



PAN AMERICAN  
— SILVER —

2017

# SUSTAINABILITY REPORT

EXECUTIVE SUMMARY



# 2017 Sustainability Report

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.

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:

- 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.
- 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.

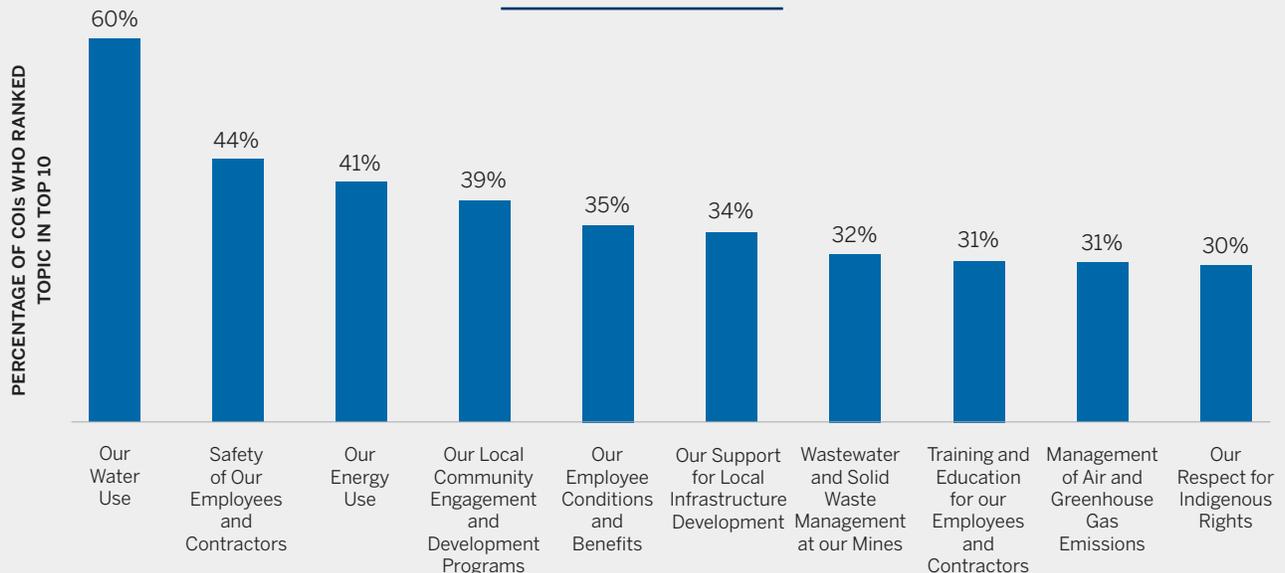
- Continually search for opportunities to expand our silver mines and acquire quality projects.
- Encourage our employees to be innovative, responsive and entrepreneurial throughout our entire organization.

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.

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## TOP 10 SUSTAINABILITY TOPICS OF INTEREST<sup>(1)</sup>



(1) As part of our reporting process, we annually survey our communities of interests (“COIs”). In 2017, we provided select COIs with a list of sustainability topics related to Pan American Silver’s business and asked them to choose the 10 topics most important to them. For further discussion, please see our Materiality Assessment in our full Sustainability Report.



**ROSS BEATY | CHAIRMAN**

What does “sustainable mining” mean at Pan American Silver? It means minimizing environmental impacts and protecting the ecosystem in and around our mining sites. It means ensuring safe and healthy work places 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.

A good company is one that rewards its shareholders. A great company is one that also looks after its employees, contractors, environment, communities and the countries 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 that enable us to maintain our stellar reputation - as a great silver mining company and a great leader in sustainability.

**It is the collective efforts of all of those who work at Pan American Silver that enable us to maintain our stellar reputation.**



