through increased productivity, cost-efficiency, and long-term sustainability. It is most fitting that on our 25th anniversary we took a major step in fulfilling that vision.

Through our recent acquisition of Tahoe Resources, we added five new mines to our portfolio, three in Latin America, and two in Canada. This acquisition doubles our silver reserves, improves our geographic diversification, and enhances our robust growth profile. As a result, Pan American Silver is now the largest publicly-traded silver mining company by free float⁽¹⁾. A priority in 2019 will be the integration of the Tahoe assets into our portfolio, including applying our sustainability approach, an approach based on partnership and collaboration.

Through our acquisition of Tahoe, we became the owner of the Escobal mine in Guatemala where operations have been suspended since mid-2017. We must gain the confidence of the local communities, civil society and government, and assist with the court-mandated consultation process, before we are able to re-start the mine. We believe our proven 25-year track record of responsibly constructing and operating mines in Latin America and building relationships with communities will help us earn a lasting social license for operations at Escobal.

In 2018, we continued our support for 11 long-term socio-economic development programs in our host communities. We also supported over 5,000 students in obtaining primary and post-secondary education. We increased water recycling at our mines in Bolivia and Peru, and neared completion of a program of independent tailings storage facility safety reviews at all our operations. We approved Corporate Environmental Standards on tailings management, and biodiversity and mine closure, which are being implemented along with the Mining Association of Canada's Towards Sustainable Mining program at our mines.

Another highlight was the significant exploration discovery at our La Colorada mine, where exploration results indicate the potential to substantially expand the mineral resources and future production. Reserve replacement and new discoveries are important for a sustainable business, which benefits all stakeholders.

We also had our challenges in 2018. The greatest disappointment was the fatality at our Dolores mine. Health and safety is the priority for our Company



and zero fatal accidents is our long-standing goal. Following a thorough investigation of the incident at Dolores, we are implementing measures to prevent a similar incident from occurring in the future, including increasing training of employees and contractors and instituting additional safety procedures.

In 2018, operations were also temporarily disrupted at our Huaron and Dolores mines. At Huaron, dialogue with local community members was successful in reaching agreements and lifting a community-instituted roadblock. At Dolores, additional support from Mexican authorities improved the security situation on the access road to the mine and enabled us to resume transportation on these roads. We have learned from both of these incidents and have been able to improve our internal processes and relationships with local communities as a result.

As we celebrate Pan American Silver's silver anniversary, I am very excited about the future of the Company. We have a diversified and superior portfolio of assets, a strong financial position, and a highly experienced and motivated management team. I am very proud of our team, and I would specifically like to congratulate Matt Andrews, Vice President of Environment and Sustainability, and Monica Moretto, Vice President of Social Sustainability, who were recipients of the Robert R. Hedley Award for Excellence in Social and Environmental Responsibility from the Association for Mineral Exploration.

Responsible resource development that respects the environment and communities is the cornerstone of our business operations and the foundation for our future success.

(1) As per Bloomberg Financial Markets, pro-forma free float is an estimate and assumes upfront consideration only. Market data as at November 13, 2018

ABOUT PAN AMERICAN SILVER

Pan American Silver engages in silver mining and related activities, including exploration, mine development, extraction, processing, refining, and reclamation. The Company owns and operates silver mines located in Mexico, Peru, Bolivia, and Argentina⁽¹⁾. In addition, the Company is exploring new silver deposits and opportunities throughout North and South America.

Pan American Silver is listed on the Toronto Stock Exchange ("TSX") (Symbol: PAAS) and on the Nasdaq Global Select Market ("NASDAQ") (Symbol: PAAS).

CORE BUSINESS AND STRATEGY

Our vision is to be the world's pre-eminent silver producer, with a reputation for excellence in discovery, engineering, innovation, and sustainable

development. To achieve this vision, we base our business on the following strategic objectives:

- Foster positive long-term relationships with our employees, our shareholders, communities, and local governments through open and honest communication and ethical and sustainable business practices.
- Generate sustainable profits and maximize returns on investments through the safe, efficient, innovative and environmentally sound development and operation of our silver mines.
- Replace and grow our silver reserves through targeted near-mine exploration and global business development.
- Continually search for opportunities to expand our silver mines and acquire quality projects.
- Encourage our employees to be innovative, responsive and entrepreneurial throughout our entire organization.

To execute these strategic objectives, Pan American Silver attracts, develops, and retains a sector-leading team of mining professionals. Our team has a depth of knowledge and experience in all aspects of our business, which enables Pan American Silver to confidently advance early stage projects through construction and into operation.

(1) With the Tahoe acquisition, Pan American Silver now has assets in Canada and Guatemala.





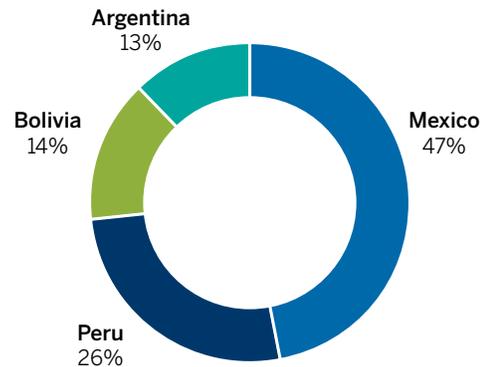
OUR PRODUCT



OUR COMPANY AT A GLANCE

Pan American Silver is determined to conduct its business in a responsible and sustainable manner. We do this by adhering to our core values of caring for the environment in which we operate, contributing to the long-term development of our host communities, ensuring safe and secure workplaces for our employees, partnering with our employees, local communities and government, and operating transparently.

2018 SILVER PRODUCTION BY COUNTRY



24.8 MOZ

TOTAL SILVER PRODUCTION IN 2018

179 KOZ

TOTAL GOLD PRODUCTION IN 2018

7,214

TOTAL EMPLOYEES AND CONTRACTORS





DOLORES

Location: Chihuahua, Mexico
Ownership: 100%
Mine Type: Open Pit/Underground
2018 Silver Production (Moz): 4.1
By-Products: Gold
Number of Employees and Contractors: 1,438

LA COLORADA

Location: Zacatecas, Mexico
Ownership: 100%
Mine Type: Underground
2018 Silver Production (Moz): 7.6
By-Products: Zinc, lead, gold
Number of Employees and Contractors: 999

HUARON

Location: Pasco, Peru
Ownership: 100%
Mine Type: Underground
2018 Silver Production (Moz): 3.6
By-Products: Zinc, lead, copper, gold
Number of Employees and Contractors: 1,640

MOROCOCHA

Location: Yauli, Peru
Ownership: 92.3%⁽¹⁾
Mine Type: Underground
2018 Silver Production (Moz): 2.9
By-Products: Zinc, lead, copper, gold
Number of Employees and Contractors: 1,304

SAN VICENTE

Location: Potosí, Bolivia
Ownership: 95%⁽¹⁾
Mine Type: Underground
2018 Silver Production (Moz): 3.5
By-Products: Zinc, lead, copper
Number of Employees and Contractors: 591

MANANTIAL ESPEJO

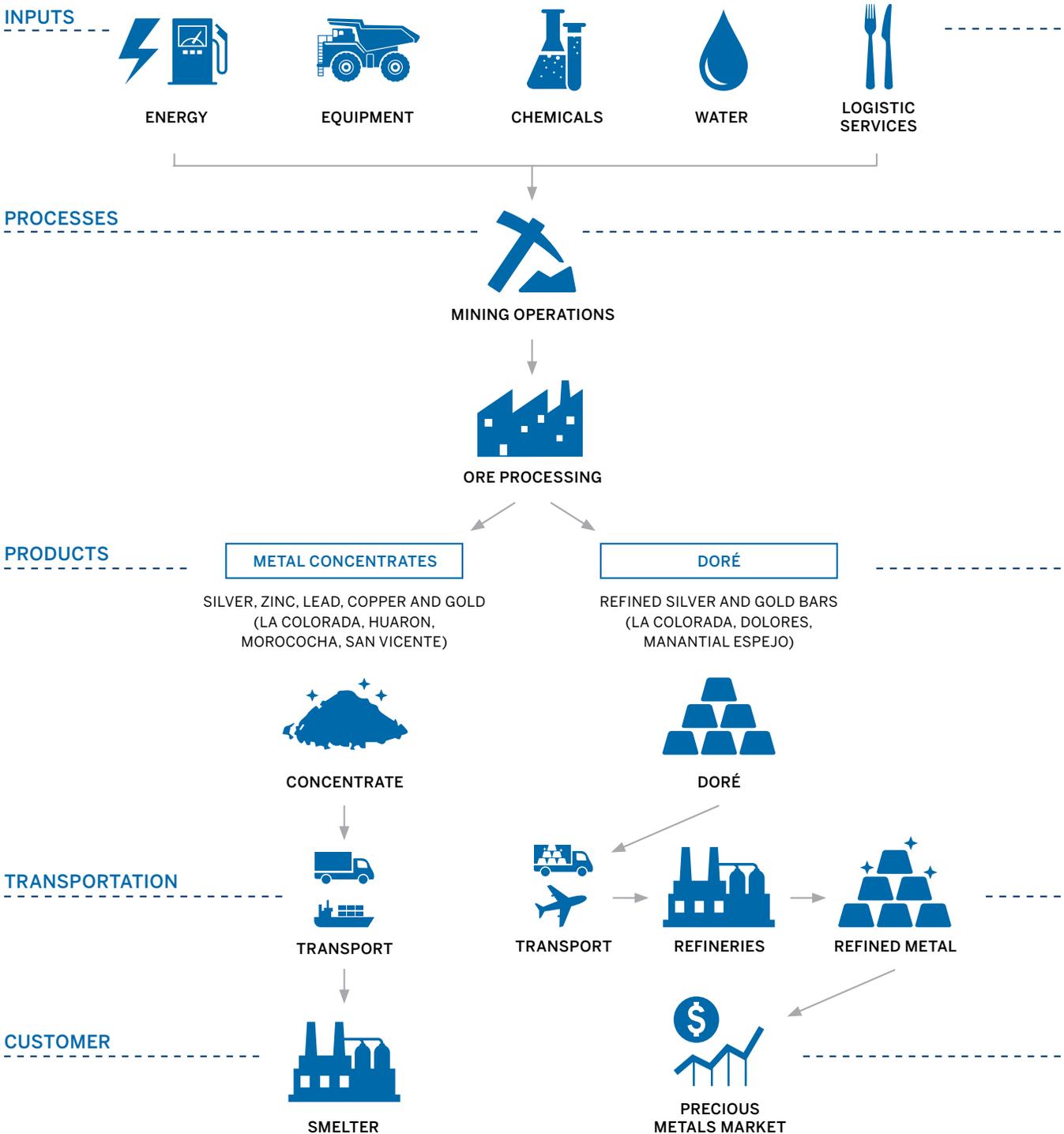
Location: Santa Cruz, Argentina
Ownership: 100%
Mine Type: Underground
2018 Silver Production (Moz): 3.1
By-Products: Gold
Number of Employees and Contractors: 646

(1) All figures reflect Pan American Silver's ownership in the projects.

OUR SUPPLY CHAIN

Mining in remote locations across Latin America requires a reliable supply chain and transport logistics for both supply materials and our products. Our service providers are primarily locally-based companies or local subsidiaries of international service or consulting groups. Our mines process ore to produce doré bars (an alloy composed primarily of silver and gold) or

mineral rich concentrates (a mixture of base metals containing silver). Our doré is sold to refiners who further refine it to produce silver and gold bullion. We sell our concentrates to traders or smelters, where it is further processed and refined into marketable products. Once refined, the principal buyers of silver and gold bullion are international bullion banks and bullion traders.



SUSTAINABILITY AND OUR BUSINESS

Q: HOW DO THE PAN AMERICAN SILVER OPERATIONS APPROACH SUSTAINABILITY?

A: As we mine a non-renewable resource, our approach to sustainability is to minimize environmental impacts, protect the ecosystems around our mine sites, ensure safe and healthy workplaces, collaborate with local stakeholders to create long-term economic benefits and foster the best possible conditions for local communities to thrive after our mine closes. Critical to sustainability is endeavoring to establish the honest, transparent and lasting dialogue that is necessary to address the diverse issues and opportunities that our various host communities face. This approach has enabled us to deliver positive community-focused programs over the years, resulting in tangible shared benefits with our host communities.

Q: WHAT ARE PAN AMERICAN SILVER'S STRENGTHS IN ADDRESSING SUSTAINABILITY?

A: Our greatest strength is our people. We currently operate mines in four Latin American countries, each with its own unique cultures, perspectives, and expectations about our performance. As such, the breadth of our sustainability programs is vast with each program adapting to meet the diverse needs of our host communities. Pan American Silver's personnel has demonstrated the considerable dedication, patience and persistence that is necessary to develop effective partnerships and collaborations. We recognize that it takes time to build trust with the communities, governments, and NGOs where we operate. We also believe our Company has something positive to offer, and that through collaboration and dialogue, we will be able to identify and create these opportunities. Our sustainability programs have generated positive outcomes for the regions where we operate over many years of development.

Q: IN 2017, EACH MINE SITE CREATED THEIR OWN SUSTAINABILITY GOALS IN THE AREAS OF PRODUCTION, HEALTH AND SAFETY, SOCIAL, ENVIRONMENT AND OPERATIONS. OVERALL, HOW DID THE SITES PERFORM AGAINST THESE GOALS IN 2018?

A: In 2017, we ambitiously set out to enhance our safety programs, continue leadership development programs, expand participation in our annual corporate social responsibility (CSR) surveys, improve our host communities' access to education and health care,



complete the physical mine closure activities at Alamo Dorado, and complete self-assessments under our Towards Sustainable Mining (TSM) initiative, among many other goals. I am extremely pleased with the advances we made towards our goals during 2018, particularly considering we also commenced the process of acquiring Tahoe during the year. We continued our socio-economic development programs, such as a Nutritional Greenhouse Program in Bolivia, an Artisanal Weaving Project in Peru, and a Ranching Project in Mexico. As well, we provided wage support programs to teachers and student scholarships in our host communities.

Q: WHAT WILL BE THE OPERATIONAL FOCUS FOR PAN AMERICAN SILVER DURING 2019?

A: Our focus during 2019 will be to integrate the Pan American Silver and Tahoe teams, taking advantage of best practices from each and sharing them throughout the new organization. We will develop a common language and approach, and management framework and understanding of the delegation of accountability and responsibility, which will allow us to become successful in all aspects of today's silver mining business. We will capitalize on lessons learned at both organizations and continue to improve our systems and approaches. As our CEO Michael Steinmann highlighted, we will apply the best practices that have evolved over our 25 years of responsible mining experience to effectively address the diverse issues and opportunities that face the newly-acquired Tahoe mines.

OUR GOALS AND PERFORMANCE

Our annual corporate goals and objectives are largely established by our employees and supervisors, encouraging a high level of understanding and commitment by those who carry out our day-to-day business activities. The common safety, employment,

environment, and social goals are listed in the table below. Please see our 2018 Annual Report for our business and economic goals. Our 2019 goals will apply to our newly-acquired Tahoe Resources mines.

2018 GOALS	2018 RESULTS	2018 PERFORMANCE	2019 GOALS
------------	--------------	------------------	------------

OPERATIONS & SAFETY

Achieve zero fatalities by continuing the implementation of our serious accident prevention program and enhance programs with meaningful improvements	X	Despite meaningful efforts of enhancing our safety programs throughout the organization, we regrettably incurred a fatality at one of our mines during 2018.	Achieve zero fatalities by continuing the implementation of our serious accident prevention program and enhance programs with meaningful improvements
Achieve an LTIF of 1.2 or less	X	Reported an LTIF rate of 1.41.	Achieve an LTIF of 1.5 or less
Achieve an LTIS of 400 or less	X	Reported an LTIS rate of 723.	Achieve an LTIS of 600 or less

PEOPLE

Continue to develop future leaders by conducting leadership workshops for employees across all operations, and encourage skills development and education programs within our organization	✓	We ran our Leadership Development Program twice. We initiated behaviour-based safety programs, and supported learning exchanges between operations.	Conduct annual Leadership Development Program workshops involving leaders from all operations Conduct "fast track" train-the-trainers leadership program at our newly-acquired Tahoe operations
Evaluate whether livable wage study should be updated according to overall labour market conditions	X	We did not complete a livable wage assessment.	A livable wage assessment is not included as a corporate goal for 2019 Improve gender diversity and inclusion metrics in recruitment, retention and promotion of women across the Company

SOCIAL

Achieve zero significant social conflicts at our operations through engagement, resolving grievances, and social auditing	✓	We achieved zero significant social incidents at our operations.	Achieve zero significant social conflicts at our operations through engagement, resolving grievances, and social auditing
Continue to expand our community engagement activities through greater participation in our corporate survey and more in-depth engagement in our corporate social responsibility (CSR) projects	✓	Our Peruvian sites updated their baseline with participation of the communities. With participation of the families in the mining camp, our team at San Vicente designed a program to improve hygiene, sanitation practices, and living conditions.	Continue to expand our community engagement activities through greater participation in our corporate survey and more in-depth engagement in our CSR projects
Improve access to quality education in the communities near our mines	✓	We added support to more teachers in Peru. Our team at Dolores worked with the community to bring back the teachers who had left due to local security incidents.	Improve access to quality education in the communities near our mines

SOCIAL

Improve access to better health care in the communities near our mines	✓	We continued with our health campaigns and added special campaigns at San Vicente on AIDS and HPV protection.	Improve access to improved health care in the communities near our mines
Develop additional alternative economic opportunities in communities near our mines	✓	We are developing a program around alpaca breeding that will involve 500 producers compared to only 50 in the previous program. We extended the greenhouse program in Bolivia until 2020.	Develop additional alternative economic opportunities in communities near our mines

ENVIRONMENT

Achieve zero significant environmental impacts (SEIs) at our operations	✓	We achieved zero SEIs at our operations.	Achieve zero SEIs at our operations
Improve on annual environmental audit performance	✗	Morococho and San Vicente improved audit performance however minor non-conformances increased in Huaron audit.	Improve on bi-annual environmental audit performance
Reduce water use compared to business as usual by implementing optimally designed projects at our operations	✓	Our Bolivian and Peruvian mines increased water recycling significantly through improved water management in their process plants.	Reduce water use compared to business as usual by implementing improved project design at our operations
Substantially complete active physical reclamation activities at Alamo Dorado and conduct interim reclamation projects at our active operations	✓	We have substantially completed active reclamation at Alamo Dorado. Progressive reclamation at Manantial Espejo and our other mines is on track.	Continue post-closure activities at Alamo Dorado and conduct interim reclamation projects at our active operations
Reduce hazardous and non-hazardous waste generation at our operations compared to business as usual	✓	We reduced hazardous waste generation and increased recycling across the Company.	Reduce hazardous and non-hazardous waste generation at our operations compared to business as usual
Implement projects that can potentially reduce energy use at our operations compared to business as usual	✓	We reduced energy use compared to business as usual by implementing improvements to the pumping systems at San Vicente, and to the ventilation control systems and energy supply substation at Huaron.	Implement projects that can potentially reduce energy use at our operations compared to business as usual
Implement projects that can potentially reduce greenhouse gas emissions at our operations compared to business as usual	✓	We reduced greenhouse gas emissions through implementing the use of fuel additives in haul trucks and connecting our Dolores mining camp and a nearby community to the regional power grid.	Implement meaningful projects that can potentially reduce greenhouse gas emissions at our operations compared to business as usual
Complete self-assessments under the Mining Association of Canada (MAC) Towards Sustainable Mining ⁽¹⁾ (TSM) program and develop action plans for each operation to achieve "A" level compliance within two years	✓	Completed self-assessments at all operations and developed action plans to reach "A" level in 2020.	Achieve A Level TSM performance in 2020 or earlier at all operations, except the newly-acquired Tahoe mines, which will achieve A level by 2022 or earlier

(1) Towards Sustainable Mining is an initiative of the Mining Association of Canada (MAC) designed to drive sustainability performance and risk management. As a MAC member, we are committed to the TSM Guiding Principles and are in the process of assessing our performance against the TSM protocols.

