



ANTOFAGASTA  
MINERALS

SUSTAINABILITY REPORT  
2018



**DEVELOPING MINING FOR A BETTER FUTURE**



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**SUSTAINABILITY REPORT  
2018**

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OUR PURPOSE

# DEVELOPING MINING FOR A BETTER FUTURE

OUR VISION

**TO BE RECOGNISED AS AN INTERNATIONAL MINING  
COMPANY BASED IN CHILE, FOCUSED  
ON COPPER AND ITS BY-PRODUCTS,  
KNOWN FOR ITS OPERATING EFFICIENCY, CREATION OF  
SUSTAINABLE VALUE, HIGH PROFITABILITY  
AND AS A PREFERRED PARTNER IN  
THE GLOBAL MINING INDUSTRY.**



# LETTER FROM THE CEO

I am pleased to present our Sustainability Report and share with you our performance and progress in 2018.

Since launching our Sustainability Policy in 2017, we have been communicating its principles and practices throughout the organisation and responding, through our actions, to the transformational changes that face the world, and in particular the mining industry. This involves making decisions with an understanding of how our activities make an important contribution to developing the world of the future while also providing benefits to everyone involved in mining, either directly or indirectly.

For our activities to have a place in the future, it is important for us to make decisions focused on mining in a more sustainable, innovative and inclusive way. This involves protecting the environment as a valuable resource for all, as well as respecting the livelihoods, ways of life and cultures of neighbouring communities and responding to wider society's needs and expectations.

Our pursuit of future mining practices led us in 2018 to define our purpose: Developing mining for a better future. We are motivated as an organisation to work for the common good of wider society beyond the day-to-day tasks everyone is expected to accomplish within the company.

Our purpose not only refers to mining in a sustainable way and contributing to the communities and regions where we operate. It also recognises copper's fundamental role in developing technologies which help to deal with climate change. Copper is essential to developing electromobility, clean energy sources and achieving greater energy efficiencies, which makes what we do a key component in achieving a low-carbon economy, which is the only answer to climate change.

In 2019 we will share in greater detail how our business strategy is based around this purpose.

“For our activities to have a place in the future, it is important for us to make decisions focused on mining in a more sustainable, innovative and inclusive way.”

## OUR CHALLENGES AND RESULTS

After 30 months without a fatality, it is with great sadness that I have to report that a contractor suffered a fatal accident at Los Pelambres in October 2018. This tragedy had a great impact on the whole organisation, not only due to the loss of life but also because of the safety and health learnings we must implement and which are critical to driving behavioural change throughout our operations.

I am convinced it is possible to have a fatality-free workplace. Safety continues to be our number one priority and we will continue working to be able to guarantee safe work conditions for all our employees and contractors.

The safety of our neighbouring communities is also a priority. After the incidents in Brazil, I believe we can and must do more as an industry to share information about tailings storage deposits. At the moment, in addition to the stringent control and maintenance of our tailings facilities, we are working to develop a monitoring and warning system as part of the Programa Tranque project. This public-private alliance, involving communities, allows everyone to participate in monitoring the physical and chemical stability of tailings deposits.

In addition, at Centinela we operate a "thickened tailings" deposit using untreated sea water. This innovation has been critical in allowing us to recycle more water and significantly reduce the impact of this mining waste.

Also on environmental matters, we have taken a leaning-orientated approach to climate change which has global consequences that affect us all. We must prepare and be ready to contribute to a low-carbon economy. By this I mean we must go further: we must integrate climate change, as well as its risks and opportunities, into our business.

For this purpose, we have implemented a climate change standard which governs all our initiatives and projects, and focuses on operating efficiency, fuel consumption and the reduction of greenhouse gas emissions. We encourage the search for renewable sources of energy, greater energy efficiency and the protection of more than 26,000 hectares of wildlands of significant biodiversity. Our goal is to reduce our carbon emissions by 300,000 tonnes by 2022.

In 2018, 45% of the water we consumed at our operations came from the sea, a significant milestone on our path to achieving sustainable mining. Moreover, in 2019 we will start to build the sea water desalination plant in Choapa Province which will serve as back-up to Los Pelambres in times of water scarcity.

Moving on, we have made important progress in the last four years in the way we engage with communities with the understanding that we can only develop our full potential if the region also develops. That is why we decided to engage in collaborative initiatives that contribute to the development of everyone, not just the Company.

Going forward, it will be critical to build a common vision and for all of us – communities, authorities and companies – to commit to this end. This does not mean we are going to agree on everything but we can resolve our differences through dialogue and working together.

In this context, during 2018 we focused on the development of a new Social Management Model. This draws on lessons learned from our past experiences and integrates aspects of engagement, initiative management, project and programme impact measurement and risk management to strengthen the way we engage with communities, mainly through our Somos Choapa and Dialogues for Development programmes.

During 2018 we also implemented our Diversity and Inclusion Strategy at all levels of the organisation. I believe the industry should attract and retain a diverse workforce from different backgrounds and we need more women to join our industry as well as people with international experience. We are also making changes to be able to employ more people with disabilities who will enrich our talent pool. At Antofagasta Minerals, we have taken concrete steps in this direction and are working to double the number of women in the workforce by 2022.

On production, 2018 was a record year for Antofagasta Minerals with output of 725,300 tonnes of copper at net cash costs of \$1.29/lb. We significantly increased our ore throughput owing to greater operating efficiencies, reaching design capacity at Encuentro Oxides and starting production at Centinela Molybdenum Plant. At the end of the year, the Los Pelambres Expansion Project was approved, and we have now started construction. We are committed to maintaining financial discipline to generate economic returns and benefit both our shareholders and stakeholders.

On corporate governance and transparency, in 2018 we conducted an independent review of our risk management maturity level and defined our risk appetite. This enabled us to update the Company's Risk Management Policy. Likewise, a new Compliance Model was implemented based on compliance risk management and the Company's Code of Ethics.

Finally, I would like to emphasise Antofagasta Minerals' commitment to the achievement of the Sustainable Development Goals (SDGs) contained in the United Nation's Agenda 2030. We are convinced that through our activities we can contribute both at the global and local level to achieving the SDGs. We are already working to identify specific goals at an operational level in our community projects and programmes.

I invite you to read our 2018 Sustainability Report on what we have done during the year, the result of the combined work of our whole workforce which, on a daily basis, is developing mining for the future with creativity, conviction, determination and dedication. Their contribution has been critical to us mining in a more sustainable, innovative and inclusive way.

**Iván Arriagada**  
CEO Antofagasta Minerals



# ANTOFAGASTA MINERALS AT A GLANCE

## SUSTAINABILITY KPIs



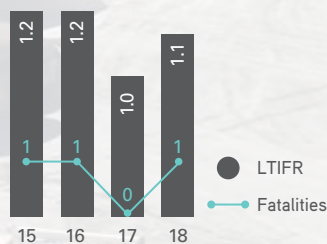
### FATALITIES AND LOST TIME INJURY FREQUENCY RATE (LTIFR)<sup>1</sup>

#### WHY IT IS IMPORTANT

Safety is our main priority. Fatalities and the LTIFR are two key measures of our performance.

#### PERFORMANCE IN 2018

There was a fatal accident at Los Pelambres involving a contractor during the year. Antofagasta Minerals' LTIFR was 1.1 accidents with lost time per million hours worked.



**1**  
fatalities

**1.1**  
LTIFR



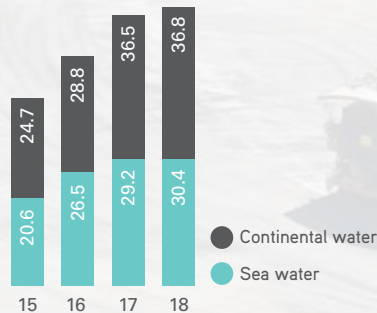
### WATER CONSUMPTION

#### WHY IT IS IMPORTANT

Water is a precious resource and Antofagasta Minerals is focused on using the most sustainable sources and maximising its efficient use.

#### PERFORMANCE IN 2018

Our consumption of sea water increased by 4.2% as Encuentro Oxides reached design capacity, while our consumption of continental water increased by 0.7% mainly due to an increase in material processed.



**67.2**  
million of m<sup>3</sup>



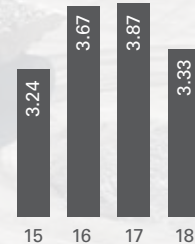
### CO<sub>2</sub> EMISSIONS INTENSITY<sup>2</sup>

#### WHY IT IS IMPORTANT

We recognise the risks and opportunities of climate change and the need to measure and act to mitigate our greenhouse gas (GHG) emissions.

#### PERFORMANCE IN 2018

Carbon emission intensity decreased by 14% compared to 2017, as the two electricity grids in Chile were combined resulting in an overall cleaner energy mix.



**3.33 tCO<sub>2</sub>e**  
per tCu produced

## HIGHLIGHTS 2018



### PEOPLE

- Tragically, after 30 months without a fatality, a contractor at Los Pelambres lost his life while working on the Mauro tailings storage facility.
- We rolled out the Diversity and Inclusion Strategy at all our operations and established the goal to double the percentage of women in the workforce by 2022.
- Labour negotiations were successfully concluded at Los Pelambres.



### ENVIRONMENT

- We set a target to reduce forecast carbon dioxide emissions by 300,000 tonnes by 2022 compared to the baseline in 2017.
- As part of the private-public partnership initiative, Programa Tranque, we are actively participating in the development of a tailings deposit monitoring and warning system in Chile, currently in its pilot stage at the Mauro tailings deposit.
- Sea water represents 45% of our operations' water consumption.
- There were no significant environmental incidents at our operations in 2018.
- Renewable energy sources represented 23% of Antofagasta Minerals' energy consumption in 2018.



<sup>1</sup> Number of accidents with lost time during the year per million hours worked.

<sup>2</sup> Tonnes of CO<sub>2</sub> equivalent per tonne of copper produced.

<sup>3</sup> Percentage of supplier companies from Antofagasta and Coquimbo Regions.

<sup>4</sup> Figure for 2018 includes mandatory and voluntary social projects and programmes, donations, social agreements and programmes managed by Minera Los Pelambres Foundation. In 2017 only voluntary social projects and programmes were included.



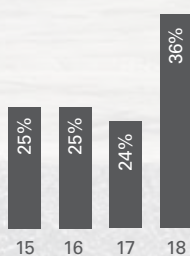
### LOCAL SUPPLIERS<sup>3</sup>

#### WHY IT IS IMPORTANT

Creating opportunities for companies that operate in Antofagasta and Coquimbo Regions supports social development and drives the local economy.

#### PERFORMANCE IN 2018

We continue to make progress in increasing the use of local suppliers, supporting local supplier initiatives and promoting collaborative alliances that foster a productive supply chain.



**36%**  
local supplier companies



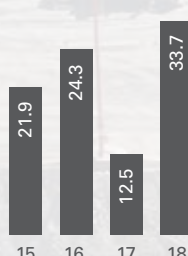
### ECONOMIC SOCIAL CONTRIBUTION<sup>4</sup>

#### WHY IT IS IMPORTANT

Wellbeing and socio-economic development are core elements of prosperous societies. We want to use the value we generate to contribute to the prosperity of the country and the regions where we operate.

#### PERFORMANCE IN 2018

The economic social contribution was \$33.7 million including voluntary and obligatory social projects and programmes, donations, social agreements and programmes managed by Minera Los Pelambres Foundation.



**\$33.7 million**  
economic social contribution



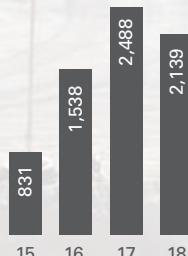
### EBITDA

#### WHY IT IS IMPORTANT

EBITDA is a measure of underlying profitability and reflects our economic performance during the year.

#### PERFORMANCE IN 2018

EBITDA was \$2,139 million, 14% lower than the previous year as unit costs increased due to grade declines and higher input costs.



**\$2,139 million**  
EBITDA



### SOCIAL DEVELOPMENT

- We joined the Mining Cluster in the city of Antofagasta, an alliance that seeks to strengthen employability and innovation in northern Chile.
- We have reinforced the Somos Choapa (We are Choapa) engagement model at Los Pelambres and the Dialogues for Development programme in our operations in northern Chile.
- We developed a new Social Management Model that will be gradually implemented as from 2019.
- We began a process to evaluate and quantify the impacts and contribution of Los Pelambres based on the Sustainable Development Goals (SDGs).
- We completed construction and opened the Technical Training Centre in Los Vilos for 304 students.



### TRANSPARENCY AND CORPORATE GOVERNANCE

- We updated our Risk Management and Compliance Models.
- We recertified our Crime Prevention Model.
- We began a human rights due diligence process.



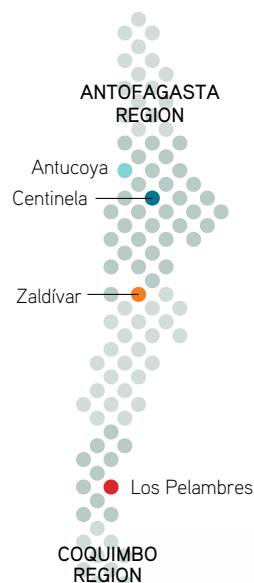
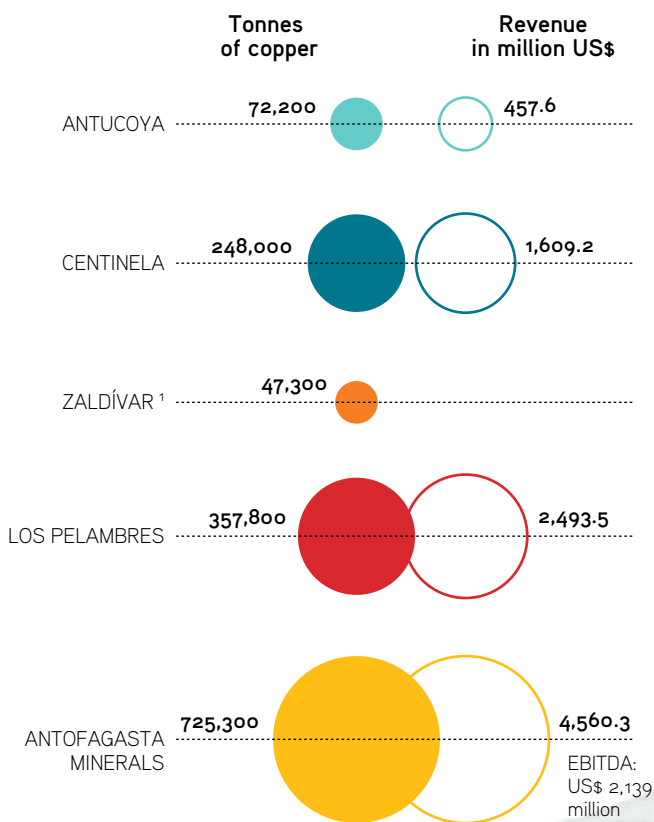
# OUR BUSINESS

We are Antofagasta Minerals, Chile's main non-State mining group and one of the nine largest copper producers in the world. Our purpose is to develop mining for a better future in an innovative, sustainable and inclusive manner.

## What we do

Through the exploration, development and operation of copper mines and through our value chain, we generate diverse, inclusive and quality employment, safeguard the safety and health of people, contribute to the development of the regions where we operate and of our neighbouring communities, and work responsibly and efficiently so that our projects and operations have a minimum impact on the environment and its natural resources.

### OUR PRODUCTION AND ECONOMIC PERFORMANCE



### ABOUT ANTOFAGASTA PLC

Antofagasta plc, the mining group which owns Antofagasta Minerals, has been listed on the London Stock Exchange since 1888. It is a constituent of the FTSE 100 and sustainability indexes such as FTSE4Good, STOXX Global ESG Leaders and ECPI Global Developed ESG Best in Class. The Luksic family is interested in 65% of the ordinary share capital, with the remaining 35% held by institutional and individual shareholders.

Mining is Antofagasta plc's core business, representing 96% of Group revenue and EBITDA. The Group also has a transport division, known as Ferrocarril de Antofagasta a Bolivia (FCAB), which it wholly owns.

<sup>1</sup> Revenue and EBITDA are not included for Zaldívar as established by IFRS 10 (International Financial Reporting Standards) for Consolidated Financial Statements.

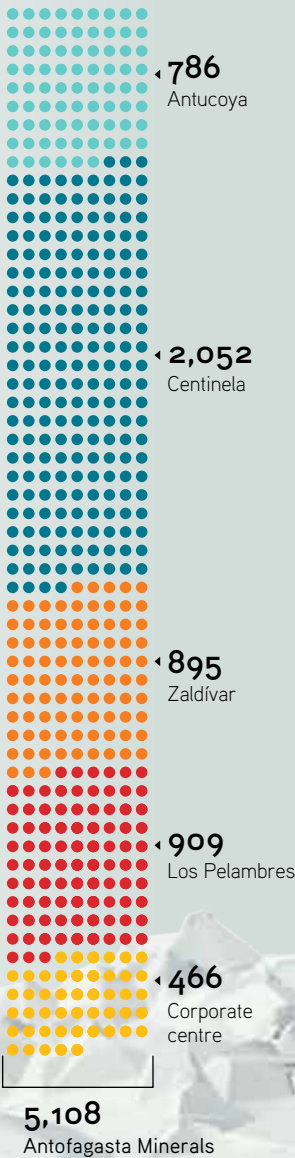
<sup>2</sup> See Choapa Province total employability on p.51.

# How we do it

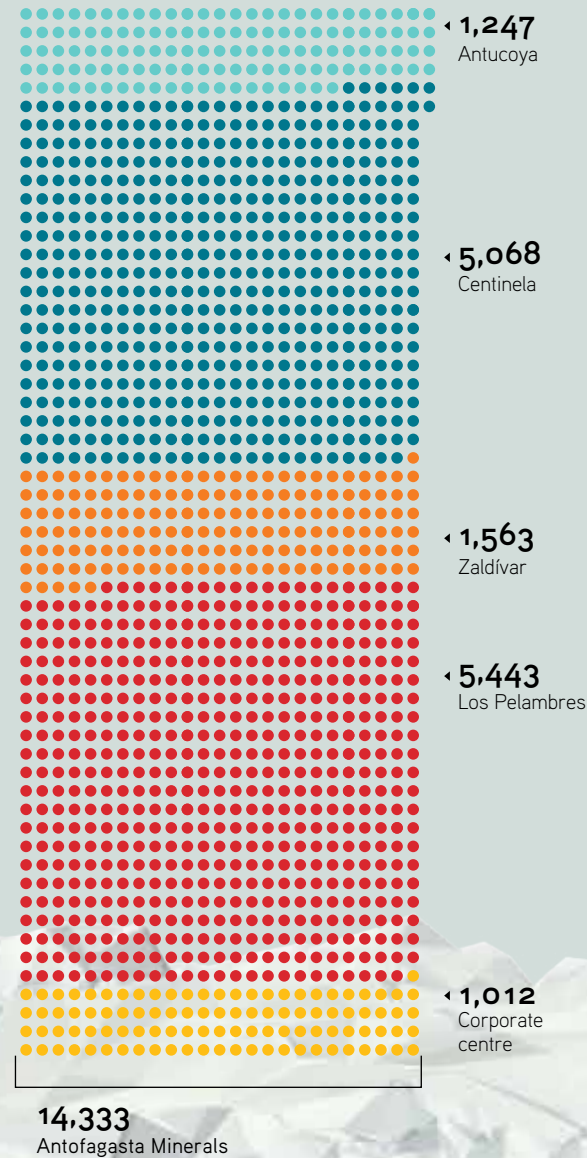
## GENERATING SAFE, DIVERSE, INCLUSIVE AND QUALITY EMPLOYMENT

### Employees

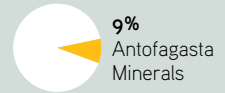
(each circle represents 10 units)



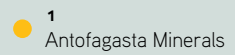
### Contractors



### % female employees

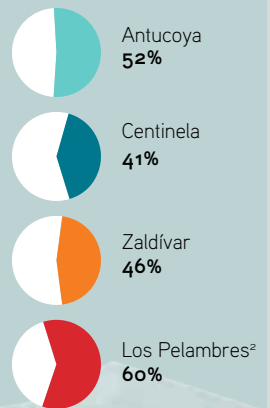


### Fatalities



### CONTRIBUTING TO REGIONAL DEVELOPMENT

#### % of own employees from Antofagasta and Coquimbo Regions



#### Antofagasta Minerals

1,455 local supplier companies

43.6% of own employees are from Antofagasta and Coquimbo Regions

## Protecting the environment

ANTOFAGASTA MINERALS

23% of energy use is renewable energy

45% of water consumption is sea water

56% of non-mining waste is recycled or reused

26,921 hectares of protected ecosystems

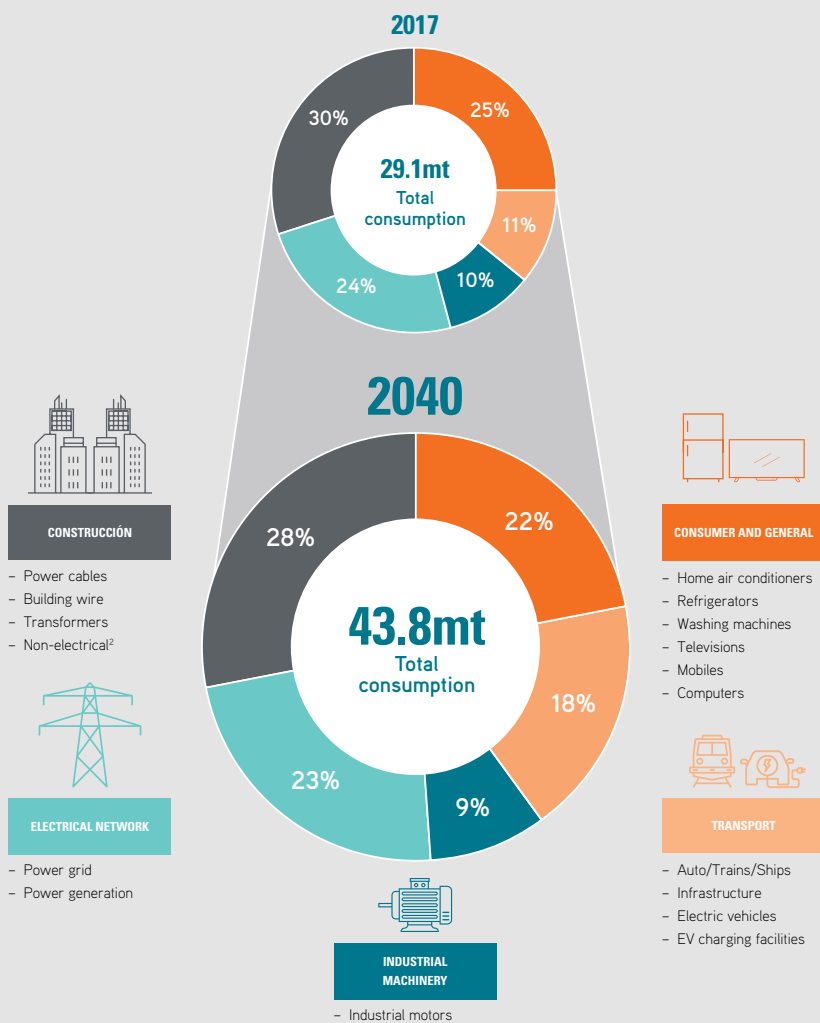


# DEVELOPING MINING FOR A BETTER FUTURE

Future demand for copper will be driven by continued urbanisation and rapidly rising adoption of renewable energy and electric vehicles.