**MICHAEL STEINMANN | PRESIDENT & CEO**

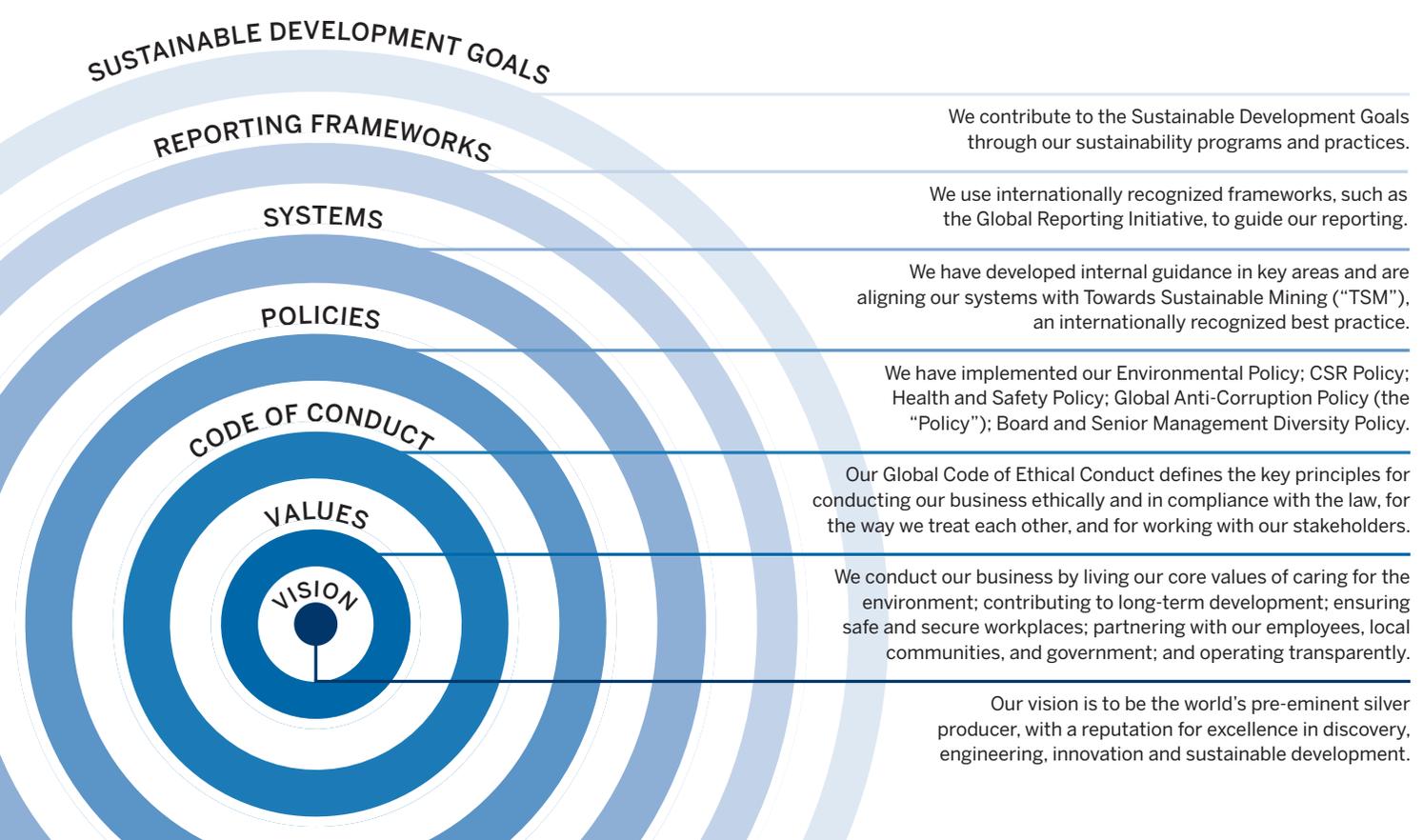
What is core to our sustainability approach, and to our success, is our belief that sustainability is achieved through partnerships and collaboration. Our partners include our employees, governments and community members with diverse backgrounds, cultures, and educational training. We engage and collaborate with local communities, whose input helps us to manage the potential effects of our operations, identify and provide employment opportunities, and develop programs that will deliver lasting benefits. This is what makes our approach robust, committed, and successful. Social workers, public health experts, engineers, and community members provide the necessary expertise to deliver community and social programs. We create opportunities for our sites to share learnings and successes. Pan American Silver’s leadership team, the majority of whom have been with the Company for over a decade, share a deeply engrained commitment to implementing our corporate values. This sets a strong example for our employees and communities.