SUSTAINABILITY GOVERNANCE AND MANAGEMENT

BOARD OF DIRECTORS

Good governance requires strong leadership to ensure that the values and vision of the corporation are integrated into everyday operations and business decisions. Our Board of Directors (the Board) oversees the direction and strategy of the business and the affairs of Pan American Silver, guided by legislative and other governance standards, stock exchange rules, and industry best practices. The Board has overall responsibility for corporate governance matters through:

- Developing and approving corporate policies and guidelines
- Assisting in the definition of corporate objectives and assessing key plans
- Evaluating our performance on a regular basis
- Ensuring that Pan American Silver is led by qualified executives and senior managers

For additional details on our Board mandate, members, committees, policies, and processes, please refer to Pan American Silver's most recent management information circular and the corporate governance section on our website.

SUSTAINABILITY MANAGEMENT AND INTEGRATION

Our sustainability management system provides us with a consistent approach to operating in an ethical and responsible manner in compliance with applicable laws and best practices. Our management system is designed to consider the external factors that affect our industry, including market uncertainties and increasingly complex economic, environmental and social issues. We do not control these external factors but have developed an approach to help us navigate risk and deliver value to COIs.

SUSTAINABLE DEVELOPMENT GOALS

Launched in 2015, the United Nations' 17 Sustainable Development Goals (SDGs) collectively created the 2030 Agenda for Sustainable Development (2030 Agenda), to transform the world by overcoming barriers to economic, social, and environmental progress by 2030.

The mining industry has enormous potential to drive future progress on the SDGs, as mines are often situated in remote and under-developed regions where achievement of the SDGs can have large and lasting positive impacts. Pan American Silver is committed to contributing to the achievement of the SDGs and the 2030 Agenda. Our programs in support of the SDGs are described throughout the report. A full list can be found on our website.

SUSTAINABILITY MANAGEMENT IMPLEMENTATION SYSTEM

VISION

To be the world's pre-eminent silver producer, with a reputation for excellence in discovery, engineering, innovation and sustainable development.

VALUES

Our leaders strive to generate a climate that inspires: Care for the environment; Contribute to long-term development; Ensure a safe and secure workplace; Partner with our employees, local communities, and government; Operate transparently.

CODE OF CONDUCT

Our Global Code of Ethical Conduct ("Code") defines the key principles for conducting our business ethically and in compliance with the law, for the way we treat each other, and for working with our stakeholders.

POLICIES

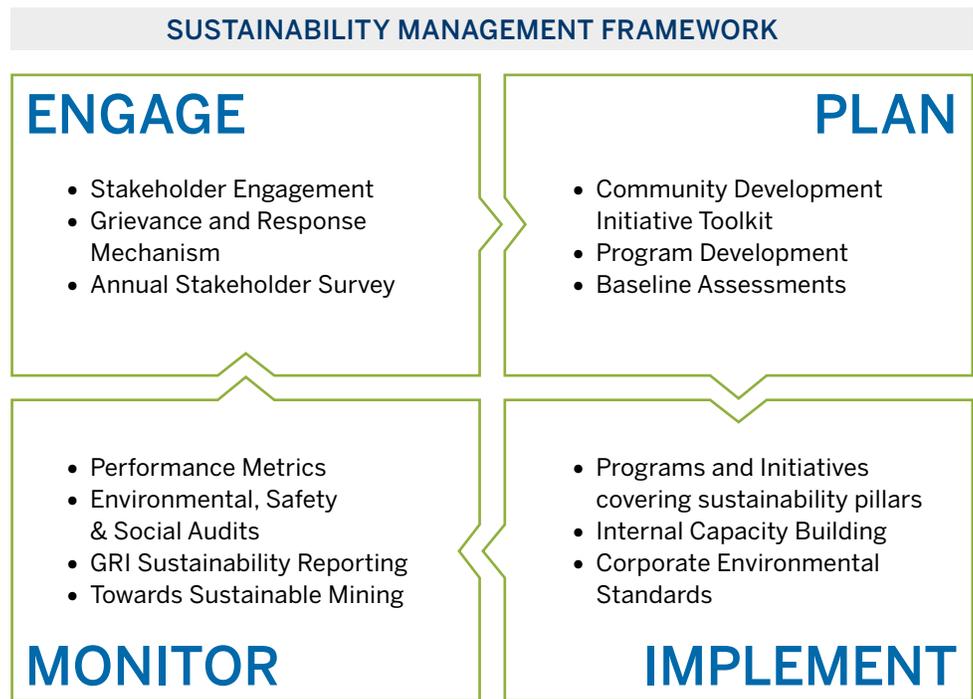
Environmental Policy; CSR Policy; Health and Safety Policy; Global Anti-Corruption Policy; Board and Senior Management Diversity Policy

SYSTEMS & STANDARDS

Our internal systems and Corporate Environmental Standards guide operations and help align with TSM, an internationally recognized best practice.

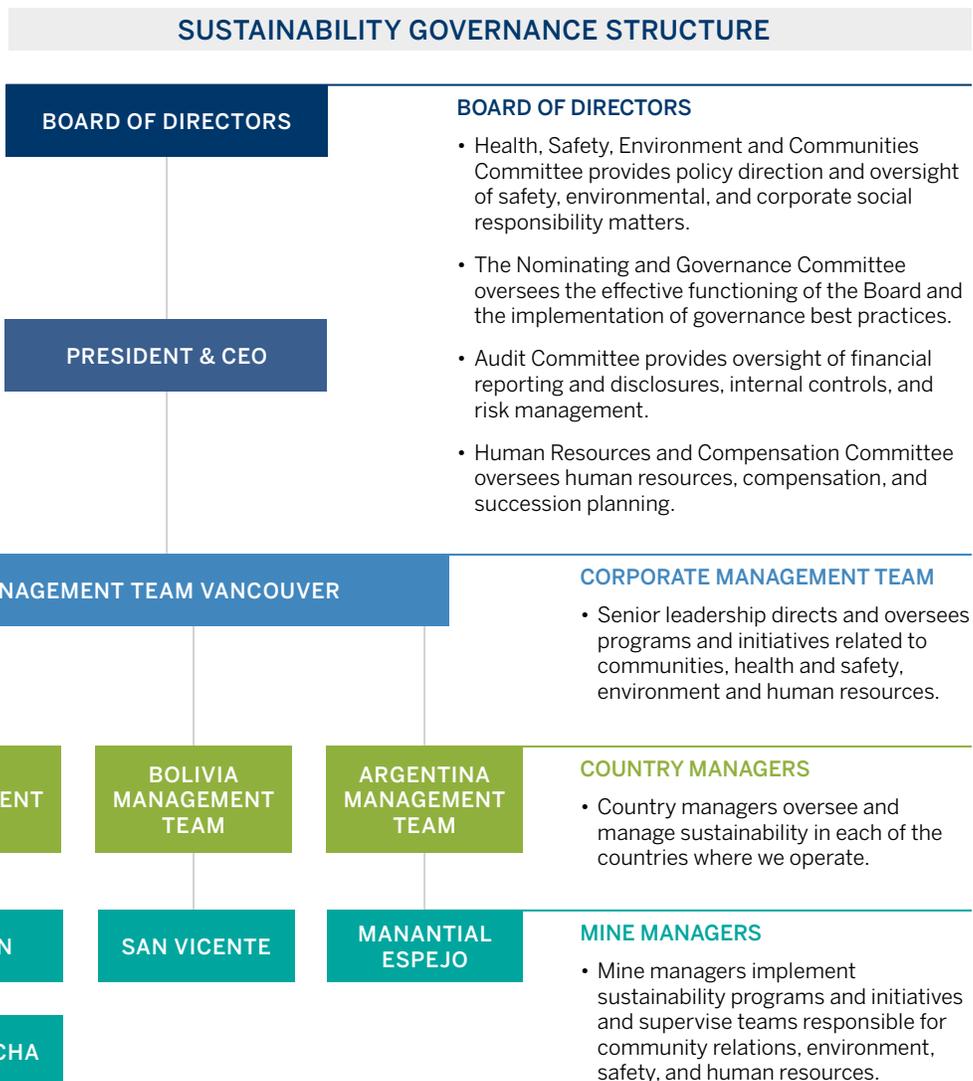
SUSTAINABILITY IMPLEMENTATION STRATEGY

We use a modified plan-do-check-act cycle to ensure our programs and initiatives align with our vision and values, mitigate our impacts, and contribute to long-term sustainability in our communities. Our sustainability pillars constitute the primary focus areas for our sustainability programs and initiatives. The sustainability pillars are Community Investment and Social Development, Human Rights, Health and Safety, Employee Attraction and Retention, Water, Air Emissions and Energy, Business Ethics, Biodiversity and Mine Closure, and Tailings and Waste.



SUSTAINABILITY GOVERNANCE STRUCTURE

Sustainability is embedded in our vision, values, and business strategy. Governance and oversight of sustainability at Pan American Silver starts at the Board level and cascades to our sites. The chart below shows the roles directly responsible or accountable for our sustainability performance.



STAKEHOLDER ENGAGEMENT

Engagement is a core practice at Pan American Silver as our business is, in many ways, dependent on establishing positive relationships and trust with COIs, such as governments, local communities, employees and contractors that interact with our operations. We engage COIs before starting new projects and continue to engage throughout the mine life cycle.

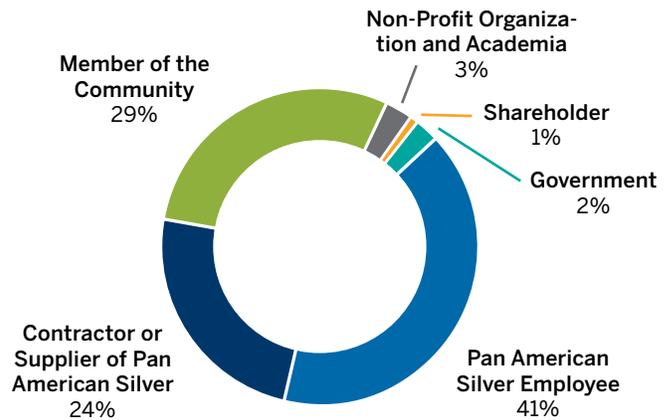
In recent years, we have strengthened our COI engagement process by taking a more structured and strategic approach, in order to help us identify and manage potential impacts and sustain constructive relationships with COIs. These processes include:

- Community of interest mapping to identify a broad range of COIs from governments, academia, civil society and industry associations, in addition to employees, contractors, and local communities.
- Developing tools and resources to support more effective engagement processes, measure their effectiveness, and help us understand and manage stakeholder expectations.
- Ongoing dialogue with COIs to determine which issues or topics are the most important.

ANNUAL STAKEHOLDER SURVEY

We augment the feedback obtained from our ongoing processes by annually surveying COIs identified in our mapping process. This survey forms the basis of our materiality assessment. In 2018, we provided select COIs with an initial list of 35 sustainability topics related to Pan American Silver’s business and asked them to rank the 10 topics most important to them.

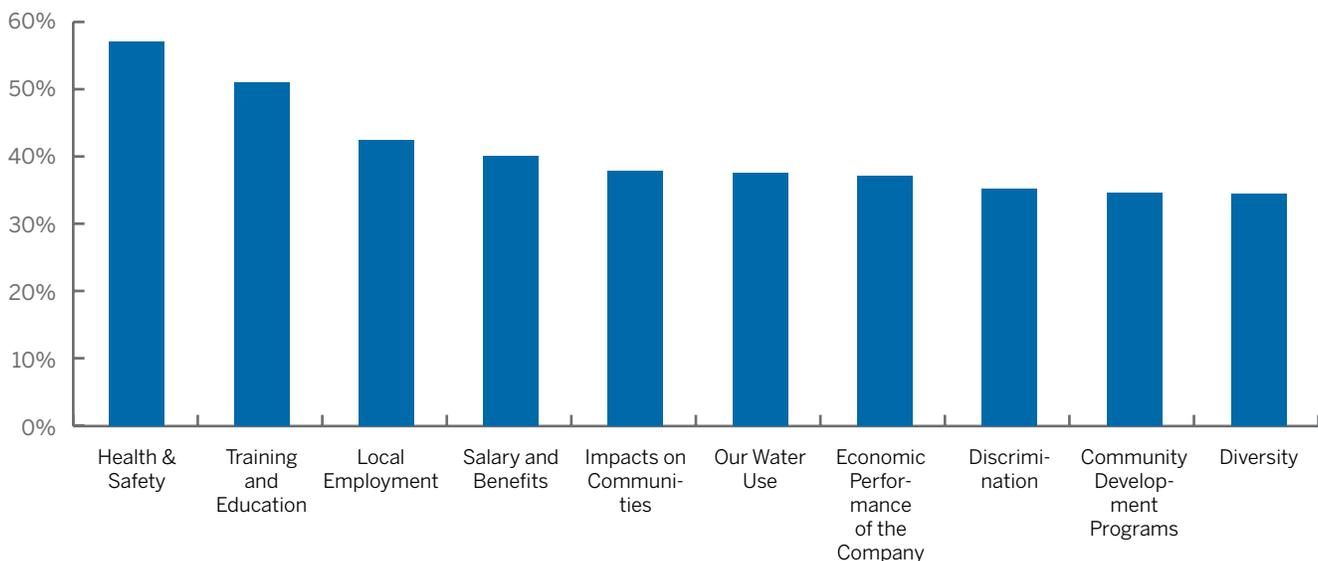
BREAKDOWN OF SURVEY RESPONDENTS



In 2018, a total of 645 individuals representing six key stakeholder groups, responded to our survey, compared to 613 in 2017.

To help us improve the quality of our survey, we engaged a consultant to update and frame the survey questions from a rights-holder perspective. As a result, the identified priority topics differed slightly from previous years. In 2017, topics were predominantly focused on environmental impacts, whereas priority topics in 2018 focused more on socio-economic impact and opportunities for communities, employees and contractors.

TOP 10 SUSTAINABILITY TOPICS OF INTEREST



MATERIALITY

Our materiality assessment helps us define and analyze the impacts of our business on COIs and enables us to more effectively manage issues as well as identify goals and priorities for our sustainability planning and implementation strategy.

Our approach to managing material topics is through the sustainability management implementation system, which connects to our core business strategy.

We define material topics as those of high importance to COIs as well as our most significant sustainability impacts and opportunities to contribute to sustainable development where we operate. While material topics may have impacts on COIs internally, externally or in the value chain, the reporting boundary for each identified topic is limited to our operations and local communities.

Our process to identify material topics is informed by the GRI's Reporting Principles for defining report content.

1. ISSUE IDENTIFICATION

- On-going COI engagement
- Consideration of strategic business priorities and risks
- Participation in industry groups and associations.
- Consideration of international norms, standards, and frameworks (e.g. GRI, SDGs,)



5. REPORTING

- Report progress on identified material topics



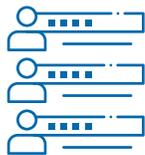
2. ENGAGEMENT

- COI survey and identification of priority topics



4. VALIDATION

- Review by senior management



3. ANALYSIS AND PRIORITIZATION

- Review of identified topics
- Assessment of impact
- Scoring of topics
- Determination of materiality threshold



MATERIAL TOPICS

Topics are considered material for reporting if their combined score of significance to stakeholders and significance of impact is greater than 10. In assessing impact, we considered stakeholder expectations, importance to the mining industry, as well as Pan American Silver's business priorities, management

systems, and our ability to influence each topic. This means that in certain cases, we report on topics which, although not priorities for our COIs, are relevant to our industry. For ease of reporting, we have included topics with high materiality scores as sub topics and have amalgamated material topics into 10 high-level topics.

MATERIAL TOPICS	SUB-TOPICS	DEFINITION
Responsible Business		
Business ethics and anti-corruption	Tax transparency	Ensuring good corporate governance through ethical business practices
Community		
Impacts on local communities	Managing environmental impacts Managing social impacts	Managing actual and potential impacts on local communities
Community investment and sustainable development	Economic impact Infrastructure investment Local hiring and procurement Socio-economic development programs	Contributing to the social and economic well-being of local communities
Human rights	Training of security personnel	Respecting human rights and managing our potential impact on rights holders
People		
Health and safety	Emergency management	Protecting the health, safety and well-being of our employees and contractors
Employee attraction, retention, and development	Employment conditions and benefits Employee and contractor training and development Inclusion and diversity and equal opportunity Labour relations Non-discrimination and pay equity	Creating the conditions to attract, retain and develop a talented workforce
Environment		
Water	Water quality Water use	Managing the impacts of our activities on water availability and optimizing our water use
Air emissions and energy	Air and greenhouse gas emissions management Energy use	Reducing our energy consumption and greenhouse gas emissions
Biodiversity and mine closure	Biodiversity management Mine closure	Planning and management of mine closure to minimize negative impacts on the environment, including biodiversity
Tailings and waste management	Tailings storage facility management Waste management Spills	Managing tailings storage facilities and waste disposal

BUSINESS ETHICS AND ANTI-CORRUPTION

WHY IS BUSINESS ETHICS AND ANTI-CORRUPTION IMPORTANT?

The mining industry operates in a complex and demanding legal and regulatory environment under cyclical market conditions. Globally, our industry is experiencing an increase in public and government interest in transparency and a corresponding increase in regulatory requirements. As a Canadian company listed on the TSX and NASDAQ stock exchanges, Pan American Silver must comply with securities regulations and exchange rules and requirements designed to protect investors and the integrity of financial markets. We also must adhere to applicable legislation in the jurisdictions where we operate. We are expected to conduct our activities ethically and apply industry best practices at home and abroad.

Material Topic	Business ethics and anti-corruption
Sub-Topic	Tax transparency
Definition	Ensuring good corporate governance through ethical business practices and anti-corruption
Feedback w COIs	<p>The public and governments want increased transparency on issues related to corporate governance.</p> <p>Analysts and investors are interested in our approach to supplier screening.</p>
How We're Responding	<p>We updated our codes and policies and implemented a whistleblower hotline to improve governance of and compliance with ethical practices.</p> <p>We are working to improve our supplier due diligence processes.</p>

POTENTIAL RISKS AND IMPACTS

- Unanticipated changes to laws or regulations resulting in inadvertent non-compliance
- Corruption in our business or by third-parties

RELATED SDGs



OUR APPROACH

Pan American Silver is committed to high standards of corporate governance, ethics and transparency in the way we conduct our business. Our Global Code of Ethical Conduct and related policies and guidelines together provide the fundamental tenets of ethical business practices, set corporate expectations and guide us to consistently operate in an ethical and responsible manner in compliance with applicable laws, rules and regulations. We approach tax matters by ensuring that we are compliant with all local laws and regulations and deal with local tax authorities in a co-operative and open manner.

Policies

- Global Code of Ethical Conduct (the Code) – Defines the key principles for conducting our business ethically and in compliance with the law, for the way we treat each other, and for working with COIs.
- Global Anti-Corruption Policy (the Policy) – Articulates our position on prohibiting bribery, corruption, and other means of obtaining an improper business advantage.
- Gifts and Hospitality Guidelines (the Guidelines) – Supplement the Policy by providing additional guidance for employees dealing with government officials.

Programs and Initiatives

- Communication – All new employees receive the Code and Policy upon commencement of employment. The Code is posted in key locations at our offices and sites. We inform our key contractors and suppliers of our Code.
- Whistleblower hotline – Directors, officers, and employees may report actual or potential breaches to the Code or Policy via phone or web, in English or Spanish, 24 hours a day, 365 days a year. The hotline is managed by Navex, an independent service provider.

Monitoring and Compliance

- The legal and compliance teams review and investigate all complaints made through the whistleblower hotline.
- The Board, officers, executives and all senior management⁽¹⁾ certify compliance with the Code and the Policy annually.

(1) Senior management is defined as director, manager, and superintendent-level positions or the equivalent.



- The Board's Audit and Nominating and Governance Committees monitor compliance with the Code. The Board may grant waivers from Code requirements to directors or executive officers. Any such waivers are disclosed in our quarterly reports.
- Our corporate and site-level compliance and audit functions monitor compliance with the Code, Policy, Guidelines, and relevant procedures.

Accountability

- Our General Counsel oversees our legal compliance and anti-corruption practices.
- The Board updates the Code, Policy, and Guidelines as necessary to ensure we are meeting evolving good governance and ethics practices.

OUR PERFORMANCE

All directors, officers, employees and contractors are required to comply with our Code, Policy, and Guidelines. They are also responsible for reporting any actual or potential unethical or illegal activity.

Anti-Corruption

In 2018, all Pan American Silver operations were assessed for risks related to corruption. Our assessment process included:

- Risk scoping and fraud risk assessment
- Quarterly management and officer questionnaires
- Internal audit assessment and reporting
- Whistle blower system

- Senior management meetings
- Consultations with in-house legal
- Cyber security assessments
- Entity-wide fraud risk identification interviews

As a result of this assessment, we identified our most significant potential corruption-related risks to be: fraud perpetrated by (or colluded with) third party contractors/suppliers; raw materials or supply inventory theft; and government transactions and corruption.