## GLOBAL COPPER CONSUMPTION BY MARKET SECTOR<sup>1</sup>

Growth in total consumption from 2017 to 2040 is estimated to be 1.8% per year and will reach 43.8mt, underpinned by electrification in transportation, buildings and manufacturing. In addition, governments continue to establish targets for renewable energy, which results in higher copper demand.



<sup>1</sup> Including direct use of scrap.  
Source: Wood Mackenzie, Copper Outlook December 2018

## COPPER'S ROLE AND ITS INCREASING MARKET DEMAND

Copper is essential to modern society and a greener future. It can play a vital role in addressing some of the world's major challenges such as the availability of affordable and clean energy, air pollution and sustainable urban development.

The metal is corrosion resistant, extremely malleable and an exceptional conductor of heat and electricity, making it a key input for efficient energy use and green technologies.

### ANTOFAGASTA MINERALS AND ELECTROMOBILITY

#### 2019 Antofagasta Minerals Santiago E-Prix

Antofagasta Minerals is the ABB FIA Formula E's Global Copper Mining Sponsor. It was also the Title Sponsor for the 2018 and 2019 Antofagasta Minerals Santiago E-Prix. In northern Chile, the company also sponsored the Carrera Solar Atacama, a solar car race.

Electric car races are an expression of our thoughts on the role copper plays in the development of new technologies and especially electromobility.

#### Carrera Solar Atacama

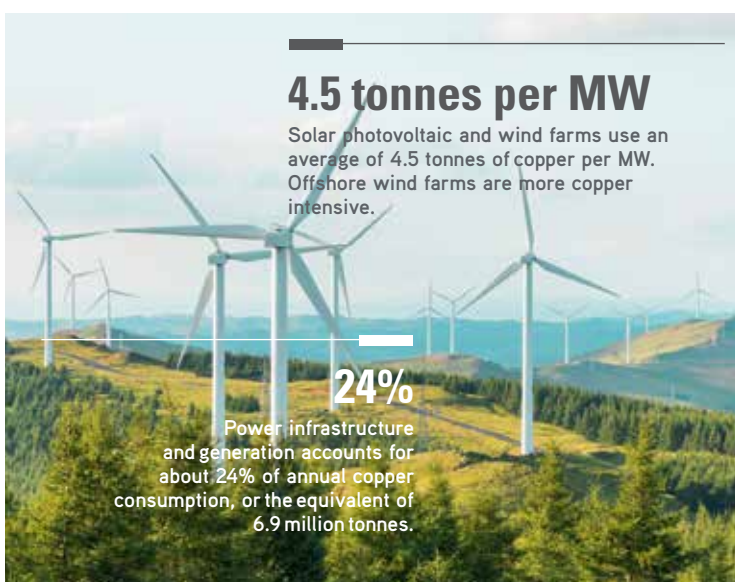
The fifth version of this solar car challenge stretched 2,600 kilometres from Santiago to Arica through the world's driest desert. One of the highlights was the arrival of 11 solar vehicles at Sierra Gorda, a locality close to Antofagasta Minerals' operations.



## URBANISATION

### Building the cities of tomorrow

The global trend towards urbanisation has led to a rapid increase in copper demand in the last decade. The metal is a key component of the wiring, plumbing, heating and cooling, lighting and roofing of homes, as well as the commercial services, transport, power and telecommunications systems needed for vibrant, modern cities.



## RENEWABLE ENERGY

### Contributing to clean and affordable energy

As the world looks to new clean energy technologies to provide a more sustainable future, copper remains centre stage. Solar and wind technologies need four to six times as much copper than conventional energy.

Copper's outstanding ability to conduct electricity means it will be a crucial element in the supply of affordable and clean energy for generations to come.



## TRANSPORT

### Moving towards electromobility

The world is progressing towards the mass uptake of electromobility, with the use of electric cars and public transport that generate zero emissions. This is good news for copper as electric vehicles contain up to almost four times the amount of this metal as conventional ones.





# OUR VISION ON SUSTAINABILITY

## **WHAT IS ANTOFAGASTA MINERALS' VISION REGARDING SUSTAINABILITY AND ITS IMPACT ON THE BUSINESS?**

In recent years, Antofagasta Minerals has renewed its strategy on how to address different issues, placing sustainability at the centre of its operations and emphasising its importance. This is because sustainability is an essential requirement to be able to operate in the world today; companies which perform in a sustainable way are those that will last over time. There is no other option. The latter is particularly true for companies in the natural resources sector.

This change has implied strengthening our standards and management models on the environment, safety and health and stakeholder engagement. It starts with the adoption of the United Nations' Sustainable Development Goals (SDGs) and especially those that are related to our specific operations and activities.

## **HOW DO WE ADAPT TO THE FUTURE AND ITS CHANGES FROM AN ENVIRONMENTAL AND SOCIAL PERSPECTIVE?**

On the environment, our main challenge is to prepare for the most important effects of climate change. This is why we have decided to sign contracts with generators to supply us with renewable energy for a large part of our energy needs. Chile is particularly fortunate in that these changes are happening at a time when renewable energy has become more economically feasible. However, it is important to take into account that for there to be sufficient supply, the country's energy matrix has to be transformed.

**"Sustainability is an essential requirement to be able to operate in the world today; companies which perform in a sustainable way are those that will last over time. There is no other option."**

## INTERVIEW WITH VIVIANNE BLANLOT

CHAIR SUSTAINABILITY AND STAKEHOLDER  
MANAGEMENT COMMITTEE

Likewise, we have also considered the possibility of using other water sources. For example, we are building a desalination plant in Los Vilos which will serve as back-up to Los Pelambres in times of water scarcity. In addition, at our operations in northern Chile there is great solar potential that facilitates the provision of energy to pump sea water long distances.

From the social perspective, the automation and remote control of certain activities is inevitable and gives us opportunities to address labour, diversity and social development matters. Although it will take the mining industry time to fully adopt automation and remote control options, we must adapt gradually to this new scenario.

For example, in some construction processes, a remote control centre centralises the information so there are fewer people at the project, and those that are, constantly provide information on work progress to the control centre. The information flow to these centres makes it possible to ensure that construction standards are maintained and every detail occurs as it should and the responsibility does not just rest on one person.

In addition, in recent years we have seen how women are interested in and training for roles where there was previously no female participation, for example driving mining trucks, both remotely and at the mine site, or working with explosives and in maintenance.

Technology will not only allow us to be more efficient but also to adapt to the working preferences of new generations and so have a more diverse talent pool. In the same way, digital inclusion and work training are tools that will facilitate the adaptation of people to this new reality.

In this context, in 2018 the Technical Training Centre in Los Vilos was inaugurated, with infrastructure funded by Los Pelambres. It is run by a specialist technical training institution with the aim of contributing to the economic and social development of Choapa Province and training people to join the modern world of work. In addition, through technology, they can adapt to a more competitive world.

### CAN YOU TELL US ABOUT THE COMMITTEE'S PRIORITIES IN 2018 AND FOCUS IN 2019?

The Committee's priority in 2018 was to monitor the implementation and reinforcement of the Social Management, Safety and Health and Environmental models. Reports on all the models were presented at all the Committee's meetings and we were given progress updates and informed if risks were identified and whether these were communicated by the employees themselves. The Environment Department also constantly reviews each operation's compliance with standards and the model. Identified risks were analysed and corrective actions taken. We had no severe environmental incidents but we deeply regret the fatality of one of our contractors.

Other matters that were and are always part of the Committee's and Board's deliberations are the stability and safety of tailings storage deposits and stakeholder relations. We always assess significant emerging issues and keep them under constant review. It is worth noting that although the Sustainability and Stakeholder Management Committee has a small number of members, usually all the directors participate in the meetings, including the Chairman, which shows how important sustainability issues are at the most senior level of the organisation.

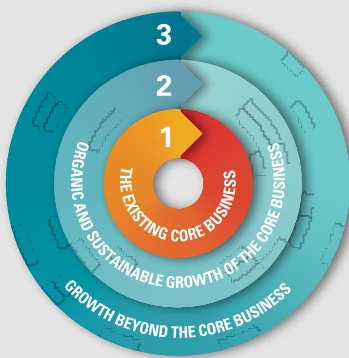
In 2019, the Committee will focus on investment projects at their initial stages. These projects require extremely rigorous environmental and social control that will be managed through the Environmental and Social Management Models, and the Committee will monitor their performance. The standards demanded today are much higher than when we made most of our investments and we have to work differently now. If we have to strengthen areas, we will.



# OUR FOCUS ON SUSTAINABILITY

To achieve organic and legitimate long-term growth we need to develop areas that go beyond our core business.

## STRATEGY



### 1. THE EXISTING CORE BUSINESS

The first pillar of the strategy is to optimise and enhance the existing core business: Los Pelambres, Centinela, Antucoya and Zaldivar.

### 2. ORGANIC AND SUSTAINABLE GROWTH OF THE CORE BUSINESS

The second pillar of the strategy is to achieve sustainable, organic growth by further developing the areas around the Group's existing asset base in Chile.

### 3. GROWTH BEYOND THE CORE BUSINESS

The third pillar of the strategy is to seek growth beyond the Group's existing operations, in Chile or internationally, through the acquisition of high-quality operating assets and/or high-potential early-stage developments.

## BUSINESS STRATEGY AND SUSTAINABILITY POLICY

We know how to produce copper and export it globally. We also know that large-scale mining has associated risks. However, from a business perspective, it is important to evaluate these risks and challenges, tackle them with innovative solutions and detect opportunities in a timely manner. We have learnt that mining, and the activities linked to its value chain, present us with a unique opportunity to generate positive, significant and lasting impacts for our different stakeholders and especially for the communities and regions where we operate.

At Antofagasta Minerals, we believe developing mining for a better future requires our operations to maintain operational excellence and also move towards more innovative, inclusive and sustainable mining practices that will allow us to contribute with creative solutions to the world's new challenges. The latter must be done in association with others and contribute towards the social legitimacy of our activities in our area of influence for us to grow and develop over the long term.

## SUSTAINABILITY POLICY AND PRIORITIES

Our Sustainability Policy is structured around five pillars: People, Financial Performance, Environmental Management, Social Development and Transparency, and Corporate Governance. These pillars frame our efforts to mine in a more innovative, sustainable and inclusive way. **+** See p.22 for more information

At Antofagasta Minerals safety and health come first. We are constantly improving our environmental performance, contributing to the social development of the regions that host our operations, maintaining excellent corporate governance and ethical practices, and developing our sustainable value creation model.

Our sustainability priorities are based on our values, our business risks and opportunities, and our stakeholders' key concerns and expectations, all of which are reviewed frequently by the Board and the Sustainability and Stakeholder Management Committee. **+** See p.26 for more information



## SUSTAINABLE DEVELOPMENT GOALS (SDGs)

At Antofagasta Minerals, we understand that we must grow and develop with a long-term perspective. This involves finding innovative solutions for our challenges and also contributing to achieving global sustainability goals in the economic, environmental and social fields, which are reflected in the United Nation's Sustainable Development Goals (SDGs).

Also known as Agenda 2030, the SDGs are 17 global objectives to end poverty, protect the planet and ensure prosperity for all and are part of a new sustainable development agenda. Multinational organisations, governments, companies and civil society have joined forces to work together to achieve these goals.

At Antofagasta Minerals, we are committed to Agenda 2030. In 2017 we conducted our first mapping of our contribution to the SDGs through Somos Choapa Programme initiatives and in 2018 we integrated this vision into the entire business. We began to evaluate Los Pelambres' current performance and growth project against the SDGs to determine its contribution, critical areas and possible improvements within the operation's sustainable development area.

In 2019 we will focus on developing a system to monitor the progress of Agenda 2030 in Choapa Province through systematic collaboration with relevant players in the region and the Columbia Center on Sustainable Investment (CCSI), part of Columbia University. [+ More information on pages 68 and 69](#)





## OUR RESPONSE TO THE CHALLENGES

At Antofagasta Minerals, we seek to address new and diverse technical, operational and socio-environmental challenges through acquired learnings, innovation, collaborative alliances and the diversity and wealth of knowledge of our workforce. Among the most important challenges are:



**PROVIDING A SAFE WORKPLACE** is our main challenge, as many of our workers' activities are considered hazardous and can have serious consequences. Antofagasta Minerals continues to strengthen the execution of its Safety and Occupational Health Strategy allowing it to efficiently manage safety and health risks, improve incident reporting and foster visible leadership at its operations.

[+ See p.41 for more information](#)



**ADAPTING TO CLIMATE CHANGE.** At Antofagasta Minerals, we have adopted a learning-oriented approach to tackle this new scenario, in which one of the biggest challenges is water scarcity. With this in mind, we took the decision to build a sea water desalination plant as part of the Los Pelambres Expansion Project.

[+ See p.57 for more information](#)



In addition, in 2018 Antofagasta Minerals set its first target to reduce forecast CO<sub>2</sub> emissions over the period 2018 to 2022 by 300,000 tonnes, equivalent to 3% less than 2017. This goal will mainly be achieved through energy efficiency measures and incorporating non-conventional renewable energy into our processes.

[+ See p.59 for more information](#)



### IMPLEMENTING A RESPECTFUL, DIVERSE AND INCLUSIVE WORK CULTURE.

Another challenge is to identify our activities' impacts over people with whom we interact. In 2018 we began due diligence on Human Rights to provide a baseline on which to develop a framework and action plan on the matter. We also implemented the Diversity and Inclusion Strategy, first introduced in 2017, at all of our operations.

[+ See p.36 for more information](#)



### RESISTANCE TO NEW PROJECTS AND GREATER SOCIETAL DEMANDS REGARDING THE REAL CONTRIBUTION OF MINING TO LOCAL DEVELOPMENT.

These are undoubtedly the challenges that have gained most prominence in recent years. For Antofagasta Minerals, collaborative, trackable, comprehensive and transparent dialogue with members of host communities has been critical in moving the relationship from one of competition to one of coexistence. This has allowed us to prepare together with local people long-term, shared development plans that have a positive impact for all parties. As part of this process, in 2018 we launched the Social Management Model which aims to standardise the way we engage with communities; monitor and ensure the timely and correct implementation of social commitments, projects and programmes, as well as measure their impact; and manage socio-territorial risks.

[+ See p.44 for more information](#)

These challenges are compounded by economic and operational challenges, such as the volatility of the copper market, uncertainty about the world economy and international trade, and the deterioration in the quality of mineral deposits owing to lower grades, harder rock or geological issues.



## INNOVAMINERALS

Created in 2017, InnoVaMinerals is an open platform on which business challenges are shared. It seeks for innovation to be a key pillar of our business strategy.

It encourages innovation efforts around our main challenges allowing both Company employees and external partners, suppliers and institutions to present proposals and acquired learnings in these areas.

Since its creation, 400 ideas have been put forward, of which 16 have been transformed into innovation initiatives approved by the Innovation Board.

## ALLIANCES AND WORKING TOGETHER FOR SUSTAINABLE MINING:

### FORUMS AND ORGANISATIONS IN WHICH WE PARTICIPATE



At the international level, since 2014 we have been a member of the International Council on Mining and Metals (ICMM), an organisation that brings together the world's largest mining companies and promotes sustainable mining, develops standards and encourages its members to adopt best practices. In addition, we participate in the International Copper Association (ICA), for which Antofagasta's CEO Iván Arriagada was elected chairman of the Board in 2018, the International Molybdenum Association (IMOA), and the Civil Society and Mining & Metals Working Group of the World Economic Forum (WEF).

We also participate in discussions on future mining issues at the national level in Chile. We play an active role at the central, regional, provincial and municipal level in associations and forums with the aim of building a strategic agenda for Chilean mining through the creation of public-private partnerships. Examples of these are the Alianza Valor Minero (Mining Value Alliance) and Programa Nacional de Minería Alta Ley (National High-Grade Mining Programme).

- **Antofagasta Region:** Antofagasta Industrialists' Association (AIA), Mejillones Industrialists' Association (AIM), Mining Working Group, Gender and Integration of Women in Mining Working Group, Loa Province Development Corporation, Católica del Norte University, Antofagasta University, Gaviotín Chico Foundation, Sierra Gorda Good Neighbours Working Group, Pro Antofagasta Corporation and the Antofagasta Mining Cluster.
- **Coquimbo Region:** Industrial Corporation for the Regional Development of Coquimbo, Productive Development Regional Agency, Minero Corminco Regional Council, Choapa River Monitoring Committee and irrigation and drinking water associations. We also work with La Serena University, Católica del Norte University and its Technical Training Centre (CEDUC), as well forming part of the Choapa Province's education network.

# STAKEHOLDER ENGAGEMENT

Successful relationships with stakeholders are essential to the long-term success of our business. We have a network of arrangements in place to ensure that the views and interests of stakeholders are represented and are considered in our business decisions.

## EMPLOYEES AND CONTRACTORS

Antofagasta Minerals has 19,441 employees and contractors who work in our operations, projects, exploration programmes and corporate offices. 43% of our employees come from Antofagasta and Coquimbo Regions. Contractors represent 74% of our workforce.

### WHY WE ENGAGE

Constructive relationships built on mutual respect and transparency help us to retain employees and avoid labour disputes, contributing to greater productivity and business efficiency. Contractors are essential to our mining operations. Operational continuity requires all contractors to adhere to the same standards expected of Antofagasta's own employees, particularly in the areas of safety and health.

### HOW WE ENGAGE

- Site visits
- Quarterly on-site CEO updates
- Engagement surveys
- On-site reviews
- Regular meetings with unions and contract managers
- Safety and health meetings



## COMMUNITIES

We coexist with diverse communities in Chile, located in Antofagasta and Coquimbo Regions.

At Antofagasta Minerals, it is a priority to strengthen engagement with communities to construct and contribute to the long-term development of regions in our area of influence.

### WHY WE ENGAGE

The wellbeing of local communities in our area of influence is directly related to our business success and we are convinced that mining activities bring unique opportunities for national and local development.

### HOW WE ENGAGE

Ongoing communication through the local engagement frameworks Somos Choapa and Dialogues for Development, which include: participatory dialogue, mine site visits, grievance mechanisms, citizen-participation processes and diverse communication channels. We regularly report the results of dialogue with local communities to the Sustainability and Stakeholder Management Committee and the Board.



SUSTAINABILITY

CORE

FORWARD THINKING

EXCELLENCE

## SUPPLIERS

We work with over 4,000 suppliers, of which 36% operate out of Antofagasta and Coquimbo Regions. Suppliers are essential for the development of our activities as they provide a large range of products and services.

### WHY WE ENGAGE

Suppliers play a critical role in Antofagasta Minerals' ability to operate sustainably, safely and efficiently and therefore we ensure that they comply with our standards and guidelines on sustainability matters.

The Group pays special attention to the top suppliers in each category to ensure the most cost-effective, efficient, and sustainable solutions across all operations.

### HOW WE ENGAGE

The procurement team maintains close relationships and regularly meets with suppliers.

We encourage suppliers to raise any issues or concerns they have about their relationship with Antofagasta Minerals, its contractors or employees. We work together with local communities to foster local employment capabilities through offering job opportunities and training and/or by providing services to the mining industry.

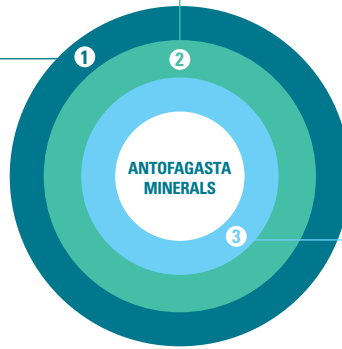




## INSTANCES AND ORGANISATIONS IN WHICH WE PARTICIPATE

### 1. MINING SECTOR AND GLOBAL ORGANISATIONS

- International Council on Mining and Metals (ICMM)
- International Copper Association (ICA)
- International Molybdenum Association (IMO)
- Mining & Metals Working Group of the World Economic Forum (WEF)



### 2. MINING SECTOR AND CHILEAN ORGANISATIONS

- Alianza Valor Minero (Mining Value Alliance)
- Programa Nacional de Minería Alta Ley (National High-Grade Mining Programme)
- Consejo Minero (Mining Council)
- Sociedad Nacional de Minería (SONAMI, National Mining Society)
- UN Global Compact network in Chile
- Acción Empresas, a global partner of the World Business Council for Sustainable Development

### 3. ANTOFAGASTA AND COQUIMBO REGIONS

- Local partnerships with different organisations and initiatives in Antofagasta and Coquimbo Regions. **See p. 17**



## CUSTOMERS

The majority of our sales are to industrial customers, who refine or further process the copper concentrate and cathodes that we sell. Most sales are made under long-term framework agreements or annual contracts with sales volumes agreed for the following year.

### WHY WE ENGAGE

Our sales are based on long-term customer relationships and commitments. Without these long-term relationships, we would be required to sell a greater proportion of cathodes and concentrate on the spot market, which entails greater uncertainty around pricing and volumes that may be sold.

### HOW WE ENGAGE

- Major customers are equity holders in our mining operations.
- Annual trip to Japan by the Chairman and several Directors to meet our partners.
- Marketing team's regular meeting with customers around the world.
- Representative marketing office in Shanghai.



SAFETY AND SAFE

VALUES

RESPECT

INNOVATION

## SHAREHOLDERS

Shareholders are financial institutions and individuals that own shares in the Company. Shareholders are entitled to receive dividends and to vote at shareholder meetings to elect the Directors of the Company, among other matters.

### WHY WE ENGAGE

Shareholders, and particularly institutional investors, are constantly evaluating their holdings in the Company as part of their portfolios. Providing insightful information about the Company's strategy, projects and performance is crucial for their assessment of the Company. We pay special attention to maintaining fluent and transparent dialogue with shareholders, in order to ensure that every shareholder is treated and informed equally.

### HOW WE ENGAGE

We regularly meet with institutional investors and banks' analysts at industry conferences, face-to-face meetings and on roadshows.

Once a year the Board attend the Company's Annual General Meeting where they are available to answer questions. We also provide regular production and financial reports and answer analyst questions on disputes and the Equator Principles. We actively participate in indexes and rankings that assess us on our sustainability performance.



## GOVERNMENTS AND REGULATORS

Governments and regulators implement social policy and set the framework within which we are required to operate.

### WHY WE ENGAGE

Mining is a long-term business and timescales can run into decades. Political cycles are typically far shorter and material developments and changes to policy, legislation or regulations can have a major impact on the business.

### HOW WE ENGAGE

We work alongside mining associations and industry-related state bodies to engage with governments on public policy, laws, regulations and procedures that may affect the business.

The relationship with governments and regulators is strictly subject to their engagement mechanisms, which are clearly defined under the Chilean Lobby Law No. 20,730.

# SUSTAINABLE MANAGEMENT THROUGH THE MINING LIFECYCLE

Within the framework of legislation and international standards, we have developed a set of tools – best practices, standards and indicators – to improve integration of social and environmental issues into each stage of the mining lifecycle.

STAGE

Exploration

Project design, evaluation and construction

## HOW WE SUSTAINABLY MANAGE

Social and environmental issues are integrated into the first stages of the mining cycle through the corporate manual on Best Social and Environmental Practices for Exploration.

We have specialist teams in risk management, environment, safety and occupational health and community engagement to ensure that employees and contractors adhere to our standards on these matters.