**We engage and collaborate with local communities, whose input helps us to manage the potential effects of our operations, identify and provide employment opportunities, and develop programs that will deliver lasting benefits.**



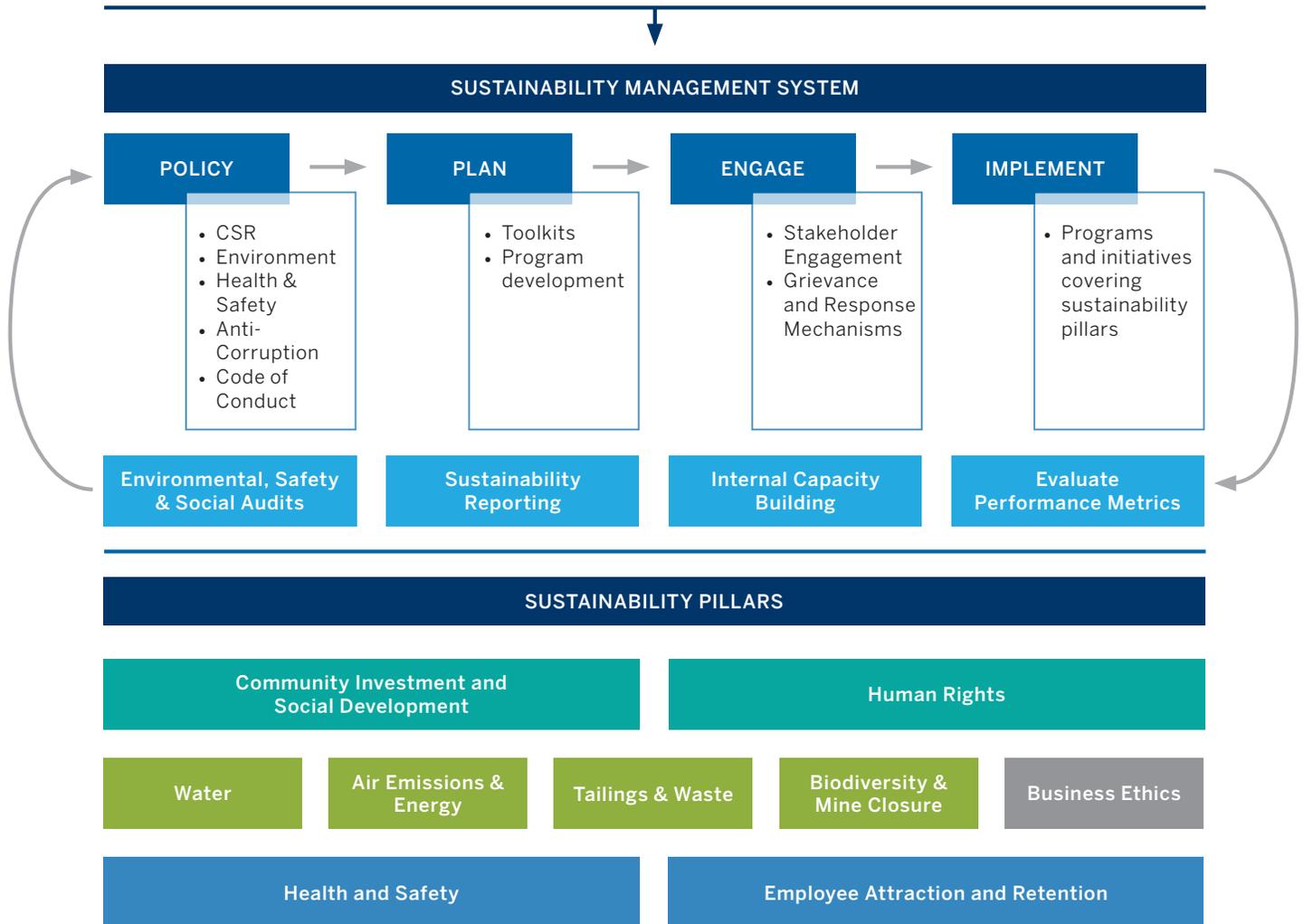
# Sustainability Management

Our framework for sustainability management is designed to consider the external factors that affect our industry, including market uncertainties and increasingly complex economic, environmental and social issues.



## SUSTAINABILITY IMPLEMENTATION STRATEGY

OUR VISION: TO BE THE WORLD'S PRE-EMINENT SILVER PRODUCER, WITH A REPUTATION FOR EXCELLENCE IN DISCOVERY, ENGINEERING, INNOVATION AND SUSTAINABLE DEVELOPMENT.