In 2017 we updated our Code and Policy, created the Guidelines, implemented the whistleblower hotline, and engaged employees. We also launched a training program for employees in roles that may be exposed to corruption risk such as procurement teams and personnel involved in government relations. By the end of 2018, we had trained 357 employees in those higher-risk roles.

We also request that our contractors, suppliers, and business partners respect and uphold our good governance standards. For certain high-risk contracts, we incorporate specific anti-corruptions provisions into the contract terms. We are currently working to expand our supplier due diligence processes.

Reporting and Whistleblower Hotline

Our whistleblower hotline service enables directors, officers, and employees to anonymously report any apparent violations of the Code, Policy, Guidelines or applicable laws. Non-employees can submit complaints by mail to Pan American Silver's General Counsel, marked private and confidential.



Any reports received are reviewed by the compliance team and appropriate measures are taken. Pan American Silver had no confirmed cases of corruption in 2018. The Board did not grant any waivers from Code requirements to directors or executive officers during 2018.

The Code and Policy are available, in English and in Spanish, on our website.

Tax Transparency

Our approach to tax matters is aligned with our Code. In all jurisdictions in which Pan American Silver operates, we:

- Make every effort to comply with local tax laws and regulations, including filing appropriate tax returns and related reports on a timely basis. We ensure that tax returns and other reports filed are accurate and complete.
- Seek to maintain a good working relationship with local tax authorities. We respond to all requests for

additional information in a timely, transparent, and accurate manner. If disputes arise, we work with the tax authorities to resolve the matters in an efficient and fair manner.

- Undertake tax planning to support the growth and development of the business in accordance with all applicable laws and regulations.

We have an offshore financial entity that provides insurance against certain risks at our worldwide mining operations. The activities of this entity are fully disclosed, as required, under the tax laws and regulations of the jurisdictions in which we operate.

Pan American Silver engages in numerous inter-company transactions. Such transactions are executed using arm's length transfer prices. In accordance with the Organization of Economic Co-operation and Development (OECD), every effort is made to ensure that these arm's length transfer prices are supported by the necessary contemporaneous documentation.

Pan American Silver complies with the Canadian Extractive Sector Transparency Measures Act (ESTMA), requiring public reporting of payments made to governments. Our ESTMA reports can be accessed from our website.

NEXT STEPS

- Develop a supplier code of conduct and a standardized supplier due diligence process to ensure compliance with our Code and Policy.
- Develop an online training platform to incentivize ethical behavior and improve employee understanding of the anti-corruption program.
- Develop internal controls and questionnaires for employees, suppliers and business partners in order to identify ethics risks or conflict of interests.





COMMUNITIES

Fostering positive long-term relationships with our local communities through open and honest communication and ethical and sustainable business practices is a key objective of our business strategy. Our aim is to support our host communities during the lifespan of our mine as well as to create a positive legacy.

MATERIAL TOPICS

IMPACTS ON LOCAL COMMUNITIES

COMMUNITY INVESTMENT AND SOCIAL DEVELOPMENT

HUMAN RIGHTS

5,232

STUDENTS WE SUPPORT DIRECTLY OR INDIRECTLY

9,386

MEDICAL VISITS MADE

78

LOCAL COMPANIES SUPPORTED

448

FAMILIES BENEFITED FROM INFRASTRUCTURE SUPPORT

MANAGING SOCIAL IMPACTS

We have adopted formal policies, procedures and industry best practices to address the impacts of our activities and contribute to the social and economic development of communities.

As each country and community in which we operate has a distinct culture and social context, our management framework provides a consistent methodology to measure and track social impact and our corporate social responsibility (CSR) performance across our mines, yet still have the flexibility to tailor our approach to the particular circumstances of each operation.

OUR MANAGEMENT APPROACH

Policy

- CSR Policy – Details our overarching commitment to operate mines and develop projects in harmony with local communities and to respect and uphold human rights. A central tenet of our CSR Policy is to engage local communities in a timely, inclusive, transparent, and culturally appropriate way throughout the mine life cycle.

Plan

Baseline assessments help us:

- Understand the current social context and the potential impacts of our operations on our host communities
- Identify and map relevant COIs, including vulnerable groups who may be disproportionately affected by our activities
- Identify programs appropriate for the social context
- CDI Tool – Our Community Development Initiative (CDI) tool helps sites determine what type of legacy programs are a good fit for us and local communities. Every socio-economic program requiring corporate office approval is developed and evaluated using this tool.

Engage

- Community teams – Each mine site has a community office with a team responsible for ongoing engagement.
- Materiality survey – We gather information annually on which issues are important to our COIs, as well as

their perceptions of our performance.

- Feedback and response mechanism – Each community office maintains a feedback log where community questions, comments, concerns and grievances are recorded. These mechanisms help us understand community concerns around the perceived or actual impact of our activities.

Implement

- Programs and initiatives – Our programs are designed to provide sustainable benefits for our local communities, promote local hiring and procurement, or support new or ongoing infrastructure or services.

Internal Capacity Building

- Training – We train our local teams on new procedures to manage potential impacts and ensure that our socio-economic development programs are aligned with community needs and aspirations.
- Education – We conduct workshops to educate employees and community-based service providers about the high ethical, safety, environmental, and CSR standards we expect.

Evaluate

- Social audits – We conduct social audits in each mine biennially to monitor the programs we run in partnership with neighbouring communities, assess our contractors' camps and facilities, and identify opportunities for improvement in our processes and programs. The ISO 26000 guidance standard on social responsibility serves as the basis for our audits, and we have developed additional company-related content to assess issues relevant to our organization.
- TSM Aboriginal and Community Outreach protocol – Our sites self-assess their performance against this protocol and develop corresponding action plans for improvement.

Accountability

- Site-level community teams, comprised of experts, such as social workers and psychologists, are responsible for ongoing engagement and program implementation.
- The head of CSR at the site or country level oversees social audits and ensures that follow-up is conducted.
- The Vice President of Social Sustainability leads sustainable development and human rights programs and initiatives, which are overseen by the Vice President of Environment and Sustainability.

Social Audits

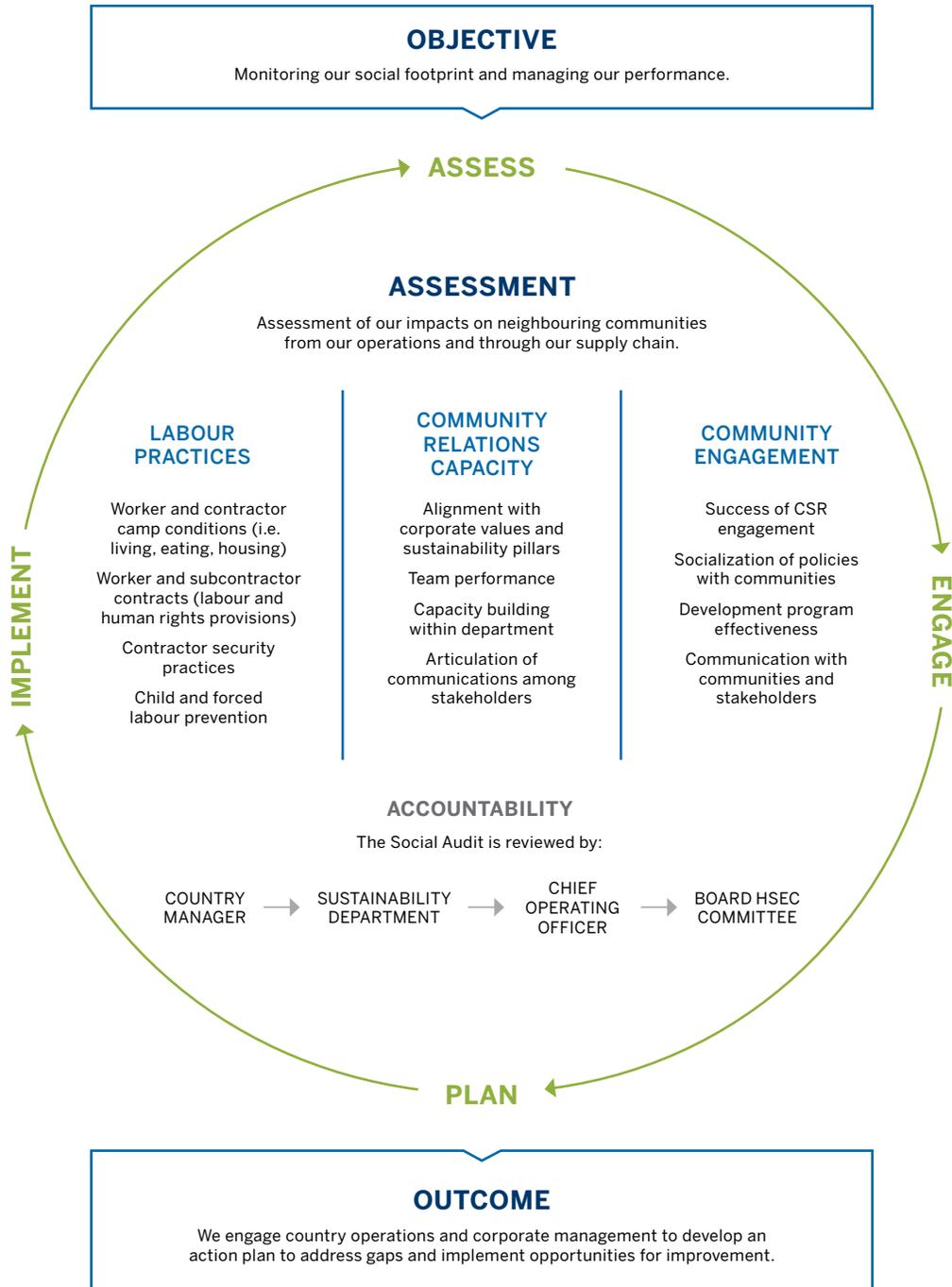
Social audits help us monitor our social footprint and manage our performance. Depending on the audit findings, sites can take between three months to a year to implement corrective actions.

In 2018, we completed an audit of Manantial Espejo in Argentina. The primary findings were related to

infrastructure upgrades and the roll out of a grievance mechanism. These are currently being addressed.

In 2019, audits are planned for our Peruvian and Bolivian operations.

SOCIAL AUDIT PROCESS



OUR PERFORMANCE

We engage in open dialogue early in the mining lifecycle and maintain this through to mine closure in order to build trust, understand the priorities and concerns of our host communities, as well as to better manage our impacts and community expectations.

Community Feedback and Grievances

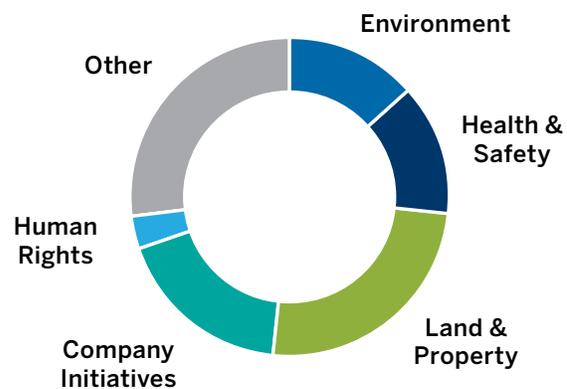
Community members can provide their questions, concerns and/or complaints to us through a community mailbox or in person at our community offices. Each community office maintains a feedback log and all feedback is categorized. Any concern or complaint raised by an individual or group impacted by our operations which requires a response or resolution is categorized as a grievance. The most common grievances we receive fall into the following categories: environment, health and safety, company initiatives, and property and land agreements.

For any grievance, a local company representative is appointed to follow up. We aim to respond to and resolve grievances within 15 days. The outcomes are reported to and reviewed monthly by the Vice President of Social Sustainability. When a grievance cannot be resolved directly with the complainant and a grievance remains, we consider this to be a significant grievance. Local senior management is then assigned to address the significant grievance. In 2018, we received 156 grievances and no significant grievances through our grievance and feedback mechanism.

We did, however, address two community-based conflicts at Huaron and La Colorada. In April 2018, members of the nearby Huayllay community set up roadblocks on the access to the Huaron mine in Peru. The community members demanded compensation for alleged impacts to community land, as well as additional service contracts for construction work, haulage and supply of materials to the mine. We temporarily suspended operations during the blockade while we engaged in a mediation process led by the Social Affairs General Office of the Peruvian Ministry of Energy and Mines.

Through this conflict, we determined the need to conduct an updated, participatory social baseline assessment, which would help us better understand the conflict's root causes and the post-conflict situation in the area. We conducted the assessment

2018 GRIEVANCES



in the fall of 2018, and are now in the process of open and broad communication on the findings to community leaders as well as to the community at large. The experience has helped us improve the ways in which we communicate and engage with the community.

As part of our plant expansion at La Colorada, in 2015 we built new camp facilities and re-accommodated workers, as well as a group of families who were not workers but lived on our property in substandard housing. A small group of these remaining families filed a claim in the Mexican Agrarian Court and also engaged the United Nations Commission on Human Rights office in Mexico City (OHCHR). We have been proactively working with the OHCHR and the families affected to resolve the issues. In 2018, during a site visit the OHCHR identified areas of concern and opportunities for improvement. These included: improving water, electricity and facilities access, and changes to physical security infrastructure. Pan American Silver took immediate steps to address these issues and we continue to work towards a final resolution with the remaining families still living in the Company's camp facilities. Engaging with the OHCHR has been a positive learning opportunity for us, particularly in receiving and adopting advice and creating a forum for respectful dialogue to mitigate potential conflicts and create a mutually beneficial resolution.

ECONOMIC BENEFITS

Q: HOW DO YOU VIEW THE PLACE OF MINING IN THE WORLD ECONOMY?

A: I see mining as critical to everyday functions. Our modern lifestyles are dependent on metals - from our cell phones, to our vehicles, to our buildings. Mining also has a role to play in the future energy transition away from fossil fuels. Large amounts of metal will increasingly be required for electric batteries and to provide the renewable energy infrastructure for wind and solar energy production. In fact, silver is a key component of photovoltaic cells in solar panels.

Q: HOW HAVE INVESTORS' DEMANDS FOR GREATER ACCOUNTABILITY ON TOPICS RELATED TO ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) PERFORMANCE AFFECTED THE MINING INDUSTRY'S PERFORMANCE IN SUSTAINABILITY?

A: We've seen a growth in the importance institutional investors place on ESG issues, and I hope that it triggers the same trend for mainstream investors in the future. An increase in investor focus on ESG performance would translate into improved performance by companies. I welcome more diligent ESG standards as these would differentiate the good companies from higher risk ones. Pan American Silver has long held ESG performance as a fundamental part of our business. Through sustainable initiatives, we are able to manage risk and share benefits for all stakeholders, and we are always open to learning and improving. We are proud of that. Ultimately, this is what investors should be looking for.

Q: WHAT DO YOU SEE AS THE ROLE OF FINANCE IN SUSTAINABILITY?

A: Finance is an integral part of sustainability. Being a financially healthy and stable company allows us to directly and indirectly contribute towards meeting our sustainability goals in the regions where we operate. We pay taxes to local governments that can be invested back into community infrastructure and services. We provide our employees with competitive wages and benefits. We procure the vast majority of the products and services we need for our business from local suppliers and we invest directly in our host communities.



At the end of the day, everything we do has a financial basis and must make financial sense, including community investments. For example, investing in capacity building of local businesses helps those businesses improve their business practices, while helping us build community relationships as well as a more cost-effective and resilient supply chain. Working with host communities to identify, create and support sustainable development programs helps us to better understand the needs and priorities of our host communities. Both these initiatives help us to improve quality of life, build trust, and maintain the community support necessary to operate in the long-term.

Q: HOW DOES PAN AMERICAN SILVER'S BUSINESS IMPACT LOCAL ECONOMIES AND COMMUNITIES?

A: What gives me the most satisfaction and pride are the positive economic impacts our company has on the communities and areas around our operations. Our need for skilled labour translates into jobs and business opportunities for our host communities. We hire locally and, whenever possible, we procure goods and services locally for necessary mine operations and maintenance. We also provide the training and capacity building to support long-term employment opportunities. In 2018, we supported the continued development of 72 local companies providing services and supplies to our mines. It's my hope that these economic benefits extend beyond the life of our mines.

COMMUNITY INVESTMENT AND SUSTAINABLE DEVELOPMENT

WHY IS COMMUNITY INVESTMENT AND SUSTAINABLE DEVELOPMENT IMPORTANT?

We invest a significant portion of our economic value back into our host countries and local communities in line with our sustainability pillars. Creating opportunities for meaningful dialogue and applying our social management framework tools helps us to better understand community needs and interests and identify beneficial and viable legacy social programs and community investments opportunities. At Pan American Silver, we want our host communities to see our presence as a positive factor in their lives.

Material Topic	Community investment and social development
Sub-Topic	Economic impacts Socio-economic development programs Infrastructure investments Local hiring and procurement
Definition	Contributing to the social and economic well-being of local communities
Feedback From COIs	Community members request employment opportunities.
How We're Responding	Our community teams work with community members to identify potential job opportunities and provide the necessary training and capacity building. Our participatory baseline assessment in Peru resulted in an updated economic development program that will involve 500 alpaca breeders.

POTENTIAL RISKS AND IMPACTS

- Community opposition to mine operations or development resulting in project or production delays, failure to obtain permits or loss of social acceptance
- Negative impacts on local communities, such as economic dependence, wealth disparity, or impacts on vulnerable groups

RELATED SDGS



OUR APPROACH

Early and ongoing community engagement and meaningful dialogue are key to better understanding our actual, potential, and perceived impact and to building trust with our host communities. We use our ongoing social management processes and tools, as set out in our social management framework, to better manage our impacts and identify opportunities for long-term investment in local communities.

Programs and Initiatives

- Socio-economic development programs – We create and sustain programs focused on education, health, and alternative economic opportunities.
- Local infrastructure and services – We invest in and upgrade infrastructure and services, such as schools, health facilities, water and sanitation services.
- Jobs and business opportunities – We hire and procure locally and provide training and capacity building in roles at or related to our operations.
- CDI Tool – We use this tool to identify and develop socio-economic programs with a high likelihood of long-term success and impact.

OUR PERFORMANCE

Our core business activities generate economic value for COIs at the international, national, regional and community levels, both directly and indirectly. Our direct investments include payments to government, wages paid to employees, community investments, and payments to governments. These payments to national, provincial, state, regional, municipal, local, and community governments in the form of taxes, royalties, and fees, can be reinvested in social and economic programs that benefit the communities in the regions where we operate.

SOCIO-ECONOMIC DEVELOPMENT PROGRAMS



Socio-Economic Development Programs

We invest in socio-economic development programs that provide lasting benefits to our host communities. Our intent is that the benefits will long exceed the lifespan of our mines. We focus on programs related to education, health, and alternative economies, which we have found are most likely to provide long-term positive benefits. Our CDI Tool helps us assess the likelihood for success of these programs and to measure their success.

Our alternative economies programs include the:

- Nutritional Greenhouse Program in Bolivia, designed to support 11 local communities in sustainable food production and provide access to fresh produce and improve family nutrition.
- Artisanal Weaving Project in Peru, which, in 2018, supported 61 female weavers with supplies and professional development training.
- Ranching Project in Mexico, which supports 135 community members.