The design of new mining projects must be guided by the Corporate Asset Delivery System, developed in 2011, which establishes a set of minimum standards including social and environmental criteria, which must be considered from the scoping study stage to the pre-feasibility, feasibility and construction stages.

We also work with specialists in environmental and social affairs to prepare environmental impact studies which are ideally discussed in advance with authorities and communities.

## THE TOOLS WE USE

Manual on Best Environmental and Social Practices for Exploration

Corporate Asset Delivery System, minimum standards for designing mining projects

## OUR OPERATIONS CREATE ECONOMIC, ENVIRONMENTAL AND SOCIAL VALUE THROUGH THE MINING LIFECYCLE

We work to ensure our activities, from exploration to closure, have a positive impact on the regions where we operate: to provide local communities with benefits through the creation of job opportunities and social projects and programmes to improve their quality of life; to generate quality employment and safe, diverse and inclusive workplaces for our employees and contractors; to protect the efficient use of natural resources through innovation, technology and environmental protection; to maintain transparent business relationships with our suppliers and customers; and to generate responsible economic value for our shareholders and contribute, through paying taxes and royalties, to local and national development.

### Operation

We have implemented environmental, social, and safety and health management models that contribute to improve our operational performance.

All our operations report on their performance which is permanently monitored to reinforce good practices and/or take corrective actions when necessary. Environmental, social, and safety and health performance comprises 20% of performance agreements with our employees and contractors.

- Climate Change Standard
- Biodiversity Standard
- Environmental Management Model
- Social Management Model
- Safety and Health Strategy
- Performance agreements with employees and contractor companies

### Closure

We developed our Corporate Integral Closure of Mining Operations Standard that includes criteria on safety and environmental issues and job opportunities for local people.

Integral Closure of Mining Operations Standard



# SUSTAINABILITY POLICY

At Antofagasta Minerals, we recognise that we have a responsibility towards our stakeholders and the environment in which we operate. We understand that mining is a long-term activity and we must always think and act with a forward-looking perspective. Our operations allow us to generate positive and lasting change and that is why we constantly seek new ways to develop more efficient, sustainable, and inclusive mining.

## PEOPLE

For Antofagasta Minerals, people's safety and health is a priority. Likewise, the wellbeing, motivation, and development of our employees and contractors are a crucial part of the Group's value proposition. We recognise the importance of diversity and equal opportunities leading us to constantly focus on the creation of environments that enable the integration and professional and personal development of our workforce.

## ECONOMIC PERFORMANCE

We are always looking for sustainable ways to improve our operational efficiency to ensure value creation for our shareholders and different stakeholders. We operate in a responsible and efficient way, with a long-term vision, with the purpose of maximising the economic value of our assets, contributing to social development and minimising our environmental impacts.

## ENVIRONMENTAL MANAGEMENT

We permanently work to prevent, control and mitigate our potential environmental impacts and always seek to use natural resources efficiently. We implement environmental management systems that are integrated with our business, setting objectives, goals and KPIs, striving towards continuous improvement and monitoring our environmental performance.

## SOCIAL DEVELOPMENT

We seek to generate economic, social and human capital in our direct areas of influence. We initiate effective, participatory and transparent dialogue processes with the different players in the regions where we operate, acknowledging disputes and opportunities to jointly address these issues and thus generate a shared vision of development.

## TRANSPARENCY AND CORPORATE GOVERNANCE

We believe in the importance of developing effective, responsible and transparent institutions. We have guidelines and internal regulations that establish our commitment to start a business in a responsible manner. We behave in an honest, transparent and respectful way with regards to human rights and the law. In addition, we openly report on our performance and implement systems that allow us to internally audit our procedures.

**+** For details of the progress we have made in each of these areas in 2018, see Sustainability Goals on p. 66



# SUSTAINABILITY FOCUS



## TRANSPARENCY AND CORPORATE GOVERNANCE

- Governance and ethics



## ECONOMIC PERFORMANCE

- Distribution of generated economic value
- Responsible supply



## PEOPLE

- Employees and contractors
- Safety and health



## SOCIAL DEVELOPMENT

- Communities
- Social contribution
- Somos Choapa
- Dialogues for Development
- Development of local skills and employability



## ENVIRONMENTAL MANAGEMENT

- Protecting the environment
- Water management
- Climate change and renewable energy
- Mining waste
- Biodiversity



# GOVERNANCE AND ETHICS

We believe in the development of effective, responsible and transparent institutions. We have established guidelines and internal policies that allow us to meet our commitment to conduct our business responsibly and with a long-term vision.

## CORPORATE GOVERNANCE STRUCTURE

Antofagasta Minerals is part of the mining group, Antofagasta plc, which has been listed on the London Stock Exchange since 1888 and trades on this market.

For this reason, we are subject to the UK Corporate Governance Code<sup>1</sup> which sets out the governance principles and provisions that apply to the Group according to its specific circumstances, and are reported annually in its Corporate Governance Report.

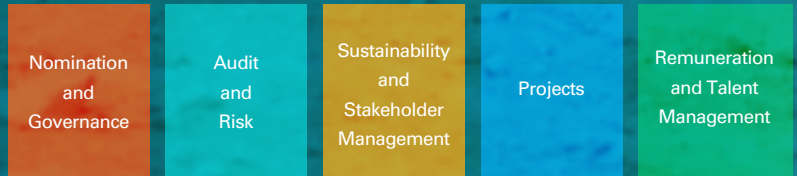
The Corporate Governance Report is structured around five principles that guide the development of our policies and practices on the matter: leadership, effectiveness, accountability, remuneration and stakeholder engagement. We have aligned our corporate governance around these principles to make decisions that are more effective and connected to the interests of our stakeholders.

### INSTANCE

#### BOARD



#### BOARD COMMITTEES



### ROLE AND RESPONSABILITIES

Promote the long-term, sustainable success of the Company, generating value for shareholders and contributing to wider society.

The Board is assisted in its responsibilities by five Board Committees: Nomination and Governance, Audit and Risk, Sustainability and Stakeholder Management, Projects and Remuneration and Talent Management.

The Chair of each Committee reports to the Board following each Committee meeting, allowing the Board to understand and, if necessary, discuss matters in detail and consider the Committee's recommendations.

<sup>1</sup> Available on the Financial Reporting Council website: [www.frc.org.uk](http://www.frc.org.uk)



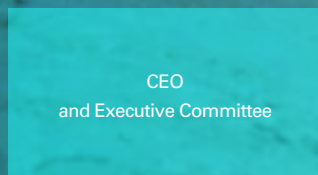


“As we are an international Chile-based mining group, we constantly review the best way to apply the UK Corporate Governance Code principles to our local context. This has allowed us to operate successfully in Chile, where our headquarters, executive team and all our operating assets are located.”

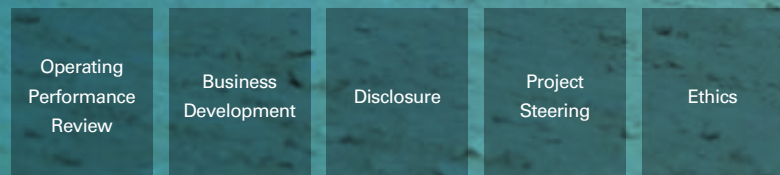
**Jean-Paul Luksic**  
Chairman

**+** For further information about corporate governance, the responsibilities, role and membership of the Board, as well as the priorities and measures adopted to develop and strengthen the Board’s collective knowledge on sustainability matters, see pages 92 to 95 of the Annual Report, available on [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

### CEO AND EXECUTIVE COMMITTEE



### SUBCOMMITTEES OF THE EXECUTIVE COMMITTEE



The CEO’s role is to implement the business strategy and foster the corresponding organisational culture. The CEO role is supported by the Executive Committee, which is chaired by the CEO.

The Executive Committee leads the annual budgeting and planning processes, monitors the performance of operations and investments, evaluates risk and establishes internal controls, and promotes the sharing of best practices.

Members of the Executive Committee also sit on the boards of the Group’s operating companies and report on the activities of those companies to the Board, CEO and the Executive Committee.

The Executive Committee is assisted in its responsibilities by subcommittees.

**BOARD**

The Board is responsible for the long-term success of Antofagasta Minerals. In particular it is responsible for providing leadership and strategic direction; defining core principles, strategy and priorities; monitoring value creation and the efficient use of resources; supervising performance, risks and internal control systems; and guaranteeing that we are acting in the best interests of all shareholders and taking into account the interests of its stakeholders.

**SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE**

The Sustainability and Stakeholder Management Committee assists the Board in the stewardship of sustainability programmes and engagement with our different stakeholders and makes recommendations to ensure that ethical, safety and health, environmental, social and community considerations are taken into account in the Board’s deliberations.

The Committee meets as necessary and at least twice a year to review and update Antofagasta Minerals’ strategy and policy framework, including safety and health, environment, climate change, human rights, community and other stakeholder issues. It also establishes targets and monitors our performance in these areas.



“It is worth noting that although the Sustainability and Stakeholder Management Committee has a small number of members, usually all the directors participate in meetings, including the Chairman, which shows how important sustainability issues are at the most senior level of the organisation.”

<p><b>CHAIR</b> Vivianne Blanlot</p>	<p><b>MEMBERS</b> Jorge Bande Juan Claro William Hayes</p>	<p><b>KEY RESPONSIBILITIES</b></p> <ul style="list-style-type: none"> <li>· Policies and commitments</li> <li>· Safety and health</li> <li>· Community relations</li> <li>· Environment</li> </ul>	<p>Other regular attendees include the CEO and Vice President of Corporate Affairs and Sustainability. In 2018 sessions were also regularly attended by Directors who are not Committee members, including the Chairman of the Board.</p>
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**KEY ACTIVITIES OF THE SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE IN 2018:**

Policies and commitments	Safety and security	Community relations	Environment
<ul style="list-style-type: none"> <li>• Reviewed the 2017 Sustainability Report.</li> <li>• Reviewed the sustainability aspects of Antofagasta Minerals’ expansion projects at Los Pelambres and Centinela.</li> <li>• Reviewed the Committee’s terms of reference.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitored the continued deployment of Antofagasta Minerals’ Safety and Occupational Health Strategy.</li> <li>• Monitored the work of the Independent Technical Review Board appointed to advise Los Pelambres and Centinela in the operation of their tailings deposits.</li> </ul>	<ul style="list-style-type: none"> <li>• Reviewed and monitored the Somos Choapa and Dialogues for Development community engagement programmes.</li> <li>• Reviewed the application of the UN Sustainable Development Goals to the Somos Choapa programme.</li> <li>• Monitored results from the communications campaign Generation Change.</li> <li>• Reviewed issues raised by communities close to Los Pelambres and strategies to resolve them.</li> <li>• Reviewed Los Pelambres public perception survey results.</li> <li>• Reviewed results from Los Pelambres’ local employment programme.</li> <li>• Monitored the first year of the technical training centre at Los Vilos.</li> </ul>	<ul style="list-style-type: none"> <li>• Reviewed Antofagasta Minerals’ environmental compliance programme.</li> <li>• Monitored fulfilment of the compliance programme presented by Los Pelambres to the environmental authorities.</li> <li>• Reviewed progress of the removal of the Cerro Amarillo waste rock dump and of the strategy to resolve legal disputes in Argentina.</li> <li>• Reviewed reports from the new environmental management system.</li> <li>• Reviewed results of the internal audit of sustainability processes.</li> </ul>



## SUSTAINABILITY AND PERFORMANCE AGREEMENTS

A Performance Agreement is a management tool that establishes annual objectives and goals, allowing performance to be monitored and adjusted as necessary to help achieve targets. By incorporating sustainability targets in annual performance agreements, the Company mobilises and aligns the whole organisation behind strong sustainability practices. Targets associated with safety, people, environment and social performance account for 20% of these agreements. Fulfilment of these targets is supervised in monthly operational performance reviews and included in monthly reports to the Board.



### RISK MANAGEMENT

Risks are an inextricable part of our business and cannot be completely eliminated. Effective risk management is an essential part of our culture and strategy.

Our risk management system aims to ensure there are established structures and processes to identify and assess risks, and appropriate controls and mitigation measures in place to address such risks. It also requires key risks and mitigation activities and actions to be reported in a timely manner to relevant parties.

The Board is responsible for determining the nature and extent of Antofagasta Minerals' significant risks and for ensuring adequate internal risk management systems and responsibilities exist to prevent and mitigate these risks. The Audit and Risk Committee, which reports regularly to the Board, is responsible for monitoring strategic risks and the status of their respective controls.



#### REVIEW OF RISK MANAGEMENT MATURITY LEVEL

In 2018 an independent review of Antofagasta Minerals' risk management maturity level was completed and the main activities were as follows:

- The Board reviewed, defined and approved the risk appetite for all key risks and updated the risk management policy.
- Risk methodology was reviewed, strengthened and aligned with the risk appetite.
- A risk assessment was carried out at all the operations, projects, exploration activities and support areas. Risks that represented a threat to the business's strategic goals were identified as "key" and presented to the Audit and Risk Committee and the Board for their review.
- Critical controls and key risk indicator dashboards were defined for each key risk and action plans to keep the exposure within the acceptable limits were prepared.
- Timely and comprehensive risk analysis was embedded into each relevant decision-making process, including for all matters presented to the Board for approval.
- Risks status and the applicability and efficacy of critical on-site controls were included in the performance reviews of the members of the Executive Committee and Risk and Compliance team.

Next steps include monitoring the effectiveness of controls and implementation of action plans, monitoring new internal and external risks that may threaten the achievement of strategic objectives, and defining action plans for risks that require additional analysis or guidance to those defined in the framework methodology. These activities, as well as lessons learned from reviewing the risk management process or materialised risks, are communicated and analysed in relevant internal forums.

#### PRINCIPAL RISKS

We maintain a risk register through a robust assessment of the potential key risks that could affect our performance. We have identified 14 key risks for the business grouped under the categories of People, Sustainability, Competitiveness, Innovation and Growth.

Within the Sustainability area we have identified six risks: safety and health, environmental management, community relations, political, legal and regulatory, and corruption. The risk level for these varies between high and very high and the risk appetite is low.

**+** For more information on our risk matrix, see Annual Report 2018, p. 24.

#### INTERNAL AUDIT

We have a corporate internal audit programme based on the risk matrix. This programme covers ethics and compliance, safety, environment, labour and social performance at Antofagasta Minerals and in each of its operating companies. Measures are proposed to correct any control weaknesses identified in audits. The Head of Internal Audit is independent of the executive committee and reports directly to the Board's Audit and Risk Committee.

**+** For more information on risk management, responsibilities, areas of focus in 2018 and details of the key risks and mitigation measures, see Annual Report 2018, pages 22 to 30.



## ETHICS AND COMPLIANCE

We want to be recognised for our responsible, honest and transparent conduct. For this purpose, we have adopted guidelines and standards and have a Code of Ethics that guides our actions and a Compliance Model to prevent, detect and act in timely manner when this aspiration is threatened.

### CONTEXT

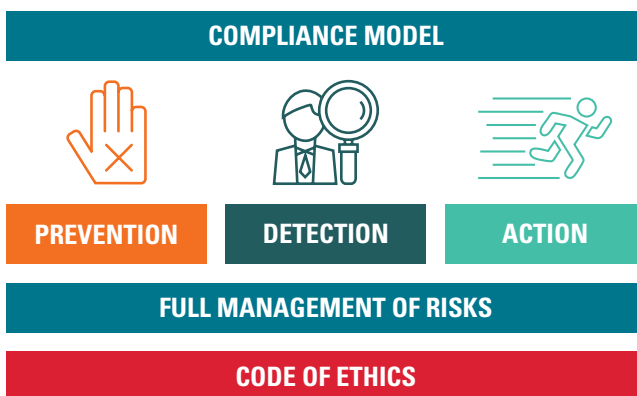
Keeping the trust of stakeholders is critical for any business but especially for the natural resources sector due to the long-term nature of mining operations and investment. It presents a significant challenge as society is increasingly distrustful of institutions and companies, demands high ethical standards and has greater expectations of the role companies play in promoting a diverse and inclusive culture and protecting human rights, among other matters.

It is a priority for the long-term viability of Antofagasta Minerals to ensure our Purpose, Values and Ethical Principles remain relevant and are reflected in the daily actions of our employees.

### MANAGEMENT

Antofagasta Minerals' compliance management aims to ensure that all employees follow internal policies, procedures and controls, as well as relevant laws and regulations.

In 2018 we implemented a new Compliance Model structured around three pillars (Prevention, Detection and Action) that were based on compliance risk management and the Code of Ethics.



### TRAINING

Antofagasta Minerals ensures its Crime Prevention Model, policies and procedures are implemented and understood across the organisation. This is achieved by induction training for all workers, extensive e-learning every two years, special training for the most exposed areas and a training plan that is updated annually.



### PREVENTION

**PREVENT** situations and behaviours that are at odds with ethical behaviour and compliance. For this purpose, the Company has various guidelines and tools, including:

- **Crime Prevention Manual** which describes our Anti-Corruption Model to ensure compliance with regulations under the UK Bribery Act<sup>1</sup> and Law 20,393<sup>2</sup> in Chile. There is a person in charge of Crime Prevention at each of our operations. All of them are certified by the risk classification system Feller Rate until March 2019 in line with Law 20,393.
- **Policies and procedures** which determine how we engage with stakeholders and provides guidelines that all workers must follow. These include the Antitrust Protocol, and guidelines on business relations with companies linked to a Politically Exposed Person and on modern slavery.
- **Conflict of interest declarations** which must be completed by all employees and updated regularly.
- **Due diligence** is conducted on suppliers and contractors to review company ownership, involvement in corruption cases, commercial behaviour, legal and labour cases, conflicts of interest and contract risks.
- **Training** to provide employees with the knowledge and skills to deal with any problem that might arise.

<sup>1</sup> UK's anti-corruption law.

<sup>2</sup> It establishes criminal liability for money laundering, reception, financing of terrorism and bribery offences.



### DETECTION

**DETECT** promptly infringements of ethics guidelines. For this purpose, there is a consultation and complaint reporting mechanism. Complaints that affect the Group are resolved by the Corporate Ethics Committee, which reports to the Board's Audit and Risk Committee at least every three months. Committees have also been established at each operation to deal with local issues. In addition, assessments and analysis are conducted on the most sensitive concerns and complaints.



### ACTION

**ACT** when identifying possible infringements. Investigations are conducted to take the necessary measures to protect the Company, as well as to strengthen internal controls, effective functioning of the Compliance Model and communication with key stakeholders.

## CODE OF ETHICS

The Code stresses the commitment of the Board, employees and contractors to conduct business in a responsible and transparent manner. It includes the values that guide the Company's actions, guidelines to identify and manage potential conflicts of interest and for the handling of privileged, confidential and financial information, and it also sets out the role of the Ethics Committee. It also provides guidelines on a number of issues including respect for human rights, local culture and values and the rights of neighbouring communities.

## MANAGEMENT OF COMPLIANCE RISKS

The Compliance Risks Department keeps a record and monitors the evolution of the main compliance risks, but daily risk management is everyone's responsibility. Compliance risks and existing controls are regularly highlighted and assessed and action plans are defined to reduce risk exposure. As part of this process, changes in the operating environment that require controls to be strengthened or additional measures are also highlighted, and this helps to continuously improve the Compliance Model.

## PAYMENTS TO GOVERNMENT

Antofagasta makes payments to governments relating to activities involving the exploration, discovery, development and extraction of minerals. In June 2018, the Group published its third report detailing its mining division's payments to governments for the year ended 31 December 2017. These payments were primarily taxes paid to the Chilean government, and mineral licence fees. In 2017 these payments totalled \$317 million, of which 99.9% were paid in Chile. The full report is available on the Company's website at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

Chilean law allows political donations subject to certain requirements but Antofagasta Minerals does not make political donations. However, it often contributes to financing projects that benefit local communities in alliance with local municipalities and the government. These contributions are regulated by specific laws and are reviewed by the Chilean Internal Revenue Service.

## HUMAN RIGHTS

Our Code of Ethics provides guidelines on protecting respect for the Human Rights of our different stakeholders. These have been incorporated into Antofagasta Minerals' risk management, e-learning to all employees and in inductions for new workers. Our operating companies are also audited on their adherence to Human Rights and the Board's Sustainability and Stakeholder Manager Committee monitors performance.

In addition, in compliance with the UK's Modern Slavery Act 2015<sup>1</sup>, Antofagasta plc has published a statement setting out the steps taken to ensure that slavery and human trafficking are not occurring in its supply chain or in any part of its business (including Antofagasta Minerals). Other reviewed issues are undocumented workers, discrimination by gender or ethnic origin, and labour conditions and abuse. This statement is available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

At the end of 2018, we began a due diligence process to identify our impacts on people (employees, communities, contractors) which will allow us to prepare a Human Rights Policy and action plan for the coming years.

Since 2018 we have participated in the extractive sector's "Laboratorio de Derechos Humanos y Empresas" (Laboratory of Human Rights and Companies), organised by Acción Empresas<sup>2</sup>, a learning space to strengthen organisational practices on human rights.

Our relations with indigenous peoples are conducted with respect and in accordance with the provisions of ILO Convention 169 and ICMM guidelines. Of our operations, only Zaldívar needs to engage with an indigenous community as its water source is near Peine, a village included in the Atacama La Grande Indigenous Development Area.

<sup>1</sup> Modern Slavery Act: UK law which establishes provisions on modern slavery, servitude and forced or compulsory labour and about human trafficking, including provision for the protection of victims.

<sup>2</sup> An organisation of 130 companies that aims to run businesses sustainably and represents the World Business Council for Sustainable Development in Chile.



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**120**

Ethics complaints  
received in 2018

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**82%**

Ethics complaints  
resolved in 2018

# DISTRIBUTION OF GENERATED ECONOMIC VALUE

The economic value generated benefits both our shareholders and stakeholders, delivering not only financial returns but contributing to the achievement of common sustainable development objectives.

In 2018 Antofagasta Minerals achieved record production of 725,300 tonnes of copper due to an improved operational efficiency. Although the average realised copper price decreased by 6.3% compared to the previous year, in 2018 revenue reached \$4,560.3 million due to higher copper sales volumes and increased molybdenum sales.

EBITDA was \$2,139.4 million in line with expectations for the year. Cash costs before by-product credits were \$1.72/lb (compared to \$1.60/lb in 2017), while net cash costs were \$1.29/lb, 3% higher than the previous year. Increased costs were mainly due to the higher prices of critical inputs such as diesel oil, acid and grinding media, as well as the start-up of the new Encuentro Oxides plant at Centinela. These were partially offset by savings and productivity improvements of \$184 million, together with higher revenues from the sale of by-products such as molybdenum and gold.

Our economic performance priorities are to maintain cost control, reliability and operational efficiency. We understand that developing mining for a better future requires responsible economic management, which means more than making a profit.

Creating economic value implies generating profits responsibly and with a long-term vision, incorporating unique and innovative solutions in business decisions to address challenges in the regions where we operate and working to tackle today's global challenges.

During 2018, \$4,808 million benefited both our shareholders and stakeholders, which includes employees and contractors, communities, suppliers, shareholders, lenders and governments.





# RESPONSIBLE SUPPLY

Suppliers play a fundamental role in the development of our activities and the capacity to operate safely, sustainably and efficiently. For this reason we not only have policies and controls to ensure they meet our standards but also seek to develop suppliers and to contribute to the progress of everyone who works in the mining industry.

## CONTEXT

More than 4,000 suppliers of goods and services form part of Antofagasta Minerals' supply chain. They provide a large range of goods and services from mining equipment and energy to fuel and catering.

