

# SUSTAINABILITY REPORT 2017

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ANTOFAGASTA PLC



SUSTAINABILITY  
REPORT  
2017



ANTOFAGASTA PLC

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# THE CEO'S VISION

**IVÁN ARRIAGADA**

“We are committed to mining for the future, and we want to lead in safety, innovation and sustainability.”



## WHAT IS YOUR VISION ABOUT COPPER MINING AND ITS FUTURE CHALLENGES?

Copper mining continues to be a tremendously important industry for development and progress due to the properties of this metal. Over time copper does not corrode and is non-toxic, unlike many other metals, and is fully recyclable. That is why copper is widely used in water installations, heating systems and air conditioning. Also, the ease with which it can form joints and handle heat makes it suitable for transporting different substances, including flammable ones. Thanks to copper's electrical conductivity, it is a key material in electric cables. Without the copper in the electrical and electronic components in cars, it would not be possible to have intelligent engine management, sensors, and information and entertainment systems. A conventional medium-sized car contains up to 22.5kg of copper and an electric vehicle can contain three to four times as much.

All these properties make copper a vital element in daily life, and it is also an essential metal for a more sustainable future, since it plays a significant role in the development of non-conventional renewable energy and the growth of a cleaner, more sustainable electric economy.

Copper mining today faces great challenges. Remaining competitive is difficult as the industry is facing falling grades of deposits, longer haulage distances, impurities in the ore and increased hardness, normally associated with the greater depth of deposits. There are also other challenges such as the use of water and energy, and regulatory and community demands, all of which have been evolving and require the industry to adapt and operate with ever higher levels of excellence.

On the other hand, there has generally been a critical view of extractive activities compared with new industries such as digital, telecommunications and IT, where people do not understand that metals are the great enablers of these industries and the modern world as we know it today. The continuing development of mining is therefore at the heart of creating a more sustainable world. For this reason it is an industry that should be valued, and so another challenge we face is communicating what we do and how we contribute to progress and economic development.

## HOW IS THE COMPANY PREPARING FOR THE FUTURE AND WHAT ARE YOUR CHALLENGES AND PRIORITIES?

Mining has a huge impact on the development of Chile and that is why we are convinced we must have a national perspective to overcome the challenges that we face as a sector. The growth and development of the areas where we conduct our business is essential to achieve the growth and development of the Company.

Therefore, as an industry, we must continue working to overcome the gaps that exist today in terms of productivity, environmental protection, citizen participation and effective relations in the areas where mining takes place. At Antofagasta Minerals, we have taken important steps to advance our vision of creating long-term value through sustainability and the way in which we engage with communities. The agreement we reached with Caimanes is clear proof of this.

After a long period of dialogue, we have established a new relationship model that allowed us to solve a long-running conflict, and enables the operation and development of Los Pelambres. Dialogue and community participation have been fundamental in this model, and our goal is to continue with this shared vision, developing the areas close to our operations and constantly working with the communities, local government and state agencies.

In relation to environmental matters, we must ensure compliance with our commitments and all the impact management measures agreed in the Environmental Qualification Resolutions (RCA) that govern our operations. But beyond this, we are interested in maintaining a system that is fully integrated into the management of our day to day operations ensuring the implementation of critical controls to manage the environmental risks, whether they already exist in the current commitments as is the case for those that are part of the RCAs, or are new, for example those that have arisen from the effects of climate change. That is why we have introduced a new Environmental Management Model which seeks to promote reporting, quality of information and the completion of required corrective actions.

Our goal is that sustainability, which firstly includes the safety and health of our workers, be understood and addressed as a key concern of our business. Nowadays, projects face a greater risk of failing if the areas related to sustainability are not managed proactively.

This change of approach also includes developing a more transparent style of management, which is fundamental to enable growth and to fulfil the current demands of the society in which we operate.

We want to ensure that our business continues to develop in the long term; that the riches of the environment are maintained and generate value for all; that communities empower their productive activities, and their way of life and culture, and therefore improve their wellbeing and quality of life; and that mining continues to be a powerful engine of growth for Chile. Only in this way will we generate the positive changes that the regions, communities, the country and all stakeholders expect from us.

### **WHAT WERE THE MAIN EVENTS AND THE PROGRESS MADE BY THE COMPANY DURING 2017?**

Beyond the fulfilment of our production and financial goals, and the structural changes we made that will contribute to consolidating our development, the most important goal we fulfilled in 2017 was having zero fatalities. At the Group, people are our most valued asset and we are very proud that there were no fatal accidents last year. This is an achievement that we seek to continue in 2018 and beyond.

Moreover we seek to go beyond what is required and this has inspired the development of our Sustainability Policy that we launched in 2017, which promotes the integrated performance of the five crucial areas of our business: people, economic performance, environmental management, social development, and transparency and corporate governance. In each of these areas, we have made significant progress during 2017 and we have new challenges for 2018. One of the most important challenges is to consolidate teams of excellence, which have greater gender diversity and new views and experiences. With this in mind, we designed a Diversity and Inclusion Strategy that was approved by the Board last year. Now we are advancing a plan that will help us to better use everyone's talents.

One of our goals was the introduction of the Operating Model, which is in the process of being implemented at our mining operations. The competitive advantage it will give us will allow us to be more productive and efficient and in this way, we will be better prepared to utilise all the capabilities we have. The same applies to innovation, a key pillar for mining more complex deposits, in a more demanding environment; and the new Environmental Management Model, which seeks to ensure we comply with the commitments we have undertaken, as well as controlling the main risks in this area.

We completed 2017 with good results, which would not have been possible without the effort and commitment of our employees and the support of our stakeholders. I am very excited about what we can achieve together in the coming years.

Finally, I would like to highlight the performance of our transport division (FCAB), which is also a part of this Group.

In addition to achieving its zero fatalities target, FCAB made significant progress in improving its relations with communities and towards achieving its freight cargo goals and so maintain growth and contribute to the Antofagasta Region's development.

**COPPER,**

# A METAL THAT IS KEY TO THE FUTURE OF SOCIETY

If there is one challenge that most concerns humanity, it is combating the effects of global climate change and the greenhouse gas emissions that cause it.

The good news is that new technological developments and advances provide grounds for optimism in the face of this global challenge. And all of this technology needs copper: from wind, solar and other forms of renewable energy to the growth of zero-emission electric vehicles. Copper is an excellent conductor of heat and electricity. It offers better energy savings than other metals, and is more durable. **Antofagasta plc is one of the world's ten biggest producers of this raw material.**

## A METAL THAT HELPS TO MAKE THE PLANET MORE SUSTAINABLE<sup>1</sup>

- ▶ **Copper is highly durable and 100 percent recyclable.** Copper pipes can last for up to fifty years in buildings, and can actually improve the quality of the water flowing through them.
- ▶ **Copper cable is 99.99 percent efficient at conducting electricity,** and conducts up to eight times more heat than other materials.
- ▶ **It is a key ingredient of environmentally friendly technologies:**
  - Without electric and electronic components made from copper, our cars would not have starter motors and engine management, motion sensors, or information and entertainment systems.
  - It takes five to twelve tonnes of copper to make a two-megawatt wind turbine, while a two-kilowatt domestic solar energy system may use up to twelve kilogrammes.
  - An electric car uses three to four times as much copper as a conventional one, and almost 60 percent more than a hybrid.
- ▶ **Copper has an antimicrobial effect,** reducing hospital-acquired infections by up to 58 percent. It can also be used to improve hygiene in the home.

## COPPER IS THE FOUNDATION OF CHILE'S ECONOMIC DEVELOPMENT<sup>2</sup>

- ▶ **Mining accounts for 10 percent of Chile's gross domestic product** and contributes one in every twelve pesos of government revenue. More than 50 percent of the country's exports are mining products. Between 2012 and 2016, mining accounted for an average of 36 percent of foreign direct investment.
- ▶ **Six of the world's ten biggest copper mines are in Chile.** One of these is Antofagasta's mine at Los Pelambres. Seven percent of world metals exploration takes place in Chile.
- ▶ **Mining directly and indirectly supports nine percent of jobs in the country.** Six thousand Chilean companies are suppliers to the sector, and 34 percent of these export their products and services.

## THE MINING SECTOR PLAYS A LEADING ROLE IN SPREADING SUSTAINABLE PRACTICES IN THE COUNTRY<sup>3</sup>

- ▶ **Mining has the lowest accident rate of any sector** in Chile, at 1.5 percent, compared to a national average of 4.7 percent.
- ▶ **The proportion of women in the workforce continues to grow,** and now stands at 7.9 percent.
- ▶ **Three quarters of the water used in mining is recirculated.**



# INTERVIEW WITH THE CHAIRWOMAN OF THE SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE

**VIVIANNE BLANLOT**

“Commitments must be fulfilled. That is, and must be, the mind-set of the Sustainability and Stakeholder Management Committee, the Board and the whole Group.”



## WHAT WERE THE KEY ACHIEVEMENTS OVERSEEN BY THE COMMITTEE DURING THE YEAR?

We are extremely pleased that there were no fatal accidents during the year. We believe that the systematic and thorough application of safety standards and high levels of near-miss reporting by our operations has significantly contributed towards this outcome. We will continue to focus on these standards and near-miss reporting in our pursuit of a fatality-free working environment.

Work on the Environmental Impact Assessment (EIA) for the Los Pelambres Incremental Expansion project progressed during the year and the EIA was approved in February 2018. Preparatory work is also underway on an EIA that would extend Zaldívar's mine life until 2029.

Los Pelambres is the most environmentally sensitive of the Group's operations because of its size and location.

In 2016 the environmental authority (the SMA) made nine charges against the company and in 2017 the company submitted a compliance plan to the SMA to resolve these charges, which it accepted in August. The Committee is now carefully monitoring the execution of this compliance programme and has requested an internal report the mining division's compliance with all of its environmental commitments. It has also highlighted to management the importance of monitoring and complying with these commitments and their timely completion.

This compliance procedure will be rolled out to the transport division during 2018.

## SIGNIFICANT PROGRESS HAS BEEN MADE ON COMMUNITY RELATIONS AT LOS PELAMBRES. WHAT ABOUT STAKEHOLDERS ELSEWHERE IN THE GROUP?

The future of our operating companies depends on committed and sustained collaboration with neighbouring communities and local, regional and national governments. During 2017, the Committee oversaw an evaluation of the Somos Choapa model that has been implemented at Los Pelambres. The lessons learned from this programme are being used to assist with the deployment of similar models at the other mining operations and at the transport division. The model has attracted the attention of other organisations as a possible best practice in stakeholder relations and the addressing of community issues.

## WHAT ARE THE COMMITTEE'S PRIORITIES IN 2018?

Our number one priority continues to be the safety and health of our workforce. Meeting the Group's target of zero fatalities requires relentless application of the Group's safety standards and verification, monitoring and reporting by the Group's operations. We will continue to closely monitor safety performance and the work being done across the Group to take occupational health processes to the same level of maturity as the Group's safety standards and processes.

The Committee will continue to monitor the implementation of the Group's environmental management system by the operations responsible, as the fulfilment of the commitments made by our operations is the foundation of our licence to operate.

Work is underway to update climate change mitigation actions and associated carbon footprint metrics, and measurable targets for reduced CO<sub>2</sub> emissions were recently adopted.

A good long-term relationship with our neighbours is built day by day. The Committee will continue to monitor the implementation of the Group's social programmes and the work that is being done with the communities near our operations.

# ANTOFAGASTA PLC AT A GLANCE

We are Chile's leading non-State mining company, and one of the world's top ten copper producers. We create value for our stakeholders by discovering, developing and operating copper mining assets. We also have a freight transport division. We are committed to paving the way for the mining industry of the future.

## WHAT INSPIRES US?

Throughout our mining history, we have been different to other companies. We are a team of individuals, and have created a clear identity. We take pride in belonging to a Chile-based company whose vocation is to extract and process a mineral that creates tangible value and growth opportunities for our shareholders, workers, communities and country.

Our mission is: "to be innovative and operate in a sustainable manner, anticipating future challenges, creating growth opportunities and bringing positive change to people's lives". We have formed a set of principles that guides us through constant social, economic and market change that enables us to act together as a single mining group. Our vision is "to be recognised as an international mining company, based in Chile, and focused on copper and its by-products. We also want to stand out in terms of operating efficiency, added value and profitability, and as a preferred partner to the global mining industry".

## WHO ARE WE?

Our mining division is young, but we have achieved great things in a short time. We started mining in the early 1990s and had the confidence to believe that we could build a private-sector mining company, based in the Antofagasta region but operating on a global scale.

A company that would become one of the largest in the industry, and could significantly contribute to the development of local communities and the country as a whole.

This has not been an easy task. It has been a long journey that constantly tested our technical, managerial and human skills and talents, our ability to mobilise resources and operate efficiently and, most importantly, our constant commitment to achieving the goals we have set ourselves.

Today, we take pride in being one of the world's ten largest producers of copper. We are working in partnership with our local communities, and with the nation as a whole, to achieve ever higher levels of prosperity for us all.



## MINING

### ANTOFAGASTA MINERALS

- ▶ One of the world's top ten copper producers.
- ▶ By-products: gold, silver and molybdenum
- ▶ Four operations in Chile: Los Pelambres, Centinela, Antucoya, and Zaldívar.

## TRANSPORT

### FCAB

- ▶ Provides rail and road freight services to the mining industry in the Antofagasta region.



## ANTOFAGASTA PLC

The Group's shares are quoted on the London Stock Exchange and are included in many indices such as: the FTSE 100, the FTSE4Good, the STOXX Global ESG Leaders, and the ECPI Global Developed ESG Best in Class. We are a member of the International Council on Mining and Metals (ICMM). Our mining division, Antofagasta Minerals, belongs to Chile Transparente, the national chapter of Transparency International. Our head office is located in Santiago.

Three of the Group's mining operations, Centinela, Antucoya, and Zaldívar, are located in the Antofagasta region of northern Chile. The fourth, Los Pelambres, is in the Coquimbo region in the centre of the country.

The Company also has an important portfolio of growth opportunities, with projects located in Chile and the United States. The transport division (FCAB) operates its own rail networks, with access to Bolivia and the region's two biggest ports, in the cities of Mejillones and Antofagasta.

For more information about our products, markets, processes and financial performance, visit [www.aminerals.cl/mineria-quienessomos/que-hacemos/](http://www.aminerals.cl/mineria-quienessomos/que-hacemos/) and read the 2017 Annual Report of Antofagasta plc, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk)

# OUR OPERATIONS

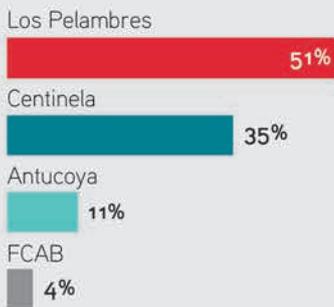
## ANTOFAGASTA PLC

**EBITDA (2017)**  
US\$2,587 million

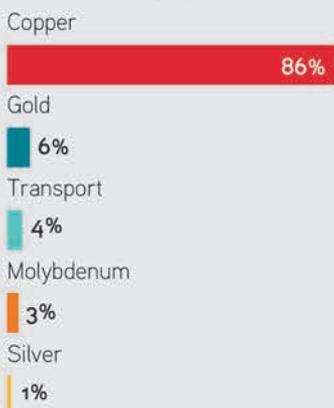
**Revenue**  
US\$4,749 million

**Market capitalisation**  
US\$13.4 billion

### Revenue by company<sup>1</sup>



### Revenue by product



## ANTOFAGASTA MINERALS

### How much do we produce?

**704,300 tonnes**  
of fine copper

### How do we do it?

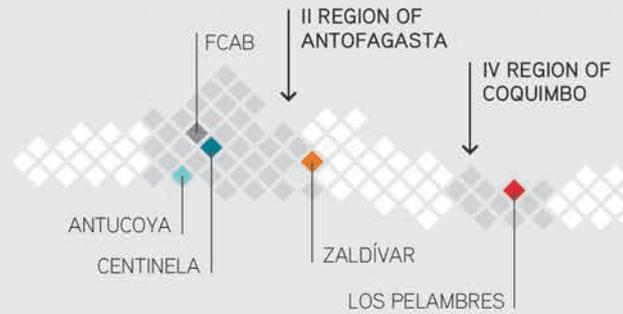
**JOB**  
5,026 employees<sup>2</sup>  
14,472 contract workers<sup>3</sup>  
52% local employment<sup>4</sup>  
9% of employees are women<sup>5</sup>  
0 fatalities

**WATER CONSERVATION**  
45% of water used comes from the sea

**PROMOTING RENEWABLE ENERGY**  
21% of energy comes from renewable sources

**BIODIVERSITY**  
25,800 hectares of ecosystems protected by our companies

**WASTE**  
66% of our non-mineral waste is recycled



INDICATORS >

### LOS PELAMBRES

PRODUCTION

tonnes >

**343,800**

JOB OPPORTUNITIES

employees >

**902**

contractors >

**4,747**

local employment >

**60%**

1. Zaldívar not included, according to IFRS 10 (International Financing Reporting Standards) for Consolidated Financial Statements.  
2. Figure from december 31, 2017. Includes the four mines (11,798 contractors) and Corporate Center (2,674 contractors).  
3. Figure from december 31, 2017. Includes the four mines (11,798 contractors) and Corporate Center (2,674 contractors).



### CENTINELA



228,300

1,990

4,269

44%

### ANTUCOYA



80,500

738

1,252

55%

### ZALDÍVAR



51,700

920

1,530

48%

### FCAB



1,332

employees



559

contractors



92%

local employment



9%

of employees are women

0

fatalities



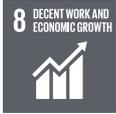
4. Average annual number of workers stating that they live in the same region as they work, as a proportion of the total. Seventy-seven percent of the workers in the Company's head office are local.

5. Total number of women as a percentage of own employees.

# KEY FACTS

## DURING 2017, ANTOFAGASTA PLC:

- ▶ Achieved its target of zero fatalities, and continued to improve its performance on occupational health and safety.
- ▶ Obtained Board approval for its updated Sustainability Policy.
- ▶ Set its first greenhouse gas emissions reduction target.
- ▶ Achieved 45 percent seawater usage.
- ▶ Participation in ICMM's sustainable mining waste management committee.
- ▶ Began implementing its new Environmental Management Model to comply with its commitments, and implemented critical controls for key environmental risks.
- ▶ Approved its Diversity and Inclusion Strategy.
- ▶ Obtained government recognition for two new biodiversity protection areas at Los Pelambres: Quebrada Llau Llau and Palma Chilena de Monte Aranda.
- ▶ Presented the Somos Choapa programme at the Architecture and Urban Planning Biennial, as an example of leadership and innovation in establishing a model for relationships between the mining industry and surrounding communities.
- ▶ Remained an active contributor to public-private initiatives relating to innovative and sustainable mining practices in Chile, among them the Alta Ley, Valor Minero and Somos Choapa programmes.
- ▶ Obtained the following awards: Generación Empresarial-Diario Financiero al Compromiso con la Integridad; "Achieving the SDGs in the extractive industry", awarded by the Columbia Center on Sustainable Investment (CCSI) for its contributions to corporate responsibility and the Sustainable Development Goals; and the ICARE 2017 award for business excellence and its contribution to the country's progress.



## SUPPLY CHAIN

Suppliers play a critical role in our operations by providing us with a wide range of products and services, from grinding materials to employee catering. We currently do business with **3,729 first-level suppliers**. Around two thirds provide services and one third goods.

### PROTECTING SUSTAINABILITY

Our purchasing of goods and services is designed to fully reflect the values of our business, including sustainability. This is illustrated by:

- ▶ **Best practice and compliance:** Bidders in all significant tenders are first validated for issues such as the involvement of politically exposed persons, compliance with antitrust and other laws, safety, employee relations, and finances, among other things. Agreements with suppliers of goods to the Group include clauses relating to compliance with Chile's Crime Prevention Act, number 20.393, and the UK's Bribery Act and Modern Slavery Act.
- ▶ **Transparent bidding:** Our online bidding process has been specially designed to ensure objectivity and auditability.
- ▶ **Reducing the environmental impact of freight transport:** Goods are delivered to the mining division's corporate logistics provider in Santiago or Antofagasta, where they are consolidated as much as possible to avoid thousands of individual movements between sites. We prefer to use rail transport for consumables and very large volumes. The Zaldívar and Centinela mines, which have rail links, operate a policy of always transporting acid and cathodes by train to avoid the use of trucks and the resulting impact on roads. Centinela is in the process of switching from trucks to trains, and this is expected to be completed by March 2019.
- ▶ **Communication:** We maintain open channels of communication with our suppliers and encourage them to share any problems or concerns with us.

### RISK AND COMPLIANCE MANAGEMENT

We identify financial, social, environmental and ethical risks in the supply chain as part of the corporate risk management process. The Group's suppliers are periodically audited to ensure that they comply with their obligations to their employees, the law, and Antofagasta plc's policies and procedures. The minimum monthly income for all the mining division's own and contracted employees is CLP\$415,450, which is 50.5 percent above Chile's legal minimum wage.



ANTOFAGASTA PLC

### CRITICAL SUPPLIES, EQUIPMENT AND SERVICES

The critical supplies in our mining business are: electricity, water, oil, lubricants, explosives, sulphuric acid, grinding balls, lime and chemical reagents (diluent, extractant, sodium hydrosulphide, foaming agent, NaSh, collectors, cobalt sulphate, and metabisulphite). Critical equipment consists of spare parts for mining machinery and the processing plant, work clothing and personal protection items. Critical services are food and accommodation, passenger and freight transport, hospitals, plant and equipment maintenance, blasting services and civil engineering.

The critical supplies for the transport division, FCAB, are diesel, lubricants, rails, sleepers, truck and locomotive wheels and axles, traction motors, main generators, tyres and personal protection items.

# DISTRIBUTION OF GENERATED VALUE

This shows the value that the Group generates and how it distributes this to its main stakeholders. For Antofagasta plc, this is the difference between revenue and operating costs. In 2017, the Group added value of US\$2,925.1 million. Of this, US\$1,644.9 million was distributed to stakeholders and US\$1,280.2 million was retained by the Group and used mainly for reinvestment.





- 1. Includes suppliers to Los Pelambres, Centinela, Antucoya, Zaldivar and FCAB.
- 2. This figure (US\$4,775.3 million) differs from that published on page 12 (US\$4,749.4 million), as it includes US\$25.9 million of non-business income (e.g. scrap sales, etc.).
- 3. Additional tax applied to the payment of dividends remitted abroad.
- 4. Including Minera Los Pelambres Foundation, Somos Choapa, North programs and projects.

## GENERATED ECONOMIC VALUE

# US\$2,925.1 million

US\$1,644.9 million ◀ Distributed value  
 + US\$1,280.2 million ◀ Retained value

US\$2,925.1 million

EMPLOYEES US\$459.1 million  
 on wages and benefits



6,358 direct employees (own workers)  
 9% women

GOVERNMENT US\$509.5 million  
 in taxes



74% corporate tax  
 13% additional<sup>3</sup>  
 14% royalty tax

SHAREHOLDERS AND LENDERS US\$572.3 million  
 distributed as dividends



US\$91.5 million  
 interest paid to lenders

COMMUNITY US\$12.5 million  
 contributed to community projects<sup>4</sup>





# SUSTAINABILITY AS A SOURCE OF ADDED VALUE

Our activity, by definition, is of long-term horizons. To ensure continuity, we must not only achieve good results each year, but also bring about change that helps to protect us sustainably against future risks.





## CONTEXT AND KEY CHALLENGES

### THE MINING INDUSTRY IN CHILE AND AROUND THE WORLD

Mining plays a huge part in Chile's development. Copper is the main driver of the economy, contributing 10 percent of gross domestic product and 50 percent of exports. Consequently, making the mining industry more sustainable, competitive and inclusive is essential not only for the industry itself, but for the country. The Programa Nacional de Minería de Alta Ley (national high-grade mining programme), promoted by the government in cooperation with the business and academic sectors, states: "Mining has the potential to become the driver of our development and play a leading role in the creation of skills, knowledge, technology, and innovation."

To achieve this, the industry must confront a variety of technological, operational, social and environmental challenges. These are not exclusive to Antofagasta plc, or to the Chilean mining industry; they affect the industry worldwide. Among the most important are: cyclical nature of the copper market, uncertainty about the future of the international economy, the deteriorating grade of orebodies, harder ore, geological difficulties, regulatory uncertainty, the availability of water, increased energy demand and public opposition to new projects.

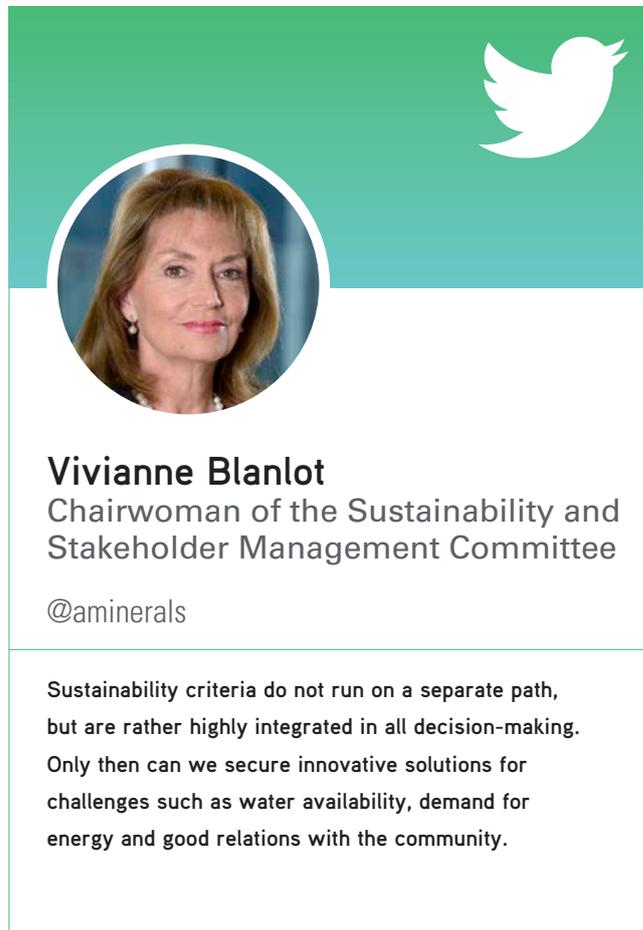
Against this background, the International Council on Mining and Metals (ICMM), of which Antofagasta Minerals is a member (see p.24, External and International Initiatives), has drawn up a Sustainable Development Framework laying down principles that member companies should seek to achieve in terms of corporate governance and social, economic and environmental development. The mining industry, through the ICMM, Chile's Consejo Minero and other bodies, is working to align its practices with the United Nations' Agenda 2030 Sustainable Development Goals. These global objectives were adopted by world leaders in 2015, and involve government, business and the public. They seek to eradicate poverty, protect the planet and ensure prosperity for all.