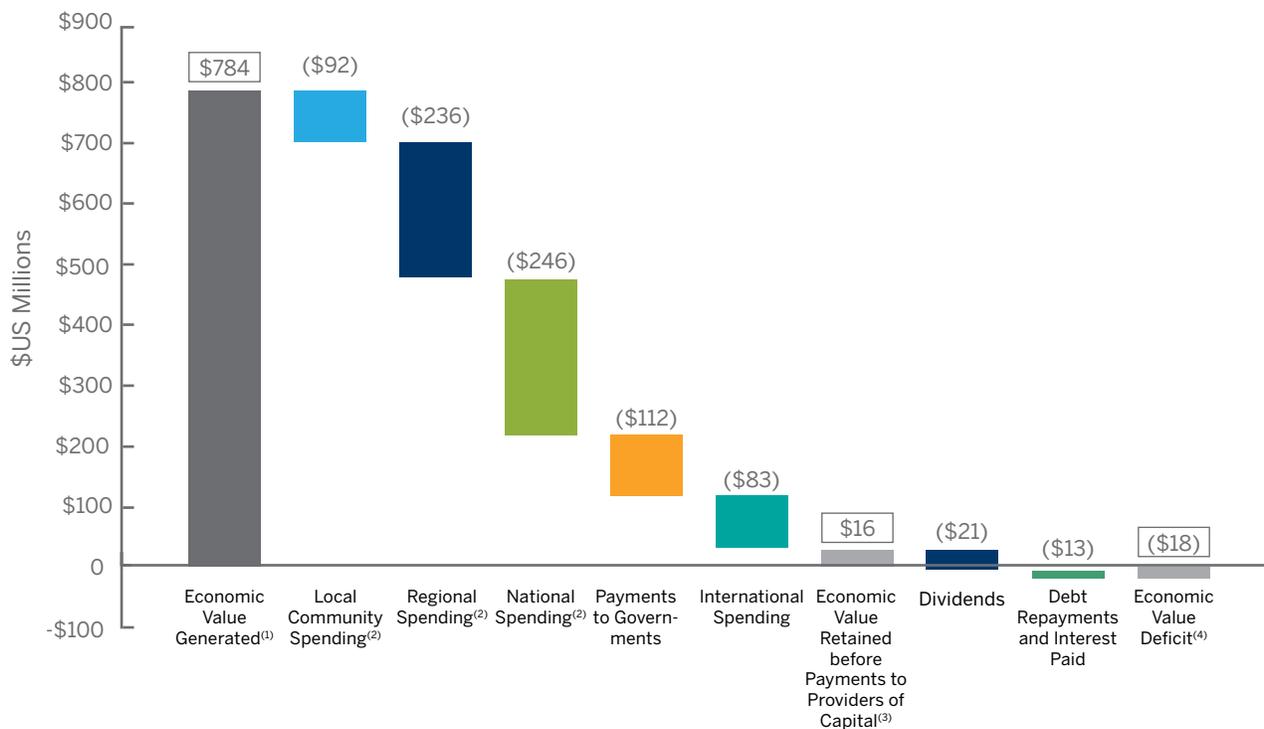
Our education programs:

- Provided support for child and adult literacy and education by fully supporting or supplementing wages of 182 teachers.
- Provided university scholarships for 134 students in the countries where we operate.

In total, our programs provided direct and indirect support to 5,232 students in 2018.

Our health programs are intended to improve access to health services for all community members with a focus on identified vulnerable groups, such as young children, women, and elders. In 2018, our initiatives supported 9,386 medical visits by community members.

DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED



(1) Based on 2018 accrued revenue as per annual financial statements for fiscal year 2018, dated March 12, 2019.

(2) We have broken down our spending into four geographical categories. The "local" category refers to the expenditures in communities surrounding the mining operations. The "regional" category is intended to capture expenditures beyond the local communities, but within surrounding regions. The "national" category includes all other areas within each of the countries that are excluded from either local or regional. The "international" category refers to expenditures outside of the country of operation.

(3) This is the economic value retained by the Company after expenditures from mining activities and growth projects, but prior to distributions to providers of capital (shareholders and debtholders).

(4) Economic value deficit in 2018 was related to the repayment of long term debt and the investment in growth projects in Mexico and Argentina.

CORE ECONOMIC AND SOCIAL DEVELOPMENT PROGRAMS

RELATED SUSTAINABLE DEVELOPMENT GOALS

MEXICO

- Ranching Project | 135 AGRARIAN COMMUNITY MEMBERS
- Local Procurement & Supply Chain Development | 17 COMPANIES
- Children and Adult Education Programs | 200 PEOPLE
- Hygiene & Sanitation Program | 120 HOMES

PERU

- Local Procurement & Supply Chain Development | 17 COMPANIES
- Education & Scholarship Program | 2,486 STUDENTS
- Artisanal Weaving Project | 61 WOMEN
- Alpaca Breeding Project | 50 PRODUCERS
- Scholarship Program | 56 STUDENTS

BOLIVIA

- Commercial Llama Breeding Project | 220 FAMILIES
- Nutrition Greenhouse Program | 166 FAMILIES
- Education Support Program | 1,220 STUDENTS
- Education & Scholarship Program | 6 STUDENTS

ARGENTINA

- Education Support Program | 380 STUDENTS
- Post-Secondary Scholarship Program | 49 STUDENTS
- Local Procurement & Supply Chain Development | 45 COMPANIES



Infrastructure and Services Investments

We regularly make investments in and upgrades to local infrastructure and social services in the communities near our operations. In 2018, significant initiatives included:

- Construction of the road from the Dolores mine to Madera town.
- Sanitation planning in Arroyo Amplio, a town near Dolores.
- Sanitation planning in the San Vicente mine's family camp.

Local Hiring and Procurement

Given the remote location of some of our sites, there may be few opportunities for long-term, stable employment. Consequently, community members look to us to provide jobs through direct employment or as service providers for our mine sites. In 2018,

99 percent of our employees were nationals of the country where the mine is located.

Not all community members will have the qualifications to perform skilled labour. Consequently, our sites and community teams look to:

- Provide opportunities for unskilled employment, such as road building.
- Identify on-site job opportunities, such as machinery worker, where we are able to provide the required skills and safety training.
- Offer ongoing capacity and skills building to help employees and contractors move into higher paying roles.

Our procurement practices also create opportunities for local businesses in the regions where we operate. Pan American Silver's procurement is intentionally decentralized, and we are able to procure the majority

of goods and services we need in national economies. This approach supports our ability to operate profitably over the long term by deepening our sites' relationships with local suppliers, providing a higher level of service, and helping us build a more resilient supply chain. In 2018, 46 percent of goods and services were provided by local or regional suppliers.

Key goods and services sourced locally include:

- Materials for road construction
- Machinery and small parts
- Food and catering services
- Maintenance services
- Earthmoving equipment for road maintenance and smaller construction projects

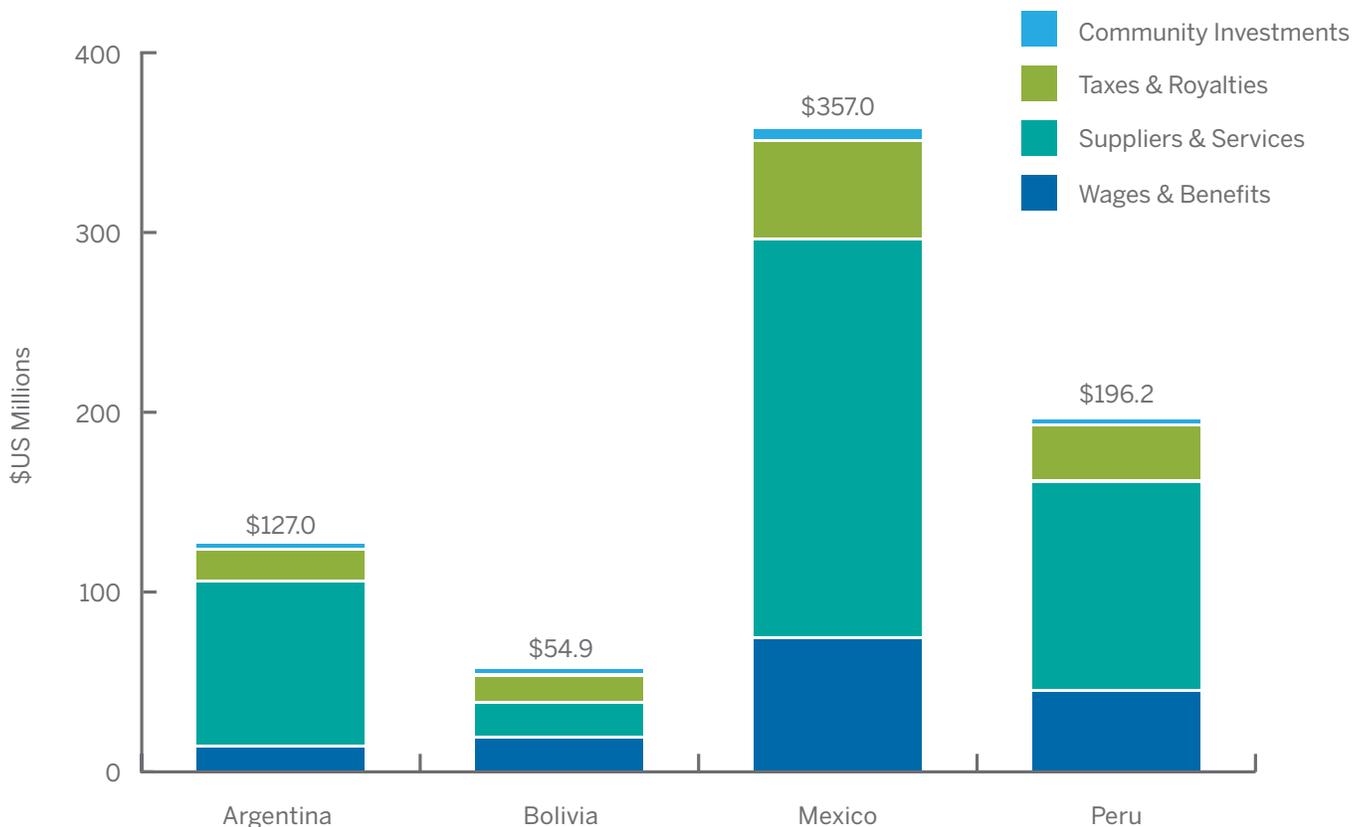
We also help community members launch small businesses by matching a site's business needs to the interests of community members. To date we have helped launch 78 small businesses. Where local suppliers cannot meet our needs or business standards, we invest in their capacity by offering programs and support focused on:

- Business skills, such as accounting and bookkeeping
- Bidding processes
- Health and addiction workshops
- Pan American Silver's business standards and expectations
- Health and safety training to contractors

NEXT STEPS

- Improve existing processes, such as optimizing our grievance and feedback mechanisms, and expand our COI mapping/engagement to include a broader set of COIs.
- Update baseline assessments and perception studies for our existing mines to improve our understanding of their socio-economic realities.
- Conduct baseline assessments and perception studies to better understand the social contexts of our newly-acquired Escobal mine in Guatemala.

SPENDING BY REGION



CASE STUDY: BOLIVIA

GREENHOUSE PROGRAM UPDATE

Pan American Silver developed its CDI Tool with the overall objective of improving the long-term success of our socio-economic development programs.

The tool is designed to help our community teams identify programs appropriate for the local social context, engage communities in the program, and develop indicators to evaluate the program's progress and success. In 2016, we piloted the tool on a greenhouse program in the 11 communities near our San Vicente mine in Potosi, Bolivia, which is located in a region with pockets of extreme poverty. The program, which entailed supporting the community in greenhouse construction and maintenance as well as in sustainable food production, was identified and developed in consultation with the community and in response to concerns over the lack of accessible fresh vegetables and children's poor nutrition.

Working with the community, we identified the factors necessary for the program's long-term success:

- Hiring an agronomist/nutritionist to work with the communities for the duration of the program.
- Training families on nutrition and promoting a culture of healthy eating.
- Training families in food production.
- Promoting the participation of vulnerable groups in food production.
- Promoting the efficient use of natural resources and organic gardening practices.

At the end of the three-year pilot, all 11 original communities were still participating in the program. 166 families were producing and consuming fresh fruits and vegetables. Overall, we are pleased with performance on key program indicators.

NEXT STEPS

The greenhouse program has been extended until 2020 and will be re-evaluated at that time. We will focus on improving the existing infrastructure and providing participating families with relevant education, such as nutrition programs, cooking classes, and organic growing practices.



KEY PROGRAM INDICATORS

1) Infrastructure

Number of greenhouses constructed

Goal: 100 greenhouses by 2018

Outcome: 109 greenhouses

2) Production

Amount of vegetable production and consumption per family per month

Goal: 16 kg per family per month (other than potatoes) by 2018

Outcome: Three-year average of 7.1 kg per family per month⁽¹⁾

3) Production Area

Amount of land used for production

Goal: 1,500 m² by 2018

Outcome: 1,315 m²⁽²⁾

(1) Although production did reach 8 kg per family per month in 2017, we realized that we would not meet our original goal due to the challenging climate of the region.

(2) Challenging weather conditions was the primary reason this goal was not met. We also had lower-than-expected community participation in the project's second year.

HUMAN RIGHTS

WHY ARE HUMAN RIGHTS IMPORTANT?

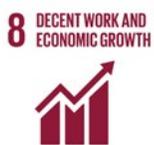
All organizations are expected to respect and uphold human rights. Mining companies, due to the location of their operations, may come into contact with vulnerable populations. Consequently, human rights have become increasingly important in the mining sector, and industry groups, such as the Mining Association of Canada (MAC), of which Pan American Silver is a member, are incorporating global best practices into their standards. Pan American Silver is committed to upholding human rights, respecting the traditions and cultures of local communities, as well as supporting those communities in understanding and realizing their rights.

Material Topic	Human rights
Sub-Topic	Training of security personnel
Definition	Respecting human rights and managing our potential impact on rights holders
Feedback From COIs	NGOs and investors requested collaboration on and a visible demonstration of our commitment to human rights.
How We're Responding	We are committed to aligning with the Voluntary Principles on Security and Human Rights. We enhanced the human rights-focus of our annual COI stakeholder survey.

POTENTIAL RISKS AND IMPACTS

- Community opposition to mine operations or development resulting in project or production delays, revocation of permits, or loss of social acceptance
- Negative impacts on vulnerable groups
- Security risks and the protection of people and assets

RELATED SDGS



OUR APPROACH

Pan American Silver abides by applicable local human rights laws and is committed to align with key international human rights conventions. Our identification and management of human rights risks and impacts is a component of our social management framework. In addition to our overarching social management framework, our management of human rights includes:

External Commitments

- MAC – Through our membership with MAC, we have committed to implementing a risk-based human rights and security approach consistent with the Voluntary Principles on Security and Human Rights.
- United Nations Children's Fund (UNICEF) – Through our work with UNICEF, we have committed to uphold the Convention on the Rights of the Child.

EDUCATION AND CAPACITY BUILDING

For Pan American Silver, an element of respecting rights is helping our community members to understand and exercise their rights. We conduct education and training for specific groups in our communities, such as women, youth, families, and vulnerable peoples. Over the past few years, we have provided training and education on topics, including:

- Access to education and career opportunities
- Domestic violence, addiction, and vulnerable groups
- Gender equality
- Parenting and healthy homes
- Mother and child health
- Hygiene and sanitation practices
- Sexual health and reproductive rights



Programs and Initiatives

- Community teams – Our site-based teams work with local professionals, including social workers, teachers, and health practitioners to identify potential human rights risks and concerns.
- Training and capacity building – We provide education and training for COIs to help them understand and exercise their rights.

Monitoring

- Social audits – The assessment incorporates human rights and includes a checklist on security and human rights
- Senior management provides oversight of our security program.

OUR PERFORMANCE

Our corporate and site-level risk assessment processes consider social risks including human rights, worker rights, and child and forced rights. We have not identified any operations to be at risk for child labour or forced labour. We similarly have not identified any operation to be at risk for violations of Indigenous' rights⁽¹⁾. None of the communities near our mining operations have identified themselves as having Indigenous origins and national governments have not made that designation.

Security and Human Rights

The priority for all security programs at Pan American Silver is to protect our people and our assets. Our

objective is to act in accordance with local laws while being mindful of international practices and principles, particularly with regard to the use of force. In 2018, we initiated a number of activities under the framework of the Voluntary Principles on Security and Human Rights, including an assessment of security risks at our operations and projects. At our operating locations, we identified our main security risks to be crime, potential violence associated with labour unrest and civil unrest.

Training of Security Personnel

We carefully review the use of armed private security personnel and its relationships with public security entities. Our goal is to minimize the deployment of armed private security to only those operations where and at times it is deemed necessary. Our compliance program is also a key element of the security process, providing an additional guidance and verification of our relationships, support, and interface with public security forces.

We contract only unarmed private security guards at our sites in Argentina, Bolivia and Peru. We contract armed, private security guards at our facilities in Mexico. These contractors have little interaction with community members, and in the event that they do, our priority is the safety of community members and respect for their rights as well as the security of our assets. We therefore require the companies providing security personnel to provide their employees with human rights training according to international standards before allowing these employees at our sites.

(1) The scope of this report does not include our newly-acquired Tahoe mines. We recognize the Indigenous communities near some of those mines and look forward to working with them to address any concerns and achieve mutually positive outcomes. A court ordered ILO 169 Consultation process was underway at the time of our acquisition of the Escobal mine in Guatemala.

Security Incidents at Dolores

In May 2018, an increase in criminal activity and security incidents along the access roads to the Dolores mine in Mexico led us to suspend the transportation of mine personnel and materials to and from the mine. As our primary concern is the safety of our workers, we temporarily curtailed certain mining activities. Following increased patrols and enforcement by the Mexican authorities, the security situation on the access roads improved. Within two weeks, we were able to resume transportation of supplies, and within a month, Dolores was operating at full capacity.

The town closest to the mine site, Arroyo Amplio, was also affected by the insecurity in the area. The majority of the town's 250 families temporarily left their homes due to concerns for their personal or family safety as a result of the increased criminal activity and security incidents. Pan American Silver has worked hard over the years to build strong relationships with the people of Arroyo Amplio, and it was important to us to ensure that when the community members returned, they had access to food and essential supplies, as well as access to health and education services.

Due to our long-standing relationship with UNICEF, we sought UNICEF Canada's advice on how best to support the community and restore living conditions to normal. Based on this advice, we:

- Worked with local and regional governments to conduct an assessment of housing conditions
- Helped rebuild vegetable gardens for food
- Arranged for the return of key personnel, including the hospital nurse and teachers for the local school

- Supported the government in deploying a program to assess and treat post-traumatic stress disorder in children and vulnerable groups to help them better transition back into the community
- Worked with the local ejido⁽¹⁾ to restructure the mine's local procurement program, which had been affected by the conflict

As a result of our response to the security-related issues in the region, and our engagement with Mexican authorities, we have created deeper relationships with the people of Arroyo Amplio. Learning from partners such as UNICEF and sharing these learnings across our Company positions us to better support our neighbours in the future.

NEXT STEPS

- Enhance our social audit tool to include an improved gender, human rights, and security lens in the audit process.
- Develop our security management framework focusing on company-wide processes influenced by international best practices, including the Voluntary Principles on Security and Human Rights, the International Code of Conduct for Private Security Service Providers, UN Guiding Principles on Business and Human Rights, and UNICEF's Child Rights and Security Checklist.
- Conduct on-site assessments at Dolores and at the newly-acquired Escobal mine in Guatemala using the UNICEF's Child Rights and Security Checklist to assess our alignment with the Voluntary Principles on Security and Human Rights.

(1) Village lands farmed communally under a system supported by the Mexican government.





OUR PEOPLE

People are Pan American Silver's most important asset. We consider our employees and contractors as partners in sustainability, as they play a central role in the value-creation process for COIs. Our people provide the intelligence, the ideas and the energy that drive our operating and financial performance and inspire our continued progress in sustainable development.

MATERIAL TOPICS IN THIS SECTION

HEALTH AND SAFETY

EMPLOYEE ATTRACTION, RETENTION AND DEVELOPMENT

AWARDS

Our Huaron mine was the recipient of the Chairman's Safety Award for best overall safety performance.

Anticona, a component of Morococha, was awarded first place in the category of underground mining in the Mining Safety Institute's 2018 National Safety Competition.

99%

OF OUR EMPLOYEES
ARE FROM THE
COUNTRIES WHERE
WE OPERATE

706K

HOURS OF SAFETY
TRAINING IN 2018

99%

OF OUR EMPLOYEES
ARE NATIVE
SPEAKERS OF THE
LOCAL LANGUAGE AT
OUR OPERATIONS

HEALTH AND SAFETY

WHY IS HEALTH AND SAFETY IMPORTANT?

Mining, by its nature, has potential hazards that must be carefully managed. On a daily basis, mine workers may be engaged in drilling and blasting rock, operating heavy machinery, using explosives and chemicals, working with high voltage electricity, gases, working at heights, working with high temperature materials as well as other complex and potentially dangerous tasks.

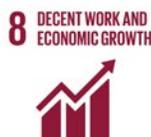
Pan American Silver is deeply committed to protecting the health, safety and well-being of our employees, contractors, suppliers, and community partners where we operate. Operating safely is a moral imperative. We believe that operating safe mines and building a culture of safety are directly related to our operational success and the ability to create long-term value for COIs and society.