## MANAGEMENT

### COMPLIANCE

A central corporate purchasing team defines and consolidates common procurement practices and procedures, as well as the standards and good practices required of suppliers.

We carry out due diligence on all our potential suppliers prior to awarding a contract. Company ownership, participation of politically exposed persons (PEP), antitrust issues, commercial behaviour, legal and labour cases, conflicts of interest and contract risks are all reviewed.

Contracts covering the supply of goods include clauses requiring compliance with Chilean Law 20,393 (Prevention of Crimes) and UK laws on bribery (UK Bribery Act) and modern slavery (UK Modern Slavery Act).

In addition, audits of direct suppliers monitor compliance with labour legislation and the Group's rigorous safety and health policy. In the case of contracts with direct suppliers in jurisdictions with different standards, for example in Asia, on-site audits and due diligence are carried out to ensure suppliers' compliance with our standards. This was the case for China-based suppliers during 2018 with 26 on-site audits of factories.

In 2018 nearly 500 suppliers participated in a training session to reinforce their knowledge of our policies and practices, including the new Compliance Model.

**+** For more information see p. 29



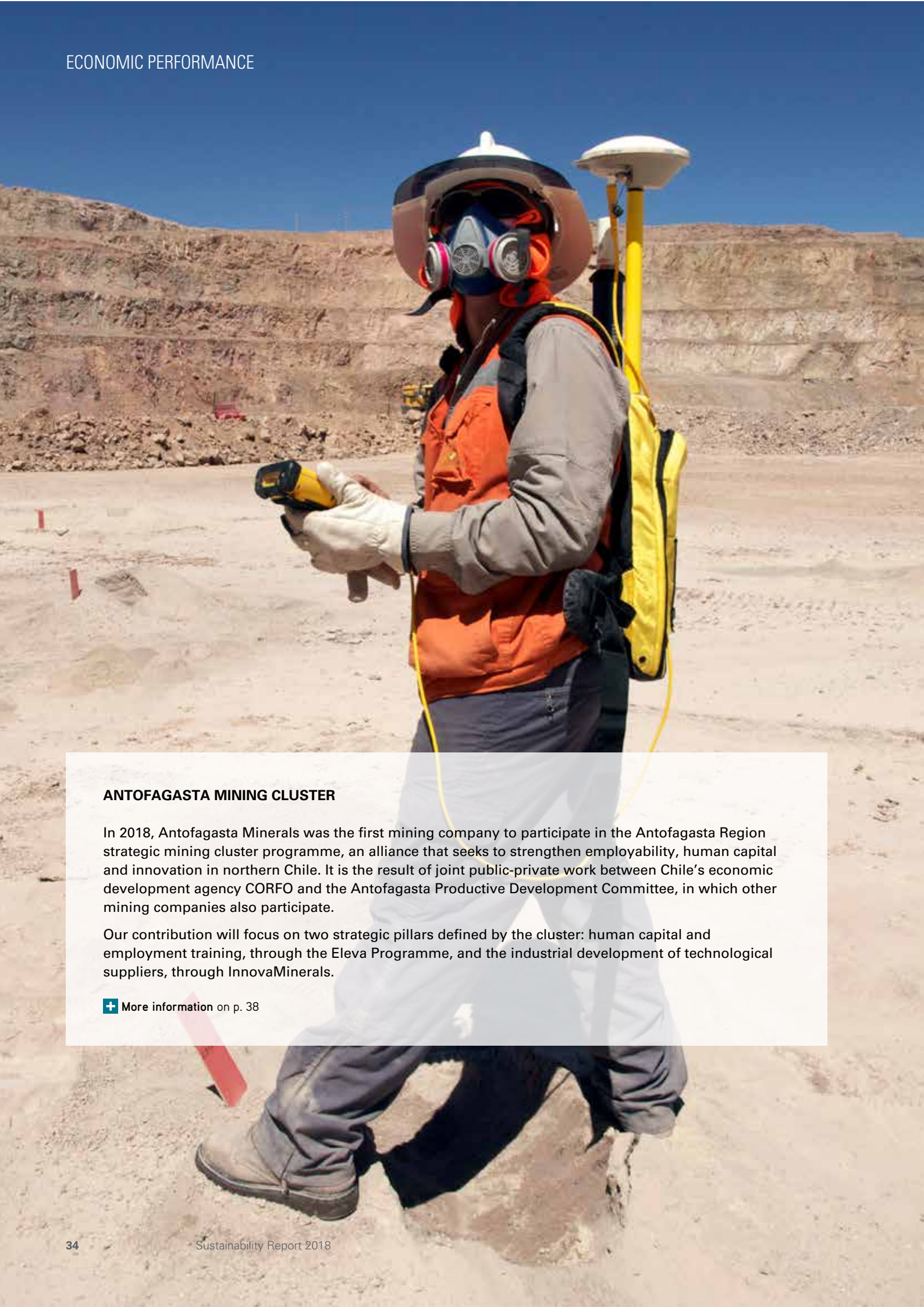
In 2018 there were no lawsuits or fines for incidents in the supply chain. This is a considerable achievement given the Group's large number of suppliers of goods and services of over 4,000 companies.

The identification of economic, environmental, labour and ethical risks in the supply chain forms part of our Risk Management Model. These risks are addressed in contracts with direct suppliers (Tier 1).

SUPPLIERS	2018	2017	2016
SUPPLIERS			
Total number of suppliers	4,028	2,865	2,948
PURCHASES OF GOODS AND SERVICES <sup>1</sup>			
Millions of \$ in goods and services net of VAT	3,218	2,445	2,260

<sup>1</sup> Figures for 2018 include purchases made during the year and the balance from 2017. It also incorporates payments to suppliers which, as shown on p.32, are considered part of our economic social contribution (strategic partners, Somos Choapa and Dialogues for Development programmes).





### **ANTOFAGASTA MINING CLUSTER**

In 2018, Antofagasta Minerals was the first mining company to participate in the Antofagasta Region strategic mining cluster programme, an alliance that seeks to strengthen employability, human capital and innovation in northern Chile. It is the result of joint public-private work between Chile's economic development agency CORFO and the Antofagasta Productive Development Committee, in which other mining companies also participate.

Our contribution will focus on two strategic pillars defined by the cluster: human capital and employment training, through the Eleva Programme, and the industrial development of technological suppliers, through InnovaMinerals.

[\*\*+\*\* More information on p. 38](#)



## FAIR AND TRANSPARENT TENDER PROCESSES

Bidding processes are carried out on an online platform designed to guarantee objective and auditable evaluation and award procedures.

## COMMUNICATION AND COMPLAINTS

We encourage suppliers to raise any issues or concerns regarding their relationship with the Company or its contracts through the complaints reporting line as well as various other channels of communication and engagement. In 2018 no complaints regarding irregularities in procurement and hiring processes were registered.

## CRITICAL INPUTS, EQUIPMENT AND SERVICES

Critical inputs in the mining industry are: electricity, water, fuel, lubricants, explosives, sulphuric acid, grinding balls, lime and chemical reagents (diluent, extractant, NaSH, foaming agent, salt, collectors, cobalt sulphate and metabisulphite). Critical equipment consists of spare parts for critical assets for operational continuity and the safety and health of people. Examples are mining equipment and plant processing systems, work clothing and personal protection equipment (PPE). Finally, critical services are catering and accommodation, passenger and freight transport, health care centres, equipment and installation maintenance services and blasting services.

## LOCAL SUPPLIERS

At Antofagasta Minerals, we seek to conduct our business in a thriving local environment that participates in our activities and require suppliers to have high standards. To achieve this we have focused on developing the skills of local companies to help improve their commercial, financial and human resource capabilities, as well as their productivity and use of innovation.

## OPPORTUNITIES FOR LOCAL SUPPLIERS

Most of our suppliers have their headquarters in Santiago. However, an analysis conducted by the supply area in 2018 showed that most of the spending on goods and services by Centinela, Antucoya and Zaldívar is through regional branches of our supplier companies which mainly use local employees, infrastructure and resources including power plants, ports, manufacturers, distribution centres, repair shops, logistics and subcontractors.

As part of the local integration strategy, our operating companies favour local suppliers, both for new projects and at its operations. In 2018, 1,455 suppliers in Antofagasta and Coquimbo Regions supplied \$1,929 million of goods and services.

Future projects also incorporate local suppliers; for example, at least 55 companies from Los Vilos and Salamanca have been contracted to work on the construction of the Los Pelambres Expansion Project.

## SUPPLIER DEVELOPMENT

Our mining operating companies run development programmes for local suppliers, many of them within the framework of official programmes with participation of the Chilean state.

Antofagasta Minerals' mining operations in Antofagasta Region continued to use the local procurement programme (PAL) during the year. Los Pelambres has an online suppliers' portal to provide visibility and foster a supply chain, and to link local suppliers with its existing direct suppliers (Tier 1).

In 2018 we paid a total of \$469 million to SMEs with average payment times of 25 days.

## COLLABORATIVE INNOVATION

We are part of Expande, an open innovation programme that promotes the development of high-potential solutions from technology companies and connects them with challenges faced by the mining industry. The programme seeks to become a fundamental pillar for the development of technology providers.

## ALLIANCES FOR LOCAL DEVELOPMENT

In 2018, a co-operation agreement was signed between Los Pelambres and the Association of Traders and Companies of Salamanca (ACESA)<sup>1</sup> to ensure that local businesses get the opportunity to supply Los Pelambres and the Expansion Project.

### LOCAL SUPPLIERS<sup>2</sup>

	2018	2017	2016
<b>LOCAL SUPPLIERS</b>			
Number of suppliers from Antofagasta and Coquimbo Regions	1,455	688	735
<b>LOCAL PURCHASES</b>			
Millions of \$ in purchases of goods and services net of VAT in Antofagasta and Coquimbo Regions	1,929	350	377

<sup>1</sup> Asociación Gremial de Comerciantes y Empresarios de la comuna de Salamanca (ACESA).

<sup>2</sup> Figures for 2018 represent total Antofagasta Mineral purchases through local suppliers from Coquimbo and Antofagasta Regions according to the following definition: "local supplier is a supplier company that has facilities in any of the municipal districts of a specific region, and may have its headquarters or a branch installed in this region".

# EMPLOYEES AND CONTRACTORS

A wide diversity of talent is required to address the challenges of mining in the future, as well as a culture of innovation and values aligned to our business objectives. We actively manage and develop mining talent and seek the commitment of employees and contractors to our values.

## CONTEXT

The mining industry is in constant flux. Innovation, automation, new technologies as well as new generations of employees and contractors are an important challenge. Are we ready for these changes? Which working model will best adapt to future society? Discussing this with more than 19,000 employees and contractors, union leaders and workers’ families is critical to understand the importance of organisational changes the mining industry will face in the future. Rather than resisting these changes, we must channel them and manage their impacts, so they become a source of opportunity both for Antofagasta Minerals as well as the labour force.

Antofagasta Minerals has a workforce of 19,441 people, including employees and contractors, at our operations, projects, exploration programmes and corporate offices. Contractors account for 74% of our workforce. Centinela has the largest proportion of employees and contractors with 37%, followed by Los Pelambres with 33%, Zaldívar with 13%, Antucoya with 10% and our corporate offices with 7%.

## MANAGEMENT

We continue to reinforce our 2013 labour strategy built on four pillars: culture, talent management, organisational effectiveness, and labour relations and engagement. In 2018 efforts were focused on integrating the new Diversity and Inclusion (D&I) Strategy into these four pillars. Our challenge is to align our 14,000 contractors with both our operating model and D&I Strategy.

## PEOPLE

	2018	2017	2016
No. of employees and contractors	19,441	19,498	18,026
No. of employees	5,108	5,026	4,977
No. of contractors	14,333	14,472	13,049

## DIVERSITY AND INCLUSION

The D&I Strategy “We are diverse, we choose inclusion”, approved by the Board in 2017, focuses on the inclusion of more women, people with disabilities and employees with international experience.<sup>1</sup> In 2018 the strategy was rolled out across Antofagasta Minerals and D&I targets were incorporated into individual performance agreements at managerial level. These targets account for 5% of annual performance bonuses.

In 2018 the Board approved a new Charter of Values which includes the D&I Strategy, among other additions.

We are working to effect cultural change across Antofagasta Minerals to create an inclusive organisational environment that embraces and strengthens diversity, allowing all employees to achieve their maximum potential. For this purpose, we have focused on raising awareness, education, generating inclusive work environments and updating expectations about workers’ behaviour.

### D&I GOALS

- Double the percentage of women in the workforce by 2022, compared to the 2017 baseline.
- Go beyond the 1% of disabled workers required by Chilean legislation.

<sup>1</sup> Non-Chileans or Chileans with professional experience abroad.





## D&I INITIATIVES

- **Promociona programme:** a public-private initiative begun in 2017 that supports leadership development for high-potential women to increase their participation in senior management roles and on boards.
- **Sexual harassment:** in 2018 we prepared and rolled out the first Sexual Harassment Protocol. We also adhered to the Chilean government's sexual harassment campaign.
- **Collaborative alliances:** together with other mining companies, we participated in an initiative coordinated by Santo Tomás University's Cielo research centre to develop an Early Warning System to reduce loss and improve retention of female employees. We are also involved in the women and mining working group, a public-private initiative to develop a new work/life balance protocol to promote female participation in the sector. Other mining companies and associations, organisations such as Women in Mining, the Chilean Ministry of Mining and the Chilean Ministry of Women and Gender Equity also participate in the latter initiative.
- **Training:** we held several training sessions as part of the D&I Strategy communications campaign. Company executives were trained in inclusive leadership and unconscious bias. At the operational level, awareness-raising talks were held on D&I issues.
- **Monitoring D&I:** in 2017 and 2018 we developed a diversity baseline and monitored the progress and perception of the programmes. In general, there was a positive perception and acceptance of the Strategy's dissemination programmes.

In 2018 9% of the workforce was female, 21% of women were promoted and/or had development opportunities, and the participation of women increased in the succession planning talent pool for key managerial roles.

In 2018 four of Antofagasta Minerals' female executives were appointed to the boards of our operating companies, marking a milestone on the path to diversity and inclusion.

The Head of Risk and Compliance, Anna Gretchina, joined the Los Pelambres board; the Head of Competitiveness, Rosario Orchard, joined the Centinela board; the Corporate Manager of Safety and Occupational Health, Katharina Jenny, joined the Antucoya board; and the Technical Processes Manager, Cecilia Arrué, joined the Zaldívar board.

In addition, three of our female executives joined the Group's operating company boards: the Vice President of Human Resources, Ana María Rabagliati, joined the board of Ferrocarril de Antofagasta a Bolivia; senior lawyer Carla Araya joined the board of Parque Eólico El Arrayán SpA as alternate director; and Finance Manager, Paula Aguirre, joined the board of Inversiones Hornitos S.A.

## PEOPLE

### DIVERSE AND GLOBAL TALENTS

In 2018 we focused on improving the talent management system. Changes were introduced to increase the mobility of diverse and global talents, reviewing the female talent pool and identifying roles for people with international experience. We also updated our training modules according to our operating model and defined training programmes for each role. At the supervisory level, role requirements and development and training programmes were updated.

### YOUNG TALENT

Antofagasta Minerals wants to attract and strengthen the talent of new generations through different programmes:

- **Young Graduates Programme:** for the last eight years, we have sought to recruit into the talent pipeline young people with potential to take on key executive roles. In 2018, 19 young people took part.
- **Apprentices Programme:** offers job opportunities to young people from local communities.
- **Eleva Programme:** a public-private initiative to develop technical skills in the regions where we operate for mining of the future (see box).

In 2018 we invested almost \$4.7 million on 259,316 hours of training, providing an average of 51 hours of training per employee.

### LABOUR RELATIONS AND ENGAGEMENT

#### Life quality

For Antofagasta Minerals, decent working conditions are a key factor for creating commitment to the organisation. The comfort of mining camps, catering, ease and comfort of transport, recreation activities and continuity of working conditions in different posts are highly important and fundamental to the good quality of working life.

Measures implemented this year include the opening of ALMA rooms at Centinela, Zaldívar and Los Pelambres mining operations. This initiative provides the necessary infrastructure to allow working mothers to extract and store breastmilk and is an important step towards diversity and inclusion and implementing occupational health maternity standards.

We also improved our facilities to make them more comfortable and enhance the working conditions of our employees and contractors. For example, the so-called "Winter Operation" upgraded the Hualtata Refuge, located at an altitude of 3,600 metres in the Andes. Los Pelambres keeps this shelter to protect and house workers when they are unable to descend from the mine due to adverse weather conditions. It has basic supplies such as water, electricity and telecommunications, as well as resources to provide food, accommodation, cleaning and recreational activities.

This year we also implemented the Digital Signature, a new system allowing employees at all operating companies to request benefits without needing to move from their post.

The salaries of our employees and contractors can also contribute to a better quality of life. Antofagasta Minerals has set a minimum wage of \$665 per month (equivalent to Ch\$425,850), 41% higher than Chile's legal minimum wage.

#### Labour relations

As part of its vision for the future, Antofagasta Minerals is committed to the development of collaborative, constructive and long-term labour relations to achieve mutually-beneficial common goals and a shared outlook.

Within this framework, and to engage with employees on our future vision, Operational Model challenges and regional engagement strategy, in 2018 we continued to train our different work teams and union leaders on labour relation issues.

Antofagasta Minerals has 10 unions: four at Centinela, three at Los Pelambres, two at Zaldívar and one at Antucoya, together representing 76% of all employees. In 2018 two collective labour agreements were successfully negotiated at Los Pelambres and will remain in force until 2020. In 2019 negotiations are scheduled for three labour agreements with supervisors at Los Pelambres, one with supervisors at Zaldívar and one with employees at Antucoya. These binding agreements cover salaries, employment benefits and other work conditions.

Antofagasta Minerals has formal consultation and complaint mechanisms such as the Reporting Line which can be accessed by all employees, contractors and union leaders.

### ELEVA PROGRAMME

Nine of the 10 young technical professionals taking part in 2018 and doing their dual apprenticeship at Antofagasta Minerals were hired by Antucoya, thanks to the Eleva Programme.

It is a public-private initiative that seeks to prepare for future mining by improving people's skills and job opportunities and providing relevant and high-quality technical-professional training at all levels. Antofagasta Minerals is represented on the organisation's board of directors.

Eleva is part the Consejo de Competencias Mineras (CCM, Mining Skills Council) and counts on the participation of the Ministry of Economy, Ministry of Education, Ministry of Labour and Social Security, Ministry of Mining, National High-Grade Mining Programme, National Service for Training and Employment (SENCE), Mining Council and Fundación Chile as an expert adviser.

✚ For more information on the Eleva Programme and the Consejo de Competencias Mineras see: <http://www.plataformaeleva.cl>  
<http://www.ccm.cl>

"I am proud to have been the only finalist and also winner from the mining industry. This shows us that mining is becoming more open to incorporating and developing women. This award tells us that it's possible to reconcile motherhood and still perform optimally and efficiently in this industry."

Katharina Jenny, Corporate Safety and Health Manager

#### **INSPIRING WOMEN**

Women in Mining (WIM), a global organisation which has been tracking women in mining since 2006, named the top 100 inspirational women in mining in 2018. Three of Antofagasta Minerals' employees were chosen out of 642 nominees: Laura Cristoffanini, Cecilia Arrué and Angie Caro.

#### **FEMALE LEADERSHIP**

The "Executive of the Year" award, given by Mujeres Empresarias (Businesswomen) and the magazine Revista Capital, acknowledges the most important female executives in different business sectors in Chile. Katharina Jenny, our Corporate Safety and Health Manager, was chosen from 200 candidates and became the only finalist from the mining industry. The award recognises her professional career, management capacity, leadership, innovation and influence.



**ALIGNING CONTRACTORS**

Contractors conduct key tasks in our business and represent 74% of the workforce. They provide permanent support services to the operation such as maintenance, transport and catering, and temporary services related to projects, mainly the construction of new installations or expansions. The number of people who provide project contractor services can vary significantly each year depending on the size of the projects being executed. For example, Centinela hired more than 2,000 contractor workers for its expansion.

The Company has established control mechanisms to make sure contractors meet Antofagasta Minerals' standards and guidelines on labour, environmental, social and ethical matters, and is committed to auditing contractor companies' labour standards as well as their adoption of good practices. We require contractor companies to meet all the country's laws and regulations, as well as our Charter of Values and Code of Ethics. In addition, contractors must comply with the UK's Modern Slavery Act.

We establish standards in contractor companies to ensure a safe workplace and quality employment. For example, we set the same ethical minimal wage for contractors as for employees and a number of basic benefits that include life and health insurance. These requirements are included in contracts and regularly audited.

Centinela and Los Pelambres establish performance agreements with contractor companies, containing KPIs to measure performance on safety and health, labour disputes, labour demands and site stoppages, among other topics.



Performance agreements between Antofagasta Minerals and its contractor companies include key sustainability targets.



# SAFETY AND HEALTH PEOPLE COME FIRST

Safety and health is a priority and non-negotiable focal point for Antofagasta Minerals. We continuously strive to improve our performance in all matters that could affect our employees, contractors and neighbours.

## CONTEXT

The mining industry in Chile has continuously improved its accident rate and the number of fatalities<sup>1</sup> has decreased by 44% in the last nine years. Antofagasta Minerals has been part of this collective effort as well as ICMM which has driven good practice on these matters. ICMM member companies have reduced the number of fatalities by 63% over the last decade<sup>2</sup>.

Regrettably, after 30 months without a fatality, one of our contractors suffered a fatal accident at Los Pelambres in October 2018 while working on the wall of the Mauro tailings deposit. The tragic loss led to important organisational lessons, drew attention to required improvements to both behaviours and procedures and, among other issues, made clear the urgent need to further strengthen the Safety and Health Strategy in all areas of the operating companies.

Five years after launching the Safety and Health Strategy, we continue working towards a clear objective: eliminate fatal accidents.

## MANAGEMENT

Experience acquired over the years has shown that the commitment of all employees and contractors is critical to the success of the Safety and Health Strategy. Focusing on fatality risks and their critical controls is vital to eradicating fatal accidents.

### RESILIENT SAFETY AND HEALTH STRATEGY

In 2018 we deepened the implementation of our Safety and Health Strategy, approved by the Board in 2017. The strategy is based on four pillars (a) safety risk management (b) health risk management (c) aligned reporting and continuous improvement and (d) leadership. It also sets four goals to be achieved by 2020: zero fatalities, zero occupational illnesses, the development of a resilient culture, and the automation of hazardous processes.

Safety and health performance targets account for 5% of all our employees' annual performance bonuses to encourage a culture of accident prevention.

**“The first priority for everyone is to take care of the safety and health of all who work for Antofagasta. Huge progress has been made but the tragic fatality shows we must continue working to establish a resilient safety culture that ensures fatalities in all the Group’s companies are completely eradicated.”**

**Iván Arriagada**  
CEO

<sup>1</sup> The mining industry in Chile suffered 27 fatalities in 2009 compared to 15 in 2018. Source: Accidentabilidad Minera 2018. Sernageomin, 2018 (Mining Accidents 2018, National Geology and Mining Service, Sernageomin, 2018). Available at: <https://www.sernageomin.cl/accidentabilidad-minera/>

<sup>2</sup> ICMM members had 136 fatalities in 2008 compared to 15 in 2017. Source: ICMM.