## SUSTAINABILITY INTEGRATION

Sustainability is embedded in our vision, values and business strategy. Our sustainability framework provides us with a consistent approach to operating in an ethical and responsible manner in compliance with applicable laws and best practices. We can't expect to control these external factors, but we can develop an approach to help us navigate risk and deliver value to communities of interest.

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 nine pillars constitute the primary focus areas for our sustainability programs and initiatives.

## CODE OF CONDUCT

In 2017, we rolled out a communication strategy to inform employees of the updated Code and the Policy, the new Gifts and Hospitality Guidelines, and the whistleblower hotline. All new employees received the Code and Policy upon commencement of employment. Via email and posters at sites and corporate offices, senior management reiterated to existing employees the importance of the Code and the Policy, and communicated the existence of the new whistleblower hotline.



## Operating Mines

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.

25.0 Moz

TOTAL SILVER  
PRODUCTION  
IN 2017

160 koz

TOTAL GOLD  
PRODUCTION  
IN 2017

7,630

TOTAL  
EMPLOYEES AND  
CONTRACTORS

### DOLORES

**Location:** Chihuahua, Mexico

**Ownership:** 100%

**Mine Type:** Open Pit/Underground

**Average Daily Plant Throughput:**  
~20,000 tonnes

**2017 Silver Production (Moz):** 4.2

**By-Products:** Gold

**Number of Employees  
and Contractors:** 1,700

### LA COLORADA

**Location:** Zacatecas, Mexico

**Ownership:** 100%

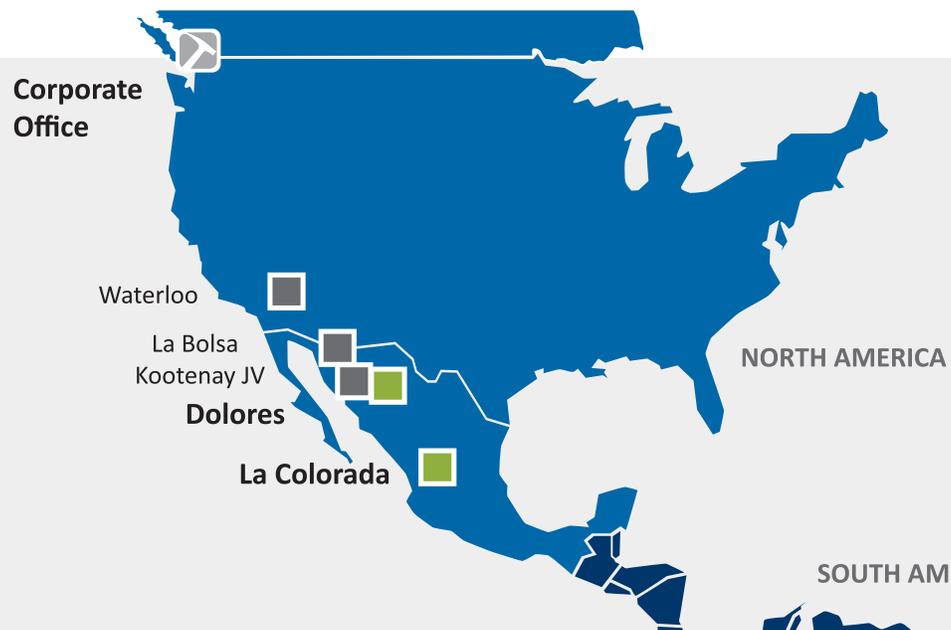
**Mine Type:** Underground

**Average Daily Plant Throughput:**  
~1,800 tonnes

**2017 Silver Production (Moz):** 7.1

**By-Products:** Zinc, lead, gold

**Number of Employees  
and Contractors:** 1,100



- Mining Operations
- Development and Advanced Stage
- Exploration Projects

## HUARON

**Location:** Pasco, Peru  
**Ownership:** 100%  
**Mine Type:** Underground  
**Average Daily Plant Throughput:** ~2,500 tonnes  
**2017 Silver Production (Moz):** 3.7  
**By-Products:** Zinc, lead, copper, gold  
**Number of Employees and Contractors:** 1,600