### KEY CHALLENGES FACING ANTOFAGASTA PLC

We are confident in our ability to face these challenges, because we have a sound basis on which to work. Our history and achievements show that we can continue to grow and become even more competitive.

As a Group, we are focused on the health and wellbeing of our employees and people living near our sites.

We are taking an active role in various organisations tackling the challenges facing the Group and the industry as a whole and believe that we must adopt a nationwide approach to resolving these challenges (see page 42, Organisations in which we participate).







**Vivianne Blanlot**  
Chairwoman of the Sustainability and Stakeholder Management Committee

@aminerals

**Sustainability criteria do not run on a separate path, but are rather highly integrated in all decision-making. Only then can we secure innovative solutions for challenges such as water availability, demand for energy and good relations with the community.**

Sustainability covers a wide range of issues that we must deal with if Antofagasta plc is to remain a successful and profitable business. The Group must have good relationships with its employees and provide them with high levels of safety and health, protect the environment, help to improve the lives of the people in the regions in which it operates, and meet high standards of ethics and corporate governance. Sustainability must not be treated separately from the Group's core business. We have therefore implemented policies and procedures to provide executives with the guidelines they need to take cost-effective, environmentally viable and socially acceptable decisions.

We have made progress towards making sustainability an integral part of the decision-making process at every stage of our business lifecycle. This means considering all social and environmental factors from exploration until mine closure.

In 2017, we updated our sustainability policy to include all areas of our operations, including an extensive training programme. This takes the form of plans and projects in a wide range of areas, such as our safety and health model, our environmental management system and our employee welfare management model.



# Main challenges that mining must face



The mining industry must tackle these challenges if it is to remain competitive.





## CORPORATE STRATEGY AND SUSTAINABILITY POLICIES

Our vision guides our work day-to-day and informs the changes we are making. Based on this, we are working on several fronts to achieve it.

We are committed to creating long-term value through sustainability and effective community relations. One example of this is our agreement with the area around Caimanes (see page 62, [Caimanes Agreement](#)). Following lengthy negotiations, we resolved a long-term conflict and embarked on a new relationship that will benefit both the community, and the operations and development of Los Pelambres.

### a) Alignment with a single strategy

Our strategy commits everyone in the Group to a specific role. It involves projects that are strategically important to the growth of the business and requires us to comply with specific objectives, benchmarks and deadlines.

### b) Restructuring to deal with the challenges we face

We are changing the structure of our organisation to deal effectively with the new challenges that we face, and thus come closer to achieving our vision. We are doing this in two ways:

► **A functional simplification model** that standardises processes so as to adopt and maintain best practice throughout the Company, increasing our efficiency and thus reducing costs.

► **A new operating model** that increases our operating discipline, sees maintenance processes as a strategic asset of the Company and improves the availability of our plant and equipment, thereby helping to reduce costs. This is helping us to deliver on our plans, improve operational excellence and achieve continuous improvement.

### c) Building on our culture and values

We cannot achieve change or overcome current and future challenges without the commitment, dedication and hard work by everyone in the Group. We have built a participatory culture, our own way of doing things, which is expressed first and foremost in a set of shared values. **These act as a guide to our behaviour and everything we do.**

1. **RESPECT** for others: we believe in, and respect people and are genuinely interested in their well-being. We value their opinion and interact with them in an open and collaborative manner. We gain their confidence and trust by fulfilling our commitments.
2. Passionate about **SAFETY AND HEALTH**: we are responsible both for our own safety and health, and the safety and health of others,



We are implementing a new form of business management that takes a long-term view and gives us the flexibility and effectiveness we need.

by identifying and controlling our risks and by being aware of the impact of our actions.

3. Committed to **SUSTAINABILITY**: we understand that being committed to sustainability involves creating economic, environmental and social value. We respect our environment and society and proactively engage with them.
4. **EXCELLENCE** in our daily performance: we continually seek to achieve the best possible results through operational discipline, efficiency and a wise use of resources.
5. **INNOVATION** as a permanent practice: we recognise and promote new ideas that improve the way we work and the way we relate to others, looking at creating value for the company, people and society at large.
6. **FORWARD THINKING**: we look into the future and understand that our business strategy is a long-term commitment. We learn from our experience and are courageous and flexible when facing the challenges of our changing world.

### d) We value people's talent

The key to our past and future successes lies in the commitment and leadership of the thousands of people who work for the Group. We are therefore defining a management model that gives people the tools to develop themselves professionally and take ownership of change for themselves, their teams, the organisation as a whole and the environment (see p. 53, ¿How we manage our labour relations and conditions?).

### SUSTAINABILITY POLICY

We are working to make sustainability part of our DNA and everything we do, so that it informs every decision we make at every stage of the business cycle. We constantly seek new ways of making mining more efficient, sustainable and inclusive. This view of our business, which goes beyond purely short-term needs, led the Board to approve our updated Sustainability Policy in April 2017. This integrates five crucial areas of our business: people, economic development, environmental management, social development, and transparency and corporate governance.

We constantly seek new ways of making mining more efficient, sustainable and inclusive.

# SUSTAINABILITY POLICY

In Antofagasta plc we recognised that we are responsible with our stakeholders and the communities in which we operate. We understand that mining is a long term activity and we should always think, and act looking forward. Our operations allows us to generate a positive and lasting change and that is why we are constantly in search of new ways to develop a more efficient, sustainable, and inclusive mining.

## PEOPLE



People's health and safety is the priority in Antofagasta plc. Also, wellbeing, motivation, and our worker's development are crucial for the Group's value proposal. We recognised the importance of diversity and equal opportunities, this is why we constantly put our efforts in the creation of environments that allows integration, and professional and personal development.

## ECONOMIC PERFORMANCE



We are constantly looking for sustainable ways to improve our operational efficiency to assure value creation for our shareholders and stakeholders. We operate in a responsible, and efficient way, with a long-term vision, with the purpose of maximise the economic value of our assets to bring social development, and minimise our environmental impacts.

## ENVIRONMENTAL MANAGEMENT



We work permanently to prevent, control, and mitigate our possible environmental impacts. We are constantly looking use natural resources in a more efficient way. We implement environmental management systems integrated to our business, with targets and KPI's, looking for continual improvement, and evaluating our environmental performance.

## SOCIAL DEVELOPMENT



We are looking to generate economic, social, and human capital in the environments in which we operate. We activate effective process of inclusive, transparent, and participative dialogue with the different actors in the territory, recognizing controversies, and opportunities to address these issues with them 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 maintain an honest, transparent conduct that respects human rights and the law. In addition, we openly communicate our performance and implement systems that allow us to monitor our procedures internally.

## EXTERNAL AND INTERNATIONAL INITIATIVES

Antofagasta Minerals has been a member of the International Council on Mining and Metals (ICMM) since 2014. The ICMM promotes sustainable mining, develops standards, and encourages companies to adopt and share social and environmental best practice.



Since 2015, Antofagasta plc has been a constituent of the FTSE4Good, the London Stock Exchange's sustainability index series that includes companies that demonstrate sound environmental, social and corporate governance, are managed transparently and are evaluated using over 300 indicators.



FTSE4Good

## AWARDS AND DISTINCTIONS



In 2017, we obtained the following awards:

### ICARE 2017 PRIZE

Antofagasta Minerals received this important award for its contribution to business excellence and to national progress.

### GENERACIÓN EMPRESARIAL - DIARIO FINANCIERO PRIZE: COMMITMENT WITH INTEGRITY

Antofagasta Minerals won this prize, along with two other companies, Transelec and VTR, for its "commitment to doing the right thing, inspiring its employees to work with a sense of mission and an awareness of how its decisions affect the common good of this country".

### PRIZE FOR "ACHIEVING THE SDGS IN THE EXTRACTIVE INDUSTRY"

Awarded by the Columbia Center on Sustainable Investment, for social responsibility practices and contribution to the UN's Sustainable Development Goals.



# INNOVATING FOR INCREASED COMPETITIVENESS AND SUSTAINABILITY

Antofagasta plc has always been driven by ideas, and the ability to turn them into reality. Without this ability and willingness to innovate, the Group could not have grown the way it has over the last twenty-five years.

Innovation has enabled us to anticipate future scenarios and seek new ideas, viewpoints and solutions to the problems the organisation faces, together with local people.

## What do we want to do?

We want innovation to become the driver that attracts people, brings them together and motivates them. Antofagasta plc has therefore created an innovation committee, chaired by the CEO and consisting of professionals from different areas, which aims to generate positive impact in five separate fields: Technology, Safety, Relationships, Organisation and Business Model.

## Where are we going?

We have defined our horizon as 2020 to 2030, which is much longer term than the current five-year budget plan. We want the Group to be recognised for its interest in promoting change that adds value and is organised in such a way as to achieve this. This means we must define an innovation process in which we learn from our mistakes.

## How do we promote innovation internally?

We are developing an innovation platform, InnovAminerals ([www.innovaminerals.cl](http://www.innovaminerals.cl)), to encourage the generation and sharing of new ideas by employees and contractors to improve our working practices and relationships. In 2017, InnovAminerals received more than 100 ideas, of which 30 were presented to the innovation committee and 20 have become Group projects.

## How do we benefit from external innovation?

We form alliances with other organisations, universities, research centres. For example, we participated in the Programa Nacional de Minería de Alta Ley, which aims to make mining a driver of the country's development and play a leading role in the construction of human skills, knowledge, technology and innovation. We also sit on the ICMM's committee responsible for finding sustainable and innovative solutions to mining waste management.

## ANTOFAGASTA PLC, A PIONEER OF INNOVATION:



### Using seawater

- ▶ We were among the first to use seawater for our production processes.
- ▶ We began using seawater at Michilla in the 1990s.
- ▶ It is now used at Centinela and Antucoya.



### Thickened tailings

- ▶ Centinela pioneered the use of this process in large-scale copper mining.
- ▶ As the tailings have a solids content of 65%, more water is recycled, they are more stable and they require less space.



### Community relations

- ▶ We encourage innovative relationships based on participation and transparency.
- ▶ We first implemented our approach at Los Pelambres as the *Somos Choapa* programme and then later in the María Elena and Sierra Gorda as *Dialogos para el Desarrollo*.



### Promoting renewable energy

- ▶ We use solar and wind energy at Centinela and Los Pelambres.
- ▶ At Los Pelambres more than 55 percent of the energy we use is clean.

# SUSTAINABILITY GOALS

## ANTOFAGASTA MINERALS

The following are the mining division's goals for 2017 and the extent to which they have been achieved.



### PEOPLE

Goal	Performance	Comments
Zero fatalities	●	The Group had no fatal accidents in 2017. The frequency index (LTIFR = Lost time injury frequency rate) decreased to 1.0 and time loss due to accidents was also reduced.
Launch of the Diversity and Inclusion Strategy	●	This was approved by the Board in 2017. It is a five-year programme enabling the Group to achieve an inclusive culture and lead the mining industry in Chile on Diversity and Inclusion issues.



### ECONOMIC DEVELOPMENT<sup>1</sup>

Goal	Performance	Comments
Maintain the levels of copper production achieved in 2016	●	Copper production in 2017 of 704,300 tonnes of copper was as planned, just 0.7% lower than in 2016, despite lower grades at our two main operations.
End the year with a solid financial performance and achieve the savings targeted in the Cost and Competitiveness Programme (CCP)	●	Good economic performance in 2017 with cash flow from operations increasing by 71.2% and our EBITDA margins returning to over 50%.
Advance Group's development plans	●	At Centinela, production started at Encuentro Oxides project and the molybdenum plant was commissioned during the year. At the beginning of 2018, we received environmental approval for Los Pelambres' Incremental Expansion project.



### SOCIAL DEVELOPMENT

Goal	Performance	Comments
Zero production time lost due to accidents	●	No production time was lost due to accidents in 2017.
Consolidate and move forward with our engagement process at our operations in the north of Chile	●	We have developed the Diálogos para el Desarrollo programme to improve relations between our three sites in the northern and Antofagasta regions and the local communities. We are also participating in local development alliances and initiatives, such as the public-private platform CREO Antofagasta.

<sup>1</sup> For more information on our financial performance, please see Antofagasta plc's 2017 Annual Report and Financial Statements at [www.antofagasta.co.uk](http://www.antofagasta.co.uk)



● Commitment achieved

● Commitment partially achieved

● Commitment not achieved



### ENVIRONMENTAL MANAGEMENT

Goal	Performance	Comments
Zero incidents with environmental impact	●	There were no incidents during 2017.
Implement and publicise the Environmental Management Model	●	In 2017, we implemented the new Environmental Management Model to achieve excellence in this area. This was reflected in zero incidents during the year and strict compliance with environmental requirements. The model was rolled out to the whole organisation.
Establish climate change goals	●	We are committed to reducing greenhouse gas emissions, with a reduction of 300,000 tonnes of CO <sub>2</sub> emissions during the five-year period 2018-2022 compared to the tonnage forecast in the Base Case 2017.



### TRANSPARENCY AND CORPORATE GOVERNANCE

Goal	Performance	Comments
Implement the Sustainability Policy throughout the organisation	●	The Policy was approved by the Board in April 2017. We have since implemented a programme to ensure that it is complied with by all of the Group's operations and by head office.
Ensure compliance with the UK Modern Slavery Act	●	In accordance with the United Kingdom Modern Slavery Act (2015), the Group has published a statement of the steps it has taken to ensure that its supply chain and all parts of its business are not engaging in slavery or people trafficking. The statement is available at <a href="http://www.antofagasta.co.uk">www.antofagasta.co.uk</a> .

# SUSTAINABILITY GOALS

## FCAB

The following are the goals defined by the transport division for 2017, and the degree to which they have been achieved.



### PEOPLE

Goal	Performance	Comments
Zero fatal accidents	●	There were no fatalities during 2017. The lessons learned from safety incidents occurring in 2017 were shared with all levels of the organisation.
Strengthen Leadership and Management Practice	●	During 2017, FCAB initiated the Ruta del Líder leadership programme for executives and supervisors with staff reporting to them. It was attended by 167 employees, who spent six months learning about the Company's leadership model. The programme will be repeated in 2018 for supervisors without staff reporting to them.
Increase employee incident reporting, aiming for 3,750 reports during the year.	●	By the end of the year 6,687 incidents and near-misses had been reported.
Frequency Index of 3.25 and Seriousness Index of 80	●	The Frequency Index in 2017 was 7.3 and the Seriousness Index 156.7.



### ECONOMIC DEVELOPMENT<sup>1</sup>

Goal	Performance	Comments
Win additional business	●	In 2017, FCAB entered into a contract to transport copper concentrate by rail in sealed containers from Codelco's Chuquicamata mine to the port of Mejillones.
Submit the Los Arrieros Bimodal Sulphuric Acid and Copper Cathode Transfer Terminal (cargo hub) DIA <sup>2</sup>	●	On 5 October 2017 FCAB submitted the DIA to the Environmental Authorities, who are now considering the statement.

<sup>1</sup> For more information on our financial performance, please see Antofagasta plc's 2017 Annual Report and Financial Statements at [www.antofagasta.co.uk](http://www.antofagasta.co.uk)

<sup>2</sup> An Environmental Impact Statement.



● Commitment achieved

● Commitment partially achieved

● Commitment not achieved



## SOCIAL DEVELOPMENT

Goal	Performance	Comments
Zero incidents with significant social impact	●	No such incidents occurred during 2017.
Set up a project in partnership with local municipalities	●	In 2017, we set up a project in partnership with the municipality of Mejillones, entitled Via Compartida, to plant trees in front of the local hospital. This was completed in December 2017. During the year, we also started the design and construction for a local project, Estación Boulevard, a project co-designed and agreed by FCAB, the municipality and social and educational entities in Calama. Work will begin in 2018.
Increase the scale of the Casa Abierta (open house) programme	●	The 2017 target for this programme of 4,000 visitors to FCAB's facilities in the region was exceeded by 1,600.
Expand the sponsorship programme	●	The 2017 target was to sponsor four new voluntary groups and the actual figure was six.
Community roundtables	●	The target for 2017 was to set up four new roundtables and we established six.



## ENVIRONMENTAL

Goal	Performance	Comments
Zero incidents with significant environmental impact	●	There were no such incidents in 2017.
Conducting audits associated with the Clean Production Agreement (APL).	●	The two audits were completed during 2017 with FCAB achieving full compliance.



## TRANSPARENCY AND CORPORATE GOVERNANCE

Goal	Performance	Comments
Implement the Sustainability Policy throughout the organisation	●	The Policy was approved for the Group by the Board in April 2017.
Ensure compliance with the UK Modern Slavery Act	●	In accordance with the United Kingdom Modern Slavery Act (2015), the Group has published a statement of the steps it has taken to ensure that its supply chain and all parts of its business are not engaging in slavery or people trafficking. The statement is available at <a href="http://www.antofagasta.co.uk">www.antofagasta.co.uk</a> .

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# FOCUS ON SUSTAINABILITY



# SUSTAINABILITY: AN STRATEGIC PILLAR OF OUR CORPORATE GOVERNANCE

We have worked hard to ensure that we have the right people in the right jobs to shape the Group's strategy and monitor and report on its implementation.





## WHY IS CORPORATE GOVERNANCE IMPORTANT?

We believe good corporate governance is fundamental to the success of any organisation. It looks to the future, confronts challenges, establishes strategies and priorities, monitors the organisation's development, and develops and maintains effective management structures that allow it to define and achieve its objectives taking all stakeholders' interests into account.

Antofagasta plc seeks to ensure that these roles and responsibilities are clearly defined. We promote and maintain a culture of innovation and constructive challenges, recruit and motivate the best available talent, commit to regular, transparent and objective review processes, and involve shareholders and other stakeholder groups in our decisions.

### CONTEXT

Antofagasta plc's shares are quoted on the London Stock Exchange and the Company complies with all applicable UK laws and regulations. However, our operations, corporate head office, senior management, and main expansion projects are in Chile. As such, we constantly strive to monitor all aspects of the country's mining industry, and comply with its laws and regulations.

## HOW DO WE ACHIEVE GOOD CORPORATE GOVERNANCE?

### I. CORPORATE GOVERNANCE

#### Our focus:

We believe in the importance of maintaining effective, responsible and transparent practices. Our internal guidelines and standards represent the Group's commitment to doing business responsibly. We seek to be recognised for our honest, transparent conduct and our respect for human rights and the law.

#### BOARD OF DIRECTORS

Antofagasta plc is a public listed Company (PLC) registered in the United Kingdom and reports periodically to shareholders on the Group's developments in accordance with European and UK law. The Board is collectively responsible for the Group's long-term success. In general terms, its functions are: overseeing and defining the Group's strategy, defining its fundamental principles, mission, values, policies and priorities; monitoring the value that the Group provides to its stakeholders and its efficient use of



resources; and supervising the Group's development and risk management systems, including those relating to sustainability.

The Board delegates the implementation of strategy and financial objectives to the CEO of Antofagasta plc. It is supported by five committees, including a Sustainability and Stakeholder Management Committee<sup>1</sup>, and has eleven members, including two women. None occupies an executive position in the Company, and five are independent directors.

**For more information** on the governing bodies, the role, responsibilities and composition of the Board, and the measures taken to develop its collective awareness of sustainability issues, see pages 74 to 79 of the 2017 Annual Report, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

<sup>1</sup> The other committees are: Audit and Risk, Nomination and Governance, Remuneration and Talent Management, and Projects.

## Membership of the Board

GENDER		INDEPENDENCE		LENGTH OF SERVICE ON BOARD			EXECUTIVE STATUS	
MEN	WOMEN	INDEPENDENT	NON-INDEPENDENT <sup>1</sup>	1 TO 5 YEARS	6 TO 9 YEARS	MORE THAN 9 YEARS	EXECUTIVE	NON-EXECUTIVE
9	2	5	6	4	2	5	0	11

### SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE

The Sustainability and Stakeholder Management Committee, comprises of four directors and supports the Board by making recommendations to the Board in relation to specific matters relating to safety and health, the environment, climate change, and social, community and human rights matters. Members of the Committee actively participate in Board decisions to ensure that the interests of the Group's stakeholders are represented in Board deliberations. The Committee also oversees the Group's compliance with its sustainability and other commitments to stakeholders.

### RISK MANAGEMENT

The Group uses centralised risk management and internal control systems. These include evaluations of every business activity to ensure that significant risks are identified in a timely and effective manner, and that measures are taken to control, mitigate and report them to the Board.

The Board is ultimately responsible for overseeing the nature and scope of significant risks to the Group and ensuring that appropriate internal control systems are in place. Strategic risks and the status of their respective controls are regularly reported to the Board via the Audit and Risk Committee and, when relevant, the Sustainability and Stakeholder Management Committee.

Antofagasta plc uses an appropriate and consistent methodology to identify risks that could compromise the achievement of our objectives and to establish controls, and prevention and mitigation responsibilities. This task is carried out annually by the operations' executive teams. Risks are evaluated by their probability of occurrence and potential impact, in order to define prevention and/or mitigation measures, together identifying those responsible for putting them into effect.

<sup>1</sup> These are considered non-independent because they do not comply with one or more of the independence criteria laid down in the United Kingdom Corporate Governance Code.

### THE COMMITTEE MET EIGHT TIMES DURING 2017. SOME OF THE MAIN ISSUES DISCUSSED WERE:

- ▶ Progress on the Group's occupational health and safety plan.
- ▶ Progress on the Group's sustainability policy.
- ▶ The 2018 Sustainability Audit Plan.
- ▶ Developments in the Group's Environmental Management System.
- ▶ The Group's environmental commitments, breaches and plans to remedy them in all Group companies.
- ▶ Carbon footprint targets, and the greenhouse gas emissions mitigation plan.
- ▶ Plans to advance the commitments made with ICMM on water and tailings management.
- ▶ The independent expert report on tailings storage facilities at Los Pelambres and Centinela.
- ▶ Progress on environmental impact studies for project developments at Los Pelambres, Centinela and Zaldívar.
- ▶ Monitoring key performance indicators that measure the impact of community relations programmes.
- ▶ The findings of an independent evaluation of the Somos Choapa programme.
- ▶ Social issues arising in the Choapa Viejo sector.
- ▶ Plans to establish a technical institute at Los Vilos, in cooperation with an educational institution.
- ▶ The Group's communications strategy.
- ▶ Review and a recommendation to the Board for approval of the Group's 2017 Sustainability Report.



In 2017, we made progress on implementing the risk management system improvement programme. Our objective is to achieve greater maturity so that risk management is an integral part of the organisation's culture and a key factor in our decision-making processes. To that end, we focus on three main areas: management, strategy and culture.

Activities in 2017 included: workshops to identify key risks at Group and individual operations; self-assessments to verify the effectiveness of critical controls; annual risk management reports submitted by managers to the Audit and Risk Committee; and risk analysis of every issue submitted to the Board for approval.

This year, we are focusing on implementing improvements based on best-practice benchmarks and continuing to implement a culture of risk awareness. Among other things, we plan to: broaden the risk self-assessment process and make risk controls more effective; carry out onsite peer reviews of key controls; improve communication and reporting of risks that materialise, use lessons learned and key performance indicators.

## MAIN SUSTAINABILITY RISKS

### a) Employment:

- ▶ Fatal accidents.

### b) Regulatory:

- ▶ Failure to comply with Environmental Classification Resolutions and sector permits which have a business impact.
- ▶ Failure to obtain critical environmental and related permits for development projects and operating continuity.

### c) Operational:

- ▶ Fire in critical installations.
- ▶ Leaks or spills in the mines, concentrate and tailings pipelines, or other plant.

### d) Social and environmental:

- ▶ Decrease in and/or loss of water supply due to environmental or regulatory factors.
- ▶ Particulate emissions with business impact.
- ▶ Inadequate management of environmental liabilities and high-volume waste.
- ▶ Failure by the Mauro dam to comply with operating requirements.
- ▶ Failure to comply with social commitments.
- ▶ Involvement in situations defined as modern slavery or child labour.
- ▶ Leaks or spills into the sea from concentrate pipelines.
- ▶ Leaks or spills of hazardous waste and/or other substances.

**For more information** on risk management, responsibilities, focuses in 2017, and key risks and mitigation measures, see pages 19 to 23 of the 2017 Annual Report.



## Audits

Our corporate audit programme includes sustainability issues. Audit management is separate from general management and reports directly to the Board's Audit and Risk Committee. The annual internal audit plan includes ethics, safety, and social and environmental development at Group and individual operations, and is based on Group and company risk matrices. Measures to correct control weaknesses are proposed as a result of the audits.

# SUSTAINABLE MANAGEMENT OF THE MINING LIFECYCLE

In accordance with international legislation and standards, we have been developing a series of tools – best practice, standards and indicators – to incorporate social and environmental aspects more effectively into each stage of the mining lifecycle.

## EXPLORATION

- ▶ Environmental and Social Best Practice Manual for exploration projects.

## DESIGN, EVALUATION AND CONSTRUCTION

- ▶ Asset delivery system: a set of minimum standards for mining project design. This includes specific sections on risk management, safety and health, and social and environmental management.