## HEALTH-STANDARDS



Fit for work



Occupational health



Ergonomics



Psychosocial



Medical surveillance programmes



Case management



Fatigue and drowsiness



Alcohol, drugs and tobacco



Maternity



Promoting healthy behaviours  
and life quality





## SAFETY RISK MANAGEMENT

We have defined Fatal Risk Standards, of which 15 are applicable across the whole business and seven cover specific tasks in each operation. The latter were developed in 2018. Based on these standards, the operations implement critical controls – both preventative and mitigating – that must be checked prior to any activity. In 2018 progress was made on ensuring compliance with all safety critical controls by conducting a review covering 98% of our accident history. The challenge in 2019 will be to establish performance measures for each of these controls.

## HEALTH RISK MANAGEMENT

We have defined 10 Occupational Health Standards through which we can identify and control potential occupational health risks, with a goal of minimising exposure to hazardous agents or risk factors. Medical surveillance programmes at operations identify early symptoms that can indicate incipient occupational diseases. During 2018, we standardised existing surveillance programmes and developed an occupational health baseline for the entire mining division. In addition, on closure of this report we conducted a survey of critically exposed teams and generated a plan for implementing engineering controls or direct maintenance at the sources of origin.

## REPORTING

The preventative culture that we are working to establish is based on the observation, reporting and follow-up of potential accidents. In 2018 the standardisation of reporting was reinforced, aligning processes of analysis, warnings, improvement projects and corrective actions raised by investigations. In 2019 the focus will be to improve organisational learnings from safety and health events and reduce repetition of high-potential incidents.

## VISIBLE LEADERSHIP

Leadership is at the heart of the Safety and Health Strategy and seeks to ensure that we are all aware of the role that we play in this model. The best standards are no help if there is no visible leadership at all organisational levels. Leadership is a key driver for eliminating fatalities, severe injuries and occupational illnesses. The Executive Committee conducts monthly on-site safety and health reviews at operations to verify that critical controls are correctly applied. Safety performance is reported weekly to the Executive Committee and monthly to the Board, and the Sustainability and Stakeholder Management Committee reviews any serious safety incidents.

## AWARENESS AND COMMITMENT

Raising awareness of the importance of a preventive culture among employees and contractors is key to achieving their commitment to safety and health. We carry out a variety of actions including training, induction courses, discussions on the causes of accidents, safety meetings and recognition of employees committed to safety, as well as participation in joint safety and health committees. Contractor and sub-contractor companies must comply with the

Corporate Guidelines on Safety and Health for Contractors which is essential for ensuring their commitment and providing orientation, training and support on safety and health issues. In addition, compliance is closely monitored by each company's contract owner.

**+** [More information on p. 40](#)

## PERFORMANCE

Regrettably, in 2018 we did not achieve our zero fatalities goal due to the fatal accident at Los Pelambres involving one of our contractors. However, we remain firm in our commitment to zero fatalities.

The Lost Time Injury Frequency Rate (LTIFR) remained steady at 1.1 and the All Injury Frequency Rate (AIFR) decreased by 30%. Near-miss reporting increased by 56% clearly indicating a substantial improvement in our reporting culture.

During the year we conducted two audits at each operation and the Executive Committee made 12 on-site reviews of compliance with the Safety and Health Strategy, which indicated progress in line with plans.

Three occupational diseases were identified in 2018, one at Centinela and two at Zaldívar. Of these cases, two are related to hypoacusis.

## SAFETY STATISTICS FOR EMPLOYEES AND CONTRACTORS

	2018	2017	2016
<b>ALL INJURY FREQUENCY RATE (AIFR)</b>			
Total number of accidents per million hours worked	5.1	7.4	6.9
<b>LOST TIME INJURY FREQUENCY RATE (LTIFR)</b>			
Number of accidents with lost time per million hours worked	1.1	1.0	1.2
<b>INDEX OF REPORTED NEAR-MISS ACCIDENTS</b>			
Number of near-miss accidents reported per million hours worked	198	126.6	50.2
<b>FATALITIES</b>	1	0	1
<b>OCCUPATIONAL DISEASES</b>			
Number	3	3	4

# COMMUNITIES

Through learning, dialogue and collaboration, we seek to strengthen our engagement with communities and build a common vision of future regional development.

## CONTEXT

Developing mining for a better future implies conducting our activities in a prosperous social environment and the wellbeing of our neighbours is key for the sustainability of our business. However, we know that our activities affect communities and we strive daily to prevent the adverse impact of our activities and to show that mining can provide unique development opportunities for the regions where it takes place.

Our operations are located in areas with different social and environmental contexts. We coexist with a variety of communities in Chile, mainly located in Antofagasta and Coquimbo Regions. Los Pelambres operates in the largely agricultural Choapa Valley and interacts with several communities. Our mining operations in northern Chile are located in desert areas near small communities with a long-mining tradition.

The experience of cohabiting with communities in different geographical and social contexts has taught us that each region has its opportunities and challenges and that dialogue and collaboration among the different players that inhabit the region contribute to people's development and provide creative and relevant solutions to local problems. Through different dialogue mechanisms, we seek to make a significant contribution to the development and wellbeing of our host communities, respond to their expectations and concerns, and embed lasting capabilities to promote their productive activities, culture and tradition.

## MANAGEMENT

### SOCIAL MANAGEMENT MODEL

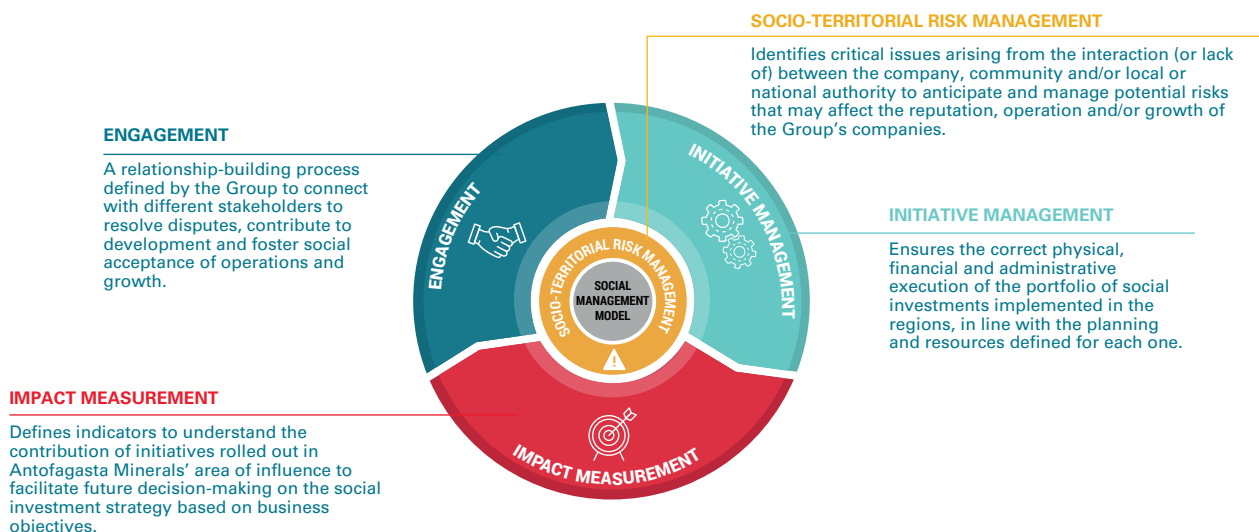
In 2018 we launched a new Social Management Model that will be gradually implemented from 2019 in our operations and in the Group's other operating companies.

The objective of the Social Management Model is to have a single, integrated way of operating at Group level to enable the application of common engagement principles, methodologies and practices, guarantee excellence in project execution, measure impacts and have a socio-territorial risk management system that offers the quantity and quality of information needed to make evidence-based decisions.

The Social Management Model consists of four components and includes standards for the application of each one.

In 2018 we worked on the conceptual development of the Model, the Engagement Standard and the Initiatives Management Standard. The latter includes the development of an online platform containing all the information regarding each project or social programme's physical and economic state of progress.

The Model was launched at the end of the year with all our operations' regional teams, together with the standards and online platform. In 2019 we will prepare the Impact Measurement and Socio-Territorial Risk Standards, as well as reinforce the Model's implementation at operations.











**ADDRESSING SOCIAL CONCERNS**

- **Engagement mechanisms:** dialogue with local people is crucial for aligning views on the region, resolving disputes and addressing concerns. To strengthen such dialogue, we use different engagement mechanisms: citizen dialogue, round tables, community meetings, participatory environmental monitoring with the community and community visits to operations, as well as communications in the media, on websites and social networks.
- **Formal complaint mechanisms:** each operating company has a formal system to monitor its commitments to the community and to investigate and respond to queries and complaints.
- **Disputes:** engagement mechanisms based on the Somos Choapa and Dialogues for Development design have allowed community concerns to be aired, creating opportunities to resolve possible issues sooner and avoid high conflict levels. However, there are communities that are not yet part of Somos Choapa, with whom other dialogue mechanisms have been used. One example is the Cuncumén community, close to Los Pelambres, with whom dialogue was established to address the inconvenience caused by unusual levels of dust from Los Quillayes tailings storage facility. This led to an agreement to strengthen preventative measures when elevated levels of dust are detected.
- **Water availability:** water scarcity, mainly caused by long periods of drought, has been a constraint on the development of various productive activities. This is especially evident in the central region of Chile, where the majority of agricultural activity is

concentrated and coexists with different activities, such as mining. This is one of Antofagasta Minerals’ greatest challenges as Los Pelambres operates in the mainly agricultural Choapa Valley. For this reason, Los Pelambres has put in place operational measures to protect water quality and ensure efficiency of use.

**+** More information on p. 55, see Water Management

In addition, initiatives designed in conjunction with the community and public agencies have improved the structure and efficiency of local irrigation systems for small and medium-sized farmers, as well as the availability and quality of drinking water in communities. Good examples of this are the Confluye and AProxima programmes.

- **Culture and heritage:** communities cherish their identity and cultural heritage and this has led to the creation of programmes that work with the communities to recover cultural traditions, public spaces and places rich with local history. Los Pelambres has carried out various activities to contribute to the recovery and/or improvement of public spaces for the community. In 2018 the most popular initiatives were the Recreo Programme, to improve communities’ public spaces and green areas, and the Gran Mateada initiative encouraging neighbours to drink mate (a traditional hot drink) together in communal areas.

Protecting natural and cultural heritage is also part of Antofagasta Minerals’ history. In 2018 we supported the opening of the Monte Aranda Rock Art Park in Choapa Valley, which protects and displays archaeological pieces belonging to the local indigenous culture.



## SOCIAL CONTRIBUTION

Our social contribution comprises our portfolio of social management projects and programmes containing all our community commitments including mandatory and voluntary initiatives as well as donations and programmes implemented by Minera Los Pelambres Foundation.

While the origin of these social projects and programmes may be different, they all correspond to commitments we have with communities.

### ECONOMIC SOCIAL CONTRIBUTION<sup>1</sup>

	2018	2017	2016
Millions of \$ invested in the community	33.7	12.5	24.3

### “CHOAPA I” – OPEN INNOVATION

In 2018 Los Pelambres launched Choapa i, an open innovation platform developed with university students to address social challenges. The pilot project is under way in the Choapa Valley and seeks to create an innovation collaboration space for productive social challenges in the community.

## FROM COMPETITION TO COEXISTENCE

Shared resources and community impacts have been a source of friction and our response has often been reactive. The learnings in the Choapa Valley are driving us towards a genuine search for long-term development plans, contributing to the prosperity of local communities through dialogue conducive to a shared vision of regional development and moving the relationship from one of competition to one of coexistence.

In 2014 we developed a new and innovative local engagement framework called Somos Choapa (We are Choapa). Four years later, this framework has been established throughout most of Los Pelambres’ area of influence and successfully replicated through the Dialogues for Development initiative at our operations in northern Chile.

This innovation has resulted in a redistribution of power among the different stakeholders, as well as alignment towards a shared vision of a sustainable future in the areas where we operate.

With the participation of more than 22,000 people, a portfolio of 131 initiatives has been developed, of which 41% are complete, 28% in execution and the remainder in the conceptual or feasibility stage. Focused on economic, social and environmental development, the following initiatives stand out: employment, productive diversification, education, road safety, city, community, local identity, health, and waste and water issues.

SUSTAINABILITY FOCUS

## RESULTS SOMOS CHOAPA 2014-2018



### GREEN AREAS

**51,224 m<sup>2</sup>** of parks developed with communities.  
(26,400 m<sup>2</sup> Salamanca, 3,230 m<sup>2</sup> Canela, 21,594 m<sup>2</sup> Los Vilos).



### SPORTS INFRASTRUCTURE

**26,209 m<sup>2</sup>**  
(Moncho Vega, Panguesillo, Los Vilos sports pitch, La Aguada and El Poligono).



### WATER RESOURCES

**18,029** inhabitants benefiting from rural drinking water systems and sanitation solutions.  
**1,049** beneficiaries of 6,615 m of improved canals.



### FOSTERING PRODUCTION

**746** entrepreneurs benefit from the Cosecha, Impulso and Emprende programmes.



### COMMUNITY BUILDING

**3,924** individual beneficiaries and **236** social organisations strengthened.

**54**

completed initiatives

**37**

initiatives under way

**40**

initiatives at design stage

<sup>1</sup> Figure for 2018 includes mandatory and voluntary social projects and programmes, donations, social agreements and programmes managed by Minera Los Pelambres Foundation. In 2017 only voluntary social projects and programmes were included.

# SOMOS CHOAPA

Somos Choapa is an initiative, promoted by Los Pelambres together with the municipalities of Salamanca, Illapel, Canela and Los Vilos, which seeks to contribute to the sustainable development of the region and the wellbeing of its inhabitants. Community participation is vital throughout the process (vision construction, problem identification, project prioritisation, definition of initiative portfolio and implementation). It is based on an institutional alliance and commits to collectively working on initiatives which are financed with public and private investment. Among 2018 highlights are:



## La Gran Mateada

Initiative promoted by Somos Salamanca and implemented by Ciudad Emergente Foundation, with the participation of nearly 800 residents, who carried out 34 “mateadas” in 26 urban and rural neighbourhoods in Salamanca municipal district to get together with their neighbours and restore an old local tradition: meeting to talk about mate, a local hot drink.

After the activity, participants acknowledged that getting to know each other, sharing and respecting one another are vital to strengthening neighbourhood ties and that similar activities should be repeated more often.



## APRoxima

APRoxima seeks to contribute to the development of rural drinking water systems and wastewater solutions in Salamanca, Illapel and Canela municipal districts.

The water programme provides Rural Drinking Water Committees with training and specialist technical support in designing sanitation projects. In addition, it contributes to financing minor works to ensure the operation of these projects.

Our partners in this initiative are the Ministry of Public Works' Water Works Directorate, the district rural drinking water network, municipalities of Salamanca, Illapel and Canela, monitoring committees for the Choapa, Chalinga and Illapel rivers and Minera Los Pelambres Foundation.





### Treasures of Choapa

The project seeks to place value on and highlight elements that reflect the identity of Choapa Province.

The entire community was invited to put forward proposals of the province's "treasures": examples of cultural, natural or social heritage that underpin the construction of the Choapa identity in order to make documentaries and graphic pieces about things which make the community proud.

[www.tesorosdelchoapa.cl](http://www.tesorosdelchoapa.cl)



### Design project for Constitución street in Illapel

The design project for Constitución street in Illapel began in 2016 and involved rehabilitating the town's high street including new paving, widening pavements, installing underground streetlight cables and planting trees. The last section of the street was inaugurated in a public ceremony bringing together about 2,000 people.



### Confluye – pilot programme to measure impact

The Confluye programme supports the design and execution of external and internal irrigation works for agricultural properties, which complements State co-financing through Law 18,450. Minera Los Pelambres Foundation has run the programme since 2008 with the Choapa River Monitoring Committee. In 2015, the Chalinga and Illapel River Monitoring Committees joined the initiative.

It tackles three main issues: the importance of agricultural activity in Choapa Province and its large number of associated water rights; the province's condition of cyclical drought and climate change; and the need for water use efficiency.

It aims to contribute to improving water availability and its efficient use for agricultural production, thus contributing to enhancing the quality of life and sustainable development in Choapa Province.

In 2018 we conducted our first impact measurement using the Confluye programme as a pilot project. The purpose was to evaluate the programme's real scope in terms of its social impact - beyond the number of beneficiaries, works built or money invested – and find out whether it positively affects farmers' profitability, income, costs, life quality and/or trust in the company.

The analysis showed external irrigation projects for agricultural properties have the biggest impact due to the higher number of farmers or families that benefit. There is also a greater increase in these types of projects (12.8 projects) owing to the Confluye programme.

The main impact is reduced costs, especially labour, incurred by farmers on irrigation. Other impacts such as increased income, increased profitability of land and time savings vary in intensity depending on the type of project.

### DIALOGUES FOR DEVELOPMENT

The Dialogues for Development programme arose out of an agreement between Antucoya, Centinela, Komatsu Cummins, the municipalities of María Elena and Sierra Gorda, and development NGO Simón de Cirene. Through open and participatory processes with communities, it aims to generate a common roadmap to improve local people's wellbeing.

In 2018 initiatives agreed through the dialogue processes were implemented including programmes on Emergency Planning, responsible possession of animals, and alcohol and drug use prevention among young people in María Elena. In the case of Sierra Gorda, improvements were made to community infrastructure such as the church, nursery school and fire station, as well as programmes to renew fire equipment and support firefighters' emergency management. Other highlights include Sierra Gorda's primary health care programme and rural health centre.

#### Primary health care programme

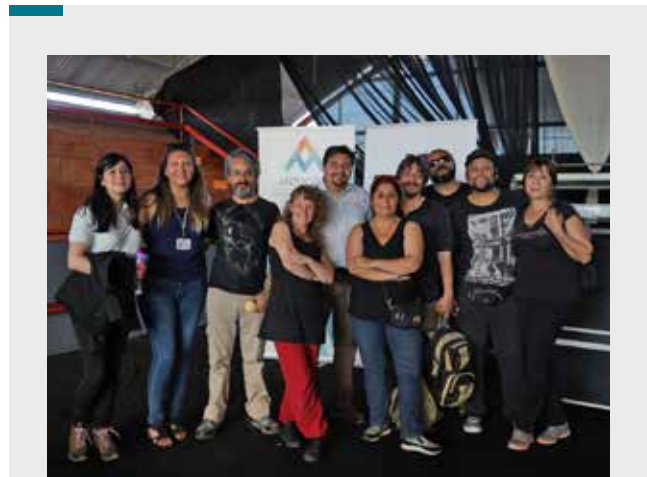
The initiative provided support to boost services at the rural health centre to improve the quality of life and wellbeing of local people. It included appointments with specialists and/or primary health care tests for Sierra Gorda inhabitants over two days involving 200 medical interventions providing dentistry, ophthalmology, paediatric care, gynaecology, dermatology and infant traumatology.

Our project partners were Sierra Gorda municipality's health department, Odontólogos Sin Fronteras (Dentists without Borders), Operativo Médico Sembrando Salud (Antofagasta University's medical assistance operation, Komatsu Chile, Distribuidora Cummins Chile and development NGO Simón de Cirene.

#### Emergency planning

With the help of specialists, María Elena's emergency response capacity was diagnosed, within the framework of the United Nations' Awareness and Preparedness for Emergencies at Local Level (APELL) standard, in order to create an integrated emergency plan. The initiative involved training and certification of key institutions and players at local and regional level, as well as raising awareness and providing information to the community.

The aim was to improve, coordinate and expand communication mechanisms in case of an emergency



#### Alcohol and drug abuse prevention programme

The María Elena community requested this initiative due to the increase in homeless people with substance abuse issues in the area. There was no preventive support from specialist experts, diagnosis mechanisms or alcohol and drug awareness, prevention and treatment programmes to tackle the problem in the municipal district.

The aim of the initiative was to prepare an analysis of alcohol and drug use in María Elena to implement a district prevention plan. This led to the drug abuse prevention agency SENDA Previene opening its first office in the area to support the early detection and prevention of drug use in children and young people.

Our project partners were María Elena municipality, Komatsu Chile, Distribuidora Cummins Chile, SENDA, Adolescents and Young People's Advisory Council (Consejo Consultivo de Adolescentes y Jóvenes), Municipal Council, María Elena health centre, development NGO Simón de Cirene, NGO Fractal and La Favorecedora theatre company.

by strengthening the institutional framework of the municipality's emergency operations committee, COE (Comité Operativo de Emergencias).

Our partners in developing this initiative were María Elena municipality, Komatsu Chile, Distribuidora Cummins Chile, firefighters, police, health centre, Cruz del Norte hospital, Nueva Coya radio, neighbourhood committees, COE María Elena, Municipal Council, COE Tocopilla, national emergency office ONEMI, development NGO Simón de Cirene and Ideambiente.



## DEVELOPING LOCAL SKILLS AND EMPLOYMENT PROSPECTS

Antofagasta Minerals' operations seek to improve local employment prospects through specific hiring initiatives and job-training programmes. To achieve this we have focused on developing the skills of local companies, to help improve their commercial, financial and human resource capabilities, as well as their productivity and use of innovation.

In 2018, highlights include the inauguration of the Los Vilos Technical Training Centre, the Antofagasta Minerals Scholarship Programme and Eleva Programme, as well as a series of initiatives to develop capabilities.

**+** [More information on p. 38](#)

The hiring of local people is at the heart of our business strategy to contribute to local development and it is a requirement that has been included in contracts with supplier and contractor companies through a performance agreement which sets local employment targets. In 2018 we directly employed 2,226 people from Antofagasta and Coquimbo Regions, representing 43% of our employees. At Los Pelambres, employees and contractors from Choapa Province account for 46% of the total workforce.

### EMPLOYMENT AND LOCAL SUPPLIERS<sup>1</sup>

	2018	2017	2016
<b>LOCAL EMPLOYMENT</b>			
Number of workers from Antofagasta and Coquimbo Regions	2,226	2,623	2,312
<b>LOCAL SUPPLIERS</b>			
Number of suppliers from Antofagasta and Coquimbo Regions	1,455	688	735
<b>LOCAL PURCHASES</b>			
Millions of \$ in purchases of goods and services net of VAT in Antofagasta and Coquimbo Regions	1,929	350	377



SUSTAINABILITY FOCUS

#### TECHNICAL TRAINING CENTRE

Inaugurated in 2018, this is the first Technical Training Centre in the town of Los Vilos. The modern higher education institution was built with funds from Los Pelambres and is operated by the Católica del Norte University through its technical training centre CEDUC.

More than 300 students enrolled in the six courses offered, all from local communities and the vast majority were able to benefit from the country's gratuity law which provides free further education to poorer families.

#### SOCIAL LEADERS TRAINING DIPLOMA

The diploma aims to increase and strengthen the leadership skills of social leaders in Salamanca municipal district. The training programme was provided by the Social Leaders Diploma Corporation (Corporación Diplomado de Dirigentes Sociales) and accredited by the University of Santiago.

124 people from both urban and rural areas graduated from the course, of which 66% were women.

#### ANTOFAGASTA MINERALS SCHOLARSHIP PROGRAMME

In 2018 34 young people taking technical-professional and university courses benefited from this scheme, of which 70% were women. They all came from the María Elena, Michilla, Sierra Gorda and Calama areas.

Of these, 20 received the grant for the first time while it was renewed for the remaining 14.

<sup>1</sup> Figures for 2018 represent Antofagasta Minerals' total purchases through local suppliers from Coquimbo and Antofagasta Regions according to the following definition: "local supplier is a supplier company that has facilities in any of the municipal districts of a specific region, and may have its headquarters or a branch installed in this region".