## MOROCOCHA

**Location:** Yauli, Peru  
**Ownership:** 92.3%<sup>(1)</sup>  
**Mine Type:** Underground  
**Average Daily Plant Throughput:** ~2,000 tonnes  
**2017 Silver Production (Moz):** 2.6  
**By-Products:** Zinc, lead, copper, gold  
**Number of Employees and Contractors:** 1,300

## SAN VICENTE

**Location:** Potosí, Bolivia  
**Ownership:** 95%<sup>(1)</sup>  
**Mine Type:** Underground  
**Average Daily Plant Throughput:** ~950 tonnes  
**2017 Silver Production (Moz):** 3.6  
**By-Products:** Zinc, lead, copper  
**Number of Employees and Contractors:** 600

## MANANTIAL ESPEJO, JOAQUIN AND COSE

**Location:** Santa Cruz, Argentina  
**Ownership:** 100%  
**Mine Type:** Underground  
**Average Daily Plant Throughput:** ~2,150 tonnes  
**2017 Silver Production (Moz):** 3.1  
**By-Products:** Gold  
**Number of Employees and Contractors:** 600



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

# Our Goals and Performance

One of the most significant organizational changes made in 2017 was that our six mines developed their own sustainability goals according to a common set of indicators.

Our decentralized organizational design is fundamental to creating reliable and meaningful outcomes by encouraging strong employee commitments to setting and achieving goals. Our annual goals and objectives are largely established by our employees and supervisors, encouraging a high level of understanding and

commitment by those who actually carry out our day-to-day business activities. Some of the common indicators established are denominated in the table below with codes OG (Operations/Safety), PA (Environment), and PS (Social). Please see our 2017 Annual Report for our business and economic goals.

## 2017 RESULT

### HEALTH AND SAFETY

Despite meaningful efforts of enhancing our safety programs throughout the organization, we regrettably incurred two fatalities at our mines during 2017. ✗

Reported a lost time injury frequency (LTIF) rate of 1.26, above our 2017 goal of 1.2 or less. ✗

Reported a lost time injury severity (LTIS) rate of 771, above our 2017 goal of 400 or less. ✗

### LABOUR

Delivered two modules of our Leadership Development Program. ✓

Updated our livable wage study in locations where we operate. ✓

### COMMUNITIES

Improved the accessibility of sustainability reporting and conformance with the Global Reporting Initiative Standards. ✓

Increased the numbers of stakeholders engaged through our annual engagement process and increased the participation of stakeholder groups in countries where we operate. ✓

## 2018 GOALS

OG1: Achieve zero fatalities by continuing the implementation of our serious accident prevention program and enhance programs with meaningful improvements.

OG1: Achieve an LTIF of 1.2 or less.

OG1: Achieve an LTIS of 400 or less.

Continue to develop future leaders by conducting leadership workshops for employees across all operations, and encourage skills development and education programs within our organization.

Evaluate whether livable wage study should be updated according to overall labour market conditions.

PS1: Achieve zero significant social conflicts at our operations through engagement, resolving grievances, and social auditing.

PS2: Continue to expand our community engagement activities through greater participation in our corporate survey and more in-depth engagement in our CSR projects.

## 2017 RESULT

## 2018 GOALS

## COMMUNITIES

With the additions of the Joaquin and COSE projects in 2017, implementation of our social grievance mechanism program near our Argentina operations has been postponed until 2018.



Continued to implement and improve our Community Development Initiative (CDI) Toolkit while adjusting for lessons learned.



Updated and expanded our social audit process to include questions related to security and human rights.



Extended our Llama breeding program in Bolivia for three years.



Continued to build our relationship with the Mining Association of Canada (MAC).



Continued to apply local procurement practices across all operations.



PS3: Improve access to quality education in the communities near our mines.

PS4: Improve access to better health care in the communities near our mines.

PS5: Develop additional alternative economic opportunities in communities near our mines.

## ENVIRONMENT

Achieved zero significant environmental incidents (SEI) during the year.



Defining energy and water guidelines for our operations was deferred into 2018 while we focused on completing our TSM self-assessments.



Successfully advanced the Alamo Dorado closure according to plan. Implementation of TSM Biodiversity protocol advanced on track.



Developed a suite of sustainability indicators, including waste management, for goal setting and improving practice at our mines.