## OPERATION

- ▶ Biodiversity and climate change management standards.
- ▶ Social management standards: complaints, community investment and transparency.
- ▶ Incident procedure.
- ▶ Safety, environmental and social development indicators.
- ▶ Safety, environmental and social targets in the operational development agreements.
- ▶ Environmental requirements management system.

## CLOSURE

- ▶ Corporate standards for integrated site closure.



## II. ETHICS AND TRANSPARENCY

### Our focus:

As a Group, we want to be recognised for our honest, transparent business conduct and our respect for human rights and the law. We have therefore implemented various systems that allow us to oversee our internal procedures. Our Compliance Model seeks to integrate ethics into the Group's day-to-day operations and decisions, and there is a special reporting channel for complaints made by employees or others.

### COMPLIANCE MODEL

We have implemented a series of policies, procedures and communications channels as part of our commitment to doing business in a responsible and transparent way.

This model applies to all employees and collaborators, and its results are periodically reported via internal channels. Compliance with the model is monitored regularly.

During 2017, we worked on implementing the compliance model for the UK Modern Slavery Act by developing policies and procedures. We are also continuing to update the due diligence process, which includes questions on modern slavery and people trafficking, increasing the profile of these issues in supply-chain audits, and monitoring the implementation of the supplier and contractor employment audit programme.

### CODE OF ETHICS

Antofagasta plc's code of ethics emphasises the commitment of the Board and of Group employees to doing business responsibly and transparently. As a group, we require all of our employees and contractors to display honesty, integrity, and responsibility.

Our Code of Ethics includes guidelines for identifying and managing potential conflicts of interest. It also lays down standards on a series of issues, such as respect for human rights, local traditions and values, and the rights of neighbouring communities.

Our Ethics Committee comprises senior managers<sup>1</sup> and is responsible for developing, implementing and updating the code and monitoring its compliance. These and other subjects are included in the induction programme for all new employees.

## COMPLIANCE MODEL

### CODE OF ETHICS

- ▶ Code of Ethics.
- ▶ Guideline for conflicts of interest.
- ▶ Guideline on gifts and hospitality.
- ▶ Regulations on modern slavery.<sup>2</sup>

### CRIME PREVENTION MODEL

- ▶ Crime Prevention Manual.
- ▶ Anti-corruption clauses.
- ▶ Supplier checks.
- ▶ Antitrust, Politically Exposed Persons (PEP), facilitation payments.

### COMPLAINTS CHANNEL

- ▶ Whistleblowing channels (website, email, mail, telephone).
- ▶ Complaints and reports investigation methodology.
- ▶ Complaints monitoring and improvements to internal controls.

### COMMUNICATIONS AND TRAINING

- ▶ Communications (memos, intranet, posters).
- ▶ Training programme – Employee Induction.

<sup>1</sup> The committee consists of: the Vice President of Administration and Finance (responsible for crime prevention), Vice President of Human Resources, Vice President of Legal Affairs, Vice President of Corporate Affairs and Sustainability and the manager responsible for Risk, Compliance and Internal Control.

<sup>2</sup> "Modern Slavery Act": The United Kingdom law laying down provisions concerning slavery, servitude, forced labour, the treatment of individuals and victim protection.

We base our management on clear, known values that reflect the best in us and define the way we carry out our mining operations.

### CRIME PREVENTION MODEL

Our Crime Prevention Model complies with UK and Chilean laws on bribery and corruption. It also includes measures to prevent money laundering, financing terrorism, receiving stolen goods and other offences. The model applies to all Group executives, employees and contractors.

Since anticorruption laws transcend national borders, we have decided to adopt the strictest possible standards, regardless of the country concerned and ensure we comply with the UK Bribery Act.

### WHISTLEBLOWING

We have set up whistleblowing channels that enables employees and contractors to report any irregularities they encounter during their work. They can do this via the intranet, by email, mail or telephone, or directly using the whistleblowing system which protects their anonymity if this is preferred.

The Group also has formal and informal consultation and feedback mechanisms to allow workers, contractors and local communities to express concerns and complaints about our operations, and/or to report irregularities. We investigate all reports that we receive. The conclusions are formalised by the Corporate Ethics Committee and are notified to the Audit and Risk Committee at least every three months.

In 2017, we received 112 reports, 100% of which were resolved.

### COMMUNICATION AND TRAINING PLAN

All employees and contractors of the Group are given a copy of the Code of Ethics and are required to confirm in writing that they have read and understood it and will apply it in every aspect of their work.

The Group has a wide-ranging training programme to ensure that all aspects of the Compliance Model are understood and incorporated into its institutional culture. This emphasises issues such as the right to know and provides an understanding of the tools available to reinforce the skills required to implement the code.

In 2017, we held risk, compliance and internal control training workshops for different stakeholder groups. In 2018 we are continuing to develop a risk awareness culture, along with a range of management tools that have an emphasis on early warning indicators and learning from experience.

Antofagasta Minerals' compliance model has been awarded the Premio Generación Empresarial-Diario Financiero al Compromiso con la Integridad.

## SUPPLIER COMPLIANCE

All new contracts with suppliers include a specific clause requiring them to follow the Compliance Model and confirm that they do business in accordance with it.

The Model requires new suppliers to undergo due diligence before being engaged and at regular intervals thereafter. Under this procedure, new suppliers must provide details of their own compliance models, training plans, codes of conduct, complaint submission and investigation procedures, third-party vetting, and measures in place to prevent slavery and people trafficking.



## HUMAN RIGHTS AND INDIGENOUS PEOPLES

“We respect the human rights, cultures and customs of indigenous peoples, especially in those regions where our operations are located”.

Our corporate policies and guidelines contain specific provisions on the human rights of stakeholder groups and indigenous peoples. These are included in the Code of Ethics, and are audited and supervised by the Sustainability and Stakeholder Management Committee.

In 2017, we developed policies and procedures to comply with the United Kingdom Modern Slavery Act through supplier due diligence and contractual clauses. Among other issues, we are reviewing undocumented employment, sexual and racial discrimination, working conditions and the abuse of employees.

During the year, we approved our Diversity and Inclusion Strategy (see page 53, Diversity and Inclusion), which provides equal opportunities for men and women, and for people of different viewpoints, origins and abilities. We also include human rights issues in the Group’s audit of its subsidiaries, the e-learning provided to all workers, and employee inductions.

We comply with International Labour Organisation Convention 169 and with the ICMM recommendations on the rights of indigenous peoples. Zaldívar is the only one of our four mining operations to have contact with such groups, because it extracts water from near the village of Peine in the Atacama la Grande indigenous development area.

## III. STAKEHOLDER RELATIONS

### Our focus:

We recognise our responsibility to our stakeholders and the environment in which we operate. Our commitment to sustainability is therefore incorporated into all our dealings with employees, investors, communities, suppliers and contractors, and we also place strong emphasis on cross-sector issues such as transparency, innovation and protecting the environment.

The Group seeks to build trusting, mutually beneficial relationships with our stakeholders, and is therefore developing ways of listening, understanding and managing their concerns and expectations more effectively while at the same time creating more value for all parties. In our relationships with communities, we are continuing to build a shared vision of the future development of the regions in which we operate.

### OUR STAKEHOLDERS

Our priority stakeholders are those who may be significantly affected by our operations and whose actions affect our ability to successfully implement our strategies and objectives.

# OUR STAKEHOLDERS

Our priority stakeholders are those who may be significantly affected by our operations and whose actions affect our ability to successfully implement our strategies and objectives.

## Main stakeholder groups



## Relationship mechanisms



## Stakeholders' main issues and concerns





### COMMUNITIES AND SOCIETY



Our priority communities are those located close to our operations and projects.

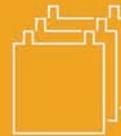
We also have relationships with academia, NGOs and the public.

### GOVERNMENT AND REGULATORS



We interact with central, regional and local government, public authorities and members of the National Congress.

### OTHERS



Other companies in the industry, analysts, and specialist and financial media.

We interact with them in a variety of ways as part of our stakeholder engagement process, including public dialogues, round table and other meetings, site visits, complaint mechanisms and citizen participation.

We use a wide variety of media, including local radio and TV, local print media, bulletins, and local media campaigns.

We also publish this Sustainability Report.

We work with industry institutions to contribute to the discussion of public policy, laws, regulations and procedures that affect our business. We also provide a wide range of information about our activities.

We take part in regional, national and international initiatives, councils and associations to develop the mining industry in the locations where we operate and the country as a whole.

We use various forms of media engagement, including press releases, interviews, our website, participation in industry events in Chile and abroad, and social media.

Protecting the environment, creating local jobs and developing the local economy, water shortages, coexistence with mines (impact on roads and air pollution), and safety in the event of emergencies, particularly at the tailings dams, are particularly important concerns in the Coquimbo region.

The other operations in the north of Chile are concerned with the same issues and with the contribution of mining to local employment and development.

Ensure mining activity is managed in a responsible manner, ensuring to avoid environmental impact and being a positive contribution to the nation. Relevant issues include efficiency in water management, energy security and climate change.



FOCUS ON SUSTAINABILITY

### ORGANISATIONS IN WHICH WE PARTICIPATE

As Chile's leading non-State mining company, Antofagasta Minerals plays an important role in promoting a nationwide strategic agenda for the industry, and in maintaining the *Valor Minero y Alta Ley* public-private alliance to monitor its implementation. It also chairs the Consejo Minero and is a member of the Sociedad Nacional de Minería (Sonami), the Consejo de Innovación para la Competitividad, ICARE, AMCHAM, the British, Chinese and Australian Chambers of Commerce and the *Acción Empresas* foundation. Los Pelambres is a member of *Red Pacto Global (Global Compact Network)*.

The Group is a member of the International Council on Mining and Metals, the International Copper Association, the International Molybdenum Association and other bodies.

The individual companies also belong to regional industry associations and local organisations.

- ▶ In the Antofagasta region, these include: the Asociación de Industriales de Antofagasta, Asociación de Industriales de Mejillones, Mesa de la Minería, Mesa de Género de la Integración de la Mujer en la Minería, Creo Antofagasta Corporación de Desarrollo de la Provincia del Loa, Universidad Católica del Norte, Universidad de Antofagasta, Fundación Gaviotín Chico, Mesa de Buenos Vecinos de Sierra Gorda and Corporación Pro Antofagasta.
- ▶ In the Coquimbo region, they include: the Corporación Industrial para el Desarrollo Regional de Coquimbo, Agencia Regional para el Desarrollo Productivo, Consejo Regional Minero Corminco, Junta de Vigilancia del Río Choapa, groups representing water channel users and drinking water associations. We also work closely with the University of La Serena.

## MONITORING AND RESULTS

### BOARD SUPERVISION

The Board's Sustainability and Stakeholder Management Committee (see page 34, *Sustainability and Stakeholders Management Committee*) oversees and supervises programmes in these areas, and makes recommendations to ensure that all decisions take account of ethical, safety and health, environmental, social and community factors.

In terms of risk management, the Board is responsible for ensuring that the Group has appropriate internal control systems. The Audit and Risk Committee supervises strategic risks and the status of their respective controls (see page 34, *Sustainability and Stakeholders Management Committee*). The corporate audit programme covers the sustainability issues (see page 35, *Audits*) affecting the Group and each individual operation.

Our Compliance Model provides mechanisms to monitor the implementation of the Code of Ethics and the Crime Prevention Model, including breaches of these, human rights, community relations, environmental violations and other matters (see page 37, *Compliance Model*).

### SUSTAINABILITY KPIS

We use a series of indicators to measure and evaluate our commitment to sustainability. Each mining operation has its own targets, reflecting its particular context and priorities, and these are included in each operation's performance agreements with head office and in each employee's performance agreement.

### PERFORMANCE AGREEMENTS

A Performance Agreement is a management tool that summarises Antofagasta Minerals' focuses and annual goals, monitors compliance with these and makes the necessary corrections to avoid variances. Issues directly related to sustainability (social, safety, people, and the environment) account for 25 percent of the Agreement's targets and affect each employee's bonus. Compliance with these targets is monitored in monthly operating performance reviews and is reported to the Board monthly.

### SOCIAL PROJECT IMPACT MEASUREMENT

In 2017, we continued to develop methodologies to quantify the Group's contribution to regional development, the impact of its projects on communities in accordance with the United Nations Sustainable Development Goals, and the effectiveness of these programmes.

## Some results

### Corporate governance

- ▶ 18% of directors are women.
- ▶ 45% of directors are independent.

### Ethics and transparency

- ▶ 112 complaints, 100% of which were resolved.

### Compliance

- ▶ There were no incidents with a significant environmental impact during 2017.



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# ANTOFAGASTA MINERALS



# PEOPLE ARE OUR PRIORITY

Our commitment to safety and health is our first and most important task. It is present in the way in which we think and act and is a central part of the Group's business strategy. Our goal is to achieve zero fatalities and eradicate occupational diseases.





## WHY ARE SAFETY AND HEALTH IMPORTANT?

People are our most important asset, and safety and health are our priority. The fatalities that have occurred in previous years prompt us to increase our efforts and take urgent action concerning safety.

In 2017, our strategy began to show success and we met our target of zero fatalities.

### CONTEXT

Mining has a lower accident rate than other sectors in Chile.<sup>1</sup> In 2017, it was 1.5 percent, compared to the national average of 4.7 percent.

Safety in the sector is governed by the Employment Code, which is implemented by the Employment Inspectorate responsible for enforcing it. There are also mining safety regulations for specific risks, enforced by the Servicio Nacional de Geología y Minería (Sernageomin).

In 2017, the Ministry of Employment and Social Security and its Superintendency of Social Security (SUSESO) enacted three legal instruments<sup>2</sup> increasing the powers of the safety regulatory bodies as laid down in law no. 16.744, and of employers in terms of Occupational Health and Safety.

## HOW DO WE MANAGE SAFETY AND HEALTH?

Antofagasta Minerals' Sustainability Policy recognises the protection of people's safety and health as a fundamental value. The Corporate Safety and Health department has established a Management Strategy to implement the policy, which was updated and improved during 2017.

The health and safety committees include employee and management representatives from each of the operations, to obtain feedback from employees and on planned safety improvements.

### Safety and health strategy

Managing safety and health requires the ability to identify fatal accident risks and define specific actions to control them. Reporting and continuous improvement are key to anticipating and reducing these risks, and learning as much as possible from them. The success of these measures undoubtedly depends on leadership on the ground and each employee's personal commitment to safety.



**Katharina Jenny**  
Head of Safety and Occupational Health

@aminerals

**The good results achieved in 2017 are a collective achievement, the result of planning, discipline and reporting. Every single member of the Group has exercised leadership in this area, which validates the management model on which we base our operations.**

<sup>1</sup> Source: Minería en números 2017, Consejo Minero.

<sup>2</sup> The DFL 1 Employment Code, law no. 16.744 establishing rules concerning occupational health and safety, MINSAL technical standard 142 on the notification of serious or fatal accidents, and SUSESO circulars 2.345 and 2.378 concerning serious and fatal accidents.





## I. OCCUPATIONAL SAFETY

A preventive culture requires a real commitment by everyone working at Antofagasta Minerals. We continue to make significant progress towards achieving this objective in the following areas:

### ▶ FATAL RISK STANDARDS

The Group has identified 15 fatal risks at its operations and projects, and during 2017 developed its Fatal Risk Standards to improve control of these risks. These standards are focused on eliminating fatal accidents, and serious and occupational diseases.

### ▶ FOCUS ON PREVENTION

In 2017, special emphasis was placed on increasing preventive reporting in the mining division and to carry out continuous and systematic analyses of the near misses that have occurred. This allowed us to go from 1,995 reported incidents in 2016 to 5,277 in 2017 and to take corrective actions to avoid repeated incidents and related accidents. An example of this is the critical behaviours-prevention tool implemented in 2017 which helps to identify actions that have the potential to lead to a serious or fatal accident if they are not detected in time. Their identification and monitoring allows us to take specific actions to reduce the accident rate.

### ▶ LEADERSHIP ON THE GROUND

Leadership in the field is critical to implement safety and health initiatives. Antofagasta Minerals has defined systematic leadership practices for executives and supervisors, including the Executive Committee. This way, we have managed to increase the presence of executives in the field, encourage the use of the tools of safety and health and disseminate messages and concepts to improve understanding of the Safety and Health Strategy.

### ▶ NEW SAFETY TECHNOLOGY

- Leadership in Safety Management: web and mobile phone apps that optimise safety management through verification, deviation and near-miss reporting from mobiles phones and evaluating RECSS (see below).
- Remote locking: development of a mobile remote locking device, which has improved maintenance workers' safety and increased productivity. This idea came from a worker at Los Pelambres and is one of the projects developed as part of the InnovAminerals initiative.
- Mobile application for safety and health training: mobile training platform based on video games that allows workers to "learn through play", a project developed as part of the InnovAminerals initiative.

### ▶ CULTURE CHANGE

Each year we take various actions to strengthen our safety culture. This includes making awards to workers, supervisors and contractor companies; communication campaigns; organising meetings with the Employee-Management Committees<sup>1</sup> and producing plays on the subject of fatigue and drowsiness, which have been performed for employees and their families in four cities.

### ▶ SPECIAL CORPORATE SAFETY AND HEALTH REGULATIONS (RECSS)

We have developed a regulation specifically for contractors and subcontractors, which defines roles, responsibilities and actions to eliminate serious and fatal accidents, as well as occupational diseases. Compliance is supervised by the Group contract administrator.

<sup>1</sup> At each mining operation, FCAB, Encuentro Oxides and head office.

**MONITORING AND RESULTS**

During 2017 we carried out two internal audits on the compliance and implementation of the Safety and Health Strategy at each of the operations and projects. Thanks to these we have been able to make continuous improvements in each of the review processes and improve compliance with the RECSS and the fatal risk standards.

In 2017 we achieved our principal goal of zero fatalities and also decreased our Frequency Index with time loss by 17% in comparison to 2016. This, together with the 152% increase in our near-miss reporting, shows the effectiveness of the preventative actions we have been taking

The 7% increase in the All Injury Frequency Rate (AIFR) during 2017 is due to the greater number of injuries arising from low potential accidents at our contractor companies. The Group is giving field-training to our contract administrators to improve their management and reduce the accident rate.

The results show that the Safety and Health Strategy is having some success, but there is a long way to go before a robust safety culture is fully developed that will continue to achieve zero fatalities and the automation of dangerous processes.

**In 2017 we achieved our goal of zero fatalities.**

SAFETY STATISTICS <sup>1</sup>	2017	2016	2015
<b>All Injury Frequency Rate (AIFR)</b> number of incidents per million hours worked	7.4	6.9	6.9
<b>Lost Time Injury Frequency Rate (LTIFR)</b> number of incidents with lost time per million hours worked	1.0	1.2	1.2
<b>Index of Near-miss Accidents</b> number of near-miss incidents reported per million hours worked	126.6	50.2	13.5
<b>Number of fatal accidents</b>	0	1	1

<sup>1</sup> The safety figures are for both our own employees and contract workers.

**VISIBLE LEADERSHIP BY THE EXECUTIVE COMMITTEE**

2017 was the year of leadership. The CEO, directors and managers all attended the Liderazgo Visible programme, which provided leadership training in the form of onsite activities. The Executive Committee also worked on safety issues with employees in leadership roles at each of the mining operations once a month.

Each project ended with an extended meeting at which strengths and weaknesses were identified. Finally, learning was shared and awards were made to outstanding workers and supervisors.

*The Executive Committee making a site visit.*



## II. OCCUPATIONAL HEALTH

We are responsible for our workers' physical and psychological health, and in 2017 we established Occupational Health Standards (ESOs) setting out the requirements for a safe and healthy working environment. These standards apply to employees, contractors and subcontractors working at Antofagasta Minerals' operations and projects. Each operation is required to implement and supervise the ESOs at their own sites.

The main risk factors that can cause employment-related illness are silica dust, sulphuric acid mist, ionising and solar radiation, height and noise. Each operation has the resources needed to prevent the occurrence of these health issues. There are also technical guidelines on occupational health and hygiene, ergonomics, psychosocial issues, fatigue and drowsiness, which indicate the risk levels for each issue and exposure factors that can lead to illness and accidents.

In matters of occupational health, the mining division has a series of preventive measures, a good database, defined standards, case management, and has been identifying the more exposed groups.

### MONITORING AND OUTCOME

During 2017, we conducted two internal checks to evaluate the degree of progress of the implementation of the Occupational Health Standards. The challenge in 2018 is to verify that these standards are already part of an integrated management model and that projects have been defined to reduce and/or eliminate exposure. In 2019 we plan to have exposure reduction goals, developed by each operation based on their risk evaluation of each Similar Exposure Group (GES). We have three people suffering from occupational illnesses, all of whom are at Zaldívar.

## SALA ALMA - A SPACE FOR WORKING MOTHERS

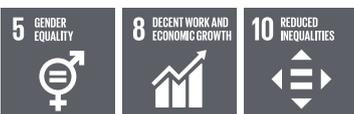
In order to make it easier to combine work and parenting, and in accordance with the maternity standards, we provide a room at the mining Group's headquarters for employees and contractors to extract and store breastmilk.





# OUR COMMITMENT TO GOOD EMPLOYEE RELATIONS AND WORKING CONDITIONS

We are seeking to overcome the challenges faced by the organisation by exploiting Group synergies and fostering employees' commitment based on shared values, a vision of the business and attractive rewards.





## WHY ARE LABOUR RELATIONS IMPORTANT?

The context of our business is changing. Modernisation, automation, and the proliferation of new technologies have become a reality in the mining industry, requiring us to develop a forward-looking employment culture. New generations of workers must be able to work in a collaborative, dynamic, diverse and flexible environment, which will require a significant effort by large companies.

The key to our past successes and future aspirations is leadership and the commitment of the 19,000-plus people working for the Group. We have therefore made progress by defining a leadership model that gives people the tools they need to develop their careers. It enables them to guide their own change, that of their immediate co-workers, and the organisation as a whole, as well as our relationship with those around us.

In mining, which operates shift systems, working conditions are a key factor in generating commitment and retaining talent. Employees' quality of life depends on having comfortable accommodation, good food, convenient transport, recreation and continuity of conditions.

Employee relations and working conditions affect not only our 5,026 direct employees, but also our 14,472 contractors, by creating a culture of well-being for them and their families. Centinela mine has the highest percentage of the mining division's direct employees, at 40 percent, followed by Los Pelambres and Zaldívar at 18 percent each, Antucoya at 15 percent, and our corporate head office at 9 percent. The majority of contractors are employed at Los Pelambres (33 percent) and Centinela (30 percent).

### CONTEXT

The Chilean mining industry directly employs 3 percent of the country's workforce. The Consejo Minero<sup>1</sup> estimates that each of these jobs generates 2.55 indirect ones, so mining accounts for 9% of total employment.

Employee relations are governed by the Employment Code, which is enforced by the Employment Inspectorate. Labour reforms that came into effect in 2017 amended the Employment Code and posed new challenges for companies and trade unions.

Another piece of legislation enacted during the year, Law 20.015 on inclusive employment, requires companies with more than 100 employees to ensure that 1 percent of their employees are people with disabilities.




**Ana María Rabagliati**  
Vice President,  
Human Resources

@aminerals

**We are all responsible for working towards greater inclusion. We are committed to creating an inclusive organisational culture that welcomes and increases diversity and allows all our workers to achieve their maximum potential.**

LABOUR FORCE <sup>2</sup>	2017	2016	2015
Own employees	5,026	4,977	4,586
Contractors	14,472	13,049	14,892
<b>Total labour force</b>	<b>19,498</b>	<b>18,026</b>	<b>19,478</b>

<sup>1</sup> Source: Minería en números 2017, Consejo Minero.

<sup>2</sup> Annual averages. Includes operations, projects and the Corporate Centre; permanent and fixed term. Includes Michilla in 2015 and Zaldívar from 2016.





## HOW DO WE MANAGE LABOUR RELATIONS?

### I. PROFESSIONAL DEVELOPMENT OF OUR WORKERS

Our employees are the central focus of our Sustainability Policy. We aim to provide them with career development and mobility opportunities and in 2017 there were internal promotions within the Group. One challenge that we are working on is to ensure that the career development model is extended to the supervisor level, so that we can establish a training plan across the Group rather than on a case-by-case basis. The plan will provide routes for progression so that each supervisor has a clear picture of their steps towards career development, can prepare for promotions and can ensure the right professional skills are in place to meet the Company's strategic objectives.

### II. ENGAGEMENT AND EMPLOYEE RELATIONS

Engagement is key at Antofagasta Minerals, because the changes we have made in the past and the challenges we face now and in the future, have required and continue to require the effort, commitment and dedication of everyone in the Group. Having clear incentives, and enabling workers and supervisors to solve problems together, is a win-win strategy. It makes employees feel involved and enables us to use the talents that exist at every level of the organisation.

There are ten trade unions: three at Los Pelambres, four at Centinela, two at Zaldívar and one at Antucoya. 76 percent of workers belong to unions and are covered by collective agreements.

In 2017, we engaged in regulated labour negotiations with the worker's union at Zaldívar under the employment code. This resulted in mediation by the Employment Directorate as part of the standard dispute regulation process. It is worth noting that we do maintain ongoing and proactive discussions with trade union representatives. There are also formal complaint and feedback mechanisms, such as on our website and through formal reporting channels. There were no strikes in the Group during 2017.

### III. DIVERSITY AND INCLUSION

Any forward-looking company must encourage diversity if it is to remain flexible and up to date, nurture talent and maximise productivity. We need a new culture of greater openness, education, awareness and mutual respect.