Material Topic	Health and safety
Sub-Topic	Emergency management
Definition	Protecting the health, safety and well-being of our employees, contractors
Feedback From COIs	Our workers want safe working conditions and additional safety training.
How We're Responding	We increased training hours provided in 2018 by 11 percent. We launched a behaviour-based safety program in Peru.

POTENTIAL RISKS AND IMPACTS

- Industrial accidents, equipment failure, or ground falls resulting in worker injuries, delayed production, or loss of social acceptance

RELATED SDGS



OUR APPROACH

Safety is always a priority for us, with zero harm being the primary goal at all facilities. We are continually striving to prevent workplace injuries through improved training, technology, and innovation.

Policy

- Health and Safety Policy – Sets out our commitments and the specific actions required to meet our health and safety objectives.

Programs and Initiatives

- The Pan American Silver Safety Pledge and Cardinal Rules (Pledge and Rules) – Set out our fundamental expectations and rules for safety at sites, which apply to all employees and contractors. The Pledge and Rules have been incorporated into our induction training and safety talks.
- TSM Health and Safety Protocol – All sites conducted TSM self-assessments in 2018 and developed action plans to continually improve their performance.
- Serious Incident Reduction Initiative – Focuses on preventing serious incidents and fatalities through training and site-specific action plans. We conduct comprehensive investigations of serious incidents and use the findings to improve our performance.
- Health and safety supervisor training program – Provides leadership and technical training for front-line supervisors.

Monitoring

- Safety audits – Each mine is audited annually by a corporate safety department team led by the Director of Health and Safety. Areas identified as high priority are elevated to the Chief Operating Officer for immediate action.

Accountability:

- Senior Vice President, Technical Services & Process Optimization oversees safety in the organization.
- The Management Safety Committee, Director of Safety, and Safety Coordinator oversee implementation of company-wide initiatives identified through our risk assessment process, safety audit programs, and incident investigations.
- The Board's Health, Safety, Environment and Communities Committee reviews adherence to the health and safety policy, reviews safety statistics, trends, and incident reports, and provides input on the overall safety direction of the Company.

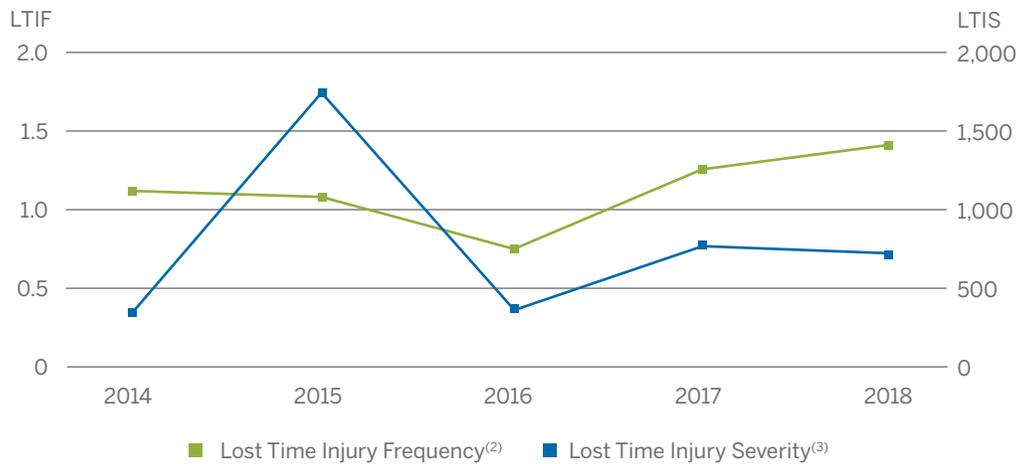
OUR PERFORMANCE

To reduce serious injuries at our mines, we have been working hard to improve our safety performance through enhancing our audit system and training processes. We are particularly proud of the safety achievements at four of our mines, where hours worked without a lost time injury (“LTI”) exceeded 1 million hours.

Alamo Dorado	+7.8 million hours
La Colorada	+1.5 million hours
Dolores	+4.2 million hours
Huaron	+1.4 million hours

Despite overall performance improvements in the past few years, in 2018, the number of LTIs increased to 25, which resulted in a lost time injury frequency (LTIF) of 1.41, and a failure to meet our goal of 1.20. Our safety performance, however, continues to be in line with or substantially better than industry performance of US metal mines.

SAFETY PERFORMANCE⁽¹⁾



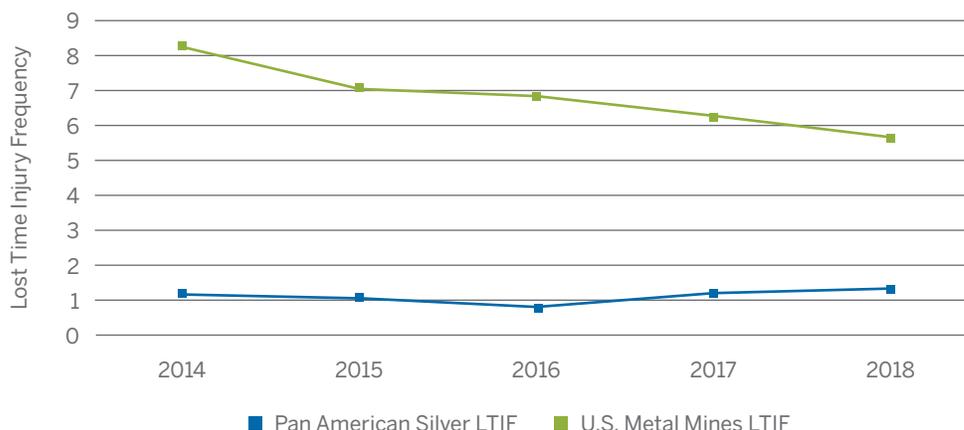
(1) Includes employees and contractors at operating mines, and active development and exploration projects.

(2) Lost time injury frequency is calculated as the number of lost time injuries, including fatalities, in the exposure period multiplied by 1 million hours and divided by the total number of hours worked in that period.

(3) Lost time injury severity is calculated as the number of workdays lost due to lost time injuries multiplied by 1 million and divided by the total exposure hours. We count 6,000 lost workdays in the event of a fatal accident.



PAN AMERICAN SILVER LOST TIME INJURY RATES⁽¹⁾ COMPARED TO INDUSTRY LOST TIME INCIDENT RATES IN THE UNITED STATES REPORTED BY U.S. METAL MINES⁽²⁾



(1) Pan American Silver lost time injury frequency (LTIF) is calculated as the number of lost time injuries, including fatalities, in the exposure period multiplied by 1 million hours and divided by the total number of hours worked in that period.

(2) U.S. Metal Mines lost time injury frequency (LTIF) is calculated per 1 million hours. The sum of fatal and non-fatal lost days are taken as equivalent to Pan American Silver lost time injuries. Source: Mine Injury and Worktime, Quarterly, Office of the Assistant Secretary for Mine Safety and Health, 2018.

We have found the most common lost time incidents to be the result of operating machinery, haulage, rock fall, slips, and falls. Workers not following standard operating procedures has been identified as a key contributing factor to safety incidents.

Zero fatal incidents is Pan American Silver’s long-standing goal, and in 2018 we were very saddened to experience a fatality at our Dolores mine, as well as a severe accident at our COSE project in Argentina. A common root cause identified in both incidents was a failure of workers to follow standard operating procedures. Preventative actions identified to reduce the possibility of similar occurrences in the future included:

- Enhancing contractor management programs, including supervisor training; equipment operation authorization/certification.
- Improving work procedures for certain tasks/ equipment and training on updated procedures.
- Re-training workers on the Pledge and Rules.

Serious Incident Reduction Initiative

The mining industry has significantly reduced overall injury rates, but when injuries do occur, they tend to be serious. Consequently, we are continually working to prevent injuries. In 2016, we expanded our extensive training program, focusing on two aspects of our Serious Incident Reduction Initiative - culture and supervisory training. By the end of 2017, we had trained the majority of our front-line supervisory workers on the technical and leadership skills necessary to change behaviour and on training others to always put safety first. During 2018, we continued to bolster existing programs by creating greater

awareness amongst our personnel and reducing the occurrence of unpredictable events and human error that are often at the root of serious incidents.

In 2018, we piloted a behaviour-based safety program at our two Peruvian mines. The program objective is to reduce the number of safety incidents caused by human error by empowering workers to take a more active role in their own safety as well as to build a mine culture that supports workers in consistently making safe choices. We plan to continue refining the program at Huaron and Morococha and roll it out at our Dolores mine.

Safety Training

In 2018, we completed over 700,000 hours of training at our sites, a 10 percent increase in training hours over 2017.

Due to supervisor turnover at some of our sites, we will be conducting another round of supervisor training in 2019.

SAFETY TRAINING HOURS IN 2018

Safety Training Type	Total Hours
General Safety	400,802
Mining Induction	127,439
Geotechnical	9,552
Formal Safety Meetings	152,261
Mine Rescue	16,439
Total ⁽¹⁾	706,493

(1) Total training hours for employees and contractors at operating mines, and active development and exploration projects.

Health and Safety Audits

In 2018, all sites conducted self-assessments against the TSM Health and Safety Protocol. All sites, other than Dolores (where a fatality occurred), met the TSM Level target criteria. Our sites also developed action plans to continually improve their TSM scores.

Although the number of non-compliance findings in all categories increased in 2018 over 2017, this is a reflection of an expanded focus on safety auditing as part of the initiative to reduce the number of serious incidents.

HEALTH AND SAFETY AUDIT RESULTS



SAFETY PLEDGE

Our Pledge and Rules are designed to reinforce a culture of safety throughout the organization. Our objective is for everyone to understand that safety is a personal as well as shared responsibility. The Pledge and Rules have been incorporated into our induction training and safety talks.

I pledge that I will always:

- Be responsible for my personal safety and the safety of those around me.
- Remember that accidents are preventable.
- Follow Company rules, regulations, policies, and procedures.
- Refrain from doing any task I am not adequately trained to do or feel uncomfortable in doing.
- Practice good housekeeping.
- Refuse to take shortcuts or be involved in any horseplay.
- Report any accident, injury, unsafe condition or unsafe practice to my supervisor.
- Communicate frequently with my supervisor, making sure that I understand the tasks assigned to me. If I am unsure I will ask.

Innovation

The industry is continually evolving thanks to new research and innovation, and we are always looking at new equipment and technology to evaluate how this may help improve our mine safety. Adopting mechanization, particularly in our underground mines – such as replacing hand held drills with mechanized equipment – means our workers are exposed to fewer hazards, and this helps keep our people safe. In 2018 we:

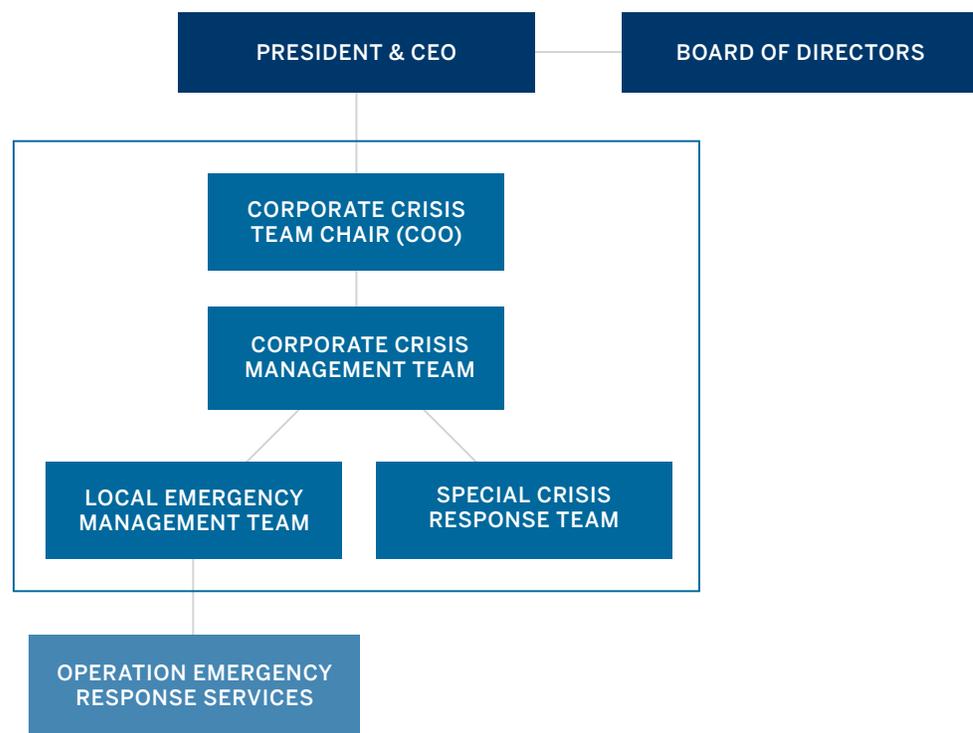
- Installed enclosed escapeway ladderways, designed to expedite emergency exits from underground mines, at our COSE project. Going forward, we will install these ladderways at our Joaquin and Dolores mines.
- Tested the use of an underground mobile equipment training simulator at our La Colorada mine.
- Piloted fatigue monitoring equipment for open pit haul truck operators at our Dolores mine.

NEXT STEPS

- Roll out the Pledge and Rules and implement accident reporting procedures at our newly-acquired Tahoe mines.
- Review safety systems and operating practices at our newly-acquired Tahoe mines to identify and integrate leading practices.
- Train new frontline supervisors and further develop the behaviour-based safety pilot program.



CRISIS MANAGEMENT AT PAN AMERICAN SILVER



Emergency Preparedness and Crisis Management

Emergency preparedness and crisis management is a component of sustainability management. We are not only responsible for the health and safety of our own workforce, but also for managing any potential impacts on local communities and the environment from incidents outside normal operations, such as fires, spills, and infrastructure failure. Proper emergency preparedness requires both an effective response to an incident and informed and prepared communities and local government agencies.

Crisis Management at Pan American Silver

In 2018, we updated our corporate crisis management plan to further align with the TSM Crisis and Communications Planning Protocol. All our sites have

emergency response plans, which are linked to the corporate-level plan. Where relevant, our site teams work with local emergency services on training and coordination with nearby mining operations. In 2018, site-level teams ran simulations of their emergency response plans.

We are working to build processes and procedures that improve communication and support between senior management and mining operations, thereby providing more effective management of incidents. Our new Corporate Director of Security and Crisis Management will lead the integration of the newly-acquired Tahoe operations into our Crisis Management framework and coordination of the Corporate Crisis Management Team.

EMPLOYEE ATTRACTION, RETENTION AND DEVELOPMENT

WHY IS EMPLOYEE ATTRACTION, RETENTION, AND DEVELOPMENT IMPORTANT?

A stable and skilled workforce is key to any organization’s success. In geographically diverse organizations, multi-faceted and multi-cultural work forces can bring a wide array of experience, knowledge, background, culture and heritage which can lead to innovation, enhanced operations, and improved relationships with COIs.

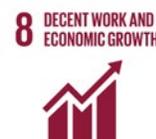
In the mining industry, it can be challenging to achieve a skilled, stable, and diverse workforce due to remoteness of operations, local demographics, and competition for talent. To be competitive and provide value to our COIs, our Company needs to attract, retain and develop the best talent. That is why we offer our people long-term, quality employment with competitive compensation and opportunities for professional development. We are committed to building a diverse, inclusive organization, representative of the communities in which we operate.

Material Topic	Employee attraction, retention, and development
Sub-Topic	Employment conditions and benefits Employee and contractor training and development Inclusion and diversity and equal opportunity Labour Relations Non-discrimination and pay equity
Definition	Creating the right conditions to attract, develop, and maintain a talented workforce
Feedback From COIs	Employees and potential employees look to us to provide fair compensation, stable employment, development and training.
How We’re Responding	We are deploying human resources programs that align the employee experience with a successful long-term mining business.

POTENTIAL RISKS AND IMPACTS

- Competition for talent and skills shortages
- Labour disruptions and work stoppages
- Low productivity and efficiency

RELATED SDGS



OUR APPROACH

Recruiting and retaining qualified personnel is critical to our success. In managing our human resources programs, Pan American Silver focuses on the following key principles:

- Creating long-term, stable employment
- Providing competitive compensation
- Providing quality benefits
- Providing opportunities for training and professional development
- Fostering an inclusive work environment

Policy

- Global Code of Ethical Conduct – Sets out corporate expectations against workplace bullying and harassment. It also supports diversity and the maintenance of an inclusive work environment, free from discrimination.
- Board Policy and Senior Management Diversity Policy – Articulates our commitment to considering diversity when recruiting, developing and appointing our senior management team and Board members.
- Management Policy Statement – Defines diversity for Pan American Silver and sets out our position and expectations and position on diversity and inclusion.

Programs and Initiatives

- Site-level training programs – Provide necessary skills and development opportunities to meet site-specific current and future needs.
- Leadership Development Program – Focuses on the personal and professional development of current and future leaders.
- Inclusion and Diversity Program – Fosters an inclusive work environment through a focus on gender, national culture, and generational diversity

- Site-level union agreements – Improve safety standards and working conditions at our operations by working with union leaders.

Accountability

- The Senior Vice President of Corporate Affairs has functional oversight of human resources in the organization.
- Corporate Inclusion and Diversity Advisory Committee and site-level sub-committees oversee inclusion and diversity initiatives.
- Country and site-level personnel provide human resources support.

OUR PERFORMANCE

The mining sector is among the highest-paid in each of the countries where we operate. We invest in our workforce, offering meaningful employment and fair compensation. We recognize that we must provide competitive compensation and benefits programs to attract and retain skilled and motivated employees. We regularly benchmark compensation to ensure we are paying in line with market trends. In setting our compensation packages, we also consider the standard of living and quality of life of our workers. We want to ensure our lowest-paid employees receive at least a livable wage - a wage enabling a worker to maintain a safe, decent standard of living and quality of life within the community. The actual amount varies by location, but our compensation far exceeds the legal minimum wage in each location.

In 2017, we calculated the livable wage for each of our work sites and compared this to our pay scales. Our wages exceed a livable wage in all but one country regional office location, which is being assessed. We plan to conduct another assessment in 2019.

Tracking turnover is one way we review our market competitiveness, assess the effectiveness of our

hiring practices, and evaluate our performance as an employer. Being a lean, decentralized company and utilizing contract workers only during peak demands, means we can better maintain our workforce during downturns.

Our turnover rate in 2018 was approximately nine percent. As a mining company, our turnover rates are site-specific, responding to local labour market competition and industry changes at each location. At the operations level, competitive environments for skilled labour and new opportunities at new mines are generally responsible for voluntary turnover.

At the senior management level, our turnover is below five percent. We focus on building a culture of openness and respect, and shared values around safety, sustainability, and achievement. We believe that these shared values and common commitment to Pan American Silver's objectives are responsible for the low turnover amongst the senior management team.

Training and Development

To retain a skilled workforce, we invest in the development of our employees. Each operation develops training programs and schedules based on the needs and skill requirements of that mine.

Leadership and management training is also a key component of our people development strategy. Through our Leadership Development Program (LDP), we have identified 250 leaders and managers from diverse backgrounds who are in positions to influence business outcomes. We believe these employees will drive Pan American Silver's future success. Our LDP is designed to develop future leaders by deepening their understanding of the mining industry and our business, enhancing their management skills and leadership capabilities, and reinforcing both Pan American Silver's core leadership values and its corporate values. To date, we have trained 150 leaders. Approximately 30 employees complete this program successfully each year.

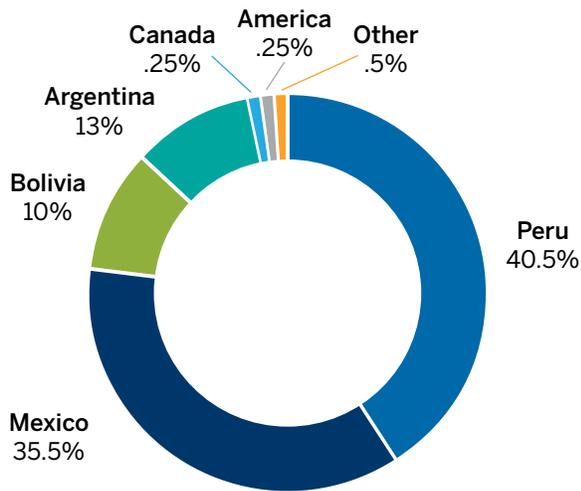


Fostering an Inclusive Work Environment

Awareness and promotion of diversity can foster an inclusive work environment where individuals are treated fairly and with respect and given equal opportunity to develop and advance. Our focus is on three key aspects of diversity – gender, national culture, and generational.