Conducted TSM training for staff from all sites and presented implementation plan to senior management. Adaptation of management systems and guidelines to TSM is on track.



Formally defined corporate and site staff accountable for tailings management in accordance with TSM tailings protocol.



PA1: Achieve zero SEI's at our operations.

PA2: Improve on annual environmental audit performance.

PA3: Reduce water use compared to "business as usual" by implementing optimally designed projects at our operations.

PA4: Substantially complete active physical reclamation activities at Alamo Dorado and conduct interim reclamation projects at our active operations.

PA5: Reduce hazardous and non-hazardous waste generation at our operations compared to "business as usual".

PA6: Implement projects that can potentially reduce energy use at our operations compared to "business as usual".

PA7: Implement projects that can potentially reduce greenhouse gas emissions at our operations compared to "business as usual".

PA8: Complete self-assessments under TSM program and develop action plans for each operation to achieve "A" level compliance within two years.



## Communities

One objective of our business strategy is fostering positive long-term relationships with our local communities through open and honest communication and ethical and sustainable business practices. Our objective is to support our host communities during the life span of our mines as well as to create a positive legacy.

Mining operations and infrastructure development influence social, economic, and environmental factors in neighbouring communities. Working collaboratively with local governments and communities helps us to effectively manage those influences in all phases of the mining lifecycle. A successful approach requires mining companies manage their performance as well as engage pro-actively with communities to understand their interests and concerns.

At Pan American Silver, we want our host communities to see our presence as a positive factor, and we want to leave a legacy that will positively influence future generations. We work hard to engage with communities to establish long-term relationships that will improve the programs and investments we support, which provide opportunities for long-term sustainable development. Community investment and employment are consistently among the top-ranked material topics for our Latin American communities of interest.

4,770

STUDENTS WE  
SUPPORT DIRECTLY  
OR INDIRECTLY

3,810

PEOPLE  
PARTICIPATED IN  
MEDICAL VISITS  
AND EDUCATIONAL  
HEALTH PROGRAMS

11

SUSTAINABLE  
DEVELOPMENT  
PROGRAMS

28

COMMUNITIES IN  
OUR AREAS OF  
INFLUENCE

## CORE ECONOMIC AND SOCIAL DEVELOPMENT PROGRAMS

## RELATED SUSTAINABLE DEVELOPMENT GOALS

### MEXICO

- Ranching Project | 135 AGRARIAN COMMUNITY MEMBERS
- Local Procurement & Supply Chain Development | 16 COMPANIES
- Children and Adult Education Programs | 265 PEOPLE
- Hygiene & Sanitation Program | 250 HOMES

### PERU

- Local Procurement & Supply Chain Development | 13 COMPANIES
- Education & Scholarship Program | 3,359 STUDENTS
- Artisanal Weaving Project | 80 WOMEN
- Alpaca Breeding Project | 50 PRODUCERS
- Guinea Pig Farming Project | 18 FAMILIES

### BOLIVIA

- Commercial Llama Breeding Project | 220 FAMILIES
- Nutrition Greenhouse Program | 127 FAMILIES
- Education & Scholarship Program | 501 STUDENTS

### ARGENTINA

- Education Support Program | 100 STUDENTS
- Post-Secondary Scholarship Program | 25 STUDENTS
- Local Procurement & Supply Chain Development | 41 COMPANIES



## 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 base framework utilized for the audits is the ISO 26000 guidance standard on social responsibility, and we have developed additional company-related content to assess issues relevant to our organization. Depending on the audit findings, sites can take between three months to a year to implement corrective actions. The head of CSR at the site or country level oversees the audits and ensures that follow-up is conducted.



### ACCOUNTABILITY

The Social Audit is reviewed by:





## 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 communities of interest. 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.

### 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 that may help improve our mine safety. Adopting mechanization – such as replacing hand-held drills with mechanized equipment – means our workers are exposed to fewer hazards, and that helps keep our people safe.