We have developed a Diversity and Inclusion Strategy, to place more emphasis on this issue and give it direction, which was approved by the board in 2017. The strategy is based on a five-year programme aimed at enabling the Group to move towards an inclusive culture

## TRAINING FOR UNION REPRESENTATIVES

The Group is committed to empowering and enhancing the skills of union representatives. We participate in a Trade Union Management Diploma programme at the Universidad Católica de Chile, sponsored by the Fundación Carlos Vial Espantoso. In 2017, thirty-four representatives took part in this training, which also includes management from mining businesses. We have agreed that representatives should receive ongoing training and we will encourage other forms of employee participation.

and lead the mining industry in terms of diversity. To do this, we need inclusive employment and people management processes, which we are hoping to develop over the next three years. We began drawing up a plan of action in April 2018 that is focused on four main areas: leadership, employee experience, commitment and organisational systems.

We do not have specific diversity and inclusion goals yet, but will decide these during the first review stage. In 2017, we had 433 female employees, representing 9 percent of the Company's workforce. This was a similar proportion to 2016 and above the 2017 industry average<sup>1</sup> of 7.9%.

The proportion of women in management roles rose to 10 percent and 0.7 percent of our employees are of non-Chilean nationality.<sup>2</sup>

Between 2018 and 2020, we plan to employ more women, people with disabilities and people of other nationalities.

#### IV. QUALITY OF EMPLOYMENT

The workers at our mining operations rate the quality of their accommodation positively and also their pay, which is well above the minimum required legal salary. Since the sites work shifts, each provides accommodation, leisure and sports facilities to meet its own needs.

Mining wages are double the national average.<sup>3</sup> In 2017, we continued to update our supervisors' compensation scheme to reflect current market practice. This resulted in the creation of a flexible annual benefits system. Other employee rewards include annual preventive health checks, and health and life insurance.

We are also continuing to develop a special recognition scheme for innovative projects. This is managed internally by the Antofagasta Minerals Innovation Directorate, and rewards individuals who suggest significant improvements to working processes and methods that add value for the Group.

## Video against labour harassment

As well as participating in a labour harassment prevention forum, the Group also supported a video by Women in Mining Chile, which seeks to raise awareness of sexual harassment at work as part of our Diversity and Inclusion strategy.<sup>4</sup>

## Promote Chile

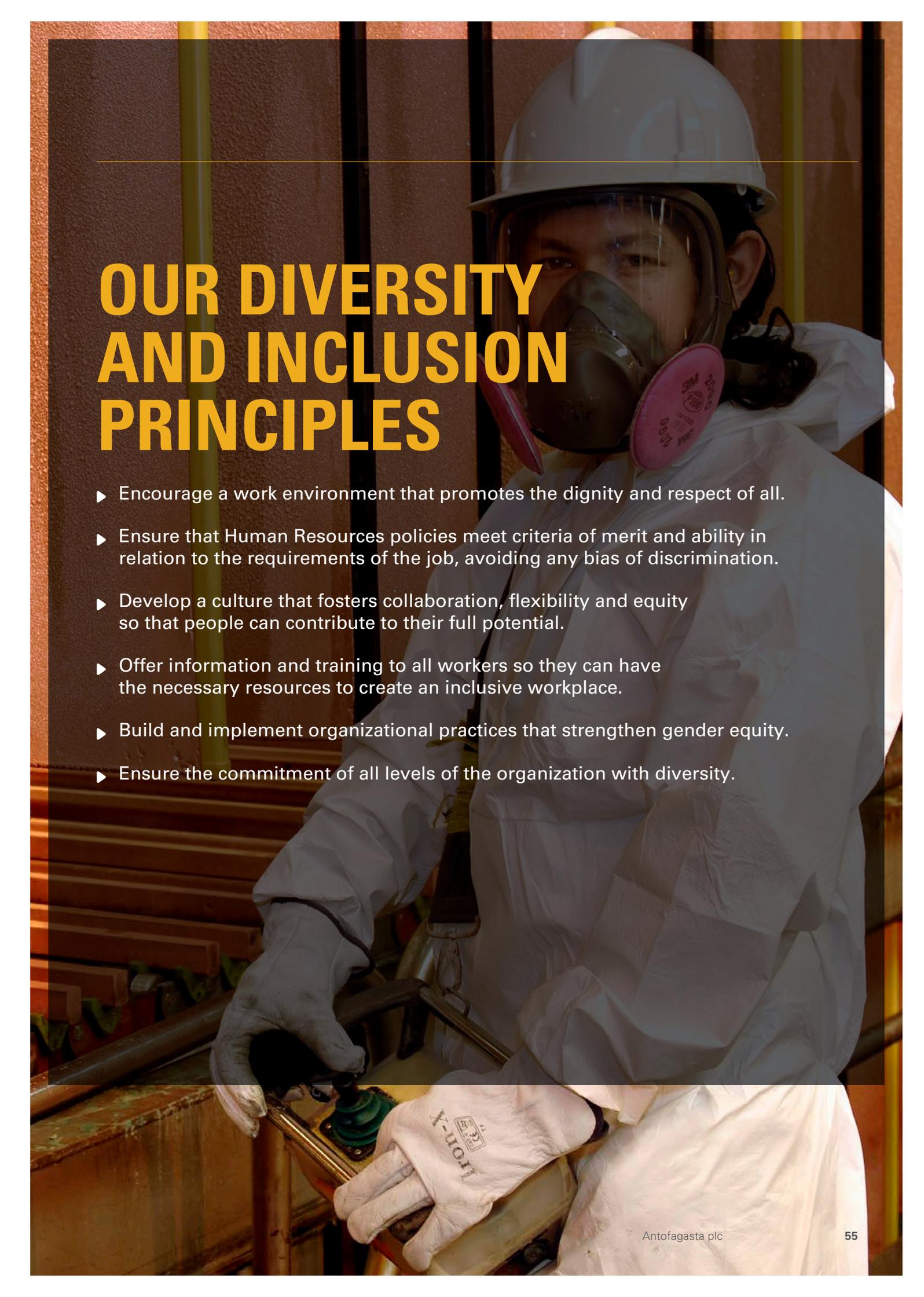
Group executives participate in the Promote Chile project, a public-private initiative that supports actions taken to increase the participation of women in senior management positions in organisations. It also has the purpose of raising awareness about the importance of women holding senior positions and empowering them through their roles and providing opportunities to network with each other.

<sup>1</sup> Source: Minería en números 2017, Consejo Minero.

<sup>2</sup> These included workers from the following countries: Argentina, Bolivia, Brazil, Canada, Colombia, Cuba, El Salvador, France, Germany, Japan, Korea, Mexico, Peru, Spain, the United Kingdom, the United States, and Venezuela.

<sup>3</sup> Source: Minería en números 2017, Consejo Minero.

<sup>4</sup> To see a short film on this project go to <https://www.youtube.com/watch?v=YXP8tzQa0P8>



# OUR DIVERSITY AND INCLUSION PRINCIPLES

- ▶ Encourage a work environment that promotes the dignity and respect of all.
- ▶ Ensure that Human Resources policies meet criteria of merit and ability in relation to the requirements of the job, avoiding any bias of discrimination.
- ▶ Develop a culture that fosters collaboration, flexibility and equity so that people can contribute to their full potential.
- ▶ Offer information and training to all workers so they can have the necessary resources to create an inclusive workplace.
- ▶ Build and implement organizational practices that strengthen gender equity.
- ▶ Ensure the commitment of all levels of the organization with diversity.



# WE ARE COMMITTED TO THE DEVELOPMENT OF OUR NEIGHBOURING COMMUNITIES AND THE COUNTRY

We believe that our business should ensure sustainable development in local communities and significantly contribute to the country's long-term development.



## WHY ARE NEIGHBOURING COMMUNITIES AND SOCIETY IMPORTANT?

Mining companies have a duty to contribute to the sustainable development of the communities where their operations are located. This includes taking part in open, transparent dialogue in which local stakeholders can discuss the management of shared resources and local development.

The Group is aware that large-scale mining has a major impact and therefore seeks to prevent, mitigate and offset negative effects while increasing the positive effects of economic activity.

Contributing to regional development, and keeping our promises to communities and other stakeholders, is essential if we are to maintain our social licence to operate and ensure that our business is a success.

### CONTEXT

Our mining operations are located in two regions of Chile with very different natural environments. Los Pelambres is at the head of the Choapa valley, in a territory shared with over 40 communities. Centinela, Antucoya and Zaldívar are in the middle of the Atacama Desert, a sparsely populated traditional mining area, and one of the driest places in the world.

These geographical factors, in addition to changing social expectations, mean that the challenges of cohabiting with local communities are more complex for Los Pelambres than they are for our operations in the north. We are therefore gradually refocusing our relationships to reflect the differences between the two regions.

### LOCAL COMMUNITIES' MAIN PREOCCUPATIONS

We have implemented various mechanisms to deal with our neighbours' concerns as part of our public relations process (see page 58). These include public dialogue, roundtables and other meetings, complaint mechanisms and citizen participation. The main concerns expressed by local communities are as follows:

#### Community relations

- ▶ Direct, formal communication channels between the company and the community with transparent and appropriate responses.
- ▶ Incorporating concerns during the engineering design stage of projects.

#### Community development and wellbeing

- ▶ Helping to solve social problems: water shortages, lack of public space, educational issues, health and employment infrastructure

**René Aguilar**  
Vice President, Corporate Affairs and Sustainability

@aminerals

**Engaging with the different parties in the mining areas where we operate is a vital way to resolve the controversies that originate there and is also an effective tool to resolve any identified inequities.**

and the slow development of other manufacturing sectors.

- ▶ Employment, purchasing and using local suppliers.

#### Social and environmental impact on communities

- ▶ Social impact when developing projects, of the arrival of outside workers (alcohol, drugs, insecurity).
- ▶ Social impact while projects are being built.
- ▶ Availability and quality of water.
- ▶ Air quality.
- ▶ Road safety.
- ▶ Tailings dam: emergency preparedness.
- ▶ Impact on local biodiversity, marine environment and cultural heritage.

## HOW DO WE MANAGE OUR COMMITMENT TO NEIGHBOURING COMMUNITIES AND SOCIETY?

In view of the context of our business and the environment, we have placed a special emphasis on:

### In the local area:

- I. Listening to and understanding what communities have to say, and helping them to build the area's future. Contributing to initiatives arising from relationship-building that respond to the shared priorities of stakeholders in each region.
- II. Contributing to the local economy by providing access to high-quality jobs and business opportunities associated with mining.
- III. Preventing and mitigating the negative impact on communities.

### In the country:

- IV. Actively participating in developing the mining industry of the future and society as a whole.

### I. LISTENING TO AND UNDERSTANDING WHAT COMMUNITIES HAVE TO SAY AND BUILDING THE FUTURE TOGETHER

The Group seeks to generate economic, social and human capital in the areas in which it operates. We want to contribute significantly to the development and well-being of our host communities and provide lasting infrastructure to build on their economy, culture and traditions. We understand that local development is key to our business and that our neighbours' wellbeing is directly relevant to our long-term success.

We also realise that we are only one of many stakeholders in the region, and if we are to contribute effectively to this development and play an active part in its challenges, we must help to find solutions in cooperation with other public- and private-sector players. We therefore aim to build and maintain good relationships with them and develop our ability to listen to, understand and manage their expectations and concerns.

Because of this, we have changed the focus of our interaction with local areas. This new Relationship-building Process aims to develop lasting ties with communities, authorities, and other stakeholders, based on five fundamental principles: dialogue, collaboration, traceability, excellence and transparency.

As part of this process, the Group operates a series of formal communication and feedback mechanisms with different local stakeholders, such as public dialogue, roundtables and other

meetings, joint monitoring, community site visits, media, websites and social networks.

We also have a system for following up social and environmental undertakings with the community, and investigating and responding to their complaints.

## THE RELATIONSHIP-BUILDING PROCESS

PRINCIPLE	Definition
Dialogue	<ul style="list-style-type: none"> <li>▶ Interaction amongst various incumbent parties.</li> <li>▶ Must seek to achieve representativeness, legitimacy and support.</li> <li>▶ Integration of views, opinions and interests.</li> <li>▶ Effective incidence on agreements, solutions and results.</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>▶ Build alliances amongst multiple parties, public and/or private.</li> <li>▶ Ensure the development, management and joint financing of projects and programmes in order to generate value.</li> </ul>
Traceability	<ul style="list-style-type: none"> <li>▶ Use of tools and indicators for evaluation of processes and initiatives.</li> <li>▶ Commitment follow-up mechanisms.</li> </ul>
Excellence	<ul style="list-style-type: none"> <li>▶ Obtain viable, feasible and relevant commitments with an adequate standard.</li> <li>▶ Integrate process principles.</li> <li>▶ Ensure suitable budget management.</li> </ul>
Transparency	<ul style="list-style-type: none"> <li>▶ Manage adequate resources for occasional conflict of interests.</li> <li>▶ Ensure timely access to information.</li> <li>▶ Be accountable to the various parties.</li> </ul>

## A. SOMOS CHOAPA

The *Somos Choapa* programme was the starting point for this process, because our Los Pelambres site is located in an agricultural valley, stretching from the mountains to the sea and including some 40 communities.

The programme includes open meetings so that all members of the community will be able to participate and where we will share our vision of the future and agree on key issues to be dealt with. The community, the government and Los Pelambres have been closely involved throughout the *Somos Choapa* programme, and all of the projects and programmes are run collaboratively through public-private alliances with the municipality and the community. *Somos Choapa* is becoming a roadmap for all public-private investment and has been implemented in the four local authority areas of Choapa province: Canela, Illapel, Salamanca and Los Vilos. The programme was given different names in the districts of Salamanca and Los Vilos: Viva Salamanca and Somos Los Vilos. These have joined the provincial process of regional development.

*Somos Choapa* has defined ten strategic areas as a result of the participatory design process. These are regarded as essential for the region's sustainable development. The ten strategic areas that will guide investment in the development of Choapa province over the coming years are: employability, education, product diversification, water, health, waste, community, city, identity, and road safety.

In 2017, *Somos Choapa* was presented at the Chilean Architecture and Urbanism Biennial, under the title of "Diálogos impostergables". It was used as an example of innovative, sustainable cooperation between a company, the surrounding communities and local authorities.

### Projects supported

The projects promoted have emerged under the aegis of the relationship process, therefore, they respond to shared priorities and have been determined by the different actors of each territory. In *Somos Choapa*, a series of works and programmes for economic, social and environmental development, financed jointly with the public sector, are the result of the first four years of this relationship process.

During 2017, initiatives deployed throughout the province of Choapa stand out. Examples are the Recreo programme, which has the strategy of rehabilitating public spaces to improve recreation alternatives and create conditions that encourage community encounters; Treasures of Choapa, which values and disseminates the wealth of the Choapa province, expressed in landscapes, buildings, customs, food and practices valued by the inhabitants themselves; and Cosecha, a productive diversification programme



that seeks to develop rural production, to cover productivity gaps for micro producers so that they can develop competitively. More than 170 entrepreneurs have participated in training provided by the programme in Salamanca.

For more details of the *Somos Choapa* programme, see [www.somoschoapa.cl](http://www.somoschoapa.cl)

## HOW DO THE DESIGN AND IMPLEMENTATION OF SOMOS CHOAPA DIFFER FROM TRADITIONAL PUBLIC RELATIONS AND INVESTMENT PROGRAMMES?

- ▶ **It is jointly designed and is part of a continuous and participatory process.** As such, it is a programme that has earned social legitimacy. It has not been invented by a mining company and imposed on the community as something that will improve its wellbeing; it is a programme designed with them and for them. It aims to create a shared vision of development through ongoing dialogue, local stakeholder participation and active involvement throughout the implementation process.
- ▶ **The programme contributes to the development and wellbeing of the community with an integrated portfolio** of collaborative projects, rather than isolated initiatives. One way of improving local people’s employability is to provide education programmes in line with industry demands. Likewise, we cannot make progress in eradicating poverty without ensuring that everyone has access to adequate quantities of drinkable water and other resources.
- ▶ **All of these strategic initiatives are based on public-private partnerships.** All stakeholders from both sectors have been mobilised, along with strategic partners, to cooperate and collaborate with each other.

This framework has reduced the asymmetry between the various players in the region by transferring decision-making powers. Thanks to this innovative approach, Los Pelambres is not the focal point of the development dialogue, but is simply one of the parties sitting at the table. Reaching an agreement with community representatives at each stage of the process ensures that the result reflects real local needs and objectives.



## Somos Choapa wins international recognition

Antofagasta Minerals received an “Achieving the SDGs in the Extractive Industry” award from the Columbia Center on Sustainable Investment. It was made in recognition of the contribution of this innovative programme to the United Nations Sustainable Development Goals.

## Somos Choapa was presented at the XX Architecture Biennial

The *Somos Choapa* programme was presented at the XX Architecture and Urbanism Biennial as an outstanding example of innovation and sustainable collaboration between a company, the surrounding communities and local authorities. The presentation, held in the Parque Cultural de Valparaíso in November 2017, was entitled *Diálogos Impostergables* (Urgent Dialogues).

It consisted of a model showing the 100 provincial initiatives, and touch screens showing the key projects that have contributed to local development, such as the El Polígono sports and community centre (Illapel), Plaza San Agustín (Salamanca), the reconstruction of the beach at Los Vilos and the design of the Escuela Canela Alta (Canela).



## B. SALAMANCA AGREEMENT

The Salamanca public-private agreement, signed in March 2015 as part of *Somos Choapa*, aims to develop projects and measures to deal with periods of extreme drought and promote the efficient use of water in the province. Over the past two years, we have set up a body to implement the agreement, representing all of the signatories and other stakeholders: directors, public bodies, the town council and Los Pelambres. This includes a Governing Board, five committees to manage specific points of the agreement and a Technical Advisory Unit from the University of La Serena.

### Projects supported

Thanks to the Salamanca Agreement, we have made important progress in dealing with water shortages, by improving rural drinking water supplies, implementing irrigation rotation schemes, conducting studies on a possible new reservoir and assessing the synergies around the use of desalinated water. Los Pelambres has played an active part in this process.

## FEATURED INITIATIVES

### SALAMANCA

#### The Future is in Our Hands - an integrated neighbourhood plan

This initiative consists of the project to design housing for 148 families with the aim of reducing the housing deficit and the risk of urban segregation in the Salamanca area. State housing subsidies were allocated to the project by SERVIU at the end of 2017, which will allow construction to begin in 2018.

### ILLAPEL

#### La Aguada and El Polígono sports and community centres

Residents of the upper part of Illapel celebrated the inauguration of the La Aguada sports and community centre in 2017, since when it has become an important focal point for the community. It has an indoor multipurpose sports hall and spaces for community events. The El Polígono sports and community centre has a concrete playing area with spotlights, basketball equipment and even roller skating facilities. There are also stands for 100 people and a multipurpose hall.

### LOS VILOS

#### Inauguration of the Open House in Los Vilos

During 2016 the municipality of Los Vilos joined the Somos Choapa programme. Once the programme was launched the Open House of Somos Los Vilos became available to the community. The Open House is in the centre of Los Vilos, near to the offices of the municipality and Los Pelambres. Since it was opened in August 2017 it has served as a location for community meetings, training and as a working place for meetings of the municipality, the company and the technical team of the programme.

### CANELA

#### Salón Cultural de Canela

The reconstruction of this building is one of the flagship projects of Somos Choapa. It was significantly damaged in an earthquake in 2015 and had been out of use ever since. The project involved improvements to the entrances and exterior, modernisation of the facade and interior, maintaining the existing adobe structure and installing a sound and lighting control room, new showers and dressing rooms, meeting rooms for community events, and general improvements to the site. The venue will host art and cultural events and festivals for the entire Canela community and the province of Choapa.

## CHOAPA'S FIRST TECHNOLOGY TRAINING CENTRE OPENS

The Centre is a joint project between the Fundación Minera Los Pelambres and CEDUC, the training and education centre at the Universidad Católica del Norte, and will run an educational programme consisting of six courses. The Centre opened in March 2018, with 304 students from Illapel, Canela, La Ligua, Los Vilos and Salamanca.

The project was set up in response to the local need for high-quality technical education that would discourage young people from moving away from the region after leaving school to pursue higher education.

Since March 2018 the Centre, which is in Los Vilos, offers workshops, simulators, machine rooms and has a full range of equipment for technical and practical training in mining operations, electricity and energy efficiency, preschool education, nursing and telemedicine, heavy machine operation and heavy engineering. The Centre has also been accredited by the Ministry of Education, so students can apply for government grants and other financial benefits.



### C. CAIMANES AGREEMENT

When Los Pelambres began construction of the Mauro dam, 13 kilometres from Caimanes, it met opposition from a group of local people. This conflict lasted more than ten years and included lawsuits, roadblocks, and other demonstrations. In May 2016, following nine months of dialogue, Los Pelambres signed a historic agreement with 84 percent of the inhabitants of the communities in Caimanes and the rest of the Pupío valley.

The agreement considers ways of allaying the concerns of people in the valley regarding the safety of the tailings dam, improving the availability of water for human consumption and other activities, and also involves setting up community and family development funds. A committee has been formed that meets periodically to implement the agreement and is made up of representatives from the community, Los Pelambres and Chile Transparente.

#### Projects being supported

The agreement includes a Family Development Fund, which has already been implemented, and a Community Development Fund, which started in 2017 by setting up projects in the towns of Caimanes, Pupío and El Rincón. In September, more than 300 local people held a vote to select projects that would improve their quality of life and open up new opportunities.

The community of Caimanes voted to build accommodation for firefighters, buy land for a future police station as well as equipment and supplies for the local post office, restore the catholic church, build a roof and pavilion for the Clara Vial school, install speed bumps on the main road and set up a fund and buy equipment for emergencies. The people of El Rincón chose to build a headquarters for Sociedad Agropecuaria El Rincón and pay off its debts with an NGO that funded the planting of walnut trees, since nuts are the area's main economic activity. The inhabitants of Pupío funded solar panels for their homes and installed water tanks for irrigation and animal use.

For more details of these projects, visit <https://web.pelambres.cl/caimanes/>

### D. DIALOGUES FOR DEVELOPMENT

During 2017 we implemented our new approach to engagement at our mining operations in the Antofagasta Region with their local communities. This process, called Dialogues for Development, is being implemented in María Elena, by Antucoya, and in Sierra Gorda, by Centinela, together with their municipalities and communities, and with the participation of Komatsu Cummins.

The process brought together more than 500 people from both communities, who developed a joint vision for their future development. In María Elena and Sierra Gorda, the programme already has seven projects chosen by their communities, which will benefit more than 5,200 people.



## FEATURED INITIATIVES

### SIERRA GORDA

#### Medical Care Programme

This health programme aims to reduce waiting lists and improve local healthcare services in the area, addressing shortages in dental, ophthalmology, dermatology, child care and cervical examinations. More than 100 people attended the first clinic.

### MARÍA ELENA

#### Emergency Planning

This initiative is being developed jointly with the municipality's Emergency Operations Centre (COE), the police, the firefighters, and other organisations such as ONEMI Regional. The objective is to strengthen the institutional framework of the COE to have a safe system of communications in case of a catastrophe.

### OTHER RELATED INITIATIVES IN THE ANTOFAGASTA REGION

Centinela participates together with the Regional Government of Antofagasta, the municipality of Sierra Gorda, the community as represented by the Board of Good Neighbours and the Spence, Sierra Gorda SCM and Gabriela Mistral mines, as part of the Territorial Dialogue project, organised by the Alianza Valor Minero. The first pilot project for this initiative will take place in Sierra Gorda. ([More information on page 67](#)).

We are also participating in initiatives and public-private partnerships to encourage regional development such as the Mining Cluster of the Antofagasta Region and the strategic programme of the Regional Productive Development Committee.

#### Projects being supported

- ▶ **Education:** during 2017, the highlight of the year was the Propedeutico programme, which was designed to strengthen both the educational development of the young people of María Elena and the work experience programme ELEVA, which is also funded by Fundación Chile. Antofagasta Minerals has also funded 20 scholarships for higher education for students from the Antofagasta Region, and, together with the University of Antofagasta, a postgraduate Chair. Antofagasta Minerals has also supported the production of a play "For a Future Without Pollution" by the Corporación Pro Antofagasta at various educational centres.
- ▶ **Leadership:** for five years Antofagasta Minerals and El Mercurio de Antofagasta, have made "Leaders of the North" awards to young people who have excelled as agents of change in the Region. Eleven awards were made in 2017.

- ▶ **Heritage and culture:** Antofagasta Minerals together with the Dibam<sup>1</sup>, presented the exhibition "Fossils, a petrified sea in the desert", which showcased diverse findings of the remains of creatures that inhabited the Antofagasta Region millions of years ago, even before the dinosaurs. The exhibited pieces were found in one of Minera Centinela's pits.

## FEATURED INITIATIVES

### ANTOFAGASTA

#### 2018 Community Funds

Seven projects will receive funding organised by the Universidad Católica del Norte and Zaldívar that will benefit more than 13,000 local people. The initiatives will take place throughout the Antofagasta region during 2018. They include an urban art museum in Playa Blanca, pharmacology education and services for older people, and an earthquake and tsunami evacuation plan for people living near the university.

<sup>1</sup> Directorate of Libraries, Archives and Museums.

### II. CONTRIBUTING TO THE LOCAL ECONOMY, JOB CREATION AND OPPORTUNITIES

#### A major force in the regional economy

Our mining operations play a key part in the economies of the regions where we operate and this imposes responsibilities on us. This is particularly important in the Coquimbo region, where Los Pelambres accounts for 14 percent of GDP and approximately 72% of exports. In the Antofagasta region our three mining operations account for 11% of exports.

#### Local employment

Antofagasta Minerals participates in initiatives run by the Consejo Minero to improve the qualifications of workers in the industry. It also allocates financial and technical resources to support skills development in local communities by providing training grants for technical and professional education.

Many of our workers are also our neighbours. We provide incentives for access to high-quality jobs at our facilities and with the contractors that provide us with services. In 2017, we provided direct employment to 2,623 people from the Antofagasta and Coquimbo regions, who account for 52 percent of our mining employees.<sup>1</sup> We are very proud of how many local people we have been able to employ.