In 2017, we established an Inclusion and Diversity Advisory Committee to help us build a more inclusive work environment. In 2018, we established inclusion and diversity sub-committees at each mine site that will be responsible for developing annual site-specific inclusion and diversity targets.

PERCENTAGE OF EMPLOYEES BY NATIONALITY

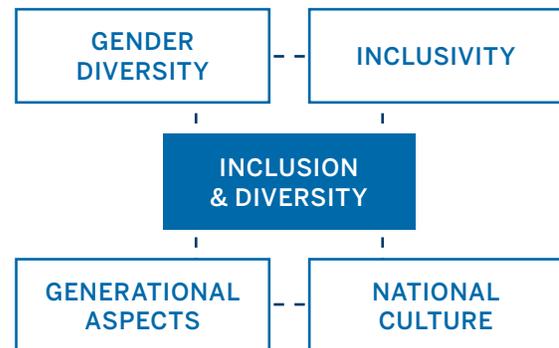


MANAGEMENT'S POLICY STATEMENT

We strive to achieve an inclusive work environment where all are treated fairly and respectfully, have equal access to resources and opportunities, are free from harassment, and can contribute to the success of the organization.

We embrace the diversity of our workforce and the communities where we operate. For Pan American Silver, diversity includes gender, ethnicity, age, race, religion, disability, cultural, socio-economic background, nationality, sexual orientation, language, educational background, and expertise.

We encourage participation and promote inclusion and diversity through our policies and practices, by providing opportunities to work with our Company as employees, contractors or suppliers, or through participation in our numerous social programs.



DIVERSITY SNAPSHOT

Employees	
Native language Spanish	99%
Native language English	0.6%
Home country in Latin America	98.5%
Employees & Contractors	
Women	6%
Over 50	11%
Under 30	23%

Gender Diversity

Women are underrepresented across the mining industry, particularly in technical and trades roles. Only six percent of our workforce are women - the majority of whom are in professional, administrative, and support roles. We are focused on developing female talent and attracting highly qualified female candidates by:

- Supporting external programs that seek to inspire women to enter and stay in science- and mining-related careers.
- Increasing the number of women participating in our Leadership Development Program.
- Setting gender percentage targets: our goal is to reach 10 percent female employees at Pan American Silver by 2020.

Cultural Diversity

We have mines in different countries. Whenever possible, we hire our workers and management from our host communities and countries as a means of contributing to local economic development. In addition, managers who speak the local language and understand the local culture help translate corporate values into site practices in a way that is appropriate for that site and the local norms. In 2018, 99 percent of our employees were nationals of the countries where the mine is located.

LOCAL EMPLOYEES BY COUNTRY⁽¹⁾

	Mexico	Peru	Bolivia	Argentina	Total
Senior Management ⁽²⁾	96%	100%	92%	73%	95%
Total Workforce	99.9%	99.8%	99.5%	99.3%	99.7%

(1) Permanent employees who are either born or who have the legal right to reside indefinitely in the same geographic market as the operation.

(2) Senior management includes directors, managers, and employees in superintendent-level or equivalent positions.

Although 99 percent of our employees have Spanish as their native language, to be inclusive and communicate more effectively, our standard practice is to conduct meetings in both Spanish and English, and use simultaneous translators so all participants can comprehend, participate, and contribute. Cross culture awareness is also a component of our LDP.

Generational Diversity

To enable all employees to contribute fully, it is important that management and employees understand the needs and expectations of employees in different stages of life. This is of particular importance as the older generation of miners approaches retirement; it is imperative to transfer their knowledge to younger generations.

Non-Discrimination

We work to avoid discrimination not only in our workplace, but also against our community members and service providers. No incidents of discrimination were reported through the whistleblower hotline or through human resource channels in 2018.

Labour Relations

At each of our sites, a percentage of our employees and contractors are unionized. We have agreements with our various unions and place significant emphasis on maintaining positive relationships with the unions and unionized employees. In 2018, none of our operations experienced strikes or lockouts exceeding one week's duration.

NEXT STEPS

- Roll out initiatives to further our inclusion and diversity objectives.
- Integrate employees from Tahoe Resources into our management teams and culture.

Click here to see our GRI data tables with additional data for:

GRI 102-8 Information on employees and other workers

GRI 401-1 New employee hires and employee turnover

WOMEN IN NON-TRADITIONAL ROLES

Jessica Huamantalla Orosco

Senior Geologist, Morococho

"I became the first female geologist in Argentum at the age of 24. My career at the company has been in two phases: first I started as a Junior Geologist. I then took two years off to advance my studies, and became a senior geologist in 2013. I want to continue my career advancement in the Company. I know the work is challenging and I have a lot to learn, but I am determined to do it."



Ana Velia Gonzalez Sanchez

Mine Supervisor, La Colorada

"My experience in mining has been unparalleled. I have always felt a lot of support from the Company, from my superiors and from my colleagues. They all show respect towards me and have contributed a lot to my professional and personal development. My father was a miner and since I was six years old. I always envisioned working in a mine, which is why I decided to study mining. I am proud to be a positive example for my daughters and show that women can get ahead in whatever we set out to do."



Lidia Sosa Laureano

Laboratory Technician, Huaron

"I really enjoy my work and it gives me purpose. I started as an assistant in the laboratory and now I am a lab technician. I believe the characteristics of fairness and honesty are important for contributing to the Company, especially when it relates to transparency in ore grades. I love my company and I know how important our work is to guaranteeing the grades that we produce."



Ana Pomacino Angel

Mining Software Analyst, Huaron

"I joined the Company thanks to an invitation for training and career development that I received from Pan American Silver. I did not hesitate and started



as a mining software analyst for the geology team at Huaron. My next challenge is to carry out the estimation of resources and reserves using the geostatistical method. I want to continue to grow professionally, and I know at Pan American Silver I can do so."

Stefany Zevallos Maldonado

Junior Environmental Engineer, Morococho



"I joined the Company as an environmental trainee in January 2016 and now I am a Junior Environmental Engineer. I want to continue growing professionally, and my future plans are to learn new languages as well as further specialize in my area of work."



ENVIRONMENT

Responsible environmental management is a cornerstone of Pan American Silver's strategy and our vision to be the world's pre-eminent silver producer. We are committed to operating our mines and developing new projects in an environmentally responsible manner.

MATERIAL TOPICS IN THIS SECTION

WATER

AIR EMISSIONS AND ENERGY

BIODIVERSITY AND MINE CLOSURE

TAILINGS AND WASTE MANAGEMENT

ZERO

SIGNIFICANT
ENVIRONMENTAL
INCIDENTS
OCCURRED AT
OUR OPERATIONS

69%

OF OUR WATER
USED WAS
RECYCLED

TWO

INDEPENDENT
TAILINGS
SAFETY REVIEWS
COMPLETED IN PERU
AND ARGENTINA

MANAGING ENVIRONMENTAL IMPACTS

Pan American Silver takes every practical measure to minimize and mitigate the environmental impacts of our operations in each phase of the mining cycle – from exploration through development, construction, operation, closure, and post-closure.

We strive for continual improvement and have adopted best practice international standards, including MAC's TSM program, across all our operations.

OUR MANAGEMENT APPROACH

Policy

- Environmental Policy - Sets out commitments to address environmental issues, including: compliance with environmental standards, laws and regulations; efficient use of energy and other natural resources; consultation with COIs; and utilizing effective and proven practices to minimize environmental impacts.
- Corporate Environmental Standards – Our internal standards are intended to help sites implement best practices to manage and mitigate impacts in key areas. We have developed standards for tailings as well as biodiversity and mine closure. We are working on converting previous draft guidelines to add to our set of standards, including guidelines for: water use and management; energy and air emissions; waste management and recycling; and hazardous chemicals.

Plan

- Baseline data collection and pre-construction environmental impact assessments help us plan our work and monitor the impacts of our operations.

Implement

- Programs and initiatives – Our programs are designed to manage and mitigate our impacts on the environment and communities, and to maximize the benefits of the environmental knowledge and expertise we develop for other stakeholders in the regions where we operate.

Internal Capacity Building

- Training – We train our local teams on standards and procedures to continually improve our environmental management performance.

Evaluate

- TSM protocols – Our sites self-assess their performance against relevant protocols and develop corresponding action plans for improvement.
- Environmental Audits – Each mine is audited at least every other year to assess the mine's facilities, operating procedures and control systems to ensure potential risks are being managed correctly. Audits are conducted by professionals from our other mines. The audit process fosters sharing of best practice and integration among mines and helps ensure that site level procedures are consistent with our corporate standards.



Accountability

- Each operation is responsible for the development and implementation of procedures and programs that comply with our Environmental Policy and corporate initiatives.
- The Vice President, Environment and Sustainability oversees environmental issues for our Company.

OUR PERFORMANCE

No significant environmental incidents (SEIs) occurred at our mines in 2018. We define SEIs as those that negatively impact the environment or communities outside of our mines or project sites, including environmental incidents that significantly impact the community perception of Pan American Silver. Our focus on prevention, environmental management through our auditing program, and emergency preparedness and crisis management at the site and corporate levels supports our ability to avoid SEIs.

In 2018, our corporate office and sites conducted self-assessments against the TSM protocols and developed action plans to address gaps and improve internal guidelines. Our objective is to achieve at least TSM Level A criteria across all protocols and frameworks by 2020. Our newly-acquired Tahoe operations will have three years to achieve at least TSM Level A criteria.

- We saw advancement in the implementation of an integrated safety and environmental management system at our Peruvian operations due to the strong support and leadership of the Peruvian senior

management team. At Huaron and Morococha, our team is working to drive integration of the TSM protocols with the environmental management system.

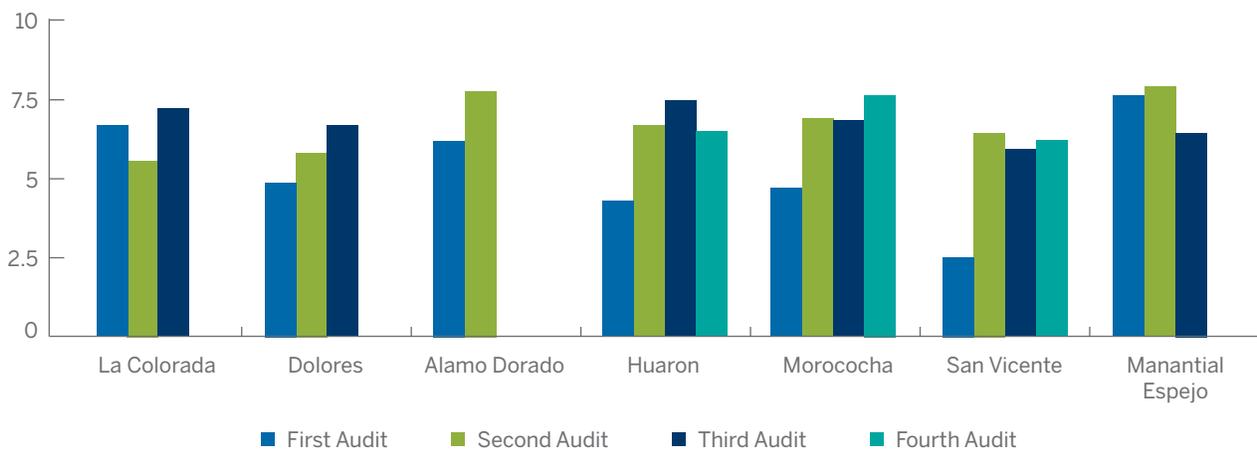
- Manantial Espejo completed an update of its environmental management system to align with TSM protocols.

Environmental Audits

Having completed several audit cycles at each site, we observed that environmental performance can be affected when our operations undergo significant changes. For example, La Colorada's performance was temporarily affected, as reflected in the second audit, when the mine was under expansion. Changes in operations at Manantial Espejo, including suspension of open pit mining and the addition of two new nearby projects, resulted in reduced performance during the third audit. In comparison, we observed major performance improvements following an initial audit once the most significant, and often historic, environmental issues have been addressed. This was the case at Huaron, Morococha, and San Vicente.

Recent audits at all of our mines have reported only low level non-conformances, such as lack of separation of recyclable waste and lack of correct signage but no significant non-conformances. We plan to address these issues through improved management systems and operator training as part of the TSM process.

ENVIRONMENTAL AUDIT PERFORMANCE⁽¹⁾



(1) "Environmental Audit Performance" is a composite score that combines levels of non-conformances where 10 is a perfect score with zero non-conformances.

WATER

WHY IS WATER IMPORTANT?

Clean water is of high environmental and social value to COIs. Access to water is recognized by the United Nations as a human right. Water is also a necessary input for mining processes and water extraction, or dewatering, is often required to allow safe mining of deeper ore bodies. As some of Pan American Silver's mines and projects are situated in predominantly arid areas, it is essential that we manage the impacts of our activities on water availability, optimize our water use, and respect the rights of other users.

Material Topic	Water
Sub-Topic	Water quality Water use
Definition	Managing the impacts of our activities on water quality and availability
Feedback From COIs	Communities are concerned about water scarcity and continued access to water.
How We're Responding	Through process improvements, we increased water recycling at San Vicente by more than 40 percent and Morococha by more than 25 percent. We are working with local authorities to handover the Pan American Silver-built community water supply at Alamo Dorado.

POTENTIAL RISKS AND IMPACTS

- Water scarcity and access for local communities
- New or more stringent water regulations
- Water discharges potentially affecting water quality

RELATED SDGS



OUR APPROACH

Effective water stewardship is essential to protect shared resources and avoid impacts that may occur within and beyond our operating boundaries. Our management approach includes:

Programs and Initiatives

- Water baseline studies – All our operations have baseline studies that identify water availability and quality prior to mining or our ownership, in the case of historic mines (including at Morococha, Huaron, San Vicente, and La Colorada). Many of these studies have identified previously unknown water resources or infrastructure opportunities that improve water availability for COIs.
- Site-wide water balances – Each mine site maintains a water balance that is continually updated with regular water monitoring data.
- TSM Water Stewardship Framework and Protocol – We are aligned with the Framework and are in the process of implementing the new Protocol.

Monitoring

- Water quality – We monitor water quality downstream of our mines to identify water-related risks and opportunities, and ensure that our water use and discharge decisions do not compromise other users and ecosystem needs. We monitor the quality of water discharged from our mines' wastewater treatment plants to ensure that we comply with water quality standards.

OUR PERFORMANCE

In 2018, our sites set water goals and identified practical projects to reduce their water use. Key achievements include:

- Increased water recycling by more than 40 percent at San Vicente by improving tailings thickening in the process plant.
- Increased water recycling by more than 25 percent at Morococha through improving water management in the process plant.
- Recommended water recycling in Huaron.

We are in the process of constructing a major upgrade to our new mine wastewater treatment facility at San Vicente, which will be completed in 2019.

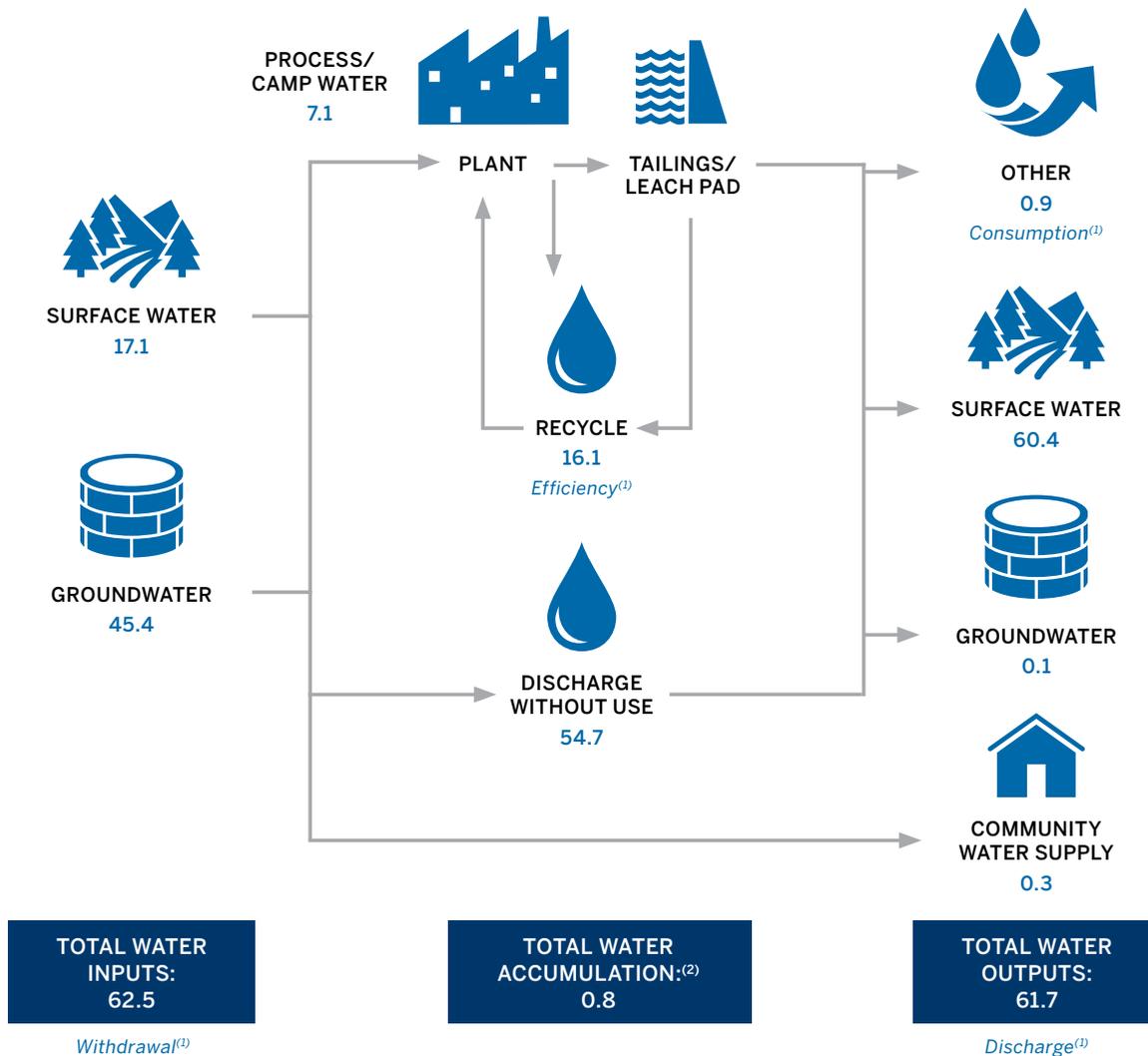
Our water balance graphic shows how much water we extract, recycle and discharge. We obtain water both from ground water, including the dewatering of our mines, and from surface water sources such as lakes or rivers. The vast majority of groundwater extracted at our operations is discharged without use, into local surface water, which is available to the general public. This new water is supplemented by water recycled from our process plants, tailings facilities, and heap leach pads to be used for ore processing. We also use new and recycled water for drilling, dust suppression, and our camps. Some of the water that we extract is provided directly to local communities to help meet their water needs. "Other" water output refers to water lost due to evaporation or retained in tailings or heap leach pads.

Water Use Intensity

Water intensity is the best measure of how efficiently we use water in our mines. The average combined water use intensity at our Mexican, Bolivian, and Argentine mines is approximately 0.27 m³/tonne of ore processed, a level that has remained relatively static over the last three years. Water use intensity at our two Peruvian mines, Huaron and Morococha is greater and averages between 3.6 and 4.2 m³/tonne of ore processed. This is due to the fact that both Huaron and Morococha are located in areas with excess precipitation and relatively abundant surface water, and both use gravity-driven water supply systems - meaning that water flows from the source, through the mineral processing plant, is then treated, and released downstream. These favourable conditions reduce the energy use and greenhouse gas

2018 COMPANY WIDE WATER BALANCE

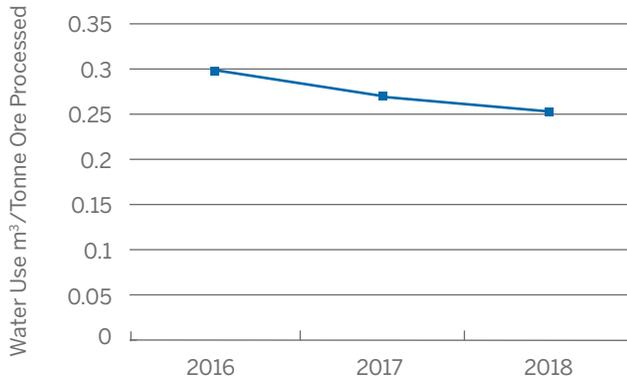
(MILLION M³)



(1) As defined in 'A Practical Guide to Consistent Water Reporting', International Council on Mining and Metals (2017).