99%

OF OUR EMPLOYEES  
ARE FROM THE  
COUNTRIES WHERE  
WE OPERATE

99%

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

600k

HOURS OF SAFETY  
TRAINING IN 2017

## LOCALLY HIRED EMPLOYEES

	Dolores	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo
Senior Management	98.52%	99.07%	99.89%	99.88%	99.76%	99.78%
Total Workforce	99.83%	100%	100%	100%	100%	88.47%

## SAFETY TRAINING HOURS IN 2017

Safety Training Type	Total Hours
General Safety	372,357
Mining Induction	134,347
Geotechnical	9,463
Formal Safety Meetings	96,629
Mine Rescue	21,687

## TRAINING AND EDUCATION

Leadership and management training is also a key component of our people development strategy. Through our Leadership Development Program, we have identified 250 leaders and managers from diverse backgrounds who are in positions to influence business outcomes.

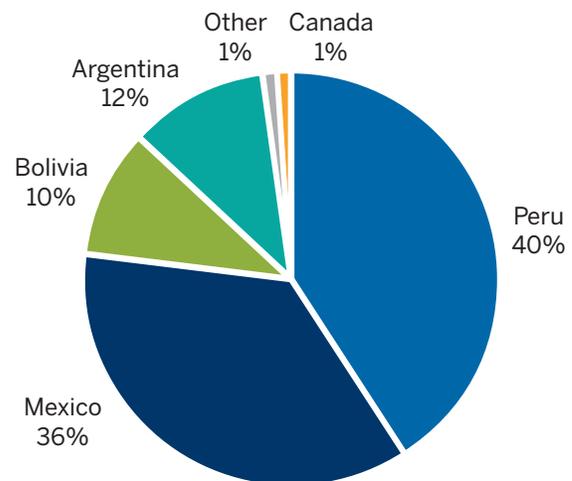
*“The management tools provided through the course are essential for professional development. Decision making processes, personnel management, planning and executing, and corporate values are the top topics that I’m taking away from this course.”*  
 - Engineering and Projects Superintendent,  
 San Vicente Mine, Bolivia

## PAN AMERICAN SILVER SAFETY PLEDGE

To reinforce a culture of safety, we implemented our safety Pledge and Cardinal Rules throughout the organization and incorporated them into our induction training and safety talks. Our objective is for everyone to understand that safety is a shared responsibility.

We are strengthening our front-line supervisory capacity by providing employees with the technical and leadership skills to change behaviour and train others to always put safety first. By the end of 2017, nearly all of our front-line supervisors had been trained in the first phase of the supervisory training program. We have also completed our “train the trainers” program at each of our operating mines.

## PERCENTAGE OF EMPLOYEES BY NATIONALITY



### 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.



# Environment

Responsible environmental management is a cornerstone of Pan American Silver's sustainability 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.

We take every practical measure to minimize the environmental impacts of our operations in each phase of the mining cycle – from exploration through development, construction, operation, closure, and post-closure. Key components of our management approach include: policy, programs and initiatives, monitoring, and accountability.

No significant environmental incidents occurred at our mines in 2017. We define significant environmental incidents 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 continues to ensure significant environmental incidents are avoided.