As part of our community relations strategy, we encourage local people to gain access to jobs associated directly or indirectly with our business. Los Pelambres has been doing this in collaboration with the four local councils since 2015. As a result, more than 1,500 people working in connected companies come from the province, and 47.16 percent of our own employees are local, well above the 30 percent commitment made to the local communities. The current figures are the result of a joint effort in which men and women have been trained in mining, and non-mining occupations such as welding, machine maintenance, rigging, heavy machinery operation, catering, gas fitting and security.

Since 2015 a job portal has been in operation, enabling would-be employees to find work more quickly. It is currently run by the municipal employment information offices.

#### Local suppliers

One of our key priorities has always been to use local suppliers where we can and help them to expand so that they can also provide services to other companies.

Los Pelambres and Centinela take part in the CORFO World Class Suppliers Programme, which encourages innovation and globalisation among national suppliers to the mining industry. Centinela also manages a pilot scheme for local suppliers, jointly with the

municipality of Sierra Gorda. Both operations have received the Finance Ministry's SME Seal, awarded to companies that commit to paying small and medium-sized suppliers within 30 calendar days.

In 2017, we spent US\$350 million with 688 suppliers in the Antofagasta and Coquimbo regions, equivalent to 14 percent of our total purchases and 24 percent of the total number of suppliers we use.

### CORFO and Los Pelambres launch programmes to benefit businesses in Choapa

Thanks to a public-private partnership, 43 companies in Salamanca, Illapel and Los Vilos will be better equipped to become more competitive.

Our two-year local suppliers' programme, launched in October 2017, provides opportunities for business development, increased competitiveness and job creation. It covers businesses providing accommodation, transport, maintenance, and other services, and will invest more than 190 million pesos, 40 percent provided by CORFO and 60 percent by Los Pelambres.

<sup>1</sup> This figure rises to 52 percent if we include our corporate head office.

## WE PARTICIPATED IN THE FIRST MEETING OF THE MINING REGIONS WITH THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)

The first meeting "OECD Mining Regions: building a network to enhance productivity and well-being" was held in October 2017 to allow for the sharing of lessons, policies and good practices to develop a framework for mining regions and cities to address common challenges and opportunities. This meeting was attended by many parties from the public and private sectors including the Group's CEO, Vice President of Corporate Affairs and Sustainability, and the Public Affairs Manager who shared the Group's experiences, learning and good practices.



### Support for fishing and farming

The Fundación Los Pelambres provides assistance to small farmers in the Coquimbo region through the use of irrigation technology and helps cooperatives to sell local products more effectively. The company works with small-scale fishermen and women in Los Vilos, supporting fisheries research, protection and development.

Additionally, 171 entrepreneurs in Salamanca have taken part in business skills training provided by the Cosecha programme. This is aimed at rural microbusinesses in the farming, tourism and crafts sectors, and helps them to fulfil their ambitions. The programme is an initiative of Viva Salamanca, supported by Los Pelambres and the municipality of Salamanca as part of the *Somos Choapa* initiative.

### Apprentice training

Ever since each of the Group's mining operations started they have run operation and maintenance apprenticeship programmes. In 2017, Antucoya took on 24 apprentices from the communities of María Elena and Mejillones, while Centinela provided apprenticeships for 58 young people from the Antofagasta region and Los Pelambres trained 19 individuals from the Choapa valley as heavy goods vehicle drivers.

We are a leading force in our local economies, particularly in the Coquimbo region, where Los Pelambres accounts for 14 percent of GDP and 72% of exports.

### III. MITIGATING OUR IMPACT ON COMMUNITIES

We identify and manage the risks and social impact of our operations and projects, and seek to allay the community's legitimate concerns about living near mines and the possibility of emergencies.

**Social impact of project construction:** During the construction stage, the main social impacts are associated with the arrival of large numbers of temporary workers in small nearby communities, and the increase in vehicle traffic. We mitigate these impacts using a set of minimum standards for the design of mining projects, including specific sections on risk management, safety and health, and social and environmental management. This is known as the Asset Delivery System.

**Social and environmental impact of mining operations:** During the operating stage, the social impact is mainly local people's concerns about traffic safety and their perception of the risk of air and water quality issues, the availability of water for irrigation and plant safety in emergency situations.

- ▶ **Water quality:** This is an area of particular concern in the Choapa valley. In late 2011, we set up a joint water quality monitoring system to make the regulatory monitoring and reporting process more transparent. This involves representatives of the community and Los Pelambres, and the authority responsible for supervising the sampling process, which is carried out by accredited laboratories. There are three teams monitoring the Choapa river, and the Pupío and Camisas streams. The results are published on the Choapa river monitoring body's website and at community meetings.
- ▶ **Water availability:** Water resources in Choapa province, where this issue is more critical, are managed by the Choapa river monitoring board, of which Los Pelambres is a member. The board works with groups representing canal users' and drinking water associations. Los Pelambres has helped to find solutions to this problem by signing the Salamanca Agreement. Water availability was also one of the subjects of the Caimanes Agreement.
- ▶ **Air quality:** Los Pelambres has agreed with the Cuncumén air quality regulator to take operating measures to reduce particulate emissions from the near-by plant. Monitors from the community evaluate the controls on a daily basis.
- ▶ **Traffic safety:** We carry out regular prevention and education initiatives in association with the authorities.
- ▶ **Emergency preparedness:** The Group's tailings dams and other installations are designed to resist extreme weather and severe earthquakes. The Mauro dam at Los Pelambres continued to

operate normally after the September 2015 earthquake, measured at 8.5 on the Richter scale, whose epicentre was only 50 kilometres away from the dam.

As required by law, the emergency procedures of our four mines have been approved by the national mining authority. We have also coordinated response plans with the relevant public services and local authorities. These comprise preventive and corrective measures for each site, including the suspension of operations if necessary.

Following a consultation with the community of Caimanes, which is near Los Pelambres' Mauro dam, a contingency plan was drawn up for the community in 2016 to complement the existing emergency procedures. This provides for a new safety zone at Caimanes, and the installation of signage and lighting to improve the community's access and evacuation routes to this zone in emergencies. It also includes an audio alarm system to notify the community of evacuations and complements the three gabions along the Pupío stream, which were also specified in the agreement. The implementation of the contingency plan is progressing as planned.

**For more information** about how we manage air, water and mining waste, see pages 72, 76, and 80 respectively.



#### IV. ACTIVELY PARTICIPATING IN SOCIETY AND IN THE MINING INDUSTRY OF THE FUTURE

As one of the world's ten largest copper producers, and the largest non-State mining company in Chile, we have a responsibility for the current and future development of an efficient, sustainable and inclusive mining industry. For this reason, we play a leading role in:

- ▶ Creating a strategic national agenda for the industry by setting up public-private alliances to implement it, such as the Minería Alta Ley and Alianza Valor Minero programmes.<sup>1</sup> The national Alta Ley project is a public-private initiative managed by CORFO<sup>2</sup> and the Ministry of Mines. Its main objective is to increase productivity, competitiveness and innovation in the industry and among its suppliers, and thus promote the country's development.
- ▶ The debate on future challenges and initiatives in the global mining industry. We take an active part in strategic forums and initiatives, for example, by playing a leading role on the ICMM committee responsible for finding sustainable, innovative mining waste management solutions.
- ▶ Implementing national initiatives on issues where we have experience to offer and/or can identify development opportunities for Chile, such as the Antofagasta Minerals Santiago E-Prix 2018.

### VALOR MINERO ALLIANCE

**A public-private institution comprising multiple players and seeking to create the conditions required to transform Chile's mining industry into a beneficial, inclusive and sustainable development platform.**

One of these is the "Institutionalising Regional Dialogue" project, which aims to develop public policy to standardised dialogue and encourage liaison between the varied organisations on major investment projects in the country. The first pilot project will take place in Sierra Gorda, one of the areas receiving the highest levels of investment in Chile. It will serve as a test case for a multisectoral proposal to the government in 2018.

Centinela is taking part in this initiative together with the Antofagasta regional government, the municipality of Sierra Gorda, the Spence, Sierra Gorda and Gabriela Mistral mines and communities.

The project is actively supported by CORFO, the Ministry of the Economy, and by various public and private-sector and civil-society organisations.



**VALOR  
MINERO**

<sup>1</sup> [www.programaaltaley.cl](http://www.programaaltaley.cl); [www.valorminero.cl](http://www.valorminero.cl)

<sup>2</sup> Government organisation to promote economic growth.

# ANTOFAGASTA MINERALS SANTIAGO E-PRIX 2018

Antofagasta Minerals was the main sponsor of the Antofagasta Minerals Santiago E-Prix 2018, an electric car race held in the streets of the capital on 3 February 2017. Some 40,000 people watched the event in central Santiago.

We supported this event because it promotes the use of electric vehicles, which not only help reduce urban pollution, but are also a boost for the copper market.

Formula E is an FIA category exclusively for electric vehicles, and seeks to serve as a research and development platform and to promote this technology. This race was part of the fourth E-prix season, with previous venues including New York, Paris, Singapore, São Paulo and Rome.

The E-Prix forms part of Chile's Electromobility Strategy, which aims to create the regulatory, logistical and market conditions required for the increased adoption of electromobility. By 2050, 40 percent of light vehicles and a significant proportion of public transport are expected to be electric, which will reduce CO<sub>2</sub> emissions by 11 million tonnes a year.



<sup>1</sup> [www.energia.gob.cl/tema-de-interes/conoce-la-nueva-estrategia](http://www.energia.gob.cl/tema-de-interes/conoce-la-nueva-estrategia)



## MONITORING AND RESULTS

We have formal consultation and feedback mechanisms enabling workers, partners and communities to anonymously express concerns and complaints about our operations (see page 38, Whistleblowing).

Three of our five relationship-building principles include adequate monitoring of projects and initiatives undertaken, transparency, and the effective use of resources (see page 58).

- ▶ **TRACEABILITY:** Using benchmarks and other tools to evaluate processes and projects and monitor compliance with commitments.
- ▶ **TRANSPARENCY:** Appropriate access to information, public reporting and the proactive identification of potential conflicts of interest.
- ▶ **EXCELLENCE:** Incorporate principles into the process, acquiring viable and relevant commitments, and adequate budgetary management.

One challenge we face with respect to our social investment initiatives is measuring the Group's contribution to regional development, the impact of the projects and how they add value to our business. In 2017, we continued to work on defining indicators to measure the progress of Somos Choapa, and creating a participatory process to combine technical expertise with government requirements and beneficiaries' contributions. The indicators must evaluate the impact and effectiveness of each community investment project.

Another set of benchmarks will measure any contribution made by the Somos Choapa project portfolio that results in any improvements in the wellbeing of communities within the parameters of the United Nations Sustainable Development Goals (SDGs). The decision to use SDG benchmarks reflects Antofagasta's desire to find common ground with the authorities concerning sustainable long-term and local development.

52 percent of our employees live in the same region as they work.

US\$350 million of our purchases are from suppliers in the Antofagasta and Coquimbo regions.

24% of our suppliers are from the Antofagasta and Coquimbo regions.

US\$12.5 million spent on community investment initiatives.



# SUN AND WIND: DRIVERS FOR SUSTAINABLE MINING

Climate change is a reality and we are committed to being part of the solution. Our increasing use of energy generated from renewable sources, such as sun and wind, is an example of this. This complements an auspicious future for copper, a metal that will play a strategic role in the low carbon society.





## WHY IS CLIMATE CHANGE IMPORTANT?

Climate change is becoming increasingly important to us, for three reasons:

- ▶ The global commitment to reducing carbon emissions has shown that it is possible to produce copper while generating less greenhouse gases, using two renewable energy resources that are abundant in Chile: sun and wind.
- ▶ But climate change is a real threat to the country and to our operations. It has already made itself felt in extreme rainfall, landslides, floods, storm surges and other phenomena.
- ▶ The low-carbon society will require more copper and other metals, which is good news for us.

### CONTEXT

The signing of the 2016 Paris Climate Agreement, which seeks to reduce global emissions and limit the planetary temperature increase to 2°C, has brought important advances in reducing carbon dependency in the energy systems of major economies such as China, India and the European Union.

Climate change made itself felt the length and breadth of Chile during 2017 in the form of extreme weather events and the Environment Ministry has evaluated the potential impact on the country in such areas as health, water availability, biodiversity, mining and ports.

Last year Chile drew up a national climate change plan<sup>1</sup>, and set itself the goal of obtaining at least 20 percent of its energy from non-conventional renewable sources by 2025. In October 2017, the figure reached 20.2%, creating great optimism among environmental groups seeking to reduce the role of carbon in the country's energy supply.

Chile's two energy grids were interconnected for the first time in 2017, significantly improving the quality of supply for our operations in the north of the country.

### THE ROLE OF COPPER IN A LOW-CARBON SOCIETY

Copper is a 100 percent recyclable metal. Each year, some 9 million tonnes are recycled around the world. It is used to conduct electricity and heat, and is an important ingredient of new low-carbon technology; it is essential in wind turbines, photovoltaic cells, planes and trains. Electric cars use four to five times as much copper as conventional ones.

<sup>1</sup> [https://portal.mma.gob.cl/wp-content/uploads/2017/07/plan\\_nacional\\_climatico\\_2017\\_2.pdf](https://portal.mma.gob.cl/wp-content/uploads/2017/07/plan_nacional_climatico_2017_2.pdf)

**Rodrigo Moya**  
Head of Environment

@aminerals

**Trying to reverse the problem posed by climate change is a challenge that no industry can ignore and our greenhouse gases reduction target is a concrete example of how seriously we take this issue.**

Copper is fully recyclable and will play a key role in the society of the future.

## HOW DO WE MANAGE CLIMATE CHANGE?

### I. CARBON FOOTPRINT

At the beginning of 2018 Antofagasta Minerals committed to a goal of reducing its CO<sub>2</sub> emissions by 300,000 tonnes relative to its 2017 base year projections, during the five year period 2018-2022.

#### Climate change Standard

The Company's climate change standards, approved by the Board in 2016, include a formal risk management process.

They seek to make progress on three levels by:

- ▶ Incorporating climate change into the organisation's culture.
- ▶ Considering greenhouse gas emissions when taking decisions, from initial project design through to project completion.
- ▶ Including greenhouse gas mitigation measures, while identifying operating opportunities in terms of energy supply and efficiency.

#### Organisation and reporting

The Board has overall responsibility for climate change issues, which are managed by the Energy and Environmental department. We have been reporting our greenhouse gas emissions' and climate change management to the Carbon Disclosure Project (CDP) since 2009 and the figures have been verified since 2013 by external auditors accredited by that organisation. We have also had a greenhouse gas module on the SIGEA online platform since 2014.

## GREENHOUSE GAS MITIGATION MEASURES

- ▶ Use more electricity from clean, renewable sources.
- ▶ Improve the energy efficiency of processes and projects.
- ▶ CO<sub>2</sub> abatement by incorporating green areas.





### Monitoring and results

Antofagasta plc's management and reporting has been favourably rated by international organisations.<sup>1</sup> We are in the third highest category, and rank above average in the mining and metals industry, which is in the fifth highest group.

In 2017, we carried out a study of our projected emissions to 2030. This showed emissions intensity rising due to lower-grade ore and reduced production by the Los Pelambres and Centinela operations. We must therefore make more of an effort to reduce them.

In 2018, we expect total mining division emissions to fall by more than 20 percent (>30% of Scope 2) as a result of the interconnection of the country's two power grids, which begins this year.

Scope 1 and 2 emissions increased by 4.7 percent compared to 2016. Scope 1 rose by 7.4 percent compared to 2016 due to increased use of fuel at the Group's operations, while Scope 2 increased by 3.6 percent as a result of increased electricity consumption. The Antucoya mine began full operation in 2017 and this was the biggest contributor to the increase in emissions at 40 percent, together with the start-up of the Encuentro Oxides project at Centinela.

GREENHOUSE GAS EMISSIONS <sup>2</sup>	2017 <sup>4</sup>	2016	2015 <sup>3</sup>
<b>Scope 1</b> Mainly diesel for trucks and mining equipment (tonnes CO <sub>2</sub> equivalent).	854,628	795,994	578,119
<b>Scope 2</b> Mainly electricity consumption by plants and pumping seawater (tonnes CO <sub>2</sub> equivalent).	2,071,937	2,000,010	1,412,760
<b>Total emissions</b> (tonnes CO <sub>2</sub> equivalent).	2,926,565	2,796,004	1,990,878
<b>CO<sub>2</sub> emissions intensity</b> (tonnes CO <sub>2</sub> emissions/tonne of copper).	3.87	3.67	3.24

### II. RENEWABLE ENERGY

Since 71 percent of emissions are associated with electricity consumption (Scope 2), we make significant efforts to increase the use of renewable energy through our choice of suppliers.

In 2017, 21 percent of the Group's power came from non-conventional renewable energy sources thanks to the supply from solar and windfarms to Los Pelambres, and the thermal and solar plant at Centinela. In total, 54 percent of Los Pelambres' energy consumption came from renewable sources (El Arrayán, Javiera, and Conejo and the energy generated by its downhill conveyor belts) to produce copper and, simultaneously, reduce its environmental impact.

Specialists forecast that, from 2018 onwards, SING (the electricity grid in the north of Chile) emissions should fall from a factor of close to 0.8 at the beginning of 2017 to between 0.4 and 0.35<sup>5</sup>, thanks to the incorporation of non-conventional renewable energy within the energy mix.

As a result of the Group's strategy of focusing on its core business, we have sold some of our energy generation assets over the past two years. Additionally, as part of our energy strategy, we have decided not to invest in this type of asset in the future, although we are continuing to consume renewable energy from the assets we have sold. For example, we buy solar energy from the Javiera solar plant, which is now owned by Energía Andina.

We have also decided to preferentially source low-emission energy when we issue tenders for electricity supply. Examples include replacing diesel with liquid natural gas in the boilers at the Centinela, Antucoya and Zaldívar mines, tendering for self-generated solar energy at Los Pelambres and Centinela, and the increased output of the solar heat and power plant at Centinela, so that we can continue replacing diesel in our operations.

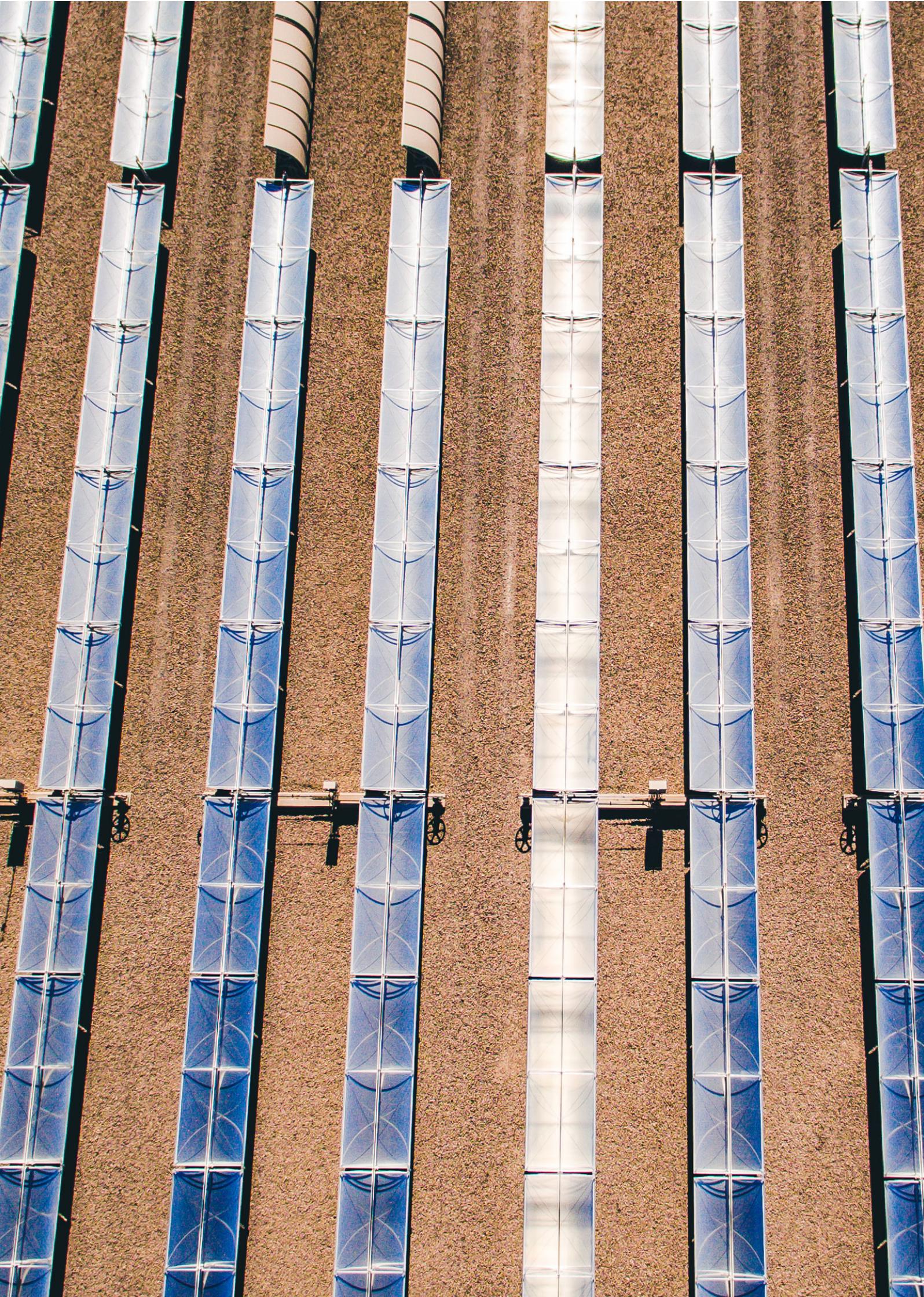
<sup>1</sup> Analysis by CDP and ADEC Innovations, which evaluate the climate change management and carbon footprints of companies around the world.

<sup>2</sup> The emissions inventory has been verified by a CDP-recognised audit company since 2013.

<sup>3</sup> The 2015 figures do not include Zaldívar, but they do include Michilla, which was sold at the end of that year.

<sup>4</sup> The 2016 and 2017 figures include 100 percent of Zaldívar's emissions, although Antofagasta plc owns 50 percent.

<sup>5</sup> "Updated 2017-2030 emissions forecast and analysis of CO<sub>2</sub> equivalent mitigation measures", carried out by the consultant POCH in June 2017 for the Asociación de Generadoras de Chile. "Estimated CO<sub>2</sub> emissions in the SING", study by the consultant Systep, November 2015.





### CO<sub>2</sub> abatement by incorporating green areas

The Innovation Committee approved a reduction strategy in 2017, and this will be implemented in 2018. We are therefore evaluating the capture capacity of the green areas, whether by restoring existing forests, reforestation, vegetation recovery or protection. (For more information, see the Biodiversity section on page 87)

GROUP RENEWABLE ENERGY CONSUMPTION	2017	2016	2015
Renewable energy consumption Percentage	21%	17%	5%

21% of the energy we consume is from renewable sources.

### III. ENERGY EFFICIENCY

Chile's 2050 Energy Strategy provides a roadmap for companies on this issue. The Consejo Minero, representing the mining industry, has agreed a joint approach with the Energy Ministry. The Company is actively participating in this agreement.

Between 2015 and 2016, the Group implemented energy audits for all of its operations and defined efficiency plans. We send a progress report to the Consejo Minero every year. In 2017, we worked on drawing up guidelines and identifying and prioritising risks and opportunities in terms of energy efficiency. In 2018, we continue to develop initiatives in three areas: behaviour, replacement technology and innovation.

#### Energy management

All Group companies use an integrated energy management system so we can continuously monitor our consumption and the progress of projects being implemented. The system, which complies with ISO 5001 principles, defines guidelines, measurements and verifications for each project.

#### Management of energy efficiency

These guidelines are defined by the Energy Efficiency Committee, consisting of the Vice Presidents of Operations, Projects, and Corporate Affairs, and the Energy Manager. During 2017, they were joined by the different operations' Operating Excellence departments

so that the initiatives can be implemented. The Innovation Committee has continued to play an active role in this area, with the aim of reviewing the potential of innovative energy efficiency projects.

#### Action plans

2017 saw the development of software that detects energy efficiency opportunities. This innovative project will be implemented in a primary operation and financed by the Group and CORFO, with scientific support from the Universidad Técnica Federico Santa María.

Among projects at the evaluation or implementation stage, we are considering a fuel-saving device which would be installed in mining equipment across all Group companies.

#### Monitoring and results

We consumed 11,906,112 gigajoules of electricity in 2017, and 9,491,721 Gigajoules of fuel. Our electricity consumption was slightly higher than in the previous year, and fuel usage also rose slightly, mainly due to the increased use of diesel. The biggest consumer of electricity and fuel is Centinela (20 percent), followed by Los Pelambres (33 percent).

GROUP ENERGY CONSUMPTION Gigajoules	2017	2016	2015
Electricity consumption	11,906,112	11,538,454	9,071,785
Fuel consumption	9,491,721	9,153,704	7,146,036



# USING SEAWATER TO MINE IN THE WORLD'S DRIEST DESERT

We know that water is a critical resource, that it belongs to everyone, and that it has great social, cultural, environmental and economic importance. It is also essential to mining. Increased demand for water means we must adopt an integrated approach to its management, to ensure that this vital resource remains available to all, both now and in the future.





## WHY IS WATER MANAGEMENT IMPORTANT?

Water has been in short supply in Chile and around the world over recent years, making climate change an increasingly pressing issue. It is a valuable resource both for mines and the surrounding environment, and has been a source of conflict with our local communities. It is therefore very important to manage it effectively, extract as little as possible, minimise our impact on natural water sources, recycle it where possible and use it efficiently.

### CONTEXT

The ICMM has reviewed the issue of sustainable water use in mining and taken a long-term view. Its Water Stewardship Framework<sup>1</sup>, published in 2014, recommends good practice for the use of water in mining.