(2) Reflects additional water collected in water reservoirs at Dolores and Manantial Espejo.

WATER USE INTENSITY



emissions at both sites, which do not require energy to pump water. Also, additional water and lime in Morococha's tailings facility provide a net benefit to the region by helping to neutralize acid drainage from abandoned, upstream, historic mine waste.

Dolores is our most water-efficient operation with a water use intensity of 0.05m³/tonne of ore processed, which is well below our average (excluding our Peruvian mines) of 0.27m³/tonne. Our Dolores mine is located in the upper catchment of the Yaqui River, which has been identified as a catchment of high water stress by both the World Resources

Institute and the World Wide Fund for Nature. Total water use by the Dolores mine is less than 0.3 percent of the natural recharge to the Yaqui River catchment. Despite the minimal impact our operation has on water availability, we continue to search for initiatives to reduce water use at Dolores and all other operations.

NEXT STEPS

- Improve water use accounting at all operations and search for opportunities to reduce water use intensity, as part of our corporate goal setting.
- Continue implementation of the new TSM Water Stewardship Protocol.

Click here to see our GRI data tables with additional data for:

303-3 Water withdrawal

303-4 Water discharge



AIR EMISSIONS AND ENERGY

WHY ARE AIR EMISSIONS AND ENERGY IMPORTANT?

Mining is an energy-intensive industry. Mines consume energy through extraction, production, and transportation of products. Energy use, particularly through fuel combustion and electricity consumption, causes greenhouse gas (GHG) emissions, which contribute to climate change. Dust generated by activities, such as blasting and ore crushing, can potentially affect air quality if not properly managed. For Pan American Silver, reducing emissions and energy use provides us with cost savings and environmental benefits within and beyond our operating boundaries.

Material Topic	Air emissions and energy
Sub-Topic	Air and GHG emissions management Energy use
Definition	Reducing our energy consumption and managing air and greenhouse gas emissions
Feedback From COIs	Industry associations, regulators, and NGOs are prioritizing improved disclosure and reductions in GHG emissions.
How We're Responding	We are members of the World Economic Forum's Alliance of CEO Climate Leaders. We reduced our energy use compared to business-as-usual through improvements to pumping systems (San Vicente), and ventilation control systems and our energy supply substation (Huaron).

POTENTIAL RISKS AND IMPACTS

- New energy regulations and rising energy costs
- Physical risks of climate change, including extreme weather events and resource shortages
- Human health and environmental impacts

RELATED SDGS



OUR APPROACH

We continually search for ways to improve the energy efficiency at our operations and development projects. Specific to air emissions and energy, our management approach includes:

Programs and Initiatives

- TSM Energy and Greenhouse Gas Emissions Protocol – Sites have self-assessed against the protocol and are in the process of developing improvement plans.
- Dust suppression programs – All our operations have dust suppression systems and active management of dust sources from mobile transport.



Monitoring

- Energy and fuel monitoring – We monitor energy and fuel use at all operations and estimate our greenhouse gas emissions on an annual basis. Our Mexican operations report independently audited greenhouse gas inventories to national authorities.
- Dust and air quality monitoring – To comply with relevant air quality standards at our operations, we conduct regular dust monitoring around our operations and also monitor the air quality of laboratory and refinery air extraction emissions.

OUR PERFORMANCE

Energy Use and GHG emissions

We use energy to mine, move, and process ore and waste rock as well as for mine ventilation and dewatering. The type and quantity of emissions from our operations are determined by the energy source and how efficiently we use this energy. The energy used at our sites comes principally from diesel fuel or regionally grid-sourced electricity. Grid-energy is cleaner and more efficient than onsite power generation, which does not include a renewable energy component.

We continually search out ways to improve the energy efficiency of our operations and have implemented power-line connections and improvements to mine ventilation systems over the past few years to achieve that goal.

We were successful in permitting a new waste rock facility at our Dolores mine which will reduce GHG emissions over the life of mine by 25,500 tonnes CO₂ equivalent compared to the current waste rock facility configuration.

KEY SOURCES OF GHG EMISSIONS AT OUR MINE SITES



HAULING/MINING



MINE OFFICE & CAMPS



VENTILATION



DEWATERING



MILLING

Air Emissions

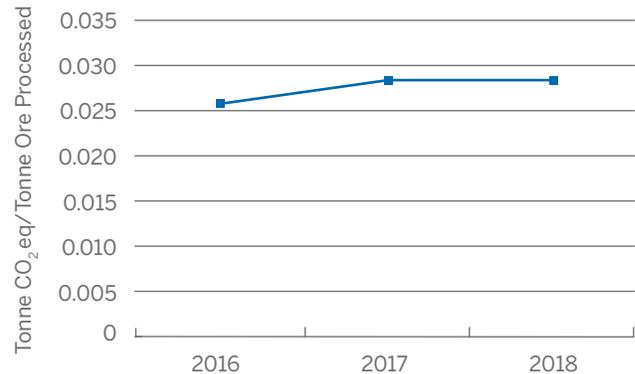
In 2018, our sites completed dust and laboratory fume monitoring in accordance with best practice. The results complied with relevant air quality regulations. We did not receive any dust-related community complaints through our grievance system in 2018.

GHG Emissions intensity

The more ore we process at our sites, the more energy we use. Also, as our mines become deeper, more energy is required for mine ventilation and dewatering and more fuel is required to haul ore and waste rock over greater distances. We track the intensity of our GHG emissions (emissions per tonne of ore processed), to help us gauge the overall energy efficiency of our processes and the effects of using cleaner grid energy.

Our GHG emission intensity did not change between 2017 and 2018. The increased emissions from the deepening of our mines and the operation of the pulp agglomeration plant at Dolores were largely offset by the closure of the Alamo Dorado mine and a reduction in emission intensity at Manantial Espejo, where ore stockpiles were the predominant feed to the mill.

GHG EMISSIONS INTENSITY⁽¹⁾



(1) The GHG Emissions intensity was calculated using the total GHG emissions divided by Tonnes of ore milled. The National Inventory Report Canada 2018 was used to calculate Direct (Scope 1) GHG emissions. The global warming potential (GWP) is based on the information provided by the Government of Canada. Gasses included in this calculation are CO₂, CH₄ and N₂O.

NEXT STEPS

- Continue to implement the TSM Energy and Greenhouse Gas Emissions protocol at all sites and look for opportunities to reduce greenhouse gas emission intensity.
- Develop an Energy Use and Air Emissions Corporate Environmental Standard.

Click here to see additional energy and emissions performance data:

302-1 Energy consumption within the organization

305-1 Direct greenhouse gas emissions

305-2 Indirect greenhouse gas emissions

BIODIVERSITY AND MINE CLOSURE

WHY ARE BIODIVERSITY AND MINE CLOSURE IMPORTANT?

Mining activities require the development of infrastructure, which alters the natural features of the local landscape. Open pit mines, processing mills, mine waste rock facilities, and roads can damage habitat, impact individual species, and affect overall ecosystem health. Mines have finite lifespans and mining companies are responsible for managing their impacts not only during mine operations, but also after mine closure. This means restoring land to a natural state and ensuring no health and safety risks remain from mining waste, equipment and infrastructure. At Pan American Silver, our desire to leave a positive legacy in our host communities means that we engage local communities and governments in planning mine closure well before a mine is in operation.

Material Topic	Biodiversity and mine closure
Sub-Topic	Biodiversity management Mine closure
Definition	Mine closure planning to minimize negative impacts on the environment, including biodiversity
Feedback From COIs	Communities and governments have voiced economic, environmental, and social expectations beyond the lifespan of our mines.
How We're Responding	We are implementing best practice mine closure techniques in the closure of Alamo Dorado which is now nearing completion and working to maximize positive biodiversity outcomes in post-closure. We completed a Corporate Environmental Standard on Biodiversity and Mine Closure and commenced implementation at our mines.

POTENTIAL RISKS AND IMPACTS

- Damage to ecosystem health and loss of biodiversity
- New or unanticipated closure, reclamation and remediation costs and regulatory requirements

RELATED SDGS



OUR APPROACH

From an environmental perspective, our objective is to return the land disturbed by our activities to as close to its natural state as possible. We work to make the transition from operations to closure as efficient as possible by starting the planning process early and collaborating with local communities. Our approach includes:

Programs and Initiatives

- Ecosystem baseline studies – We conduct detailed flora, fauna and ecosystem baseline studies to identify potentially sensitive habitats and species prior to commencement of mining or significant changes to our operations.
- Reclamation plans – Each site's reclamation plan includes measures to enhance biodiversity conservation.
- Biodiversity management plans – Each site has a plan to manage biodiversity during construction, operation, and closure.
- TSM Biodiversity Conservation Management Protocol – Our mines self-assessed performance against the protocol and are developing action plans for improvement.
- Biodiversity and Mine Closure Corporate Environmental Standard – We commenced site-level implementation of the standard in 2018.
- Closure plans – Each mine has a closure plan, and we update detailed closure costs estimates for all mines and projects on an annual basis.
- Engagement – We engage with local communities and other COIs to ensure that their closure and post-closure expectations are considered.

Monitoring

- Biodiversity monitoring – We monitor biodiversity at all our sites to identify potential new impacts and compare results with our baseline studies.
- Post-closure Monitoring and Maintenance - All our closure plans include many years of post-closure monitoring to ensure reclamation objectives are achieved.



OUR PERFORMANCE

Minimizing Impacts on Biodiversity

None of our mines are located in areas that are designated as having high biodiversity value. Our Huaron mine in Peru, however, is adjacent to the Huayllay national sanctuary⁽¹⁾. Baseline studies and monitoring have not identified any significant impacts on biodiversity from our operations. In fact, for some of our sites, ongoing monitoring shows an increase in biodiversity as well as in flora and fauna population densities. This occurs where we have purchased large areas of land, but only require a small portion for our operations. The remaining unused land is protected, and the absence of grazing activities and hunting has led to improved habitat creation. For example, in Argentina we own more than 57,000 hectares of land that is located outside our operations and protected from impacts such as sheep grazing and hunting. Flora and fauna surveys on this land in 2018 have shown an increase in abundance and diversity of species in the ecosystem. At our Dolores mine we are in the process of restoring 40 hectares of community land that was previously affected by cattle grazing and natural erosion in order to provide habitat for native fauna.

Reclamation

We conduct progressive closure, reclaiming disturbed land and waste rock facilities once they are no longer required by our operations. At the end of the mining lifecycle, we work to create landforms that integrate back into the natural landscape and provide quality habitat. This requires removing physical infrastructure and reclaiming remaining waste rock and tailings storage facilities. By the end of 2018, the accumulated area disturbed by our operations was 1,771 hectares. We reclaimed 89 hectares, primarily at Alamo Dorado.

(1) Huaron's operations are approximately 300 ha in size and located southwest of the Huayllay sanctuary (6,815 ha) which is a "rock forest" formed by volcanic activities.

Mine Closure

In 2016, we began implementing the largest mine closure program in our Company history, as the Alamo Dorado mine reached the end of open pit mining. Our closure plan was developed in collaboration with local communities and landholders and was the first ever to be formally approved by Mexican authorities under newly established procedures. Active closure is now complete and we are focused on revegetation of the waste rock facilities as well as ongoing maintenance.

In order to optimize our company-wide mine closure process, in 2018 we completed a detailed analysis of the actual costs of the Alamo Dorado plant demolition, erosion control, waste rock facility and tailings regrading, technical studies, and ongoing monitoring. The results of this work enable us to determine the underlying causes of costs that were underestimated. We then applied the lessons learned to the closure costs estimates at our other operations.

NEXT STEPS

- Continue to implement post-closure at Alamo Dorado and apply relevant lessons learned to our other operations.
- Continue site-level implementation of the TSM Biodiversity Conservation Management Protocol and our Corporate Environmental Standard on Biodiversity and Mine Closure.

Click here to see additional biodiversity performance data:

MM1 Amount of land disturbed or rehabilitated

TAILINGS AND WASTE MANAGEMENT

WHY ARE TAILINGS AND WASTE MANAGEMENT IMPORTANT?

Mining operations generate waste that can be in the form of waste rock, processed ore, tailings or sludges. Management of tailings facilities is a global priority for the mining industry, governments, and communities. If not managed properly, this waste can negatively impact the environment and human health in neighbouring communities. Mining processes also generate hazardous and non-hazardous waste, such as solvents and scrap metal. Pan American Silver works hard to ensure stable and long-term management of tailings and other mining wastes, as well as proper waste management and disposal. Both are essential to maintaining community and environmental health, as well as social acceptance.

Material Topic	Tailings and waste management
Sub-Topic	Solid waste management Spills Tailings facility management
Definition	Managing tailings facilities and waste disposal
Feedback From COIs	Governments, communities, investors and other COIs want to be sure that our tailings facilities are safe.
How We're Responding	We developed a Tailings, Water Dam, and Heap Leach Facilities Corporate Environmental Standard and commenced site-level implementation. We completed independent tailings storage facility safety reviews at Morococha and Manantial Espejo.

POTENTIAL RISKS AND IMPACTS

- Tailings, waste stockpile, or heap leach facility failure resulting in impacts on human and ecosystem health, property and community livelihoods
- Spills, acid drainage, or metal leaching resulting in water and soil contamination

RELATED SDGS



OUR APPROACH

We have systems in place for the safe management of our tailings facilities, water storage dams and heap leach pads. We actively seek to reduce our hazardous and non-hazardous waste generation by implementing management plans and procedures at each site.

External Best Practices

- Mining Association of Canada Tailings Working Group – We participate in this working group, which is responsible for developing best practice industry guidance. In 2018, major updates were completed to the TSM Tailings Management Protocol, Tailings Guide, and Operation, Maintenance and Surveillance Guide.
- Canadian Dam Association's Dam Safety Guidelines – We use the guidelines to conduct risk assessments of our facilities.

Programs and Initiatives

- Independent tailings storage facilities safety review – We are conducting safety reviews in order of priority based on a facility risk assessment.
- TSM Tailings Management Protocol – We are implementing the protocol at all of our operations, which will be completed within the year.
- Tailings, Water, and Heap Leach Facilities Corporate Environmental Standard – This standard aligns with the Canadian Dam Safety Guidelines and TSM Tailings Management Protocol and provides best practice guidance for our sites.
- Predictive modeling – We complete predictive models based on geochemical data and studies for acid drainage and metal leaching prior to mining and update those studies through regular monitoring during operation and closure.
- Waste management plans – All our mines have site-specific management plans for hazardous and non-hazardous waste, which include actions to maximize reuse and recycling opportunities.

Monitoring

- Geotechnical and environmental monitoring – We conduct regular monitoring at our tailings, water, and heap leach facilities.
- Water and soil quality monitoring – We monitor downstream water and soil quality at all operations

to ensure compliance with predictive models and water quality regulations.

- Waste monitoring – We have systems in place to monitor waste generation and disposal at all operations.

OUR PERFORMANCE

Tailings Facilities Management

Tailings are the by-products of processing and extracting metals from ore. During 2018, Pan American Silver managed six operating tailings facilities and one water storage dam. Our objective is to minimize potential harm and ensure that our facilities and systems are safe and operating in accordance with Canadian Dam Safety Guidelines and the TSM Tailings Protocol.

In 2018 we completed a new Corporate Environmental Standard on Tailings, Water, and Heap Leach Facilities, which is aligned with the Canadian Dam Safety Guidelines and TSM Tailings Protocol. The standard is being implemented at all sites.

We conducted a risk assessment of our tailings facilities in 2014 and designed a corresponding program of independent facility safety reviews. We have completed independent reviews at all our tailings and water facilities except La Colorada, which will be completed in 2019. Independent reviews will continue on a five-year basis, depending on the facility risk profile. We also have a closed dry-stack tailings facility at our recently-closed Alamo Dorado mine. We will conduct an independent review of that facility when closure work is completed.

Following extensive field evaluations and design efforts with an independent geotechnical engineering firm, in 2018 we completed the first phase of construction of our long-term La Colorada sulfide tailings facility expansion project. The innovative design provides a high degree of confidence in the stability of tailings deposition, while minimizing the long-term environmental footprint of the facility.

Mine	Type of Tailings Facility	Independent Facility Safety Reviews
Dolores	1 operating water storage dam and heap leach pads	2017
La Colorada	2 operating tailings facilities; 3 small closed historic tailings deposits	Planned for 2019
Huaron	1 tailings facility; 3 small closed historic tailings deposits	2014 and 2015
Morococha	1 operating subaqueous tailings facility	2018
San Vicente	1 operating tailings facility	2017
Manantial Espejo	1 operating tailings facility	2018

Waste management

Our operations generate small quantities of hazardous and non-hazardous materials, which require end-of-life recycling or disposal. When possible, we recycle or reuse these products at our operations. For example, used oil can become a heating fuel. For other waste, we follow local regulations in disposing of these materials either on site or at local certified disposal facilities.

Waste Types

Non-hazardous waste: tires, scrap metal, domestic waste, wood waste

Hazardous waste: used oil, solvents, batteries, reagent packaging, fluorescent lightbulbs

In 2018, our waste management plans and worker training programs were successful in reducing our overall waste generation and increasing reuse and recycling. The plant demolition and scrapping of the process facility at Alamo Dorado created a large increase in the reuse and recycling of inert waste.

In Peru, our Morococha mine signed a series of recycling agreements with local social welfare NGOs in Lima where they coordinate the sale of our recyclable materials. Our Huaron mine is working on similar agreements.

TYPES OF WASTE AND DISPOSAL METHODS

(tonnes)	2018	2017	2016
Hazardous or dangerous waste	999	1,023	1,422
Non-hazardous inert waste	925	1,288	1,360
Domestic waste to landfill	1,712	1,169	1,212
Reuse	320	608	560
Recycling	4,190	1,770	1,737

NEXT STEPS

- Continue site-level implementation of our Tailings, Water, and Heap Leach Facilities Corporate Environmental Standard and the TSM Tailings Management Protocol.
- Complete the independent tailings storage facility safety review at La Colorada.
- Develop a Corporate Environmental Standard for hazardous and non-hazardous waste management.