# ENVIRONMENTAL MANAGEMENT

At Antofagasta Minerals we believe it is possible to mine in a sustainable way through effective environmental management that prioritises environmental protection and the efficient use of natural resources.

## CONTEXT

Antofagasta Minerals believes effective environmental management contributes to the efficient use of natural resources, biodiversity protection, mitigation of negative environmental impacts, first-rate operational performance, development of regions where we operate and protection of the ways of life and livelihoods of our host communities.

This is no easy task due to the different factors we must handle. These include the development of our business activities, our activities' potential environmental impacts from exploration until mine closure, and the new climate change scenario to which we must adapt. These challenges motivate us to continue improving the effectiveness of our management and thus contribute to the sustainable development of our operations' area of influence.

## MANAGEMENT

### ENVIRONMENTAL MANAGEMENT SYSTEM

At Antofagasta Minerals, we have a Sustainability Policy and an Environmental Management Model that seek to ensure our operations, environmental activities and projects strictly comply with environmental requirements<sup>1</sup> and have no incidents with an impact on the environment. The Environmental Management Model focuses on four areas: leadership, incident reporting, operating risk management and regulatory risk management.

We have specific standards on significant environmental issues such as climate change, biodiversity, mine closure and water management.

The general manager of each mining operation is responsible for environmental issues and reports to the Board. The corporate environmental department is responsible for controls, monitoring and incident reporting. Environmental performance is reported monthly to the Executive Committee and every six months to the Board's Sustainability and Stakeholder Management Committee. Environmental performance is included in performance agreements and represents 5% of annual targets.

In 2018 significant progress was made in implementing visible leadership, with on-site visits by the Executive Committee and each operation's senior leadership teams, as well as in the reporting of environmental incidents. The latter seeks to create a preventive and learning culture. In 2018 the number of low-potential environmental incident reports increased by 91% compared to 2017 as a result of training, communication and the standardisation of criteria for issuing reports.

### ENVIRONMENTAL COMPLIANCE AND INCIDENTS

In Chile, mining projects are evaluated by the environmental evaluation service SEA and must comply with a set of specific commitments to prevent, mitigate or compensate for their potential impacts, including on water, air, soil, biodiversity as well as use of energy and water. These commitments are set out in legally binding contracts known as RCAs<sup>2</sup> and are audited by the Environmental Superintendency (SMA) on a regular basis. Non-compliance can result in fines or even revocation of operating permits.

Environmental commitments are managed in an environmental requirements management system on a platform for the whole mining division. Antofagasta Minerals has a total of 61 RCAs listing 7,145 environmental commitments. We received no environmental fines in 2017.

The Los Pelambres Expansion Project was approved in 2018, generating a new RCA and environmental commitments. It is currently under construction.

In 2018 there were no environmental incidents with significant operational impacts.

<sup>1</sup> The most important environmental institutions in Chile are the Ministry of Environment which sets out public policy; the Environmental Evaluation Service SEA (Servicio de Evaluación Ambiental) which assesses and qualifies project impacts; the Environmental Superintendency SMA (Superintendencia del Medio Ambiente) which inspects and controls; and the environmental courts which, through the judiciary, apply the General Environment Law and its associated regulations.

<sup>2</sup> Resolución de Calificación Ambiental (Environmental Qualification Resolutions).





**DUST SUPPRESSION WITH ELECTROMAGNETISM**

Antofagasta Minerals' innovation programme, InnovaMinerals, made a pioneering proposal to reduce dust emissions through electromagnetic technologies, which will be piloted in 2019.

**RESPONSIBLE MINE CLOSURE**

We have a Corporate Integrated Closure of Mining Operations Standard in place since 2016 that considers the physical and chemical stability of the facilities as well as environmental and social issues. It also provides tools for timely and effective closure planning, approval by the authority and communication with the community. There are also guidelines on risk evaluation, social and environmental impacts, economic matters and post-closure guarantees, among other issues.

All of our operations have closure plans approved by SERNAGEOMIN, the Chilean government agency responsible for this matter.

**EMERGENCY PLANNING**

Our mining operations have emergency response and action plans coordinated with public service and local authorities. Tailings deposits and other facilities are designed to resist earthquakes and extreme climate events.

**AIR**

Mining activity generates particulate matter emissions. In Chile there are regulations that establish legal parameters for air quality which differ for urban and rural areas. Antofagasta Minerals' operations proactively manage air quality through continuous operational measures to suppress dust and particulate matter emissions (eg dampening roads and ore stockpiles), and also have early warning and air-quality monitoring points defined with the authority. However, despite these measures, our controls are not always able to prevent particulate matter emissions from affecting neighbours.

In July 2018, the communities of Valle Alto in Salamanca municipal district expressed their concern about an increase in dust from the sector between Los Quillayes tailings dam and Los Pelambres. Although we have worked collaboratively since 2008 to control and minimise the generation of particulate matter, as defined in the Framework Agreement (2008) and Cuncumén 2030 commitment plan (2015), the communities believed it necessary to agree additional activities or modifications.

In this context, the communities, local authorities and Los Pelambres signed a document enabling agreement in principle to be reached on a petition of 11 points relating to particulate matter control measures presented by the communities and to generate the basis on which to begin a dialogue process centred on transparency and good faith.

Through dialogue with the community, a series of technically feasible measures were jointly developed to mitigate and improve controls of particulate matter. These measures were embodied in an agreement signed in October 2018 between Cuncumén and Batuco communities and Los Pelambres. To date, implementation of the agreed measures is in line with the work plan agreed with the community. These include the construction of a dome to cover ore stockpiles which has been completed and was visited by community representatives and authorities when finalising this report in May 2019.





# WATER MANAGEMENT

Water is necessary for life and human activities; it is also an essential element to produce copper.

Efficient water management must contribute to maintaining the balance between water availability and its use by all parties that coexist in a region, both now and in the future.

## CONTEXT

Water is an essential resource for productive process in mining as well as the development of other human activities.

The mining industry uses 3% of total water consumption in Chile<sup>1</sup>. Although the mining industry is not one of the main water users, it is useful to understand the land-use context of mining operations to assess the different water management challenges.

In our case, we have three mining operations – Centinela, Antucoya and Zaldívar – located in northern Chile and one operation – Los Pelambres – in central Chile.

Each region has different water-related challenges although those of climate change and mining sustainably are common to both. All these variables need to be incorporated into our water management system to obtain a better grasp of water issues, establish necessary controls, improve processes and performance, and contribute to solutions for future challenges.

## MANAGEMENT

In 2018 Antofagasta Minerals adopted ICMM's Water Stewardship Framework to reinforce our management of water resources. The Water Stewardship Framework is based on four key elements:

- 1. Be transparent and accountable:** Publicly report material water risks, management activities and performance.
- 2. Engage proactively and inclusively** with stakeholders to understand their priorities, share plans and collaborate on solutions.
- 3. Adopt a catchment-based approach** understanding the social, cultural, economic and environmental value of water at the catchment scale to identify material water stewardship risks and provide context for corporate and operational water management.
- 4. Effective water resource management:** Manage operational water (quantity and quality) inputs, use and outputs to maximise resource sustainability, operational flexibility and economic benefit.

Within this framework, during the year we reviewed our organisational water management structure. Our new Operational Model describes water management roles and functions. We also

held workshops at each of our mining operations with the Risk and Compliance area to identify at risk water resources. This led to the development of a risk matrix with respective controls. The general manager of each operation is responsible for water issues and reports to the Board. The corporate environmental department is responsible for controls, monitoring and incident reporting. Since 2012, we have reported our water management performance in the water chapter of the Carbon Disclosure Project (CDP)<sup>2</sup>.



<sup>1</sup> Forecast water consumption in copper mining 2017-2028, Chilean Copper Commission (Cochilco), 2017.

<sup>2</sup> Our report to CDP is publicly available at [www.cdp.net](http://www.cdp.net)



**SEA WATER FOR LOS PELAMBRES**

The Los Pelambres Expansion Project includes the construction of a back-up desalination plant that will produce up to 400 l/s of desalinated water for industrial use. Its use is planned for periods of water scarcity and it will be located in the port area of Punta Chunga in the city of Los Vilos.

## SEA WATER, REUSE AND EFFICIENCY

In recent years our different water challenges have led us to focus on the strategic and efficient planning of water resources that will be necessary to continue our processes on an annual basis, as well as on the incorporation of technologies to minimise continental water use to reduce water consumption per tonne of copper produced.

As a mining group we have promoted the use of sea water, developing technologies for its raw use in ore processing operations.

In 2018, 45% of our total water consumption came from the sea, significantly higher than 9% a decade ago, when only Michilla used sea water, and also than the Chilean mining industry’s average sea water use of 14%<sup>1</sup>. Remaining consumption came from surface water (25%), groundwater (29%) and supplied by third parties (1%).

Water reuse rates vary between 80% and 96% depending on the characteristics of each operation. This is higher than the Chilean mining industry’s average reuse rate of 75%<sup>2</sup>.

In 2018 we consumed a total of 67.2 million m<sup>3</sup> of water, 2% more than the previous year, mainly due to the increase in ore processed.

## PROTECTING WATER – SHARED RESOURCE

The main loss of water is through natural evaporation from the tailings deposits.

We conduct participatory monitoring to ensure water quality outside our sites; in the case of Los Pelambres with the local community. In 2018, we conducted monitoring at 160 points – both ground and surface water – in the Choapa Valley and in the port area. At Centinela and Antucoya, water quality is monitored in the vicinity of the port facilities and at Zaldívar, we monitor groundwater extraction points in Negrillar, close to the Salar de Atacama.

In 2018 we carried out a series of water resource protection initiatives at Los Pelambres. Some of the best examples of this are the Aproxima and Confluye programmes, as well as the training of social leaders on rural drinking water issues.

**+ More information on pages 48 and 49**

In addition, we are conducting a pilot project to help protect the accelerated melting of glaciers.

**+ More information on p. 59**

### WATER EXTRACTION<sup>3</sup> - million m<sup>3</sup>

	2018	2017	2016
Surface water	16.5	18.1	14.1
Groundwater	19.4	17.2	13.5
Water supplied by third parties	0.9	1.2	1.2
Sea water	30.4	29.2	26.5
<b>Total</b>	<b>67.2</b>	<b>65.7</b>	<b>55.3</b>

<sup>1-2</sup> Source: Minería en números 2017, Consejo Minero (Mining in numbers 2017, Mining Council).

<sup>3</sup> In 2017 we began implementing the ICMM Water Reporting Guide. The calculation considered factors such as water retained in ore moisture, water at bottom of the pit (ground water according to ICMM methodology), as well as rainfall and run-off (continental water according to ICMM methodology).



# RENEWABLE ENERGY FOR MORE SUSTAINABLE MINING

In the face of climate change, mining not only plays a role as a supplier of copper to promote new low-carbon technologies but also presents a challenge to the industry to decarbonise its production of copper. We will achieve our goals of reducing carbon emissions by incorporating renewable energy and energy efficiencies in our processes.

## CONTEXT

Antofagasta Minerals' energy use represents almost 21% of cash costs – made up of 14% electricity and 7% fuel – and most of our greenhouse gas (GHG) emissions. There is a direct link between energy use and GHG emissions when energy is generated from fossil fuels.

Chile's energy policy aims to decarbonise its energy matrix. It has set a target for renewable energy to represent 70% of its energy mix by 2050 and provided economic incentives to reach this goal. In 2018 renewable energy represented 47%<sup>1</sup> of the country's energy matrix. We can make a unique contribution towards these efforts not only because copper is vital for clean energy technologies but also by using renewable energy in our processes and decoupling our energy consumption from GHG emissions.

Mining is also very sensitive to the effects of climate change. In recent years we have all been affected by extreme weather events, such as heavy snow, floods and droughts, leading us to adopt an adaptive approach to climate change and focus efforts on technology and innovation.

## MANAGEMENT

### ENERGY MANAGEMENT

In 2018 Antofagasta Minerals' Executive Committee approved an updated structure and governance of its Energy Management System. The update emphasises energy management as a key variable to be considered in different initiatives across the organisation including innovation, operational excellence, competitiveness and costs, and as a mechanism for GHG reduction.

This involved making adjustments to management structures based on ISO 50001 guidelines and establishing the basis for the new system's operation. For this purpose, we began different key tasks such as preparing consumption profiles for each operation, analysing the portfolio of Operating Excellence projects to determine the projects' contribution to reducing energy consumption and GHG emissions, and defined KPIs to measure new projects.

In addition, in 2018 we continued to drive energy efficiency initiatives including increased performance at the Los Pelambres SAG mill, specific energy consumption improvements at the Centinela electrowinning plant, fuel-use and mining truck utilisation efficiencies at Zaldívar and the evaluation of crusher utilisation rates at Antucoya.

In 2019 our tasks are to prepare an electromobility roadmap, create an online corporate energy portal, develop and promote standards that incorporate energy efficiency into project designs and strengthen the governance structure through the Operating Model and highlight energy as an important variable to be considered in decision-making.



<sup>1</sup> Report on Installed Generation Capacity, National Energy Commission, Chile.





Our GHG emission reduction goal for 2022 is equivalent to removing around 80,000 vehicles from the roads.





## GLACIER COOLERS

In 2018 Antofagasta's Innovation Board approved a proposal to test covering glaciers with removable reflective covers containing textiles to delay the accelerated melting of glaciers caused by climate change. The pilot project will start in 2019.

## CLIMATE CHANGE MANAGEMENT

The effects of climate change have become evident in Chile in recent years mainly affecting water availability in the centre and north of the country where Antofagasta Minerals' operations are located.

In 2016 the Board approved a Climate Change Standard. The standard has three main aims:

- Incorporate climate change into organisational culture.
- Consider GHG emissions in decision-making from the initial design stage of projects until closure.
- Include GHG mitigation measures, detecting opportunities at operations in electricity supply decisions and project energy efficiencies.

In 2018 Antofagasta Minerals also defined a target to reduce carbon dioxide equivalent emissions by 300,000 tonnes by 2022 compared to the baseline in 2017.

The Board is responsible for climate change issues and the corporate environmental department for its management. In addition, since 2009 we have reported our climate change management to the Carbon Disclosure Project (CDP).<sup>1</sup>

## RENEWABLE ENERGY TO REDUCE OUR GHG EMISSIONS

In 2018, 23% of Antofagasta Minerals' energy supply came from renewable energy.

At Los Pelambres, one of the world's largest copper mines, 59% of energy consumption comes from photovoltaic plants, wind or power generated by its ore conveyor belts.

As from 2018 new energy supply contracts favour sources that reduce GHG emissions. For example, the new electricity supply contract signed between Zaldívar and Colbún S.A. for 550 GWh/year will supply renewable energy from July 2020. Zaldívar will be the first Chilean mining company to use 100% renewable energy to produce copper, which will be verified by an external organisation.

Another GHG emission reduction initiative is the power increase at Centinela's thermosolar plant which uses solar energy for heating processes at its electrowinning plant.

In 2018 carbon emission intensity decreased by 17% compared to the previous year, mainly due to the combination of the northern SING and central SIC grids. Before the combination, our northern operations obtained electricity from what is now the SING subsystem in which conventional energy sources make up 79% of installed capacity. Our operations now obtain electricity from the national electric system (SEN) in which renewable energy makes up 47% of installed capacity.

### ANTOFAGASTA MINERALS' ENERGY CONSUMPTION - GJoules

	2018	2017	2016
Electricity consumption	12,513,335	11,906,112	11,538,454
Fuel consumption	11,962,226	9,491,721	9,153,704
Renewable energy consumption	23%	21%	17%

### GREENHOUSE GAS (GHG) EMISSIONS<sup>2</sup>

	2018	2017	2016
<b>SCOPE 1<sup>3</sup></b>			
Tonnes CO <sub>2</sub> equivalent	1,026,220	854,628	795,994
<b>SCOPE 2<sup>4</sup></b>			
Tonnes CO <sub>2</sub> equivalent	1,391,695	2,071,937	2,000,010
<b>TOTAL EMISSIONS (SCOPES 1 AND 2)</b>			
Tonnes CO <sub>2</sub> equivalent	2,417,915	2,926,565	2,796,004
<b>EMISSIONS INTENSITY</b>			
Tonnes CO <sub>2</sub> e/tonnes of copper produced	3.33	3.87	3.67

<sup>1</sup> Carbon Disclosure Project (CDP) is the leading organisation in the monitoring and disclosure of companies' carbon and water footprint. More information on [www.cdp.net](http://www.cdp.net)

<sup>2</sup> Figures include 100% of Zaldívar emissions although Antofagasta plc owns 50% of the mining operation.

<sup>3</sup> Scope 1: Sources of direct emissions in operations controlled by Antofagasta Minerals S.A., such as from machinery, vehicles or boilers.

<sup>4</sup> Scope 2: Indirect emissions from electricity generation activities by sources that are owned or controlled by a third party associated with the consumption of energy inputs eg electricity bought from SEN.

# MINING WASTE

We are seeking new design, safety and process solutions for the disposal of mining waste by using creativity and innovation and working with others.

## CONTEXT

Chile's economic and social development is closely connected to mining. One of the consequences of mining is the generation of material which is deposited in waste rock dumps, spent ore dumps and tailings storage facilities. There are around 700 tailings storage facilities in Chile of which 124 are in operation<sup>1</sup>.

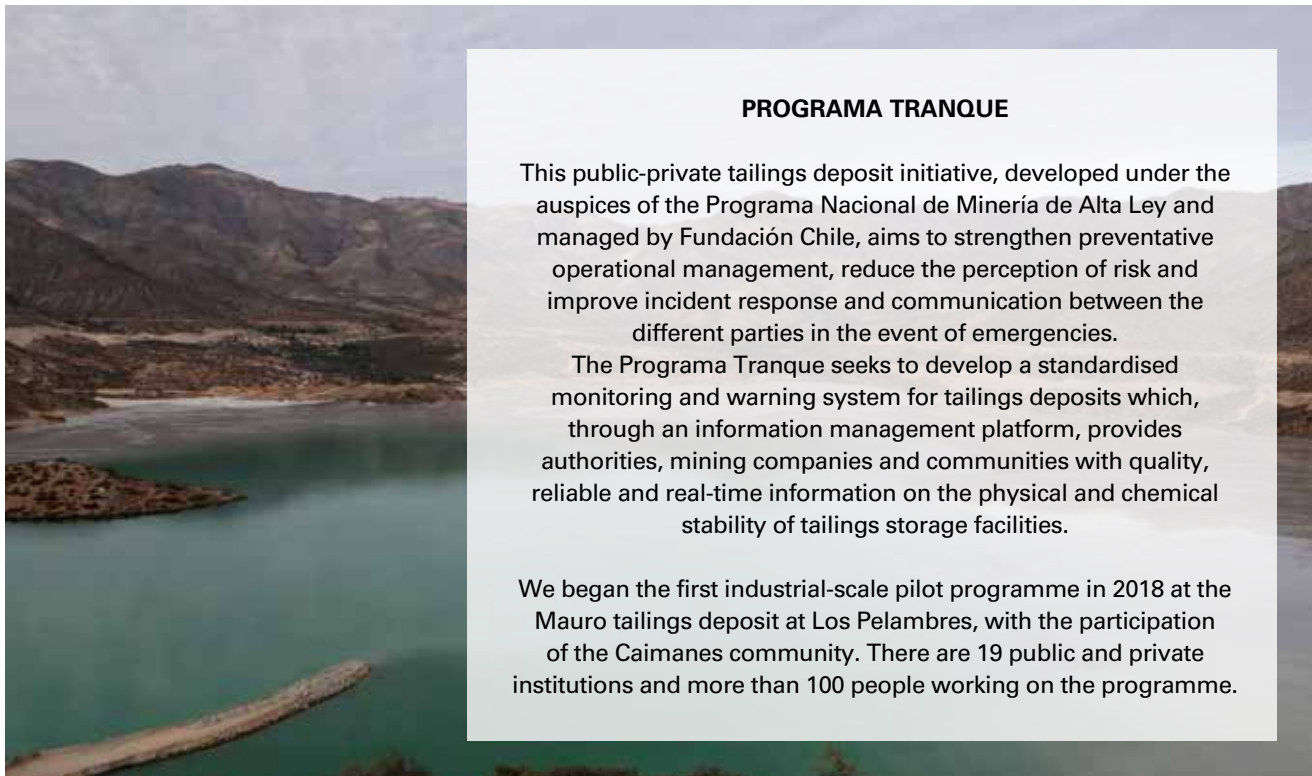
Chile's national geology and mining service SERNAGEOMIN is responsible for inspecting waste disposal facilities, together with other technical bodies – such as the water authority (DGA) – in the regions where mining operations are located.

We have four tailings storage facilities in operation: two at Los Pelambres, one at Centinela and one at Zaldívar. They have all been designed with high safety standards, constructed using the downstream method, and are regularly monitored by independent, qualified experts. We also participate in international and public-private alliances to strengthen tailings management at local and global level.

## MANAGEMENT

Depending on the copper extraction process, mining generates waste which is deposited in tailings storage facilities, waste rock dumps and spent ore dumps, as well as other industrial waste. Each type of waste is managed in accordance with current regulations and with additional measures to protect the safety and health of people and avoid pollution of the soil, and surface and underground water. Antucoya, Centinela Cathodes and Zaldívar mainly generate waste in the form of spent ore from their operations while Los Pelambres and Centinela Concentrates generate tailings; in all cases, waste rock dumps are required.

The general manager of each mining operation is responsible for mining waste and reports to the Group's Board. The corporate environmental department is responsible for controls, monitoring and incident reporting. Since 2015, we have improved communication and warning systems with the community, particularly at the Mauro tailings storage facility.



### PROGRAMA TRANQUE

This public-private tailings deposit initiative, developed under the auspices of the Programa Nacional de Minería de Alta Ley and managed by Fundación Chile, aims to strengthen preventative operational management, reduce the perception of risk and improve incident response and communication between the different parties in the event of emergencies.

The Programa Tranque seeks to develop a standardised monitoring and warning system for tailings deposits which, through an information management platform, provides authorities, mining companies and communities with quality, reliable and real-time information on the physical and chemical stability of tailings storage facilities.

We began the first industrial-scale pilot programme in 2018 at the Mauro tailings deposit at Los Pelambres, with the participation of the Caimanes community. There are 19 public and private institutions and more than 100 people working on the programme.

<sup>1</sup> Atlas of Tailing Deposits of Chile – Sernageomin, Chile. Available in Spanish at: <http://relaves.sernageomin.cl/#/home>





## TAILINGS STORAGE FACILITIES

### Innovation and safety

Innovation has been a priority for Antofagasta Minerals to achieve new and safe forms of storing tailings.

At Centinela, we operate a “thickened” tailings storage facility. This innovation provides significant benefits such as greater physical stability than conventional tailings and enables us to recycle more water to be reused in productive processes.

At Los Pelambres we operate the Mauro and Los Quillayes storage facilities (the latter is used as back-up) which were designed to meet high Chilean safety standards and go beyond these in some aspects of their operation. Mauro has 76 water pressure devices (piezometers) to monitor in real time its stability and safety.

In September 2015 the Mauro tailings deposit withstood an 8.3<sup>o</sup> magnitude earthquake 100 km away, the strongest earthquake in the region in more than 70 years. It suffered no negative impacts and continued to operate normally.