Mining consumes only 3 percent of Chile's water, which is very low compared to 82 percent for the farming sector, 7 percent for manufacturing and 8 percent used for drinking. However, there is a public perception that the mining industry is the country's largest consumer.

According to the OECD's latest environmental evaluation, Chile is already seeing the effects of climate change, which is worsening the structural water deficit. The National Climate Change Plan for 2017 to 2022<sup>2</sup> forecasts that rainfall will decrease by between 5 and 15 percent by 2030, and droughts will become more frequent.

The extraction, use and disposal of water is regulated by various government bodies, the most important of which is the DGA (the water department). There has been a great deal of controversy over plans to reform Chile's Water Code over recent years. This is being debated by Congress and includes proposals to restrict the use of onshore water by the mining industry.

## HOW DO WE MANAGE WATER?

In 2017, the Group began complying with the ICMM's Water Stewardship Framework. This has three key aspects:

- ▶ **Involving stakeholders in proactive, inclusive dialogue**, characterised by openness and transparency, seeking to understand their priorities, share plans and identify joint solutions. (For more information, see the Community section, page 58).
- ▶ **Focus on the wider water catchment area** to understand the social, cultural, economic and environmental importance of water resources, and identify key issues and risks. All of our operations comply with this principle, because their management plans are based on achieving a balance with this broader focus in mind.
- ▶ **Efficient water resource management**. We have always measured the efficiency of our operations in terms of their impact on water quality. This means managing the extraction, use and discharge of water, evaluating its impact in terms of quantity and quality, maximising its sustainability, maintaining operational flexibility and achieving an economic benefit.

### Organisation and reporting

Responsibility for water issues lies with the General Managers of each operation who report on this matter to the Board. The monitoring and reporting processes are carried out by the Corporate Environment department.

We have reported our water footprint to the CDP since 2011. The management and reporting on water issues by our Company is well regarded by international analysts. We are in the third best group, in line with the average of the world's mining and metals industry.

In 2017, we made progress in bringing each mining operation's reporting processes into line with the standard and carried out a water risk identification exercise for the mining division as a whole.

<sup>1</sup> This is available at [www.icmm.com/website/publications/pdfs/water/2014\\_water-stewardship-framework.pdf](http://www.icmm.com/website/publications/pdfs/water/2014_water-stewardship-framework.pdf)

<sup>2</sup> The full report is available at [http://portal.mma.gob.cl/wp-content/uploads/2017/07/plan\\_nacional\\_climatico\\_2017\\_2.pdf](http://portal.mma.gob.cl/wp-content/uploads/2017/07/plan_nacional_climatico_2017_2.pdf)

## USE OF SEAWATER

Antofagasta Minerals has always sought to use seawater in its operations in water-scarce areas. It owns three of the nine desalination plants in Chile. The first was at Michilla, then Centinela and now we have one at Antucoya, which uses raw water without desalination in its hydrometallurgical process. The expansion of Centinela will continue the use of seawater and the expansion of Los Pelambres will use seawater, and as a backup in case of water shortages.

In 2017, 45 percent of the water we used came from the sea. This is well above the mining industry average of 14 percent.<sup>1</sup> In total, 88 percent of Centinela's supply was seawater, making it one of the leading mines in this respect.

## RECIRCULATION AND WATER EFFICIENCY

Antofagasta Minerals' operations are designed to reuse water and maximise the effectiveness of onshore water usage. The recirculation rate varies between 76 and 93 percent, depending on the characteristics of each operation. In most of our mines, this is above the 75 percent average for Chile's mining industry.<sup>2</sup>

45% of the water we use comes from the sea.

## CATHODES PRODUCED USING SEAWATER

The Antucoya mine made use of the lessons learned at Michilla to use seawater in its copper production processes.

Seawater is transported from the coast, 80 kilometres away, and is used for heap leaching at Antucoya without being desalinated. It is then purified in a reverse osmosis desalination facility and used in the electrowinning plant.

Water rejected by the facility is reused in the leaching process, making it more water-efficient.

Seawater storage reservoir at Antucoya.



<sup>1-2</sup> Source: Minería en números 2017, Consejo Minero.

### MINIMISING THE IMPACT ON THE QUALITY AND QUANTITY OF WATER IN THE ENVIRONMENT

Water quality is continuously monitored and inspected by the relevant authorities. Given the environmental context of Los Pelambres, 160 surface and subsurface points are monitored in the Choapa Valley and port areas. In the case of Centinela and Antucoya, each of which are in desert areas far from population centres and agriculture, the underground water extraction points are supervised (for more information see page 66), as are the port areas. Los Pelambres and Zaldívar are jointly monitored with their local communities, allowing the communities to be involved in the process of sampling water before it is sent for quality analysis by accredited laboratories. In the case of Los Pelambres, this type of monitoring has been carried out since 2011. We are also investing resources in improving drinking water systems in rural areas near to the mine (see box).

The Group does not discharge liquid waste into watercourses.

#### Monitoring and results

In 2017 we consumed a total of 65,7 million cubic metres of water, 19 percent more than in the previous year. This was mainly due to the increased use of seawater at Centinela with the start-up of the Encuentro Oxides project, and the inclusion of specific accounting concepts from the ICMM's new water reporting guide.<sup>3</sup>

45 percent of the water we use is seawater, 28 percent is surface water, 26 percent comes from underground sources and the remaining 2 percent is supplied by third parties. The biggest user of onshore surface and underground water is Los Pelambres, which accounts for 72.1 percent of consumption from these sources.

WATER EXTRACTION <sup>4</sup> 000 m <sup>3</sup>	2017	2016	2015
<b>ONSHORE WATER</b>			
Surface	18,138	14,132	14,624
Underground	17,206	13,481	8,568
Third-party suppliers	1,156	1,192	1,482
<b>SEAWATER</b>			
Seawater	29,231	26,454	20,573

<sup>3</sup> In 2017, we implemented ICMM guideline for consistent water reporting. Factors as retained water in mineral humidity, mine ground water, rainfalls, and continental water (runoff water), were considered.

<sup>4</sup> The 2016 and 2017 figures include 100% of the Antucoya and Zaldívar mines, from the date of their construction and acquisition respectively.

### IMPROVING RURAL DRINKING WATER SYSTEMS

This initiative provides Rural Drinking Water Committees with training and specialist technical support in designing sanitation projects. We are also helping to finance maintenance work and ensure that these projects are effective. The Drinking Water Committees' priorities are set by a technical committee. New systems are then designed, while new committees are set up and the necessary improvements are carried out.





# INNOVATION AND SAFETY IN TAILING DAMS

From initial design to final closure, safety and operating excellence is fundamentally important in building and operating Antofagasta Minerals' tailing dams and waste dumps.





## WHY IS WASTE MANAGEMENT IMPORTANT?

All industrial processes generate waste, which under Chilean law must be stored and disposed of safely.

The mining industry has its own specific types of waste which, because of their volume and characteristics, are stored in sterile materials dumps, ordinary waste dumps and tailing storage areas. This situation is very unlikely to change in the future, so the waste requires safe, sustainable long-term storage technology.

Because the tailing storage areas are very large and built to last for a very long time, they must be able to withstand extreme climatic conditions and coexist with local communities and businesses.

### CONTEXT

In 2016, the ICMM defined the international mining industry's position on tailings storage. This is summarised in a document "Position Statement on Preventing Catastrophic Failure of Tailings Storage Facilities", which lays down recommended good practice for mining operations.

Chile has the third largest number of tailings facilities in the world, with 119 active and over 600 inactive sites. These are strictly regulated from initial design to dam closure. Regulatory responsibility lies with Sernageomin, in conjunction with technical bodies in each region where there are mining operations.

Recent international disasters affecting tailings storage have caused great concern in the mining industry and in local communities, which are aware that the facilities must be stable and must not affect the use of land and water.

## HOW DO WE MANAGE WASTE?

Our operations generate sterile material, spent ore and tailings. Los Pelambres, Centinela Concentrates and Zaldívar generate tailings, while Centinela Cathodes, Antucoya, and Zaldívar produce spent ore. All of the mines generate sterile material, which is placed in storage.

Given the social context in which Los Pelambres currently operates, managing waste is a highly complex task. It therefore works closely with various key stakeholders on a Dam Programme (see page 82), which is being piloted at the Mauro tailings dam.

Antofagasta Minerals is a member of the tailings working group established by Consejo Minero, which has four priorities: facilitating the implementation of the ICMM's position statement in Chile, producing an emergency manual for tailings dams, developing an online tailings storage monitoring programme and keeping

the Consejo Minero's tailings website up to date. We are also a member of the ICMM's tailings working group, which in 2017 issued recommendations for improved management of this infrastructure.

### Organisation and reporting

Responsibility for waste management lies with the General Managers of each operation who report on this matter to the Board, while monitoring and disclosure are the responsibility of the Corporate Environment department. We have continued to improve our community notification and alert systems with the community, particularly at the Mauro dam, since 2015.

### Cerro Amarillo sterile rock dump

Los Pelambres began operating in 1999 with permits granted by the relevant Chilean technical and environmental agencies. In 2004, the authorisation was granted to operate Cerro Amarillo, a dump for the inert rock that was removed to access the ore at Los Pelambres. As for all dumps this authorisation included an environmental closure plan approved by the Chilean mining technical organisations. In 2014, this dump became an international issue following a change in 2012 of the location of the border between Chile and Argentina, which resulted in part of the Cerro Amarillo dump being in Argentina on property owned by Glencore. From the beginning, Los Pelambres has been willing to seek a joint solution and in 2017, we reached an agreement for the removal of the dump from Argentine territory within a certain period.

MINING WASTE Million tonnes	2017	2016	2015
Sterile rocks	274	252	196
Tailings	89	89	90
Spent ore	38	30	15

## PHYSICAL AND CHEMICAL STABILITY MONITORING SYSTEM FOR TAILINGS STORAGE

This programme, an alliance between the public and private sectors and community bodies, is seeking to develop a system that will provide reliable, high-quality and real-time information to mining companies, communities and authorities. It aims to improve operating management, promote a culture of risk awareness, improve communication between the parties and respond effectively to emergencies.

We are piloting this initiative at the Mauro dam. We designed the project in 2017, and will implement it during 2018 and 2019. It is a complex task and the alliance is seeking to create a system using the best available technology and innovative mechanisms for measuring critical parameters and variables.





## X-PRIZE ZERO-WASTE MINING



This is an open innovation initiative to find ideas and technology to extract minerals and metals, without generating waste.

Through its membership of the Consorcio Chileno Minero (CCHMC)<sup>1</sup>, Antofagasta Minerals is taking part in the Zero Waste project, which aims to pave the way for a healthy and abundant future for the planet and its inhabitants.

<sup>1</sup> CCHMC: A public-private partnership of leading copper mining companies (Anglo-American, Antofagasta Minerals, BHP Billiton and Codelco) and the Consejo Nacional de Innovación y Desarrollo, working towards a sustainable, inclusive and innovative mining industry.



### Waste and recycling

Our processes produce hazardous industrial waste such as used oil and batteries, and non-hazardous items such as mud and timber. We store these in accordance with legal requirements. We aim to recycle waste wherever possible and make every effort to avoid disposing of it. Where we do this, we always use authorised sites. In addition to the existing laws, a new Extended Product Liability Act came into force in 2017. This aims to reduce waste and promote recycling by extending liability to the producer. Our mining operations already measure the recycling of non-mining waste and in 2017, 66 percent of the waste we generated was recycled. The figure was 82 percent for Los Pelambres and 56 percent for Centinela.

NON-MINING WASTE			
Tonnes	2017	2016	2015
<b>INDUSTRIAL</b>			
Hazardous	8,933	6,968	6,643
Non-hazardous (mud, timber, etc.)	30,822	35,821	38,929
<b>DOMESTIC</b>	3,826	4,493	4,263

WASTE TREATMENT			
Tonnes	2017	2016	2015
Recycled	24,072	28,027	32,155
Reused	4,656	3,883	3,371
Composted	17	67	67
Burnt	0	0	0
<b>RECYCLING RATE</b>	66%	68%	71%

66 percent of the waste we generated was recycled.



# RESPECT FOR BIODIVERSITY AND HERITAGE

It is essential that we show respect for the regions in which our mines are located. We are committed to complying with our obligations to the environment, and to protecting and preserving it for future generations.





## WHY ARE LAND, BIODIVERSITY, AND HERITAGE IMPORTANT?

The mining industry's extraction, production and waste disposal processes have the potential to create a significant environmental impact, and to affect the region's biodiversity and its historical and cultural heritage.

Los Pelambres is located in Coquimbo, one of the world's 25 most biodiverse regions. The Choapa valley has a rich variety of flora and fauna, and some renowned cave markings. The Group's operations in the Atacama desert, where Centinela, Antucoya and Zaldívar are located, is much less biodiverse. Antofagasta Minerals does not have any operations in high-value ecosystems, however, the Zaldívar mine extracts water from the Tilopozo aquifer, which was given protected status under the Water Code in 2006.

The Company also protects the marine biodiversity of the areas around its ports Punta Chungo and Los Vilos, and the dock at Caleta Michilla.

### CONTEXT

A Government Bill creating a biodiversity regulatory body, the Sistema de Servicio de Biodiversidad, was passed in 2017. The task of biodiversity management will be the responsibility of this government body.

## HOW DO WE MANAGE LAND, BIODIVERSITY, AND HERITAGE?

The Biodiversity Standard, drawn up in collaboration with the Wildlife Conservation Society, was approved in 2016. This is based on the ICMM's position statement on protected areas, and aims to prevent and minimise the impact on biodiversity, carry out remediation, provide appropriate compensation where necessary and generate additional benefits for the region.

All Group sites are required to carry out a review of species and ecosystems, as specified in the new standard, in order to avoid significant impact and, if this is not possible, to minimise or compensate for the impact. In 2017, we began including the principles of the standard in baseline studies for projects to be submitted for environmental evaluation. We will continue assessing the environmental risks associated with biodiversity during 2018.

### Organisation and reporting

Responsibility for the environment, biodiversity, and natural and cultural heritage lies with the General Managers of each operation who report this to the Board. Monitoring and disclosure are the responsibility of the Corporate Environment department.

Green desert

## CLEAN TECHNOLOGY: USING BIOMASS TO CAPTURE AND STORE CO<sub>2</sub>

Since 2012, the Zaldívar mine has been working with the Universidad de Chile on the Green Desert project at Antofagasta's high-altitude agricultural research centre, which is studying plants that can be used to reforest the harsh environment of the Atacama Desert with species that are highly resistant to extreme climates at high altitudes.







### Protected areas

The high-value ecosystems that we protect include world heritage sites, threatened or degraded ecosystems, legally protected areas, biosphere reserves and wetlands, among others. The 25,000 hectare Los Pelambres includes the Conchalí lagoon, sclerophyllous forests and high Andean wetlands.

### Water extraction from protected aquifers

Since the Zaldívar mine's aquifer was given protected status, the company has implemented an early warning system to prevent adverse effects on the natural environment as a result of its water extraction rights. Because this is a sensitive issue, we are carrying out research into the biological condition of aquatic environments in high Andean regions, evaluating water stress in ecosystems where wells are located, carrying out in-vitro propagation of plants from the Tilopozo wetlands with a view to possible reforestation and operating a seed collection programme for native plant species with high biodiversity value.

### Archaeological and cultural heritage

Archaeological, palaeontological and cultural remains have been found in the areas in which the mines operate and are being conserved by the mines. We manage a rural culture exhibition centre in Monte Aranda, and a prehistory park, both of which are in the valley where the Mauro dam is located. We are also planning a new conservation and research centre in La Serena, the capital of the Coquimbo region, which will house archaeological finds from projects at Los Pelambres. These are currently in temporary storage at the Museo Aqueológico de La Serena pending the construction of the centre, which the company is donating to the museum.

Reforestation with native plants

## THE INNOVATION DEPARTMENT IS HELPING TO REFOREST 700 HECTARES WITH NATIVE SPECIES

This is one of the conditions attached to the operating permit for the Mauro dam at Los Pelambres. However, despite the efforts we have made in this respect over several years, we have not achieved a sufficient survival rate of the newly planted trees. There are two problems: the difficulty of propagating native plants and the fact that individual plants must be habituated to their new environment, which is a fairly complex task.

An alliance between the Los Pelambres mine and the biotech company Biotecnos, is using a highly innovative propagation method to solve the problem of native species reforestation. This involves in-vitro propagation of species such as guayacan, lithraea caustica, soapbark, mayten and Chilean acorn, using seeds and cuttings from plants in the same region.

We protect more than  
25,000 hectares of high-value  
ecosystems.

# ENVIRONMENTAL MANAGEMENT

Antofagasta Minerals has a sustainable vision of mining, in which protection of the environment and the efficient use of natural resources are a priority. It is therefore seeking to achieve high standards of environmental excellence.



## WHY IS ENVIRONMENTAL MANAGEMENT IMPORTANT?

Mining has the potential to impact the environment at every stage of the mining lifecycle, from beginning to end. The Group is subject to 54 Environmental Classification Resolutions, imposing more than 6,700 requirements.

### CONTEXT

The industry is regulated by the Ley Sobre Bases Generales del Medio Ambiente, or the Environmental Principles Act, and other specific requirements relating to the mining sector. The most important environmental institutions are the Environment Ministry, which defines public policy; the Environmental Evaluation Service (SEA), which evaluates and classifies the impact of projects; the Environmental Superintendency (SMA), which implements the law and imposes penalties when necessary; and the environmental courts. The mining projects evaluated by the SEA are required to make specific commitments to prevent, mitigate and compensate for their impact. Compliance with these commitments, contained in a legal instrument known as an Environmental Classification Resolution, is supervised by the SMA.

## HOW DO WE MANAGE THE ENVIRONMENT?

In 2017, Antofagasta Minerals developed a new Environmental Management Model to achieve a high standard of excellence, including a zero incident rate and strict compliance with environmental requirements. The Model is focused on four areas: leadership, incident reporting, operating risk management and regulatory risk management. We know that learning is fundamentally important, and that reporting is the key to this; the more information we provide about incidents and the better the reporting, the more we will learn. We are committed to a vision of sustainable mining in which care for the environment and efficient use of natural resources are a priority. The Group has obtained ISO 14000 certification for Los Pelambres and Centinela, and is subject to specific environmental standards relating to such areas as climate change, biodiversity and mine closure.

### Responsible site closure

The Group is committed to environmental responsibility throughout the mining lifecycle. In 2016, we adopted a set of integrated corporate site closure standards, covering aspects such as physical and chemical stability of installations, and environmental and social issues. These standards also provide tools for appropriate and effective closure planning, including approval by the authorities, communication to the community, environmental and social impact risk evaluation guidelines, financial aspects and post-closure guarantees, among other issues.



The closure plans for all of our operations have been approved by the Servicio Nacional de Geología y Minería (Sernageomin), the government body responsible for these issues. In 2017, we made progress with obtaining approval for the updated closure plans for Centinela. During 2018, progress will be made in updating closure plans of the remaining companies.

**Organisation and reporting**

All environmental issues are the responsibility of the General Managers of each operation who report on them to the Board. Monitoring and disclosure are the responsibility of the Corporate Environment department.

**Environmental compliance**

Los Pelambres has been addressing nine charges (concerning water and vegetation) made by the Environmental Authority and has presented a Compliance Programme to them which was approved in December 2017. Los Pelambres was subject of 69 audits during the year, Centinela 10 and Zaldívar 6 audits. No breaches were identified.

**Monitoring and results**

The main focus in this area, in 2017 and 2018 was the implementation and monitoring of the environmental management model, with emphasis on the preventive management of regulatory compliance breaches. We have an Environmental Incident Reporting Procedure, which guides the action against these type of events. The environmental requirements are managed in the "management system of environmental requirements", a platform available to the whole mining division. Regarding the reporting of environmental incidents, there was an increase of 114% compared to 2016. In 2017 there were no spills or any other kind of operational incident with significant environmental impact. In 2017 Los Pelambres paid an environmental fine related to the sanction procedure on the archaeological process used at the Mauro tailings dam, which originated from 2011. This fine was appealed and, during that process, the charges were reviewed and revised to US\$1.4 million, which was paid during the year.

There were no incidents with significant operational impact in 2017.

**ONSITE ENVIRONMENTAL AUDITS**

These are the responsibility of each mining operation's Executive Team, and are governed by the Environmental Management Model. They include a review of the operation's processes and their interaction with the environment, and ways of ensuring compliance with environmental requirements.





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# FCAB





# FERROCARRIL FROM ANTOFAGASTA TO BOLIVIA - FCAB

Our task is to transport northern Chile's most valuable resources, and to take responsibility for safety, community relations and our role in the region, while contributing to the growth of mining, the country's most important industry.

## WHO ARE WE?

FCAB is a wholly-owned subsidiary of Antofagasta plc. It transports the main products extracted from mines in the Antofagasta region to ports for shipping. Construction of the railway began in 1872, and the company is now a leader in freight transport in the region, making an active contribution to regional growth.

FCAB Shippers operates acid terminals for various mines, and increases copper exports by inspecting, classifying and improving the physical quality of the cathode they produce. FCAB Train Transportes Integrados' modern fleet of trucks has made it one of the region's leading transporters of copper, lime, brine and sulphuric acid. FCAB Ingeniería y Servicios plays a key role in the repair, maintenance, sale, and recovery for FCAB and third parties.

We transport mineral concentrates from Bolivia and have access to northern Argentina, southern Brazil and Paraguay, connecting to other train companies' lines. We are part of the Pacific-Atlantic corridor linking the ports of Antofagasta and Mejillones.

## SUSTAINABILITY IS CENTRAL TO OUR BUSINESS

Our objective is to add value for the business, respecting our environment and local communities. Our management model is therefore based on three main pillars: sustainability, cost and productivity.

We aim to continue improving the safety of our operations, and our relationships and interaction with communities and other stakeholders in the areas in which we operate, as well as strengthening FCAB's historical ties with northern Chile.





# SAFETY IS NON-NEGOTIABLE

People are our most important asset and safety lies at the heart of everything we do.





## WHY IS SAFETY IMPORTANT?

We recognise our responsibility to the communities and social environment in which we operate. Contributing visibly and effectively to the development of the Antofagasta region requires our operations to be ever more efficient, productive, competitive, sustainable and safe.

The safety of our operations is fundamental to our business. Growing traffic volumes in the region, and the increasing use of technology by drivers and pedestrians, are challenges that require us to improve our preventive tools. In addition, the occurrence of natural disasters such as earthquakes, tsunamis and flooding has led us to place more emphasis on preventive risk management.

## HOW DO WE MANAGE SAFETY?

### I. SAFETY AT WORK

We want to transform our employees' safety behaviour. We are promoting a culture of individual responsibility, in which the various aspects of safety are a non-negotiable duty and an essential part of our operations. To that end, we have developed a series of preventive tools and initiatives. These include visible leadership, the 'Mi rol, mi responsabilidad por el equipo' campaign, a reporting platform, workplace risk analysis, identifying critical risks and developing critical controls.

Since one of the main causes of road accidents is driver fatigue, FCAB Train Transportes Integrados stepped up its efforts to reduce incidents of this kind in 2017 by operating a programme for truck drivers. This involves checking their physical status before they begin each journey, activating an in-cab alarm if they show signs of fatigue and investing in the latest preventative equipment.

FCAB operates workspaces and employee communication platforms dealing with different aspects of this theme: leadership on the ground, five-minute chats, a safety portal on the company's intranet and other measures.

#### Monitoring and results

Last year, we aimed to improve our internal incident reporting, with a view to achieving a Frequency Index (LTIFR) of 3.25 and a Severity Index of 80, both figures well below the rail transport sector averages of 14 and 270 respectively.

There were no fatal accidents during the year, and we achieved a frequency index of 7.3 and a Severity Index of 156.7. We produced more than 6,500 incident reports (6,687 to be exact), exceeding our target of 3,500.

### II. OPERATIONAL SAFETY

We are aware of the accident risk we face and are developing action plans to minimise and prevent it. In 2017, we made progress in:

- ▶ **Track safety.** The latest-generation Hi Rail vehicle uses advanced track inspection technology, including hydraulic bogies to move safely along the line, and high-definition cameras to monitor the track from the cab in real time, checking that the bogies are correctly installed and operating, and the rails are in good condition.
- ▶ **Construction and improvement of pedestrian crossings in Antofagasta.** We are investing more than CLP122 million (US\$205,000) in disabled-friendly pedestrian crossings. Ten of the fourteen crossings have ramps for wheelchairs, cars and people with reduced mobility. Thanks to the cooperation of the local communities, these projects are being combined with barriers of trees as part of the *Via Compartida* programme.
- ▶ **Emergency simulations.** We carry out regular simulations to test, review and improve our procedures. We performed two such exercises in 2017, one simulating a train accident involving sulphuric acid and the other simulating a major earthquake. These provided a valuable learning experience for those directly involved, and also for the community and the authorities.

#### Monitoring and results

There were no fatal accidents involving members of the community.

## No fatal accidents in 2017.



# RESPECT, A FUNDAMENTAL VALUE

People are the lifeblood of any organisation and deserve respect, recognition and consideration. It is vital to value and accept differences, and understand that they help us improve how we operate.





## WHY ARE LABOUR RELATIONS IMPORTANT?

Respect for others is a fundamental value in how we operate. It involves building trusting relationships, acting with integrity, actively listening to different opinions and establishing direct, face-to-face relationships and communication to identify shared interests and encourage collaborative, participatory working.

FCAB has 1,332 direct employees, of whom 9 percent are women and 10 percent are foreign citizens.

## HOW DO WE MANAGE LABOUR RELATIONS?

Our Employment Policy provides guidelines for action in these areas.

### Leadership

In order to strengthen the culture of leadership, we implemented a Leadership Model in 2016, combining our charter of values and our vision of business development. This has increased the skills required to create and reinforce a high-performance culture. During 2017 we conducted workshops aimed at strengthening the concept of leadership and teamwork, which were attended by 167 employees.