Click here to see our GRI data tables with additional data for:

306-2 Waste by type and disposal method

306-3 Significant spills

MM3 Total amounts of over burden, rock, tailings, and sludges

GRI DATA TABLES

102-8 Information on employees and other workers

	Admin	Geology	Engineering	Labour	Total Employees	Contractors	Total Employees and Contractors
Corporate Office	33	5	9	-	47	1	48
Peru							
Offices	49	-	-	-	49	-	49
Exploration	-	16	-	-	16	-	16
Huaron	65	34	6	803	908	732	1640
Morococha	89	46	66	662	863	441	1,304
Pico Machay	3	0	0	0	3	0	3
Total Peru	206	96	72	1,465	1,839	1,173	3,012
Mexico							
Durango Office	34	1	3	5	43	-	43
Chihuahua Office	1	1	3	1	6	-	6
Exploration	1	4	1	8	14	-	14
Alamo Dorado	-	-	1	-	1	-	1
La Colorada	30	6	92	756	884	115	999
Dolores	53	9	118	445	625	813	1,438
PASC Projects	24	3	19	-	46	278	324
Total Mexico	143	24	237	1,215	1,619	1,206	2,825
Bolivia							
Offices	26	-	3	-	29	1	30
Exploration	-	1	-	-	1	-	1
San Vicente	76	7	49	286	418	173	591
Total Bolivia	102	8	52	286	448	174	622
Argentina							
Offices	25	-	-	-	25	3	28
Exploration	-	-	-	-	-	-	-
Manantial Espejo	72	5	73	304	454	75	529
Navidad	11	-	-	19	30	3	33
Cose	9	-	8	22	39	10	49
Joaquin	9	1	6	17	33	35	68
Calcatreu	-	-	-	-	-	-	-
Total Argentina	126	6	87	362	581	126	707
Total	610	139	457	3,328	4,534	2,680	7,214

102-12
102-13

External initiatives
Memberships or associations

Canada and USA

- Mining Association of Canada
- Women in Mining
- Women Who Rock
- The Silver Institute
- Prospectors and Developers Association of Canada (PDAC)
- Northwest Mining Association
- Engineers Without Borders
- UNICEF Canada

Peru

- Patronato Plata del Peru
- Senati
- Sociedad de Minería, Petróleo y Energía
- EITI Peru

Mexico

- Cámara Minera de México (CAMIMEX)

Argentina

- Cámara Argentina de Empresas Mineras (CAEM)
- CADIM (Colegio Argentino de Ingenieros en Mineras)
- OLAMI (Organismo Latinoamericano de Minería)
- CEADS (Consejo Empresario Argentino para el Desarrollo Sostenible)
- Green Cross
- Fundación IAN (diversity and inclusion)
- Fundación LOGRAR (local development)
- Fundación Agencia de Desarrollo de Gobernador Gregores

Bolivia

- Association of Camelid Producers in San Vicente

102-41

Collective bargaining agreements

	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Employees that belong to a union or association	445	756	800	426	323	336	3,086
% of total employees	31.0%	75.7%	48.8%	32.7%	54.7%	52.0%	68.0%

TOPIC SPECIFIC GRI STANDARDS

Economic

Economic Performance

201-1

Direct economic value generated and distributed

Corporate Giving Committee Donations	(\$ CAD)		
PAS Scholarships	\$8,000	Minerva Foundation	\$20,525
Van Intl Children's Festival	\$10,000	Global Change for Children Society	\$262
Women in Mining BC	\$270	Vancouver Island Compassion Dogs	\$10,000
Paws for Hope	\$5,000	Canadian Red cross	\$5,000
Vancouver Food Bank	\$5,000	Crisis Intervention & Suicide Prevention Centre of BC	\$5,000
Laurentian University	\$10,000	411 Senior's Centre	\$20,000
Hockey Helps the Homeless	\$10,000	BC Women's Hospital	\$160
Growing Chefs	\$5,000	UBC Scholarships	\$5,000
DTES Women's Centre	\$10,000	Power To Be	\$1,000
Vancouver Symphony Orchestra	\$6,048	Women Who Rock	\$3,250
Covenant House	\$20,000	Canadian Diabetes Association	\$5,000
		Total	\$164,515

	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
CSR and Community Infrastructure Investment ⁽¹⁾	\$3,653,227	\$94,409	\$992,261	\$648,364	\$842,659	\$1,064,655	\$7,295,576

(1) Amounts capture entire CSR budget for pro bono sustainable development programs and community infrastructure and services investments.

Procurement Practices

204-1 Proportion of Spending on Local Suppliers

	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Spend for goods and services (\$'000)	202.6	65.9	77.5	57.7	56.3	28.2	488.8
Portion spent on local and regional suppliers ⁽¹⁾	42%	18%	23%	91%	95%	18%	46%

(1) Local and regional suppliers include those located in local communities or municipalities near our mines, and those located in the provinces, states, or departments in which our mines are located.

Environment

Energy

302-1 Energy consumption within the organization

	Dolores	Alamo Dorado	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
Diesel (m3)	30,392	620	2,581	3,289	3,676	1,058	16,532
Gasoline (m3)	1,073	80	212	-	-	102	-
Carbon (tonnes)	-	-	-	6	-	3	-
Liquified Petroleum Gas, LPG (m3)	77	-	329	116	168	-	-
Ammonium Nitrate, ANFO (tonnes)	8,426	-	821	451	909	674	-
Emulsion (tonnes)	202	-	525	572	11	56	1
Electricity (MWh)	91,816	638	66,869	70,314	74,833	23,899	-

(GJ)	Dolores	Alamo Dorado	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
Diesel	1,175,569	23,974	99,820	127,204	142,185	40,904	639,456
Gasoline	37,205	2,773	7,348	-	-	3,529	-
Carbon	-	-	-	168	9	83	-
Liquified Petroleum Gas, LPG	1,976	-	8,407	2,962	4,299	-	-
Ammonium Nitrate, ANFO	19,379	-	1,888	1,037	2,090	1,551	-
Emulsion	465	-	1,208	1,315	26	130	2
Electricity	330,539	2,297	240,727	253,129	269,398	86,036	-
Total	1,565,134	29,044	359,399	385,815	418,006	132,232	639,458

(GJ)	2018	2017	2016
Diesel	2,249,112	2,437,184	2,548,581
Gasoline	50,855	64,578	62,949
Carbon	260	216	259
Liquified Petroleum Gas, LPG	17,643	36,736	70,467
Ammonium Nitrate, ANFO	25,945	1,921	4,837
Emulsion	3,146	25,348	24,797
Electricity	1,182,125	1,098,741	1,037,399
Total	3,529,087	3,664,725	3,749,290

(1) The measurement methodology to collect the information is inventory control.

(2) PAAS used TSM - Energy and Greenhouse Gas Emissions Management Guide 2014, Orica and conversion tools to transform the units to GJ.

Water

303-3 Water withdrawal

	Dolores	Alamo Dorado	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Total water withdrawal⁽¹⁾								
Mine dewatering (m ³)	-	-	4,232,942	16,554,785	21,318,336	367,920	1,267,630	43,741,613
Ground water (m ³) ⁽²⁾	-	182,243	-	-	-	-	-	182,243
Surface water (m ³) ⁽³⁾	-	-	-	6,307,200	10,113,977	56,380	-	16,477,557
Water withdrawal from areas with water stress⁽⁴⁾								
Mine dewatering (m ³)	1,254,330	-	-	-	-	-	-	1,254,330
Ground water (m ³) ⁽²⁾	409,307	-	-	-	-	-	-	409,307
Surface water (m ³) ⁽³⁾	651,109	-	-	-	-	-	-	651,109
Total water withdrawal								
New water for mineral processing ⁽⁴⁾	345,716	-	209,378	3,903,225	2,487,585	118,950	250,390	7,315,244

	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Recycled Process Water (m ³)	10,978,350	943,379	188,340	473,820	721,752	2,762,738	16,068,379
% Recycled Process Water ⁽⁵⁾	97%	82%	5%	16%	86%	92%	69%

(1) The measurement methodology may vary across the sites. Each site follows local regulations to ensure water withdraw within the limits allowed.

(2) Groundwater includes water from wells withdrawing water.

(3) Surface water includes water from precipitation and natural lagoons.

(4) All new water is Freshwater \leq 1000 mg/L total dissolved solids.

(5) The percentage of recycling water is calculated by the total recycled water divided by the total water used in mineral processing.

303-4 Water discharge

(m ³)	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Discharge to Surface Water	1,254,329.56	4,023,564	22,861,985	10,113,978	305,351	-	38,559,207
Discharge to Groundwater	136,236.00	-	-	-	-	-	136,236
Discharge to treatment plant or lagoons	-	-	-	-	-	523,006	523,006
Third-party water	-	-	-	21,318,336	-	-	21,318,336

(1) The treatment and volume measurement may vary across the sites, depending on local regulations. Each site uses the most appropriate methodology to conduct analysis and ensure compliance with local regulations.

Effluents & Waste

306-2 Waste by type and disposal method

(tonnes)	Reuse	Recycled	Compost	Landfill (Non-Hazardous Waste)	Secured Landfill	Other
Hazardous or dangerous waste	291	-	-	-	999	-
Non-hazardous inert waste	2	86	-	925	-	-
Domestic waste to landfill	-	-	5	1,712	-	-
Recyclable	27	4,087	-	-	-	13 ⁽¹⁾

(1) Paper, plastic and aluminum cans donated to local NGO to be recycled.

(tonnes)	2018	2017	2016
Hazardous or dangerous waste	999	1,023	1,422
Non-hazardous inert waste	925	1,288	1,360
Domestic waste to landfill	1,712	1,169	1,212
Reuse	320	608	560
Recycling	4,190	1,770	1,737

306-3 Significant spills

	Dolores	Alamo Dorado	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
Number of significant spills	-	-	-	-	-	1 ⁽¹⁾	-
Volume of liquid or material (m ³)	-	-	-	-	-	10	-

(1) Spill was dry silver concentrate caused by a traffic accident. Spill was immediately cleaned up with no residual impact.

G4 MM3 Total amounts of over burden, rock, tailings, and sludges

	Dolores	Alamo Dorado	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
Tailings not used as hydraulic backfill (dry tonnes)	-	-	656,344	683,438	645,927	326,832	804,400
Waste rock not used as backfill	36,729,762	-	-	301,811	492,689	-	-
Water treatment sludge	5	-	2,500	11,534	17	14	-

Labour Practices and Decent Work

Employment

401-1 New employee hires and employee turnover

New Employee Hires		Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
<30	Men	33 0.46%	62 0.86%	9 0.12%	42 0.58%	13 0.18%	49 0.68%
	Women	1 0.01%	8 0.11%	5 0.07%	6 0.08%	3 0.04%	3 0.04%
Between 30 and 50	Men	56 0.78%	35 0.49%	24 0.33%	24 0.33%	22 0.30%	48 0.67%
	Women	1 0.01%	3 0.04%	5 0.07%	5 0.07%	0 0.00%	4 0.06%
>50	Men	7 0.10%	4 0.06%	3 0.04%	60 0.83%	3 0.04%	2 0.03%
	Women	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Total		98 1.36%	112 1.55%	46 0.64%	137 1.90%	41 0.57%	106 1.47%

Employee Turnover ⁽¹⁾		Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
<30	Men	18 0.25%	59 0.82%	4 0.06%	8 0.11%	2 0.03%	7 0.10%
	Women	0 0.00%	1 0.01%	2 0.03%	2 0.03%	0 0.00%	2 0.03%
Between 30 and 50	Men	50 0.69%	31 0.43%	23 0.32%	31 0.43%	17 0.24%	38 0.53%
	Women	1 0.01%	3 0.04%	2 0.03%	3 0.04%	5 0.07%	5 0.07%
>50	Men	6 0.08%	4 0.06%	5 0.07%	6 0.08%	3 0.04%	4 0.06%
	Women	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
Total		75 1.04%	98 1.36%	36 0.50%	50 0.69%	27 0.37%	56 0.78%

(1) Turnover includes permanent and contract employees. Turnover includes retirement, voluntary or involuntary departure of permanent employees.

Occupational Health and Safety

403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities

2018 Safety Performance	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Total
Lost time injury frequency ⁽¹⁾	0.23	1.44	1.54	1.73	4.05	1.61	1.41
Lost time injury severity ⁽²⁾	1,356	224	171	222	101	3,696	723

(1) Lost time injury frequency is calculated as the number of lost time injuries, including fatalities, in the exposure period multiplied by 1 million hours and divided by the total number of hours worked in that period.

(2) Lost time injury severity is a measurement of the seriousness of injuries and is calculated as the number of workdays lost due to lost time injuries multiplied by 1 million and divided by the total exposure hours. We count 6,000 lost workdays in the event of a fatal accident.

Historical Safety Performance ⁽¹⁾	2018	2017	2016	2015	2014
LTIF ⁽²⁾	1.41	1.26	0.74	1.09	1.14
LTIS ⁽³⁾	723	771	373	1,757	357
Fatalities	1	2	1	5	1

(1) Includes Contractors

(2) Lost time injury frequency is calculated as the number of lost time injuries, including fatalities, in the exposure period multiplied by 1 million hours and divided by the total number of hours worked in that period.

(3) Lost time injury severity is a measurement of the seriousness of injuries and is calculated as the number of workdays lost due to lost time injuries multiplied by 1 million and divided by the total exposure hours. We count 6,000 lost workdays in the event of a fatal accident.

GRI INDEX

GENERAL STANDARD DISCLOSURES		PAGE NUMBER
Organizational Profile		
102-1	Name of the organization	IFC, 4
102-2	Activities, brands, products, and services	4,5,6
102-3	Location of headquarters	IFC
102-4	Location of operations	7
102-5	Ownership and legal form	AIF P.8
102-6	Markets served	8, AIF P.18
102-7	Scale of the organization	6, 7, AR P.30
102-8	Information on employees and other workers	33, 41, 42, 56
	We do not report a breakdown of employees types or employment contracts by gender.	
102-9	Supply chain	8, AIF P.18
102-10	Significant changes to the organization and its supply chain	IFC, 3
102-11	Precautionary principle or approach	12
102-12	External initiatives	57
102-13	Membership or associations	57
Strategy		
102-14	Statement from the most senior decision maker	2, 3, 9, 24
102-15	Key impacts, risks, and opportunities	2, 3, 10, 17, 25, 30, 34, 39, 47, 50, 52, 54
Ethics and Integrity		
102-16	Values, principles, standards, and norms of behaviour	4, 12, 13,18
Governance		
102-18	Governance structure	12, 13

Stakeholder Engagement

102-40	List of stakeholder groups	14
102-41	Collective bargaining agreements	42, 57
102-42	Identifying and selecting stakeholders	14
102-43	Approach to stakeholder engagement	14, 15
102-44	Key topics and concerns raised	14, 16, 17, 25, 30, 34, 39, 47, 50, 52, 54

Reporting Practice

102-45	Entities included in the consolidated financial statements	IFC; AR P.79
102-46	Defining report content and topic boundaries	15
102-47	List of material topics	16
102-48	Restatement of information	
	There have been no restatements of information from previous reports.	
102-49	Changes in reporting	IFC
102-50	Reporting period	IFC
102-51	Date of most recent report	IFC
102-52	Reporting cycle	IFC
102-53	Contact point for questions regarding the report	IFC
102-54	Claims of reporting in accordance with the GRI Standards	IFC
102-55	GRI content index	64
102-56	External Assurance	IFC

TOPIC SPECIFIC GRI STANDARDS

PAGE NUMBER

Economic

Economic Performance

201-103	Management approach disclosures	21, 25
201-1	Direct economic value generated and distributed	26, 57

We currently do not breakdown DEVG&D by country. We do not separate out wages or operating costs from total economic value distributed.

Market Presence

202-103	Management approach disclosures	21, 25
202-2	Proportion of senior management hired from the local community	42

Indirect Economic Impacts

203-103	Management approach disclosures	21, 25
203-1	Infrastructure investments and services supported	24, 27, 28, 29
203-2	Significant indirect economic impacts	27

Information regarding impacts in the context of external benchmarks is currently unavailable.

Procurement Practices

204-103	Management approach disclosures	21, 25
204-1	Proportion of spending on local suppliers	27, 58

Anti-Corruption

205-103	Management approach disclosures	17
205-1	Operations assessed for risks related to corruption	18
205-3	Confirmed incidents of corruption and actions taken	18

Environment

Energy

302-103	Management approach disclosures	45, 50
302-1	Energy consumption within the organization	51, 58

Water

303-103	Management approach disclosures	45, 47
303-3	Water withdrawal	48, 59
303-4	Water discharge	48, 59
PAS Specific	Water use intensity	49

Biodiversity

304-103	Management approach disclosures	45, 52
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	53
304-2	Significant impacts of activities, products, and services on biodiversity	53

G4 MM1	Amount of land (owned or leased, and managed for productive activities of extractive use) disturbed or rehabilitated	53, 60
---------------	---	---------------

We do not report total land disturbed and not yet rehabilitated. This data is unavailable.

G4 MM2	Total sites requiring biodiversity management plans	
---------------	--	--

None of our sites are required to have biodiversity management plans.

Emissions

305-103	Management approach disclosures	45, 50
----------------	--	---------------

305-1	Direct (Scope 1) GHG emissions	51, 60
--------------	---------------------------------------	---------------

305-2	Energy indirect (Scope 2) GHG emissions	51, 60
--------------	--	---------------

305-4	GHG emissions intensity	51
--------------	--------------------------------	-----------

Effluents & Waste

306-103	Management approach disclosures	45, 47, 54
----------------	--	-------------------

306-2	Waste by type and disposal method	55, 61
--------------	--	---------------

306-3	Significant spills	61
--------------	---------------------------	-----------

G4 MM3	Total amounts of over burden, rock, tailings, and sludges	55, 61
---------------	--	---------------

Labour Practices and Decent Work

Employment

401-103	Management approach disclosures	34, 39
----------------	--	---------------

401-1	New employee hires and employee turnover	40, 62
--------------	---	---------------

Labour/Management Relations

G4 MM4	Management approach disclosures	42
---------------	--	-----------

G4 MM4	Number of strikes or lockouts exceeding one week's duration	42
---------------	--	-----------

Occupational Health and Safety

403-103	Management approach disclosures	34
----------------	--	-----------

403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	35, 63
--------------	--	---------------

We do not breakdown injury rates by gender. We do not report on occupational disease rate, lost day rate, absentee rate. This information is not available.

Training and Education

404-103	Management approach disclosures	34, 39
404-1	Average hours of training per year per employee	36, 40

We report training data related to health and safety only. Company-wide data for other types of training is currently unavailable.

Diversity and Equal Opportunity

405-103	Management approach disclosures	39
405-1	Diversity of governance bodies and employees	41, 42

We do not report on the diversity of governance bodies.

Non-Discrimination

406-103	Management approach disclosures	39
406-1	Incidents of discrimination and corrective actions taken	42

Human Rights

Freedom of Association and Collective Bargaining

407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	31
-------	--	----

As of December 31, 2018, the right to exercise freedom of association and collective bargaining was not at a significant risk at any of our operations.

Child Labour

408-103	Management approach disclosures	21, 30
408-1	Operations and suppliers at significant risk for incidents of child labour risk	31

Forced or Compulsory Labour

409-103	Management approach disclosures	21, 30
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	31

Security Practices

410-103	Management approach disclosures	31
410-1	Security personnel trained in human rights policies or procedures	31

Company-wide data is currently unavailable.

Rights of Indigenous Peoples

411-103	Management approach disclosures	21, 30
411-1	Incidents of violations involving rights of indigenous peoples	31
G4 MM5	Total numbers of operations taking place in or adjacent to indigenous people's territories and formal agreements made	31

Society

Local Communities

413-103	Management approach disclosures	21, 25, 45
413-1	Operations with local community engagement, impact assessments, and development programs	23, 26
G4 MM6	Numbers and description of significant disputes relating to land use, customary rights of local communities, and indigenous people	23
G4 MM7	Grievance mechanisms used to resolve disputes relating to land use, customary rights of local communities, and indigenous people	23

Mining and Metals

Artisanal and Small-Scale Mining

G4 MM8	Number and percentage of company operating sites where artisanal and small-scale mining takes place on, or adjacent to, the site	
--------	--	--

We had no artisanal or small-scale mining by third parties occurring at any of our operations in 2018.

Relocation

G4 MM9	Sites where resettlement took place, the number of households resettled in each, and how their livelihoods were affected in the process	
--------	---	--

We did not undertake any community resettlements in 2018.

Closure Planning

G4 MM10	Management approach disclosures	52, 53
G4 MM10	Number and percentage of operations with closure plans	52, 53, AR P.42



Please visit our 2018 Sustainability Report website at:
www.panamericansilver.com/sustainabilityreport2018

We welcome any feedback related to this report. Please direct your comments or questions to Monica Moretto, Vice President of Social Sustainability, at: csr@panamericansilver.com.

Forward-Looking Statements and Information

This document contains “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, and “forward-looking information” within the meaning of applicable Canadian provincial securities laws. All statements, other than statements of historical fact, are forward-looking statements or forward-looking information, including, but not limited to, those relating to timing or achievement of future goals environmental management, including with respect to water management, sustainability performance, and safety, as well as goals and expectations with respect to community engagement. These statements reflect the current views of Pan American Silver Corp. (the “Company”) with respect to future events and are necessarily based upon a number of assumptions (among other things for example, prices for materials and labour, and that there are no unplanned delays to the production schedule) that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic and regulatory uncertainties and contingencies. Forward-looking statements and information involve many known and unknown risks, uncertainties and other factors that could cause actual results or performance to be materially different from the results or performance that are or may be expressed or implied by such forward-looking statements or information, including, but not limited to, factors such as: metal price fluctuations, fluctuation in the costs of energy, labour, materials and other inputs, fluctuations in currency markets and exchange rates, operational risks and hazards inherent with the business of mining (including, for example, environmental accidents, safety hazards, equipment breakdown, and natural disasters), changes in laws, and those factors identified under the heading “Risks Related to Pan American Silver’s Business” in the Company’s most recent Form 40-F and Annual Information Form filed with the U.S. Securities and Exchange Commission and with Canadian provincial securities regulatory authorities, respectively. The Company has attempted to identify important factors, but there may be other factors that cause results not to be as anticipated, estimated, intended or described. Investors are cautioned against attributing undue certainty or reliance on forward-looking statements and information. The Company does not intend, nor assume, any obligation to update or revise forward-looking statements and information except to the extent required by applicable law.