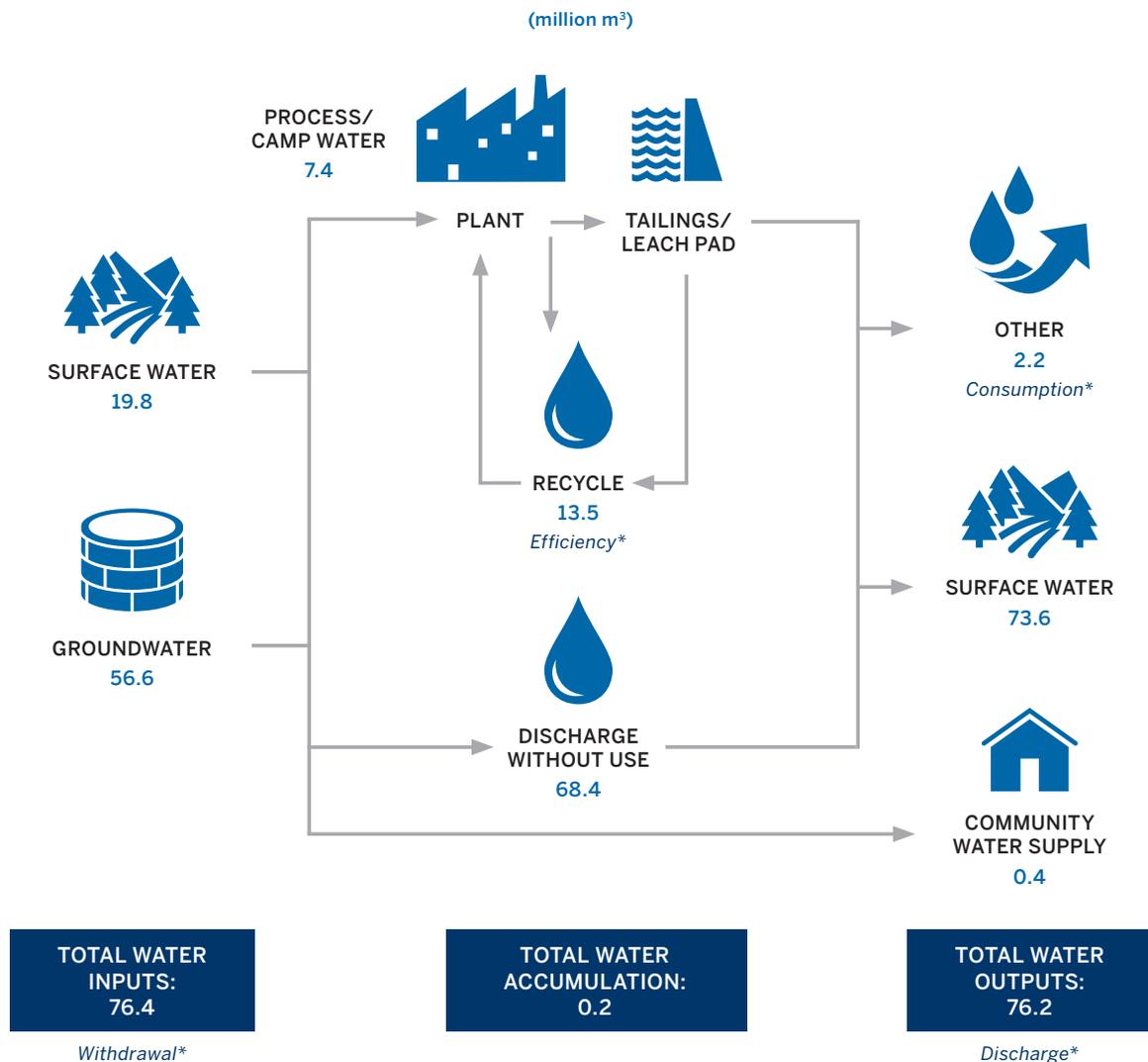
ZERO	SIGNIFICANT ENVIRONMENTAL INCIDENTS OCCURRED AT OUR OPERATIONS
65%	OF OUR WATER USED WAS RECYCLED
25%	IMPROVEMENT IN THE EFFICIENCY OF OUR HUARON WASTEWATER TREATMENT PLANT

## WHY IS WATER IMPORTANT?

Clean water is of high environmental and social value to communities of interest. 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 is required to allow mining of ore bodies that are below the natural water table. 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. The use, extraction, and recycling of water was the top material topic identified in 2017.

### 2017 COMPANY WIDE WATER BALANCE



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

Our water balance shows how much water we extract, recycle and discharge. The vast majority of water extracted at our operations is from the dewatering of our mines, which is discharged without use to local streams and often successfully supports local grazing activities or other important ecosystems. We obtain water both from dewatering (*groundwater*) and *surface water* sources such as lakes or rivers. *Total water accumulation* in 2017 reflects additional water collected in a water reservoir at our Dolores mine.

Most of the *process/camp water* used at our operations is for ore processing, which supplements *recycle* from our process plants, tailings facilities, and heap leach pads. We also use water for drilling, dust suppression, and our camps. *Other* water output refers to water lost due to evaporation or retained in tailings or heap leach pads. We operate wastewater treatment plants at all our mines and monitor them frequently to ensure that all water discharged from our operations complies with water quality standards. Some of the water we extract is not used in our operations, but is provided to local *community water supply* projects.

Please visit our 2017 Sustainability Report website at: [www.panamericansilver.com/sustainabilityreport2017](http://www.panamericansilver.com/sustainabilityreport2017)

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, Director of CSR and Sustainability, at: [csr@panamericansilver.com](mailto: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 the timing or achievement of future goals environmental management, including with respect to water management, sustainability performance, and safety. 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'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.