### Learnings and critical controls

After the 2015 tailings dam collapse in the district of Bentos Rodrigues de Mariana in Brazil, the mining industry through ICMM reviewed the critical controls for these facilities, which included ensuring the availability and development of qualified and competent human resources. Our tailings storage facilities are reviewed twice a year by a group of independent international experts who assess their condition and management, and report directly to the CEO and Board.

### Collaborative alliances

As an ICMM member, we support recent proposals to develop an independent, international system of managing tailings deposits. We also actively participate in the ICMM working group on the matter which has two main lines of action:

- **Short term (less than 10 years):** Strengthen critical controls for the design, operation and closure of conventional tailings deposits (to be prepared during 2019) and, within a period of no more than 10 years, significantly improve the management of tailings storage facilities and the implementation of ICMM’s Position Statement on tailings.
- **Long term (10 to 15 years):** This involves two lines of work. First to investigate and identify alternative methods of ore recovery to significantly reduce and/or eliminate tailings generation. Second, to promote the development of technologies to eliminate moisture from tailings and thus strengthen their geomechanic properties.

We also participate in the Consejo Minero’s (Mining Council) tailings working group which is focused on facilitating implementation of the ICMM’s Position Statement in Chile and preparing a guide to develop emergency procedures.

## WASTE ROCK AND SPENT ORE DUMPS

The waste rock we remove to extract ore and the spent ore we generate through the leaching process are stored in specially prepared areas within our facilities.

In Chile, the location, operation and closure of dumps must be authorised by the environmental authorities and by SERNAGEOMIN.

At the date of finalising this report, we were deeply saddened by news of the worst tailings catastrophe on record. In January 2019 an inactive tailings deposit at Córrego de Feijão mine, near Brumadinho, in Brazil collapsed releasing millions of tonnes of waste and caused an unknown number of fatalities. This tragedy made even more evident the importance of appropriate tailings management.

## INDUSTRIAL WASTE

Our processes produce hazardous industrial waste, such as used oil and batteries, and non-hazardous waste, such as sludge and timber. All are managed in accordance with legal requirements. Whenever possible, we recycle waste to avoid its final disposal.

In addition to Chile’s strict existing regulations on waste, Law 20,920 came into force in 2017 which established a waste management framework, extended the responsibility of the producer and promoted recycling, which included tyres as a priority waste.

### MINING WASTE - Millions of tonnes

	2018	2017	2016
Waste rock	287	274	252
Tailings	96	89	89
Spent ore	63	38	30

### NON-MINING WASTE - Tonnes

	2018	2017	2016
Hazardous industrial	10,015	8,933	6,968
Non-hazardous industrial	27,787	30,822	35,821
Domestic	3,793	3,826	4,493

# BIODIVERSITY

Protecting biodiversity and valuable environmental ecosystems.

## CONTEXT

Los Pelambres is located in Coquimbo Region in one of the world's 25 areas of greatest plant biodiversity, reflected in an abundance of flora and fauna. Our operations located in the Atacama Desert - Centinela, Antucoya and Zaldívar - are in an environment with less flora and fauna.

## MANAGEMENT

Antofagasta Minerals has a Biodiversity Standard developed in conjunction with the Wildlife Conservation Society (WCS) in 2016. It is aligned with the ICMM's position statement on Biodiversity and

Protected Areas and aims to prevent and minimise impacts on biodiversity, appropriately restore and compensate for any such impact, and generate additional benefits in the surrounding area.

All of our operations must conduct a review of biodiversity - species and ecosystems - according to the categories established by the Standard to prevent significant impacts and, if this is not possible, to minimise or compensate for them.

Los Pelambres currently administers four Nature Sanctuaries in Coquimbo Region: Palma Chilena de Monte Aranda, Quebrada Llau Llau, Laguna Conchalí and Cerro Santa Inés.

## ANTOFAGASTA MINERALS' MAIN CONSERVATION SITES



### LAGUNA CONCHALÍ NATURE SANCTUARY

Laguna Conchalí is a coastal wetland with a high conservation value and a highly unique habitat for the establishment and development of terrestrial and aquatic plant and animal life.

Los Pelambres has administered it since 1997 with the aim of restoring and protecting the environment.

As a result of work to restore the ecosystem, in 2000 Laguna Conchalí received Nature Sanctuary status and in 2004 it was designated a RAMSAR Convention international wetland site, one of only

14 sites in Chile and the only one managed by a private company.

The sanctuary is located 4 km north of Los Vilos and covers 50.4 hectares (the surface area of the RAMSAR site is 34 hectares).

In 2018, a new environmental management plan was developed together with the Wildlife Conservation Society (WCS) and approved by the Ministry of Environment that will further strengthen this site's environmental richness.

In 2018 we contributed to the protection of about 27,000 hectares of high-conservation land through a management model, allowing us to safeguard its conservation and strengthen its rich biodiversity.



**BOSQUE SANTA INÉS  
NATURE SANCTUARY**

Santa Inés is a 714-hectare coastal site which has one of the last remnants of relict rainforest, meaning that it contains plant and animal life that used to exist in the wider area but which has shrunk due to climate change.



**PALMA CHILENA MONTE  
ARANDA NATURE  
SANCTUARY**

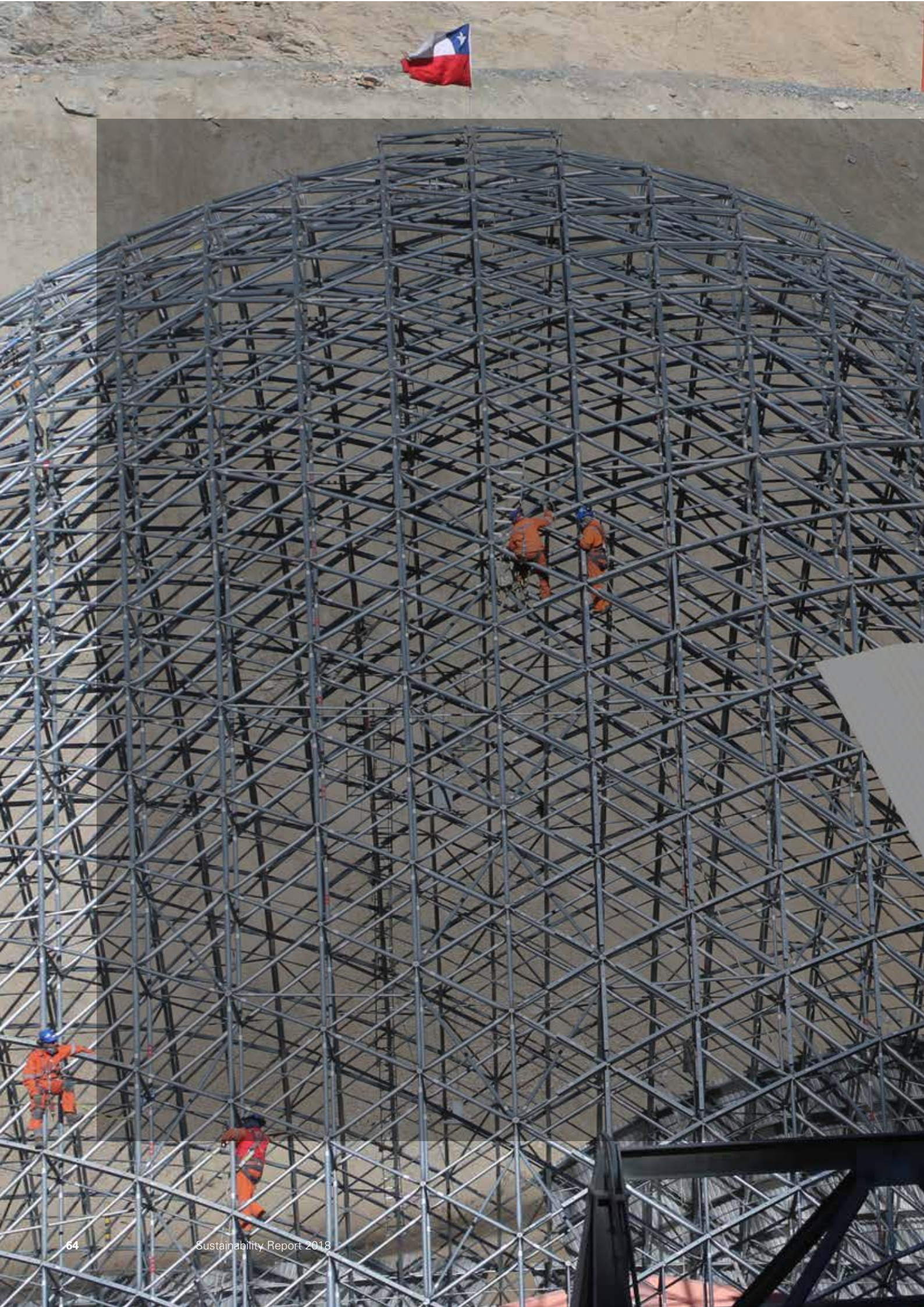
This nature sanctuary covers more than 5,696 hectares and has populations of the Palma Chilena (*Jubaea chilensis*), a threatened endemic palm species. Its conservation status is “vulnerable” and it is regarded as one of the southernmost palms in the world. There are also almost 100 species of native flora and fauna, among other common and endemic species.



**QUEBRADA LLAU-LLAU  
NATURE SANCTUARY**

Almost 1,800 hectares protect this sclerophyllous “hard-leaved” woodland ecosystem in the mediterranean-climate ecoregion found in central Chile. It preserves some of the region’s endangered species such as the Chequén (*Luma chequen*) or white Chilean Myrtle and the Canelo (*Drymis winteri*).









# APPENDICES

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SUSTAINABILITY GOALS

MATERIAL ISSUES

SUSTAINABLE DEVELOPMENT GOALS (SDGs)

INDEPENDENT ASSURANCE LETTER

ICMM PRINCIPLES

SUMMARY OF SUSTAINABILITY PERFORMANCE

GRI CONTENT INDEX

# SUSTAINABILITY GOALS

We have a set of indicators to measure and evaluate our sustainability performance.

Some of these indicators are included in the business scorecards of each mining operation and our corporate offices while others are aspirational goals that we have defined to complement these targets.

STRATEGIC OBJECTIVES	PERFORMANCE 2018	TARGET 2018	COMPLIANCE
<b>PEOPLE</b>			
Zero fatalities	1	0	Regrettably one of our contractors at Los Pelambres had a fatal accident.
Lost Time Injury Frequency Rate (LTIFR)	1.1	1.0	We were unable to meet this target as a contractor suffered a fatal accident. However, the LTIFR remained at around 1.0.
Implement Diversity and Inclusion Strategy	Implemented according to plan and without delays.	Implement plan milestones without delays in accordance with Strategy.	The implementation of the Diversity and Inclusion Strategy was executed during 2018 according to plan.
<b>ECONOMIC PERFORMANCE</b>			
EBITDA	\$2,139 million	\$2,073 million	Target achieved and 3% better than planned mainly due to higher revenues as a result of higher copper prices.
Copper production	725,300 tonnes of copper.	705,000 – 740,000 tonnes of copper.	Production target partially achieved (-2%), mainly due to lower than planned throughput and production.
Projects and Development	Closure plan for Los Pelambres Expansion Project approved.	Obtain approval of closure plan for Los Pelambres Expansion Project.	Closure plan for Los Pelambres Expansion Project approved in October by the Projects Committee and in November by the Board.
<b>ENVIRONMENTAL</b>			
Environmental incidents	0 severe environmental incidents occurred.	0 severe environmental incidents and/or with a relevant reputational impact.	There were no severe environmental incidents that affected our reputation and/or operational continuity.
Emissions reduction	CO <sub>2</sub> e emissions reduced by 17% compared to 2017.	Reduce CO <sub>2</sub> e emissions by 300,000 tonnes by 2022 compared to the baseline in 2017.	Reduction mainly due to country's two main power grids merging into the National Electric Grid (SEN).
<b>SOCIAL</b>			
Zero severe social incidents	0 severe social incidents occurred.	0 severe social incidents and/or with a relevant reputational impact.	There were no severe social incidents that affected our reputation and/or operational continuity.
<b>TRANSPARENCY AND CORPORATE GOVERNANCE</b>			
Ethics and compliance	The compliance model was reviewed and rolled out across the organisation.	Review and communicate the Group's Compliance Model.	During the year, the Compliance Model was reviewed and its structure was updated. It was rolled out through a day workshop for executives, a corporate video and mass emails across the organisation. In 2019 a mass e-learning process is planned and specific training for more exposed areas.
Corporate governance and risk	The Group's risk appetite was defined and approved.	Define the Group's risk appetite.	In 2018 the Board reviewed and approved the Group's risk appetite in the main risk areas, providing guidelines to the administration on how to analyse and control our main risks.
Due diligence on Human Rights	Due diligence on Human Rights began.	Conduct due diligence on Human Rights.	Due diligence on Human Rights began at the end of 2018 at all our mining operations.



# MATERIAL ISSUES

The key issues reported in our Sustainability Report are defined through a formal Materiality Analysis process, involving Antofagasta Minerals' CEO and executive team.

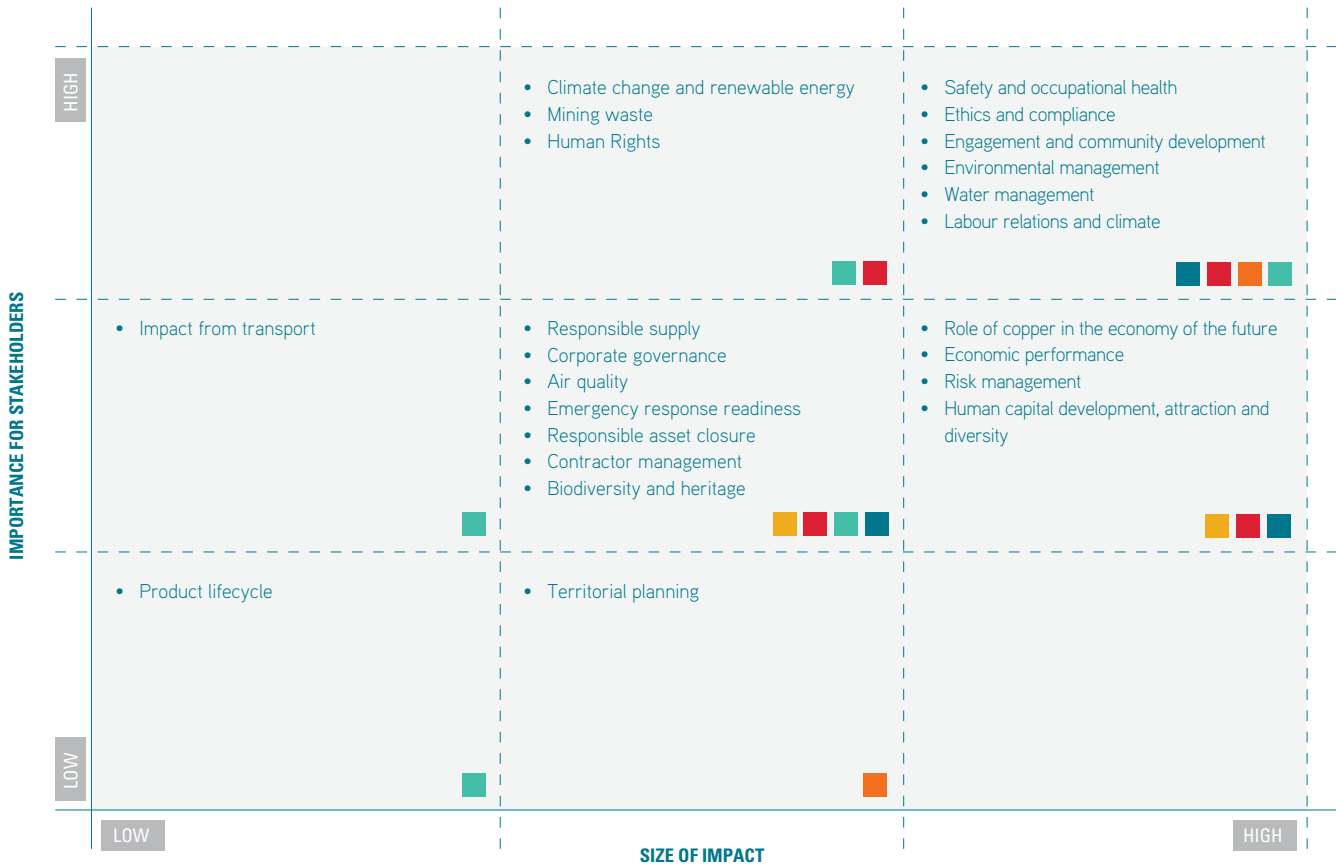
For our 2018 Materiality Analysis, we conducted a review and update of the issues that were material to Antofagasta Minerals in 2017. The key issues were identified through the following activities:

- **Strategic and priority issues for Antofagasta Minerals:** these were identified through interviews with the CEO and the Vice President of Corporate Affairs and Sustainability. The Business Strategy, Sustainability Policy and Risk Matrix were also reviewed.
- **Principal issues for external stakeholders:** these were identified through a review of internal and external communications media, the latter mainly focused on the mining sector. Critical issues for specialist investors and analysts on sustainability were also identified.

- **Emerging issues for the mining sector and companies in general:** key emerging issues for Antofagasta Minerals were identified by reviewing different sources of specialist information.

The most important issues identified were analysed and classified according to "importance to stakeholders" and the "size of impact". The Materiality Matrix in the 2017 Sustainability Report was used as a basis for the evaluation as well as an assessment of the issues in the Risk Matrix. The main messages and audience to whom the Report is addressed were defined together with the CEO. Workshops were held with vice presidents and key executives on the management of material issues to define the management approach, initiatives and indicators to be highlighted.

## 2018 MATERIALITY MATRIX



# SUSTAINABLE DEVELOPMENT GOALS (SDGs)

Achieving the Agenda 2030 targets will require cooperation between the State, local government, private sector and civil society. At Antofagasta Minerals, we seek to contribute to the achievement of these goals through our operations, projects and programmes.



- Generate employment opportunities for local communities
- Impulso Programme (SCh-FMLP)
- Cosecha Programme (SCh-FMLP)
- Los Emprende Programme (SCh-FMLP)
- Confluye Programme (SCh-FMLP)
- Integrated agricultural support programme (FMLP)
- Local supply programme (DD)




- APROxima Programme (SCh-FMLP)
- Cosecha Programme (SCh-FMLP)
- Integrated agricultural support programme (FMLP)





- Safety and Occupational Health Strategy
- Occupational Health Standard
- Sala Alma
- Prevention, communication and treatment of drugs and alcohol programme (DD)
- Support for primary health programmes (DD)



- Choapa technical training centre (SCh)
- Apprentices programme
- Eleva Programme
- Technical-professional education network (SCh)
- Social leaders training diploma (SCh)
- Higher education scholarships (FMLP)
- Excellence scholarships (FMLP)
- Minera Los Pelambres scholarship (FMLP)
- Preparatory Programme (DD)
- Preschool infrastructure improvement programme (DD)
- Higher education study scholarships programme (DD)



- Climate Change Standard
- Renewable energy use in mining processes

- Diversity and Inclusion Strategy
- Sexual Harassment Protocol
- Promociona Programme



- APROxima Programme (FMLP)
- Water reuse in mining processes
- Nature Sanctuaries (Laguna Conchalí, Bosque Santa Inés, Monte Aranda, Quebrada de Llay-Llay)
- Los Vilos desalination plant
- Sea water use in mining processes
- MOP-Centinela-APR Calama Poniente Framework Agreement (DD)

SCh: Somos Choapa    FMLP: Minera Los Pelambres Foundation    DD: Dialogues for Development






- Local employability programme
- Protect Human Rights (Code of Ethics and UK Modern Slavery Act)
- Emprende Programme (SCh - FMLP)
- Choapa technical training centre (SCh)
- Eleva Programme
- Technical-professional education network (SCh)




- Innovaminerals Programme
- Choapa i Programme (SCh)
- Private-public sector alliances: Programa Tranque, Programa Nacional de Minería de Alta Ley, Valor Minero
- System to monitor physical and chemical stability of tailings deposits



- Climate Change Standard
- Energy efficiency measures and renewable energy use to reduce GHGs
- Los Vilos desalination plant
- Sea water use



- Laguna Conchalí Nature Sanctuary
- Los Vilos desalination plant
- Sea water use




- Biodiversity Standard
- Biodiversity conservation sites



- Recreo Programme (SCh)
- Promueve Programme (SCh)
- Treasures of Choapa (SCh - FMLP)
- En Acción Programme (SCh)
- La gran mateada (SCh)
- Integral Closure of Mining Operations Standard
- Refurbishment projects: Constitución street in Illapel, Canela Baja cultural hall, Ramón Moncho Vega stadium (SCh)
- Emergency response training programme (DD)
- Responsible animal possession programme (DD)
- Comprehensive plan to support firefighters programme (DD)



- Code of Ethics
- Crime Prevention Manual
- Compliance Model
- UK Modern Slavery Act
- UK Bribery Act



- We encourage and promote the creation of public-private alliances, taking advantage of the experience and strategies for obtaining resources from alliances, to support the achievement of the SDGs in the regions where we operate.
- Collaborative alliances are formed across all our programmes and are part of our Somos Choapa and Dialogues for Development programmes, as well as in our relations with the State, Chilean and international trade associations, other mining companies and/or industry groups, civil society, academia and NGOs.

# INDEPENDENT ASSURANCE LETTER



(A free translation from the original in Spanish)

## INDEPENDENT PROFESSIONALS' REVIEW REPORT

Santiago, May 16<sup>th</sup>, 2019

Messrs. Shareholders and Directors  
Antofagasta Minerals S.A.

We have reviewed the set of performance indicators contained in pages 76 to 79 of Antofagasta Minerals S.A.'s 2018 Sustainability Report, hereinafter, "Performance Indicators", for the year ended December 31, 2018. Antofagasta Minerals S.A.'s management is responsible for the presentation of the Performance Indicators in accordance with the definitions established in the sustainability reporting standards of the Global Reporting Initiative (GRI standards). Our responsibility is to express a conclusion on the Performance Indicators based on our review.

Our review was conducted in accordance with attestation standards established by the Chilean Institute of Public Accountants. Those standards require that we plan and perform the review, to obtain limited assurance about whether any material modifications should be made to the Performance Indicators, in order to be in accordance with the definitions established in the GRI standards. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the Performance Indicators are in accordance with the definitions established in the GRI standards, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

We performed, among others, the following procedures:

- work planning according to relevance and volume of the information of the Performance Indicators;
- interviews with different executives responsible for the information provided for the Performance Indicators;
- review, based on testing, that the data for the Performance Indicators is consistent with the documentary evidence reviewed and/or comes from verifiable supporting information sources;
- review that the financial information included as part of the Performance Indicators is derived from accounting records or from financial statements as of December 31, 2018, audited by a firm of independent auditors.
- review of the presentation of the Performance Indicators in the 2018 Sustainability Report.

The reviewed Performance Indicators are detailed on pages 76 to 79 of the 2018 Sustainability Report.

Based on our review, we are not aware of any significant modifications that should be made to the Performance Indicators of Antofagasta Minerals S.A. for the year ended December 31, 2018, presented in the 2018 Sustainability Report, in order to be in accordance with the definitions established in the sustainability reporting standards of the Global Reporting Initiative.

A handwritten signature in blue ink, appearing to read 'Andrew de la Mare'.

Andrew de la Mare

The PricewaterhouseCoopers logo, featuring the company name in a blue, cursive script font.