### Talent

Also in 2016, we set up a Performance Management System, whose purpose is to align employees' actions with the company's business goals and values. In 2017, we created a Performance Management System Cycle within all of our associated companies<sup>1</sup> to move towards a high-performance culture.

### Employee relations

During 2017, the organisation finalised in good terms two relevant collective negotiations with related companies labour unions, FCAB TRAIN Transport Integrated and FCAB Shippers, within the framework of the new Labor Reform.

### Monitoring and results

FCAB's employees are regularly trained in safety, occupational health, technical and other general issues, such as leadership. There were 8,295 hours of training in 2017, of which, 48 percent were on safety and health issues, 32 percent on technical issues and 20 percent on other subjects.

<sup>1</sup> FCAB Ferrocarril de Antofagasta, FCAB Shippers, FCAB Train Transportes Integrados and FCAB Ingeniería y Servicios.



## 2017 IN NUMBERS:

- ▶ 1,332 own employees.
- ▶ 559 contractors.
- ▶ 9% women (of own employees).



# COMMITTED TO THE DEVELOPMENT OF THE ANTOFAGASTA REGION

We contribute to the development of the communities that host our operations. Our main commitment is in establishing ongoing dialogue, cooperative and participatory work, and respect for people and the environment.





## WHY ARE RELATIONS WITH NEIGHBOURING COMMUNITIES IMPORTANT?

The Group's origins began in the Antofagasta region. It was created in 1980 and that same year FCAB went on to form part of the Group. For this reason, it is very important to us that we contribute to the region in which we had our beginnings.

FCAB currently has operations in six of the nine districts making up the Antofagasta region. The quality of our relationships with these communities is crucial to the long-term future of our business. We know that sharing land with the communities that host our operations involves a responsibility to contribute to their sustainable development. We must also work constantly to prevent, mitigate and compensate for any impact that our operations may have on the local area.

## HOW DO WE MANAGE RELATIONS WITH NEIGHBOURING COMMUNITIES?

### I. LISTENING TO AND UNDERSTANDING THE COMMUNITIES AND BUILDING THE FUTURE OF THE REGION TOGETHER

#### Relationship Strategy

In 2016, FCAB began to develop a new style of relationship with local communities, as part of a strategy based on four main areas:

- ▶ **Managing trust:** a process of structured relationships with our neighbours, in which active participation is the principal focus.
- ▶ **Impact management:** preventing and mitigating any effect that our operations may have.
- ▶ **Quality of life:** finding solutions to any aspect of our operations that may affect our neighbours' quality of life, such as trackside litter.
- ▶ **Social investment:** funding projects that contribute to social and economic development.

The work we carried out during 2016 and 2017 was focused on the first two of these areas. We plan to place more emphasis on the remaining two from 2018 onwards.

Our strategy is based on ongoing, direct dialogue and keeping our promises, to earn the trust of the communities we are dealing with. We prefer face-to-face interaction and have adopted a proactive approach to managing the impact of our rail operations. We have done this partly by using our own employees as ambassadors, as they too are members of the community.

#### Priority areas of influence

As stated above, our operations are located in six districts of the Antofagasta region. We are carrying out a review to determine our impact on these areas of influence, and have defined the cities of Antofagasta and Calama as priority areas. They were the main focus of our relationship strategy in 2016 and 2017, but we are also beginning work in Sierra Gorda, Ollagüe and Mejillones.

#### Priorities and relationship strategies

One important part of this increasingly close relationship with the community has been to show how we operate and how we manage our impact. Specifically, this includes managing noise, crossing safety, dust emissions, hazardous goods, traffic congestion, landslides and floods, trackside litter clearance and preventing land occupation.

The *Casa Abierta (Open House)*, sponsorship programmes, and technical and community roundtables, have been important ways of developing relationships with local people. They have been held in conjunction with the municipality of Antofagasta, the regional government and the communities themselves.

Other public relations measures have included collaboration and/or loan for use agreements with various organisations. In 2017, we signed agreements with the Universidad Católica del Norte, Puerto Ideas, the Feria Internacional del Libro Zicosur (Filzic), the Fundación Sierra Gorda and other institutions.

#### The community's main concerns

The community's principal concerns relating to FCAB are:

- ▶ Managing the impact of new operations.
- ▶ Developing future projects to benefit the region's quality of life, culture, heritage and in other areas.
- ▶ Establishing direct, face-to-face relationships with the company.

#### Institutions and organisations in which we participate

In the city of Antofagasta, we participate in PROA, CREO Antofagasta, Asociación de Industriales de Antofagasta, Consejo Consultivo Antofagasta and the Centro Cultural Estación Antofagasta. We are also actively involved with the fire brigade and the Fundación Teletón. In Calama, we are involved with PROLOA, Calama Plus and as an observer to the new Hospital Calama project.

**CASA ABIERTA**

This “open house” scheme offers guided tours of the company’s sites in Antofagasta and Calama and enables us to establish closer ties with the surrounding communities and share information about the history of railways in northern Chile. Some 5,600 people from the two cities took part in these visits during 2017.



**SPONSORSHIP PROGRAMME**

We are also promoting community ties by appointing FCAB “ambassadors”, employees who represent the company in dealings with local groups such as residents’ committees, sports clubs and playgroups. The objective is to create links with the community by being active and regular participants. We agreed six new sponsorships in 2017, which will benefit around 165 people in Antofagasta and Calama.



**TECHNICAL AND COMMUNITY ROUNDTABLES**

Since 2016, we have been holding roundtables with local and regional technical bodies to identify issues of mutual concern caused by our rail operations and resolve them jointly. So far, these meetings have been attended by representatives of the regional government and the municipalities of Antofagasta, Calama and Ollagüe. We also hold community forums to engage in dialogue with local representatives: three of these took place in Antofagasta during 2017 and three in Calama.



**II. CONTRIBUTING TO LOCAL SOCIAL AND ECONOMIC DEVELOPMENT**

**Social investment based on a shared vision of the region**

We have traditionally sought to generate social, human and economic capital in the areas in which we operate. As part of this process, we supported a variety of initiatives in 2017: Trenes Urbanos, the Centro Cultural Estación Antofagasta, “Por la vía del cine” and the “Cuida tu vida, respeta la vía” (Take care of yourself, respect the way) campaign in Antofagasta, Calama, Ollagüe, Mejillones and Baquedano. We also share our facilities in Antofagasta, which serve as a vital space for public meetings and many social, cultural, educational and recreational activities.

**ESTACIÓN ANTOFAGASTA CULTURAL CENTRE**

Estación Antofagasta promotes the region’s cultural identity and heritage. It is designed as a hands-on experience to excite and inspire positive change in visitors and communicates the message that the city belongs to everyone.

Over the last five years there have been more than 150,000 visitors to the centre.



**CONSERVING RAILWAY HERITAGE**

The Group places a major emphasis on preserving the company’s heritage and identity, and expressing the pride that comes of working on the railways. It is the leading private-sector Chilean company working to achieve this. Testament to this undertaking is the FCAB museum, and the restoration of a 1927 locomotive and two railway stations, Antigua and Prat.





### THE “POR LA VÍA DEL CINE” CULTURAL PROGRAMME

“Por la vía del cine” aims to promote the distribution of regional films, grow cinema audiences and encourage the use of public spaces through artistic and cultural events. The programme is organised in collaboration with the Centro de Desarrollo Cinematográfico de Antofagasta, Cinemanorte and local residents’ committees.

In 2017, it attracted 1,200 people in Antofagasta and 800 in Calama.



### THE “CUIDA TU VIDA, RESPETA LA VÍA” CAMPAIGN

The “Cuida tu vida, respeta la vía” rail crossing safety campaign is led by FCAB and supported by the Secretaría Regional de Transporte y Telecomunicaciones, Carabineros de Chile, Antofagasta Minerals, the municipality of Antofagasta, the Unión Comunal de Juntas de Vecinos de Antofagasta and Mutual de Seguridad. Its aim is to promote a culture of safety awareness among the public by communicating messages relating to accident prevention.



### TRENES URBANOS

The “Trenes Urbanos” initiative uses rail journeys to encourage dialogue within a recreational environment. Events in 2017 included the *Tren Aniversario de Calama y Antofagasta*, the *Trenetón*, which allowed thousands of families to use the train to contribute to good causes and a Christmas-themed train. In 2017, these initiatives attracted 2,500 people in Antofagasta and 2,000 in Calama.



### Local employment opportunities

Since we were established we have encouraged our neighbours to apply for quality jobs, both at our operations and with the contractor companies that provide services to us. In 2017, we gave direct employment to more than 1,200 inhabitants of the Antofagasta region, which is 92% of our own workers. Additionally, we encourage the development of local suppliers to join our supply chain. In 2017, 59% of our suppliers were from the region, and we bought US\$17 million of goods and services from them.



# DEMONSTRATING OUR COMMITMENT TO THE ENVIRONMENT

We have an ongoing commitment to protecting the environment, which demands that we perform each and every aspect of our daily work with the utmost care. We seek to reduce potential damage to our workers, customers, communities and environment.





## WHY IS ENVIRONMENTAL MANAGEMENT IMPORTANT?

Freight and passenger trains can affect the environment. The main risks are greenhouse gas emissions, noise, waste, transporting hazardous substances and the impact on wildlife. Our greenhouse gas emissions mainly come from our diesel locomotives and many of our operations generate noise. Also, a large part of our business involves transporting, handling and storing hazardous substances, and there is a risk that any accident could impact the environment. Finally, animals such as llamas, vicuña and alpaca could be hit by our trains.

## HOW DO WE MANAGE THE ENVIRONMENT?

Our Environmental Policy<sup>1</sup> provides guidance in these areas, helping us to prevent and mitigate adverse effects and use our resources responsibly.

### Managing key environmental impacts

- ▶ **Atmospheric emissions:** These can be reduced by maintaining and operating our locomotives appropriately.
- ▶ **Noise:** We have implemented a noise control system, including practical measures such as locomotive silencers, noise barriers, a monitoring and alert system, and adapting our operations to minimise the noise that can be heard by the community.
- ▶ **Waste:** We are developing a waste management plan that prioritises reducing and recycling waste, and have been operating a trackside litter clearance programme since 2011.
- ▶ **Hazardous substances:** We operate a rigorous system for evaluating, controlling and managing the products that we transport, and we have a specialist multidisciplinary freight emergency management team. In 2016, we signed a clean mining logistics agreement with the port of Antofagasta<sup>2</sup>, which sets standards for the transport, storage, loading and unloading mineral concentrates at the port terminal.
- ▶ **Wildlife:** Our incident response plan, coordinated with SAG<sup>3</sup> and/or CONAF<sup>4</sup>, provides first aid to injured animals.

### Monitoring and results

One of our safety goals is to achieve zero environmental incidents. In 2017, we set a target of over 3,750 reports and achieved more than 7,000. Our environmental commitments include soil, noise and water monitoring, the results of which are reported to the authorities, as required by law. There were no incidents with significant environmental impact in 2017.

## 2017 IN NUMBERS:

- ▶ Zero incidents with a significant environmental impact.
- ▶ 26% of waste recycled.
- ▶ 1,207,321 Gigajoules of fuel consumed (by own employees).

<sup>1</sup> [www.fcab.cl/sustentabilidad/gestion-ambiental/politica-ambiental/](http://www.fcab.cl/sustentabilidad/gestion-ambiental/politica-ambiental/)

<sup>2</sup> The signatories are: Codelco, Glencore Altonorte, Minera Sierra Gorda, Empresa Portuaria de Antofagasta, FCAB and Antofagasta Terminal Internacional.

<sup>3</sup> SAG= Servicio Agrícola y Ganadero. For more information, see [www.sag.gob.cl/quienes-somos/que-es-y-que-hace-el-sag](http://www.sag.gob.cl/quienes-somos/que-es-y-que-hace-el-sag)

<sup>4</sup> CONAF= Corporación Nacional Forestal. For more information, see [www.conaf.cl/quienes-somos/mision-y-objetivos/](http://www.conaf.cl/quienes-somos/mision-y-objetivos/)



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# APPENDICES

# ABOUT THIS REPORT

This is our eleventh annual Sustainability Report, which complements the Company's Annual Report. It summarises our strategy, priorities and commitment to the social, environmental, ethical and governance objectives that are most relevant to our business.

The report has been drawn up in accordance with Global Reporting Initiative (GRI) core standards. It focuses on the issues of most importance to Antofagasta plc and its stakeholders, which have been determined in accordance with the guidelines provided in those standards, and relates to the Group's operations during 2017. It also includes information from previous years for additional context, and the main events that had occurred by the time of its publication. The report covers the following operations: Antofagasta Minerals (Los Pelambres, Centinela, Antucoya, Zaldivar and the Corporate Head Office) and Ferrocarril de Antofagasta a Bolivia (FCAB). Its scope has changed since the previous year, in that it now covers the entire Antofagasta Group and not just its mining division.

The report has been audited by PricewaterhouseCoopers, which has also evaluated our compliance with International Council on Mining and Metals (ICMM) principles. The information on CO<sub>2</sub> emissions has been verified by SGS, an international company specialising in emissions measurement.

The production of this report has been managed by Antofagasta Minerals' corporate affairs department, in close cooperation with the various departments of Antofagasta Minerals and FCAB. The team was tasked with collecting and validating the information reported and ensuring that it complies with GRI principles. It has been drawn up and verified with the help of outside experts.

The report has been written in accordance with GRI core standards, and covers the entire Antofagasta plc Group.

# KEY ISSUES

Antofagasta plc has carried out a formal Materiality Analysis, including Antofagasta Minerals and FCAB, involving the CEO and all of the Vice Presidents.

The Materiality Analysis began by identifying key issues from the following perspectives:

- ▶ **Investors and analysts:** FTSE ESG rating, DJSI (mining sector), Vigeo.
- ▶ **ESG specialists and industry-specific organisations:** ICMM, GlobeScan specialist ESG survey, GRI sustainability topics by sectors.
- ▶ **Communities and workers:** Antofagasta Minerals worker engagement survey, environmental impact studies and participation in the *Somos Choapa* programme.
- ▶ **Public opinion:** media coverage of Antofagasta plc, the mining sector, other companies and the Globescan/ICMM public opinion survey.
- ▶ **Internally:** interviews with senior management, and issues arising from the Sustainable Value Creation Strategy, Sustainability Policy and Risk Matrix.

The issues identified were analysed at a workshop with the CEO and Vice Presidents of Antofagasta plc, where they were ranked by importance to stakeholders and the magnitude of their impact. The results of the workshop were used to define the key issues to report, the 2017 materiality matrix, the readership to target and the central messages to be communicated.

## 2017 MATERIALITY MATRIX

Importance to stakeholder	<ul style="list-style-type: none"> <li>▶ Human rights (labour, community)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Labour relations</li> <li>▶ Community relations</li> </ul>	<ul style="list-style-type: none"> <li>▶ Safety and occupational health</li> <li>▶ Ethics and transparency</li> <li>▶ Development and wellbeing of communities</li> <li>▶ Policy, environmental management system</li> <li>▶ Water: availability, quality, efficient use</li> <li>▶ Climate change: effect and management of CC and energy</li> <li>▶ Mining waste</li> </ul>
	<ul style="list-style-type: none"> <li>▶ Pollution and impact on air quality</li> <li>▶ Human capital, attraction and retention</li> </ul>	<ul style="list-style-type: none"> <li>▶ Management of risks and crises</li> <li>▶ Land planning, biodiversity and heritage</li> <li>▶ Corporate governance</li> <li>▶ Labour conditions</li> </ul>	<ul style="list-style-type: none"> <li>▶ Sustainability as part of the development strategy</li> </ul>
	<ul style="list-style-type: none"> <li>▶ Stakeholders engagement</li> <li>▶ Impact of transport</li> <li>▶ Supply chain management</li> <li>▶ Mining lifecycle</li> </ul>	<ul style="list-style-type: none"> <li>▶ Responsible closure plans</li> </ul>	
Size of social, environmental and financial impact			

# AUDIT LETTER



(A free translation from the original prepared in Spanish.)

## INDEPENDENT PROFESSIONALS REPORT

Santiago, May 11<sup>th</sup>, 2018

Messrs. Shareholders and Directors  
Antofagasta plc

We have reviewed the 2017 Sustainability Report of Antofagasta plc, for the year ended December 31<sup>st</sup> 2017. Antofagasta plc management is responsible for the 2017 Sustainability Report in accordance with the "core" option of the sustainability reporting standards of the Global Reporting Initiative (GRI standards). Our responsibility is to express a conclusion with regard to said Sustainability Report 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 Sustainability Report, in order for it to be in accordance with the "core" option of 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 Sustainability Report is in accordance with the "core" option of 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.

As part of our review, we performed, among others, the following procedures:

- work planning according to relevance and volume of the information presented in the 2017 Sustainability Report draft;
- understanding of the materiality process conducted by Antofagasta Minerals S.A., the material aspects identified, management approaches and selected indicators, in accordance with the "core" option under the GRI Standards;
- review of the compliance of the Sustainable Development Principles and Positions Statements of the ICMM;
- interviews with different executives responsible for the information in the 2017 Sustainability Report;
- verification, based on testing, that the data included in the 2017 Sustainability Report is consistent with the documentary evidence reviewed and/or comes from verifiable supporting information sources;
- verification that the greenhouse emissions inventory information has been verified by an independent third party;
- verification that the financial information included in the 2017 Sustainability Report is derived from accounting records or from audited financial statements as of December 31<sup>st</sup> 2017, audited by another firm of independent auditors.

The verified and the unverified indicators are detailed on pages 116 to 119 of the 2017 Sustainability Report.

Based on our review, we are not aware of any material modifications that should be made to the Sustainability Report of Antofagasta plc for the year ended December 31<sup>st</sup> 2017, in order for it be in accordance with the "core" option of the sustainability reporting standards of the Global Reporting Initiative.

  
Andrew de la Mare



PwC Chile, Av. Andrés Bello 2711 - piso 5, Las Condes – Santiago, Chile  
RUT: 81.513.400-1 | Teléfono: (56 2) 2940 0000 | 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 relating to 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
1 Apply ethical business practices and sound systems of corporate governance and transparency to support sustainable development.	32
2 Integrate sustainable development principles in corporate strategy and decision-making processes.	22, 34
3 Respect human rights and the interests, cultures, customs and values of employees and communities affected by our activities.	39
4 Implement effective risk-management strategies and systems based on sound science and which account for stakeholder perceptions of risks.	34
5 Pursue continual improvement in safety and health performance with the ultimate goal of zero harm.	44
6 Pursue continual improvement in environmental performance issues, such as water stewardship, energy use and climate change.	88
7 Contribute to the conservation of biodiversity and integrated approaches to land-use planning.	84
8 Facilitate and support knowledge-base and systems for responsible design, use, re-use, recycling and disposal of products containing metals and minerals.	71
9 Pursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities.	56
10 Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner. Effectively report and independently verify progress and performance.	40, 58

ICMM PRINCIPLES	PAGE NUMBER
Protected areas and mining	84
Indigenous peoples and mining	39
Principles for climate change policy design	70
Mining partnerships for development	67
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	76
Tailings governance	80

# SUMMARY OF SUSTAINABILITY PERFORMANCE

INDICATOR	BASIS OF CALCULATION	GRI Standard	2017	2016	2015
<b>ANTOFAGASTA PLC</b>					
<b>ECONOMICS</b>					
Revenue	US\$ millions. Excluding non-operating revenue	102-7	4,749	3,622	3,226
EBITDA	US\$ million	102-7	2,587	1,626	910
Market capitalisation	US\$ billion	102-7	13.4	8.2	6.8
<b>Economic value generated and distributed</b>					
Operating revenue and sale of assets (a)	US\$ million. Including non-operating revenue	201-1	4,775.3	3,641.9	3,432.2
Investment income (b)	US\$ million	201-1	23.9	26.9	18.1
Operating costs (c)	US\$ million	201-1	1,874.1	1,723.0	2,130.9
<b>Economic value generated (a+b-c)</b>	US\$ million	201-1	2,925.1	1,945.8	1,319.3
Workers: remuneration and benefits	US\$ million	201-1	459.1	371.6	426.2
Community: Contributions to community projects	US\$ million	201-1	12.5	24.9	22.1
Financing: payments to lenders	US\$ million	201-1	91.5	86.1	33.7
State: Taxes	US\$ million	201-1	509.5	261.3	75.7
Shareholders: dividends	US\$ million	201-1	572.3	290.6	207.2
<b>Economic value distributed</b>	US\$ million	201-1	1,644.9	1,034.5	764.8
<b>Economic value retained</b>	US\$ million	201-1	1,280.2	911.3	554.5
<b>GOVERNANCE AND ETHICS</b>					
<b>Board composition</b>					
Directors: male	As at 31 December	102-22; 405-1	9	9	10
Directors: female	As at 31 December	102-22; 405-1	2	2	1
Board tenure: 1 to 5 years	As at 31 December	102-22	4	6	6
Board tenure: 6 to 9 years	As at 31 December	102-22	2	0	1
Board tenure: Over 9 years	As at 31 December	102-22	5	5	4
Independent	As at 31 December	102-22	5	5	5
Not independent	As at 31 December	102-22	6	6	6
Executives	As at 31 December	102-22	0	0	0
Non executives	As at 31 December	102-22	11	11	11
<b>Code of Ethics</b>					
Complaints under the Code	Number of complaints received		112	67	64
Percentage of complaints resolved	Number of complaints resolved/Number of complaints received		100%	100%	100%
<b>Discrimination</b>	Number of incidents of discrimination	406-1	3	1	3
<b>ANTOFAGASTA MINERALS</b>					
<b>ECONOMICS</b>					
Copper production	000 tonnes	102-7	704.3	709.4	630.3
<b>Suppliers</b>					
Total number		102-7	2,865	2,948	4,448
Registered in the Antofagasta and Coquimbo regions	Percentage of total	102-8; 204-1	24%	25%	25%
Registered in other regions in Chile	Percentage of total	102-8	70%	72%	70%
Registered outside of Chile	Percentage of total	102-8	6%	3%	5%
<b>Local suppliers</b>	Number of suppliers registered in the Antofagasta and Coquimbo regions	102-8	688	735	1,113
<b>Purchases</b>					
Total purchases	US\$ million. Total purchases	204-1	2,445	2,260	2,062
Bought locally	US\$ million. Goods and services, net of VAT, in the regions the company operates (Antofagasta and Coquimbo)	204-1	350	377	n/a
Bought from other regions in Chile	US\$ million	204-1	2,037	1,841	n/a
Bought abroad	US\$ million	204-1	59	42	n/a

INDICATOR	BASIS OF CALCULATION	GRI Standard	2017	2016	2015
<b>SAFETY AND HEALTH</b>					
<b>Fatalities</b>	Number of fatalities in the year, including own employees and contractors	403-2	0	1	1
<b>Lost Time Injury Frequency Index</b>	Number of accidents with lost time during the year, per million hours worked	403-2	1.0	1.2	1.2
<b>All Injury Frequency Rate</b>	Number of accidents with and without time lost during the year, per million hours worked	403-2	7.4	6.9	6.9
<b>Near misses Index</b>	Number of near misses reported per million hours worked	403-2	126.6	50.2	13.5
<b>Occupational diseases</b>	Number of occupational diseases contracted during the year, own employees and contractors	403-2	3	4	4
<b>LABOUR</b>					
<b>Breakdown of own employees</b>					
Permanent and full time employees	As at 31 December	102-8	5,026	4,977	4,586
Men	As at 31 December	102-8	4,593	4,546	4,127
Women	As at 31 December	102-8	433	431	459
Percentage of women	Number of women as a percentage of own employees	102-8	9%	9%	10%
<b>Own employees by role</b>					
Supervisors and executives	As at 31 December	405-1	1,726	1,741	1,767
Employees	As at 31 December	405-1	3,301	3,236	2,916
<b>Labour relations</b>					
Unions	Number	405-1	10	10	8
Union members	Average monthly number	405-1	3,808	3,380	2,706
	Percentage of unionised own employees	405-1	76%	68%	59%
Strikes	Number	MM4	0	0	0
<b>Training</b>					
Hours of training	Hours	404-3	152,197	152,197	100,000
	Hours/employee	404-3	30.3	30.6	21.8
Amount spent on training	US\$000	404-3	3,208	1,511	2,695
Amount spent per employee	US\$/employee	404-3	638	304	588
Employee with performance evaluation	As a percentage of the total number of employees	404-3	30%	30%	32%
<b>Talent management</b>					
Supervisor roles filled internally	Percentage	405-1	32%	27%	64%
Key roles filled internally	Percentage	405-1	37%	52%	68%
<b>Contractors</b>	As at 31 December	102-9; 102-10	14,472	13,049	14,892
<b>COMMUNITY</b>					
<b>Operations with community participation</b>	As a percentage of all operations	413-1	100%	100%	100%
<b>Local employment</b>					
Local employees	Number. Annual average of own employees who are resident in the same Region as they work	203-2	2,623	2,312	2,308
Regional offices	Number. Annual average of own employees who are resident in the same Region as they work	202-2	269	298	628
<b>Local suppliers and purchases</b>	See Economic Indicators				
<b>CLIMATE CHANGE</b>					
<b>Energy consumption</b>					
Electricity	Gigajoules	302-1	11,906,112	11,538,454	9,071,785
Fuel	Gigajoules	302-1	9,491,721	9,153,704	7,146,036
<b>Renewable energy</b>					
Clean energy	kWh generated by alternative sources		689,027,898	532,926,367	122,024,068
Percentage of clean energy	Percentage		21%	17%	5%
<b>Greenhouse gas emissions</b>					
Scope 1, direct emissions	Tonnes of CO <sub>2</sub> equivalent.	305-1	854,628	795,994	578,119
Scope 2, indirect emissions	Tonnes of CO <sub>2</sub> equivalent.	305-2	2,071,937	2,000,010	1,412,760
CO <sub>2</sub> emissions intensity	Tonnes CO <sub>2</sub> equivalent emissions/tonne of copper	305-4	3.87	3.67	3.24