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PricewaterhouseCoopers, Av. Andrés Bello 2711 – Pisos 2, 3, 4 y 5, Las Condes – Santiago, Chile  
RUT: 81.513.400-1 – Teléfono: (56) (2) 940 0000 – [www.pwc.cl](http://www.pwc.cl)



# ICMM PRINCIPLES

Antofagasta Minerals is a member of the International Council on Mining and Minerals, and complies with its Sustainable Development Framework. This defines certain principles that member companies commit to on corporate governance and social, economic and environmental performance.

This table shows where in the report the initiatives and details of Antofagasta Minerals' progress can be found for each of the Sustainable Development Framework principles.

ICMM PRINCIPLES	PAGE NUMBER
<b>1</b> Apply ethical business practices and sound systems of corporate governance and transparency to support sustainable development.	24-30
<b>2</b> Integrate sustainable development principles in corporate strategy and decision-making processes.	14, 16, 26
<b>3</b> Respect human rights and the interests, cultures, customs and values of employees and communities affected by our activities.	16, 30
<b>4</b> Implement effective risk-management strategies and systems based on sound science and which account for stakeholder perceptions of risks.	28
<b>5</b> Pursue continual improvement in safety and health performance with the ultimate goal of zero harm.	41
<b>6</b> Pursue continual improvement in environmental performance issues, such as water stewardship, energy use and climate change.	52, 55, 57
<b>7</b> Contribute to the conservation of biodiversity and integrated approaches to land-use planning.	53, 62
<b>8</b> Facilitate and support knowledge-base and systems for responsible design, use, re-use, recycling and disposal of products containing metals and minerals.	10
<b>9</b> Pursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities.	44
<b>10</b> Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner. Effectively report and independently verify progress and performance.	18, 19

ICMM PRINCIPLES	PAGE NUMBER
Protected areas and mining	53, 62
Indigenous peoples and mining	30
Climate change policy design	57
Mining partnerships for development	17, 19, 34-35
Mercury risk management	Antofagasta Minerals does not produce mercury or use it in its processes.
Transparency of mineral revenues	Antofagasta Minerals only produces raw materials.
Water stewardship	55
Tailings governance	60

# SUMMARY

## OF SUSTAINABILITY PERFORMANCE

INDICATOR	BASIS OF CALCULATION	GRI Standard	2018	2017	2016
<b>ECONOMIC PERFORMANCE</b>					
<b>ECONOMICS</b>					
Copper production	Thousands of tonnes	102-7	725.3	704.3	709.4
Revenues	\$ million. Excluding non-operating revenue	102-7	4,560.3	4,578.3	3,461.5
EBITDA	\$ million	102-7	2,139.4	2,488.5	1,538.4
<b>Economic value generated and distributed</b>					
Operating revenue and sale of assets (a)	\$ million. Including non-operating revenue	201-1	5,192.8	4,600.6	3,480.8
Investment income (b)	\$ million	201-1	30.1	23.3	26.3
<b>Economic value generated (a+b)</b>	\$ million	201-1	5,222.9	4,623.9	3,507.1
Workers: remuneration and benefits	\$ million	201-1	449.6	422.2	339.6
Operating costs	\$ million	201-1	3,104	1,811	1,668
Community: Contributions to community projects	\$ million	201-1	33.7	12.1	24.3
Financing: payments to lenders	\$ million	201-1	66.1	89.5	83.6
State: Taxes	\$ million	201-1	566.9	492.9	243.3
Shareholders: dividends	\$ million	201-1	587.0	572.3	290.6
<b>Economic value distributed</b>	\$ million	201-1	4,808	3,400	2,649
<b>Economic value retained</b>	\$ million	201-1	415	1,224	858
<b>RESPONSIBLE SUPPLY</b>					
Suppliers	Total number	102-7	4,028	2,865	2,948
From Antofagasta and Coquimbo Regions	Percentage of total	102-8; 204-1	36%	24%	25%
From other regions in Chile	Percentage of total	102-8	57%	70%	72%
From outside Chile	Percentage of total	102-8	7%	6%	3%
Local suppliers	Number of suppliers from Antofagasta and Coquimbo Regions	102-8	1,455	688	735
Purchases	\$ million. Total purchases	204-1	3,218	2,445	2,260
Local purchases	Millions of \$ in purchases of goods and services net of VAT in Antofagasta and Coquimbo Regions	204-1	1,929	350	377
Purchases from other regions in Chile	\$ million	204-1	1,138	2,037	1,841
Purchases outside Chile	\$ million	204-1	151	59	42
Purchases to SMEs	\$ million	204-1	469	358	267
<b>TRANSPARENCY AND CORPORATE GOVERNANCE</b>					
<b>CORPORATE GOVERNANCE</b>					
Board composition					
Male directors	As at 31 December	102-22; 405-1	9	9	9
Female directors	As at 31 December	102-22; 405-1	2	2	2
Board tenure: 1 to 5 years	As at 31 December	102-22	3	4	6
Board tenure: 6 to 9 years	As at 31 December	102-22	3	2	0
Board tenure: Over 9 years	As at 31 December	102-22	5	5	5
Independent	As at 31 December	102-22	6	5	5
Not independent	As at 31 December	102-22	5	6	6
Executives	As at 31 December	102-22	0	0	0
Non executives	As at 31 December	102-22	11	11	11



INDICATOR	BASIS OF CALCULATION	GRI Standard	2018	2017	2016
<b>ETHICS AND COMPLIANCE</b>					
Code of Ethics					
Complaints under the Code	Number of complaints received	102-17	120	112	67
Percentage of complaints resolved	Number of complaints resolved/ Number of complaints received	102-17	82%	100%	100%
<b>PEOPLE</b>					
<b>EMPLOYEES AND CONTRACTORS</b>					
Breakdown of own employees					
Permanent and full-time employees	Annual average	102-8	5,108	5,026	4,977
Men	Annual average	102-8	4,670	4,593	4,546
Women	Annual average	102-8	438	433	431
Percentage of women	Number of women as a percentage of own employees	102-8	9%	9%	9%
Own employees by role					
Supervisors and executives	Annual average	405-1	1,760	1,726	1,741
Employees	Annual average	405-1	3,348	3,301	3,236
Labour relations					
Unions	Annual average	405-1	3,884	3,808	3,380
	Percentage of unionised own employees	405-1	76%	76%	68%
Training					
Hours of training	Hours	404-1	259,316	152,197	152,197
	Hours/employee	404-1	51	30.3	30.6
Amount spent on training	Thousands of US\$	404-3	4,633	3,208	1,511
Amount spent per employee	US\$/employee	404-3	907	638	304
Performance evaluation					
Employee with performance evaluation	As a percentage of the total number of employees	404-3	33%	30%	30%
Talent management					
Key roles filled internally	Percentage	405-1	62%	37%	52%
Contractors	Annual average	102-9; 102-10	14,333	14,472	13,049
<b>SAFETY AND HEALTH</b>					
Accidents					
Fatalities	Number of fatalities in the year, including own employees and contractors	403-9	1	0	1
Lost Time Injury Frequency Rate (LTIFR)	Number of accidents with lost time during the year, per million hours worked	403-9	1.1	1.0	1.2
All Injury Frequency Rate (AIFR)	Number of accidents with and without time lost during the year, per million hours worked	403-9	5.1	7.4	6.9
Near Misses Index	Number of near misses reported per million hours worked	403-9	198	126.6	50.2
Occupational diseases					
Occupational diseases	Number of occupational diseases contracted during the year, own employees and contractors	403-10	3	3	4

## APPENDICES

INDICATOR	BASIS OF CALCULATION	GRI Standard	2018	2017	2016
<b>SOCIAL DEVELOPMENT</b>					
<b>COMMUNITIES</b>					
Operations with community participation	As a percentage of all operations	413-1	100%	100%	100%
Local employment					
Local employees	Annual average of own employees from Antofagasta and Coquimbo Regions	203-2	2,227	2,623	2,312
	Average percentage of own employees that declare residence in Antofagasta and Coquimbo Regions	203-2	43.6%	52.2%	46.5%
Local supervisors	Annual average of supervisors that declare residence in Antofagasta and Coquimbo Regions	202-2	216	269	298
<b>ENVIRONMENTAL MANAGEMENT</b>					
<b>ENVIRONMENTAL MANAGEMENT</b>					
Environmental incidents and fines					
Incidents with an environmental impact	Number of environmental incidents with high potential impact	306-3	0	0	0
Environmental fines	Number of fines	307-1	5	1	0
Responsible mine closure					
Closure plans	Percentage of operations with closure plans	MM10	100%	100%	100%
<b>WATER MANAGEMENT</b>					
Water consumption by source					
Total water consumption	Thousands of m <sup>3</sup>	303-5	67,201	65,731	55,261
Sea water	Thousands of m <sup>3</sup>	303-3	30,447	29,231	26,554
Surface water	Thousands of m <sup>3</sup>	303-3	16,534	18,138	14,034
Underground water	Thousands of m <sup>3</sup>	303-3	19,350	17,206	13,481
Third party suppliers	Thousands of m <sup>3</sup>	303-3	870	1,156	1,192
Percentage of seawater	As a percentage of total water consumption	303-3	45%	45%	48%
<b>CLIMATE CHANGE AND RENEWABLE ENERGIES</b>					
Energy consumption					
Electric energy	Giga Joules	302-1	12,513,335	11,906,112	11,538,454
Fuels	Giga Joules	302-1	11,962,226	9,491,721	9,153,704
Renewable energy					
Renewable energy	kWh generated by alternative sources	302-1	794,000,000	785,023,851	532,926,367
Percentage of renewable energy	Percentage	302-1	23%	21%	17%
Greenhouse gas emissions					
Scope 1, direct emissions	Tonnes CO <sub>2</sub> equivalent emissions	305-1	1,026,219	854,628	795,994
Scope 2, indirect emissions	Tonnes CO <sub>2</sub> equivalent emissions	305-2	1,391,695	2,071,937	2,000,010
CO <sub>2</sub> emissions intensity	Tonnes CO <sub>2</sub> equivalent emissions/tonne of copper	305-4	3.33	3.87	3.67

INDICATOR	BASIS OF CALCULATION		GRI Standard	2018	2017	2016
<b>MINING WASTE</b>						
<b>Mining waste</b>						
	Waste rock	Million tonnes	MM3	286	274	252
	Tailings	Million tonnes	MM3	96	89	89
	Spent ore	Million tonnes	MM3	63	38	30
<b>Non-mining waste</b>						
	Non-hazardous industrial waste	Tonnes	306-2	27,787	30,822	35,821
	Hazardous industrial waste	Tonnes	306-2	10,015	8,933	6,968
	Domestic	Tonnes	306-2	3,793	3,826	4,493
<b>Waste treatment</b>						
	Recycled	Tonnes	306-2	19,855	24,072	28,027
	Composted	Tonnes	306-2	0	17	67
	Reused	Tonnes	306-2	3,981	4,656	3,883
	Burnt	Tonnes	306-2	0	0	0
	Recycling rate	Percentage	306-2	56%	66%	68%
<b>BIODIVERSITY AND HERITAGE</b>						
<b>Biodiversity</b>						
	Protected areas	Hectares	304-3	26,921	25,803	27,670



# GRI CONTENTS INDEX

## CORE OPTION

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>GRI 101: BASE 2016</b> [GRI 101 NOT INCLUDED IN DISCLOSURES]				
<b>GENERAL CONTENTS</b>				
GRI 102: General Disclosures 2016	102-1 Name of the organisation	Front cover		
	102-2 Activities, brands, products and services	8, 10, 11		
	102-3 Location of headquarters	Santiago, Chile.		
	102-4 Location of operations	8		
	102-5 Ownership and legal form	8, 24		
	102-6 Markets served	10, 11. Annual Report 2018 (pp. 10-17, 42, 43)		
	102-7 Scale of organisation	8, 9		
	102-8 Information on employees and other workers	9, 36, 66, 73	Information about employees and other workers is not shown by employment contract and by region.	
	102-9 Supply chain	33-35, 72-73		
	102-10 Significant changes to the organisation and its supply chain	Annual Report 2018 (pp. 6, 19, 70-73)		
	102-11 Precautionary principle or approach	22		
	102-12 External initiatives	15, 17, 19		
	102-13 Membership of associations	17, 19		
	102-14 Statement from senior decision-maker	4, 5, 12, 13		
	102-15 Key impacts, risks and opportunities	4-7, 10, 11, 13, 16, 28		
	102-16 Values, principles, standards and norms of behaviour	3, 14, 22, 29, 30		
	102-17 Mechanisms for advice and concerns about ethics	29, 30		
	102-18 Governance structure	24-26. Annual Report 2018 (pp. 92, 93)		
	102-19 Delegating authority	26. Annual Report 2018 (pp. 82, 116)		
	102-20 Executive level responsibility for economic, environmental and social topics	26		
	102-21 Consulting stakeholders on economic, environmental and social topics	Annual Report 2018 (pp. 89, 115)		
	102-22 Composition of the highest governance body	72. Annual Report 2017 (pp. 98-100)	Information not available for the following: affiliation with underrepresented social groups and representation of stakeholder groups.	
	102-23 Chair of the highest governance body	The Chairman is not an executive of the company		
	102-24 Nominating and selecting the highest governance body	Annual Report 2018 (pp. 105-106)		
	102-25 Conflicts of interest	Annual Report 2018 (pp. 82, 91)	Information not available: conflicts of interest with stakeholder groups, according to criteria of the GRI Standards.	
	102-26 Role of the highest governance body in setting purpose, values and strategy	26		
	102-27 Collective knowledge of highest governance body	Annual Report 2018 (p. 100)		
	102-28 Evaluating the highest governance body's performance	Annual Report 2018 (p. 107)		
	102-29 Identifying and managing economic, environmental and social impacts	20, 21, 26, 28. Annual Report 2018 (pp. 23, 109-112)		
	102-30 Effectiveness of risk management processes	28. Annual Report 2018 (pp. 23, 109-112)		
	102-31 Review of economic, environmental and social topics	Annual Report 2018 (pp. 23, 114)		
	102-32 Highest governance body's role in sustainability reporting	26. Annual Report 2018 (p. 114)		

This index allows you to identify the Global Reporting Initiative (GRI) Standards used for disclosures in this report, as well as associated content and the location of this information in our report or other documents available on the Company's website. This Sustainability Report has been prepared in accordance with the GRI Standards: Core option.

● PwC verified      ● SGF verified

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>GENERAL CONTENTS</b>				
GRI 102: General Disclosures 2016	102-35 Remuneration policies	Annual Report 2018 (p. 121)		
	102-40 List of stakeholder groups	18, 19		
	102-41 Collective bargaining agreements	38		●
	102-42 Identifying and selecting stakeholders	18, 19		
	102-43 Approach to stakeholder engagement	18, 19	Information not available on frequency of engagement by type and by stakeholder group.	
	102-44 Key topics and concerns raised	16, 46, 47, 50		
	102-45 Entities included in the consolidated financial statements	The Sustainability Report 2018 only covers Antofagasta Minerals' operations. In contrast, the Annual Report 2018 covers the operations of Antofagasta plc, the mining group which controls Antofagasta Minerals.		
	102-46 Defining report content and topic boundaries	Flap 2		
	102-47 List of material topics	67		
	102-48 Restatements of information	The effect of any restatement of information with respect to previous reports and the reasons for the restatement, are shown in the footnotes to the respective indicators.		
	102-49 Changes in reporting	Significant changes are shown in the footnotes.		
	102-50 Reporting period	Flap 2		
	102-51 Date of most recent report	Sustainability Report 2017 published in July 2018		
	102-52 Reporting cycle	Annual		
	102-53 Contact point for questions regarding the report	Flap 3		
	102-54 Claims of reporting in accordance with the GRI Standards	Flap 2		
102-55 GRI contents index	76			
102-56 External assurance	70			
<b>MATERIAL TOPICS</b>				
<b>I. ECONOMIC DEVELOPMENT</b>				
<b>COPPER'S ROLE IN FUTURE ECONOMY AND ECONOMIC PERFORMANCE</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	10, 32		
	103-2 The management approach and its components	10-12, 14, 32		
	103-3 Evaluation of the management approach	32, 33		
GRI 201: Economic performance 2016	201-1 Direct economic value generated and distributed	32, 72		
GRI 203: Indirect Economic Impacts	203-2 Significant indirect economic impacts	33, 35, 46-51, 72, 74		
	Copper production	8, 72		
	Revenues	8, 72		
	EBITDA	7, 8, 72		
<b>RESPONSIBLE SUPPLY</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	33		
	103-2 The management approach and its components	33-35		
	103-3 Evaluation of the management approach	33, 35		

## APPENDICES

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>MATERIAL TOPICS</b>				
<b>RESPONSIBLE SUPPLY</b>				
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	35, 72		●
	Total suppliers	18, 33, 72		●
	Purchase of goods and services	33, 72		●
<b>II. TRANSPARENCY AND CORPORATE GOVERNANCE</b>				
<b>ETHICS, COMPLIANCE AND HUMAN RIGHTS</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	29		
	103-2 The management approach and its components	29, 30		
	103-3 Evaluation of the management approach	29-31, 73		
GRI 102: Ethics and integrity 2016	102-17 Complaints received in 2018	31, 73		●
	Percentage of complaints resolved in 2018	31, 73		●
<b>CORPORATE GOVERNANCE AND RISK MANAGEMENT</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	24, 28		
	103-2 The management approach and its components	24-28		
	103-3 Evaluation of the management approach	26, 28		
GRI 405: Diversity and Equal Opportunities 2016	405-1 Diversity of governance bodies and employees	72. Annual Report 2018 (p. 100)		
<b>III. PEOPLE</b>				
<b>SAFETY AND HEALTH</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	41		
	103-2 The management approach and its components	41-43, 66		
	103-3 Evaluation of the management approach	41, 43, 66		
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	41		
	403-2 Hazard identification, risk assessment, and incident investigation	41, 43		
	403-3 Occupational health services	43		
	403-5 Worker training on occupational health and safety	43		
	403-6 Promotion of worker health	43		
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	43		
	403-9 Work-related injuries	6, 9, 43, 73	The safety indicators are not shown by region, as they are grouped for all operations in Chile. Information not available: breakdown by sex and by type of employment. For each indicator, the rules for its registration are as defined by the Chilean Social Security Superintendency (SUSESO).	●
	403-10 Work-related ill health	43, 67		
<b>EMPLOYEE ENGAGEMENT, HUMAN CAPITAL DEVELOPMENT AND TALENT ATTRACTION AND RETENTION</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	36		
	103-2 The management approach and its components	36		
	103-3 Evaluation of the management approach	6, 36-40		
GRI 405: Diversity and Equal Opportunities 2016	405-1 Diversity of governance bodies and employees	36-37, 39, 73		●
	Unionisation and freedom of association	38, 73		●
	MM4: Número de huelgas y cierres superior a una semana de duración	38		●
GRI 404: Training and education 2016	404-1 Average hours of training per year per employee	38, 73	Information not available: average hours of training broken down by sex and job category.	●
	404-2 Programmes for upgrading employee skills and transition assistance programmes	38	Information not available: Transition assistance programmes for professionals leaving the company.	●
	404-3 Percentage of employees receiving regular performance and career development reviews	73	Information not available: breakdown by sex and job category.	●



GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>MATERIAL TOPICS</b>				
<b>CONTRACTORS</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	36, 40		
	103-2 The management approach and its components	40		
	103-3 Evaluation of the management approach	40		
<b>IV. SOCIAL DEVELOPMENT</b>				
<b>COMMUNITY ENGAGEMENT AND DEVELOPMENT</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	44		
	103-2 The management approach and its components	44, 46, 66		
	103-3 Evaluation of the management approach	7, 9, 47, 66		
GRI 202: Market presence 2016	202-2 Proportion of senior management hired from the local community	9, 51, 74		
GRI 203: Indirect Economic Impacts	203-2 Significant indirect economic impacts	9, 51, 74		
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	47-50, 74		●
<b>V. ENVIRONMENTAL MANAGEMENT</b>				
<b>ENVIRONMENTAL MANAGEMENT; BIODIVERSITY AND HERITAGE; MINE CLOSURE; EMERGENCY PREPAREDNESS; AIR QUALITY</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	52		
	103-2 The management approach and its components	20, 53, 62, 66		
	103-3 Evaluation of the management approach	20, 62, 66		
GRI 306: Effluents and Waste 2016	306-3 Significant spills	6, 52, 74		●
GRI 307: Environmental Compliance 2016	307-1 Number of environmental fines	52, 74		●
	307-1 Amount of environmental fines	52, 74		
GRI 304: Biodiversity 2016	304-3 Habitats protected or restored	9, 53, 75		●
	MM10 Number and percentage of operations with closure plans	54, 74		
<b>WATER MANAGEMENT</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	55		
	103-2 The management approach and its components	55-56		
	103-3 Evaluation of the management approach	55-56		
GRI 303: Water and Effluents 2016	303-1 Water withdrawal by source	6, 9, 56, 74	Wastewater from other organisation is not used, nor is rainwater collected naturally in reservoirs and other water storage spaces quantified. Data regarding zones under water stress conditions is not informed.	●
	303-5 Water consumption	6, 56, 74	A breakdown of total water withdrawal by operation is not provided.	●
<b>CLIMATE CHANGE AND RENEWABLE ENERGIES</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	57		
	103-2 The management approach and its components	6, 57-59, 66		
	103-3 Evaluation of the management approach	57-59, 66		
GRI 305: Emissions	305-1 Direct (Scope 1) GHG emissions	59, 75		●
	305-2 Energy indirect (Scope 2) GHG emissions	59, 75		●
	305-4 GHG emissions intensity	6, 59, 75		●
GRI 302: Energy 2016	302-1 Energy consumption within the organization	6, 9, 59, 74	There is no heating, cooling or steam consumption or sales from renewable energy sources.	●
<b>MINING WASTE</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	60		
	103-2 The management approach and its components	60-61		
	103-3 Evaluation of the management approach	61		
GRI 306: Effluents and waste 2016	306-2 Waste by type and disposal method	9, 61, 75	Antofagasta Minerals shows the waste treatment methods grouped for hazardous, non-hazardous and domestic waste (which is also non-hazardous).	●
	MM3 Total amount of coverings, rock, tailings and mud, and their associated risks	61, 75		

## ABOUT THIS REPORT

This is Antofagasta Minerals' twelfth Sustainability Report in which we report on our strategy, priorities and performance on the main sustainability material issues for our business and our stakeholders in 2018.

The document includes data for 2018 and previous years to provide greater context and covers the following operations: Minera Los Pelambres, Minera Centinela, Minera Antucoya, Minera Zaldivar and Antofagasta Minerals' corporate headquarters. The scope has changed compared to the previous year's report which covered the operations of Antofagasta plc, the group which controls Antofagasta Minerals.

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. The published indicators were verified by Pricewaterhouse Coopers (PwC) and SGS.

All \$ in this report refer to US dollars unless stated otherwise. This is a translation of the original in Spanish.

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Antofagasta Minerals' Sustainability Report 2018 is also available at [www.aminerals.cl](http://www.aminerals.cl).

This report complements the financial and business information contained in Antofagasta plc's 2018 Annual Report and Financial Statements, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

### CONTACT

For more information, or to make comments or enquire about this Sustainability Report, write to [infoporte@aminerals.cl](mailto:infoporte@aminerals.cl).

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[www.antofagasta.co.uk](http://www.antofagasta.co.uk)  
[www.aminerals.cl](http://www.aminerals.cl)



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