## APPENDICES

INDICATOR	BASIS OF CALCULATION	GRI Standard	2017	2016	2015
<b>WATER</b>					
<b>Water consumption by source</b>			<b>65,731</b>	<b>55,259</b>	<b>45,247</b>
Seawater	000 m <sup>3</sup>	303-1	29,231	26,454	20,573
Surface water	000 m <sup>3</sup>	303-1	18,138	14,132	14,624
Underground water	000 m <sup>3</sup>	303-1	17,206	13,481	8,568
Third party suppliers	000 m <sup>3</sup>	303-1	1,156	1,192	1,482
Seawater	As a percentage of total water consumption		45%	48%	45%
<b>Liquid waste</b>	m <sup>3</sup>		0	0	0
<b>WASTE</b>					
<b>Bulk mining waste</b>					
Sterile rocks	Million tonnes	MM3	274	252	196
Tailings	Million tonnes	MM3	89	89	90
Spent ore	Million tonnes	MM3	38	30	15
<b>Non-mining waste</b>					
Non-hazardous industrial waste	Tonnes	306-2	30,822	35,821	38,929
Hazardous industrial waste	Tonnes	306-2	8,933	6,968	6,643
Domestic	Tonnes	306-2	3,826	4,493	4,263
<b>Waste treatment</b>					
Recycled	Tonnes	306-2	24,072	28,027	32,155
Composted	Tonnes	306-2	17	67	67
Reused	Tonnes	306-2	4,656	3,883	3,371
Burnt	Tonnes	306-2	0	0	0
<b>Recycling rate</b>	Percentage	306-2	66%	68%	71%
<b>LAND, BIODIVERSITY AND HERITAGE</b>					
<b>Biodiversity</b>					
Protected areas	Hectares	304-3	25,803	27,670	19,504
<b>ENVIRONMENTAL MANAGEMENT</b>					
<b>Environmental incidents and fines</b>					
Incidents with an environmental impact	Number of environmental incidents with high potential impact	306-3	0	0	0
	m <sup>3</sup> . Volume of significant spills	306-3	0	0	0
Environmental fines	Number of fines	307-1	1	0	0
	Amount in US\$	307-1	1,438,905	0	0
<b>Responsible mine closure</b>					
Closure plans	Percentage of operations with closure plans	MM10	100%	100%	100%
<b>FERROCARRIL DE ANTOFAGASTA A BOLIVIA (FCAB)</b>					
<b>ECONOMICS</b>					
<b>Freight transported</b>	Million tonnes	102-7	6.3	6.5	6.1
<b>Suppliers</b>	Total number	102-7	864	554	408
Registered in the Antofagasta region	Percentage of total	102-8; 204-1	59%	39%	39%
Registered in other regions in Chile	Percentage of total	102-8	35%	41%	41%
Registered outside of Chile	Percentage of total	102-8	6%	20%	20%
<b>Local suppliers</b>	Number of suppliers registered in the Antofagasta region	102-8	509	n/a	n/a
<b>Purchases</b>	US\$ million. Total purchases	204-1	42.3	n/a	n/a
Bought locally	US\$ million. Goods and services, net of VAT, in the regions the company operates (Antofagasta and Coquimbo)	204-1	17	n/a	n/a
Bought from other regions in Chile	US\$ million	204-1	17.4	n/a	n/a
Bought abroad	US\$ million	204-1	8.2	n/a	n/a
<b>SAFETY AND HEALTH</b>					
<b>Fatalities</b>	Number of fatalities in the year, including own employees and contractors	403-2	0	1	0
<b>Lost Time Injury Frequency Index</b>	Number of accidents with lost time during the year, per million hours worked	403-2	7.3	4.9	10.9
<b>All Injury Frequency Rate</b>	Number of accidents with and without time lost during the year, per million hours worked	403-2	22.0	13.3	17.8
<b>Near misses Index</b>	Number of near misses reported per million hours worked	403-2	6,687	4,050	1,812
<b>Occupational diseases</b>	Number of occupational diseases contracted during the year, own employees and contractors	403-2	3	1	0

INDICATOR	BASIS OF CALCULATION	GRI Standard	2017	2016	2015
<b>LABOUR</b>					
<b>Breakdown of own employees</b>					
Permanent and full time employees	As at 31 December	102-8	1,332	1,332	939
Men	As at 31 December	102-8	1,216	1,212	849
Women	As at 31 December	102-8	116	114	90
Percentage of women	Number of women as a percentage of own employees	102-8	9%	9%	10%
Foreigners	As at 31 December	102-8	129	110	85
Percentage of foreigners	Number of foreigners as a percentage of own employees	102-8	10%	7%	9%
<b>Own employees by role</b>					
Supervisors and executives	As at 31 December	405-1	276	255	210
Employees	As at 31 December	405-1	1,056	1,077	729
<b>Labour relations</b>					
Union members	Average monthly number	405-1	749	713	494
	Percentage of unionised own employees	405-1	56%	54%	52%
<b>Training</b>					
Hours of training	000 hours	404-3	8,295	13,348	24,723
	Hours/employee	404-3	9	14	27
Amount spent on training	US\$000	404-3	30	115	198
Amount spent per employee	US\$/employee	404-3	33	124	216
Employee with performance evaluation	As a percentage of the total number of employees	404-3	17%	21%	n/a
Contractors	As at 31 December	102-9; 102-10	559	471	n/a
<b>COMMUNITY</b>					
Operations with community participation	As a percentage of all operations	413-1	100%	100%	100%
<b>Local employment</b>					
Local employees	Number. Annual average of own employees who are resident in the same Region as they work	203-2	1,222	918	939
Regional offices	Number. Annual average of own employees who are resident in the same Region as they work	202-2	193	92	93
Local suppliers and purchases	See Economic Indicators				
<b>WATER</b>					
<b>Water consumption by source</b>					
Seawater	000 m <sup>3</sup>	303-1	0	0	0
Surface water	000 m <sup>3</sup>	303-1	99	92	94
Underground water	000 m <sup>3</sup>	303-1	0	0	0
Third party suppliers	000 m <sup>3</sup>	303-1	5	0	0
Liquid waste	m <sup>3</sup>		0	0	0
<b>CLIMATE CHANGE</b>					
<b>Energy consumption</b>					
Electricity	Gigajoules	302-1	9,709	10,052	9,619
Fuel	Gigajoules	302-1	1,207,321	1,230,243	1,184,094
<b>WASTE</b>					
<b>Waste produced</b>					
Non-hazardous industrial waste	Tonnes	306-2	1,202	796	476
Hazardous industrial waste	Tonnes	306-2	2,305	429	417
Domestic <sup>1</sup>	Tonnes	306-2	2	n/a	n/a
<b>Treatment of waste</b>					
Composted	Tonnes	306-2	0	0	0
Reused	Tonnes	306-2	759	n/a	n/a
Recycled	Tonnes	306-2	13	4	4
Burnt	Tonnes	306-2	152	193	115

n/a = not available

<sup>1</sup> Domestic waste was included in non-hazardous waste in 2015 and 2016.

# ALIGNMENT WITH THE SUSTAINABLE DEVELOPMENT GOALS

## INDEX

The following is a list of the Sustainable Development Goals (SDGs) that affect us most directly.

<p><b>1 NO POVERTY</b></p> 	<p><b>2 ZERO HUNGER</b></p> 	<p><b>3 GOOD HEALTH AND WELL-BEING</b></p> 	<p><b>4 QUALITY EDUCATION</b></p> 	<p><b>5 GENDER EQUALITY</b></p> 
<ul style="list-style-type: none"> <li>▶ Initiatives by Antofagasta Minerals under Somos Choapa and Diálogos para el Desarrollo (pp. 59, 62), and by FCAB (p. 100).</li> <li>▶ Creating job opportunities in local communities (pp. 64, 101).</li> <li>▶ Minimising the social and environmental impact of mining operations and projects (p. 66).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Improving rural drinking water supplies (pp. 61, 66).</li> <li>▶ Support for farmers, fishermen and women (p. 65).</li> <li>▶ The Cosecha programme (p. 65).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Occupational health and safety strategy (p. 45).</li> <li>▶ Safety action plans at Antofagasta Minerals (page 47) and FCAB (p. 95).</li> <li>▶ Occupational Health Standards (p. 49).</li> <li>▶ Sala Alma (p. 49).</li> <li>▶ Minimising operations' qualitative and quantitative impact on local water (p. 79).</li> <li>▶ Rail operating safety (p. 95).</li> <li>▶ FCAB "Cuida tu vida, respeta la vía" campaign (p. 101).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Centro de Formación Técnica del Choapa (p. 62).</li> <li>▶ Other education initiatives as part of the Diálogos Para el Desarrollo and Somos Choapa programmes (p. 61, 63).</li> <li>▶ Apprenticeships (p. 65).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Diversity and Inclusion Strategy (p. 53) and FCAB (p. 97).</li> <li>▶ Diversity and Inclusion Principles (p. 55).</li> <li>▶ Initiatives to reduce discrimination and strengthen female leadership: Sala Alma (p. 49), anti-harassment video, participation in Women in Mining and in women's inclusion forums (p. 54).</li> </ul>
<p><b>11 SUSTAINABLE CITIES AND COMMUNITIES</b></p> 		<p><b>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</b></p> 	<p><b>13 CLIMATE ACTION</b></p> 	<p><b>14 LIFE BELOW WATER</b></p> 
<ul style="list-style-type: none"> <li>▶ Initiatives to improve local infrastructure and planning, access to basic services and a safe environment, and protection of cultural and historic heritage within the Somos Choapa and Diálogos para el Desarrollo programmes (p. 59, 62).</li> <li>▶ FCAB initiatives to promote and protect historical and cultural heritage (p. 100).</li> <li>▶ Participatory, integrated and sustainable management of these projects (p. 58, 99).</li> <li>▶ Achieving increased resilience and risk management in the region: emergency preparedness (p. 66),</li> </ul>	<p>physical and chemical stability monitoring system for tailings storage (p. 82), closure standards (p. 88), track safety (p. 95) emergency simulations (p. 95).</p> <ul style="list-style-type: none"> <li>▶ Cultural and natural heritage protection initiatives, such as reforestation with native species (p. 87), protected areas (p. 87), water extraction from protected aquifers (p. 87), archaeological and cultural heritage (p. 87).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Environment-friendly waste management initiatives: physical and chemical stability monitoring system for tailings storage (p. 82), XPRIZE Zero Waste Mining (p. 83), waste and recycling (p. 83), responsible mine closure (p. 88).</li> <li>▶ Initiatives for the efficient use of natural resources: energy efficiency (p. 75), renewable energy (p. 73), recycling and efficient use of water (p. 78).</li> <li>▶ Onsite environmental audits (p. 90).</li> <li>▶ FCAB environmental impact management (p. 103).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Climate change standards (p. 72).</li> <li>▶ Greenhouse gas mitigation measures (p. 72).</li> <li>▶ Renewable energy (p. 73).</li> <li>▶ Energy efficiency (p. 75).</li> <li>▶ Using biomass to capture and store CO<sub>2</sub> (p. 85).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Minimising qualitative and quantitative impact on local water resources (p. 79).</li> </ul>

Antofagasta plc regards the United Nations Sustainable Development Goals as an important framework for global alignment on social aspects of the planet’s sustainability. We support the work being done globally by the ICMM and nationally by the Consejo Minero to align mining industry practices with the 2030 sustainable development goals. Achieving these targets will require cooperation between governments, the private sector, and civil society.

<p><b>6 CLEAN WATER AND SANITATION</b></p> 	<p><b>7 AFFORDABLE AND CLEAN ENERGY</b></p> 	<p><b>8 DECENT WORK AND ECONOMIC GROWTH</b></p> 	<p><b>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</b></p> 	<p><b>10 REDUCED INEQUALITIES</b></p> 
<ul style="list-style-type: none"> <li>▶ Alignment with the ICMM water stewardship framework (p. 77).</li> <li>▶ Initiatives to support community water management: protection of water resources included in the Salamanca and Caimanes Agreements (p. 61), improving quantity and quality of rural drinking water supplies (p. 79).</li> <li>▶ Seawater usage (p. 78).</li> <li>▶ Water recycling and efficiency (p. 78).</li> <li>▶ Minimising qualitative and quantitative impact on local water (p. 79).</li> <li>▶ Initiatives to protect water-related ecosystems: tailings storage, physical and chemical stability monitoring system (p. 82); protected areas (p. 87), extraction of water from protected aquifers (p. 87).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Climate change standards (p. 72).</li> <li>▶ Renewable energy (p. 73).</li> <li>▶ Energy efficiency (p. 75).</li> <li>▶ Antofagasta Minerals Santiago E-Priz (p. 68).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Incentives for innovation and improved productivity (p. 25).</li> <li>▶ Creating job opportunities in local communities (pp. 64, 101).</li> <li>▶ Apprenticeships and youth employment (pp. 62, 65).</li> <li>▶ Protecting the human rights of employees and contractors and throughout the supply chain (pp 15, 38, 39).</li> <li>▶ Supporting the development of other industries such as farming, fishing and tourism (pp. 64, 65).</li> <li>▶ Dignity at work: safety and health (pp. 48 and 95), quality of employment (pp. 54 and 97), trade union relations (pp. 53 and 97).</li> <li>▶ Diversity and Inclusion Strategy and Principles (p. 53).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Participation in Alianza Valor Minero, for a beneficial, inclusive and sustainable Chilean mining industry (p. 67).</li> <li>▶ Participation in the Programa Nacional de Minería de Alta Ley (p. 67).</li> <li>▶ Physical and chemical stability monitoring system for tailings storage (p. 82).</li> <li>▶ Antofagasta Minerals Santiago E-Priz 2018 (p. 68).</li> <li>▶ Zero Waste Mining, XPrize (p. 83).</li> </ul>	<ul style="list-style-type: none"> <li>▶ Youth economic inclusion initiatives (apprenticeship programme: page 65) and local employment opportunities (pp. 64, 101).</li> <li>▶ Diversity and Inclusion Strategy (p. 53).</li> </ul>
	<p><b>15 LIFE ON LAND</b></p>  <ul style="list-style-type: none"> <li>▶ Biodiversity Standards (p. 85).</li> <li>▶ Protected areas (p. 87).</li> <li>▶ Biodiversity protection initiatives: native species reforestation, Green Desert (p. 87), water extraction from protected aquifers (p. 87).</li> </ul>		<p><b>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</b></p>  <ul style="list-style-type: none"> <li>▶ Code of Ethics and prevention of crime, bribery and corruption (p. 37).</li> <li>▶ Inclusion, participation and transparency in local relationship-building process (pp 58, 99).</li> </ul>	<p><b>17 PARTNERSHIPS FOR THE GOALS</b></p>  <ul style="list-style-type: none"> <li>▶ Construction of effective alliances: Community relationship-building, and participation in the Alianza Valor Minero and Programa de Minería de Alta Ley (pp. 58, 62, 67).</li> <li>▶ Sustainability progress indicators (p. 42).</li> </ul>

# GRI CONTENTS INDEX - STANDARDS

## CORE OPTION

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>GRI 101: 2016 BASE [GRI 101 NOT INCLUDED IN DISCLOSURES]</b>				
<b>GENERAL STANDARDS</b>				
GRI 102: General Disclosures 2016	102-1 Name of organisation	Front cover		✓
	102-2 Activities, brands, products and services	10, 11, 12		✓
	102-3 Location of headquarters	Santiago, Chile.		✓
	102-4 Location of operations	11		✓
	102-5 Ownership and legal form	33, 40		✓
	102-6 Markets served	11, 16, 40. Annual Report 2017 (page 11)		✓
	102-7 Scale of organisation	12, 13, 110		✓
	102-8 Information on employees and other workers	111	Information about employees and other workers is not shown by employment contract and by region.	✓
	102-9 Supply chain	15, 16		✓
	102-10 Significant changes to the organisation and its supply chain	Annual Report 2017 (pages 4, 6, 7, 13)		✓
	102-11 Precautionary principle or approach	22, 23		✓
	102-12 External initiatives	24, 42		✓
	102-13 Membership of associations	42		✓
	102-14 Statement from senior decision-maker	4-6		✓
	102-15 Key impacts, risks and opportunities	5, 6, 8, 9, 19-22, 26-29, 34, 35		✓
	102-16 Values, principles, standards and norms of behaviour	10, 23, 24, 36-38, 47, 55, 72, 77, 81, 85, 88		✓
	102-17 Mechanisms for advice and concerns about ethics	37, 38		✓
	102-18 Governance structure	33, 34. Annual Report 2017 (pages 74, 75)		✓
	102-19 Delegating authority	34. Annual Report 2017 (page 65)		✓
	102-20 Executive level responsibility for economic, environmental and social topics	34		✓
	102-21 Consulting stakeholders on economic, environmental and social topics	Annual Report 2017 (pages 69, 71, 98, 99)		✓
	102-22 Composition of the highest governance body	34, 110. Annual Report 2017 (pages 65, 76-78)	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 2017 (pages 86, 87)		✓
	102-25 Conflicts of interest	Annual Report 2017 (page 124)	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	33, 34		✓
	102-27 Collective knowledge of highest governance body	Annual Report 2017 (page 89)		✓
	102-28 Evaluating the highest governance body's performance	Annual Report 2017 (page 88)		✓
	102-29 Identifying and managing economic, environmental and social impacts	33. Annual Report 2017 (pages 70, 71, 74, 98, 99)		✓
	102-30 Effectiveness of risk management processes	34, 35. Annual Report 2017 (pages 90-95)		✓
	102-31 Review of economic, environmental and social topics	Annual Report 2017 (pages 96, 97)		✓
	102-32 Highest governance body's role in sustainability reporting	Annual Report 2017 (page 96)		✓

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>GENERAL STANDARDS</b>				
GRI 102: General Disclosures 2016	102-35 Remuneration policies	Annual Report 2017 (pages 102-105)		✓
	102-40 List of stakeholder groups	40, 41		✓
	102-41 Collective bargaining agreements	53, 111		✓
	102-42 Identifying and selecting stakeholders	40		✓
	102-43 Approach to stakeholder engagement	40, 41		✓
	102-44 Key topics and concerns raised	40, 41		✓
	102-45 Entities included in the consolidated financial statements	The Sustainability Report 2017 covers the same entities as the Annual Report 2017		✓
	102-46 Defining report content and topic boundaries	106		✓
	102-47 List of material topics	107		✓
	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	106		✓
	102-51 Date of most recent report	Sustainability Report 2016 published in May 2017		✓
	102-52 Reporting cycle	Annual		✓
	102-53 Contact point for questions regarding the report	Flap 2		✓
	102-54 Claims of reporting in accordance with the GRI Standards	106, 116		✓
102-55 GRI contents index	116		✓	
102-56 External assurance	108		✓	
<b>MATERIAL TOPICS</b>				
<b>SAFETY AND HEALTH</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	45, 95		✓
	103-2 The management approach and its components	23, 45, 47, 94-95		✓
	103-3 Evaluation of the management approach	48, 95		✓
GRI 403: Occupational health and safety 2016	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism and number of work-related fatalities	48, 111, 112	The safety indicators are not shown by region, as they are grouped by operation: Antofagasta Minerals and FCAB. 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).	✓
<b>ETHICS AND TRANSPARENCY</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	37		✓
	103-2 The management approach and its components	37-39		✓
	103-3 Evaluation of the management approach	38, 42		✓
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	110		X

V = external verification

✓ = verified

X = not verified

# APPENDICES

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>MATERIAL TOPICS</b>				
<b>DEVELOPMENT AND WELFARE OF COMMUNITIES</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	57, 99		✓
	103-2 The management approach and its components	58-68, 99-101		✓
	103-3 Evaluation of the management approach	69, 101		✓
GRI 202: Market presence 2016	202-2 Proportion of senior management hired from the local community	64, 101, 111, 113		✓
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	64, 101, 110, 111, 112		✓
GRI 203: Indirect Economic Impacts	203-2 Significant indirect economic impacts	64, 65, 101		✓
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact	111, 113		✓
<b>ENVIRONMENTAL MANAGEMENT SYSTEMS AND POLICIES</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	88, 103		✓
	103-2 The management approach and its components	23, 88, 90, 102-103		✓
	103-3 Evaluation of the management approach	90, 103		✓
GRI 306: Effluents and waste 2016	306-3 Significant spills	90, 112		✓
GRI 307: Environmental compliance 2016	307-1 Number of environmental fines	90, 112		✓
	307-1 Amount of environmental fines	90, 112		✓
	MM10 Number and percentage of operations with closure plans	88, 112		✓
<b>WATER: AVAILABILITY, QUALITY AND EFFICIENCY</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	77		✓
	103-2 The management approach and its components	76-79		✓
	103-3 Evaluation of the management approach	25, 79		✓
GRI 303: Water 2016	303-1 Water withdrawal by source	12, 79, 112, 113	Wastewater from other organisation is not used, nor is rainwater collected naturally in reservoirs and other water storage spaces quantified.	✓
	303-2 Water sources significantly affected by withdrawal of water	79, 112, 113	Only a range of recirculated water is presented, as this figure varies from operation to operation.	✓
<b>CLIMATE CHANGE</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	71, 103		✓
	103-2 The management approach and its components	70 - 75, 103		✓
	103-3 Evaluation of the management approach	25, 73, 75, 103		✓
GRI 305: Emissions	305-1 Direct (Scope 1) GHG emissions	73, 111	Only shown for Antofagasta Minerals and not FCAB.	✓
	305-2 Energy indirect (Scope 2) GHG emissions	73, 111	Only shown for Antofagasta Minerals and not FCAB.	✓
	305-4 GHG emissions intensity	73, 111	Only shown for Antofagasta Minerals and not FCAB.	✓
GRI 302: Energy 2016	302-1 Energy consumption outside of the organisation	21, 75, 111, 113	Information not available: Antofagasta Minerals does not show the breakdown required for this indicator: fuel consumption from renewable and non-renewable sources, electricity consumption, heating, cooling, steam consumed and sold.	✓
<b>MINING WASTE</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	81, 103		✓
	103-2 The management approach and its components	80-83, 103		✓
	103-3 Evaluation of the management approach	25, 81, 83, 103		✓
GRI 306: Effluents and waste 2016	306-2 Waste by type and disposal method	21, 83, 112, 113	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	81, 112		✓

GRI STANDARD	DISCLOSURE	PAGE NUMBER OR URL	NOT REPORTED	V
<b>MATERIAL TOPICS</b>				
<b>SUSTAINABILITY DEVELOPMENT STRATEGY</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	18, 19		✓
	103-2 The management approach and its components	19-23		✓
	103-3 Evaluation of the management approach	42		✓
GRI 201: Economic performance 2016	201-1 Direct economic value generated and distributed	16, 17		✓
<b>LABOUR RELATIONS</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	51, 97		✓
	103-2 The management approach and its components	53, 97		✓
	103-3 Evaluation of the management approach	53, 97		✓
	Unionisation and freedom of association	51, 111, 113		✓
	MM4: Number of strikes and stoppages of over a week	53, 111		✓
<b>COMMUNITY RELATIONS</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	57, 99		✓
	103-2 The management approach and its components	58-63, 99, 100		✓
	103-3 Evaluation of the management approach	69, 99, 101		✓
<b>RISK AND CRISIS MANAGEMENT</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	34		✓
	103-2 The management approach and its components	34, 35		✓
	103-3 Evaluation of the management approach	35		✓
<b>LAND PLANNING, BIODIVERSITY AND HERITAGE</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	85		✓
	103-2 The management approach and its components	84 - 87		✓
	103-3 Evaluation of the management approach	87		✓
GRI 304: Biodiversity 2016	304-3 Habitats protected or restored	21, 112	Information not available: status of each protected area based on its condition at the end of the reporting period. It is expected to have this information for the 2019 report.	✓
<b>CORPORATE GOVERNANCE</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	33-36		✓
	103-3 Evaluation of the management approach	42		✓
GRI 405: Diversity and Equal Opportunities 2016	405-1 Diversity of governance bodies and employees	42, 110. Annual Report 2017 (pp. 76-78)		✓
<b>LABOUR CONDITIONS</b>				
GRI 103: Management approach 2016	103-1 Explanation of the material topic and its boundary	51, 97		✓
	103-2 The management approach and its components	23, 53, 54, 55, 96, 97		✓
	103-3 Evaluation of the management approach	53, 54, 97		✓
GRI 405: Diversity and Equal Opportunities 2016	405-1 Diversity of employees	21-22, 54, 111, 113	Information not available: split by age range. Expect to incorporate this information in the 2018 report.	✓
GRI 404: Training and education 2016	404-1 Average hours of training per year per employee	111, 113	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	53	Information not available: Transition assistance programmes for professionals leaving the company.	✓
	404-3 Percentage of employees receiving regular performance and career development reviews	111	Information not available: breakdown by sex and job category.	✓

V = external verification  
✓ = verified  
✗ = not verified  
\* = verified, except FCAB



ANTOFAGASTA PLC

## SUSTAINABILITY REPORT 2017

### **Management**

Public Affairs Department, Antofagasta Minerals

### **Contents**

Kodama & Mex

### **Design and production**

Loreto Cammas Diseño  
Sebastián Paublo

July 2018

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Cleveland House  
33 King Street  
London SW1Y 6RJ  
United Kingdom  
Tel: (+44 20) 7808 0988

**ANTOFAGASTA MINERALS**

Apoquindo 4001 - 18th floor  
Santiago, Chile  
Tel: (+56 2) 2798 7000

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

This Report complements Antofagasta plc's  
Annual Report and Financial Statements 2017,  
available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk) .

**CONTACT**

For more comments or questions about this  
Report please contact [inforeporte@aminerals.cl](mailto:inforeporte@aminerals.cl)

**GROUP'S WEB SITES**

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

This report is a translation of the Sustainability Report 2017 in  
Spanish which is available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).