

SUSTAINABILITY REPORT

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ANTOFAGASTA  
MINERALS

# *Antofagasta* **MINERALS**

## 2013



# ABOUT THIS REPORT

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For the seventh consecutive year, Antofagasta Minerals is reporting to its stakeholders about its strategy, management, priorities and performance as regards the material issues for the sustainability of its business. In previous years, this information was part of the Sustainability Report of its controlling group, Antofagasta plc.

This Report is complemented by the Sustainability Reports 2013 of its principal operations, Los Pelambres and Centinela.

## GUIDELINES

This Report was prepared in accordance with the Core Option of the G4 Guidelines of the Global Reporting Initiative (GRI), including its Mining and Metals Sector Supplement.

## MATERIALITY

The Report focuses on material issues as defined using the process suggested by GRI (G4). In the context of sustainability, materiality refers to those issues which internal and external stakeholders consider most relevant for the operations of the company, sector or industry and which also have the greatest impact on the development of the business.

## REPORTING PERIOD

The quantitative indicators presented are for the company's performance in 2013. Data for previous years is also provided in order to put these indicators in the context of their trend. Key aspects occurring through to 30 June 2014 are also included.

## SCOPE OF THE REPORT

The Report covers the company's three operations – Minera Los Pelambres, Minera Centinela and Minera Michilla – as they relate to the aspects of the GRI Specific Standard Disclosures. In the case of some aspects of the General Standard Disclosures, information is also presented about the Group's explorations and projects at the construction stage (Chapters 1 and 2).

## EXTERNAL ASSURANCE

For the second consecutive year, this Report was externally assured by PwC. **(SEE PAGE 47: ASSURANCE STATEMENT)**

## PROCESS

A team formed by representatives of the different corporate areas of Antofagasta Minerals and the different areas of its three operations participated in preparation of this Report. Its work was coordinated by the Group's External Affairs Area with advice from external experts. The team also sought to ensure compliance with GRI principles and was responsible for gathering and validating the reported information.

## GRI INDICATORS

A complete list of GRI indicators can be found in the online version of this Report, which is available at [www.aminerals.cl/mineria-sustentabilidad/reportes-de-sustentabilidad/](http://www.aminerals.cl/mineria-sustentabilidad/reportes-de-sustentabilidad/).

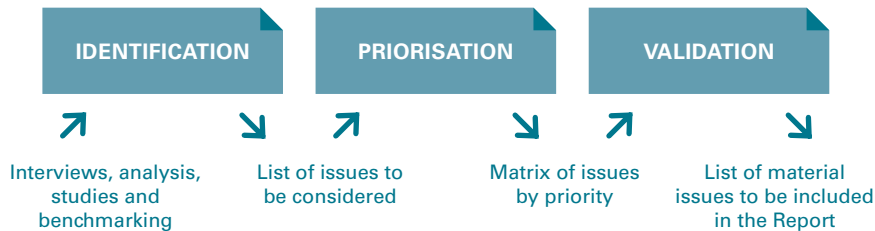
This Report has been prepared in accordance with the Core Option of the G4 Guidelines of the Global Reporting Initiative (GRI)

# MATERIAL ISSUES

Material issues were defined in accordance with the GRI G4 Guidelines, applying its recommended principles of Stakeholder Inclusiveness, Sustainability Context, Materiality and Completeness.

## PROCESS

Material issues were identified using a three-stage process:



## 1. IDENTIFICATION

In this phase, a list of relevant issues was compiled from the following standpoints:

Standpoint	Sources
<b>Business development</b>	<ul style="list-style-type: none"> <li>Analysis of information about the business: Vision 2018, Strategic Objectives 2014, Sustainability Challenges and Risks (Annual Reports 2012 and 2013), presentations to financial analysts (2013) and Sustainability Reports of shareholder companies.</li> </ul>
<b>Relevance for stakeholders</b>	<ul style="list-style-type: none"> <li>Operations' Perceptions and Reputation Studies 2013.</li> <li>Minerobarómetro 2012.</li> <li>Citizen confidence in companies (<i>Acción RSE</i> - 2013).</li> </ul>
<b>Emerging issues for the mining sector</b>	<ul style="list-style-type: none"> <li>Benchmarking with reports of peer world-class companies.</li> <li>Material issues for relevant organisations: International Council on Mining and Metals (ICMM), Japan Bank for International Cooperation, Equator Principles, International Finance Corporation, GRI G4 (Mining and Metals Sector Supplement G4), ISO 26000 and Integrated Reporting Initiative.</li> </ul>
<b>Local and national economic, social and environmental context</b>	<ul style="list-style-type: none"> <li>Analysis of press and social networks 2013.</li> </ul>

## 2. PRIORISATION

The list compiled in the previous stage was evaluated to determine material issues through qualitative analysis of their importance considering two dimensions: importance for stakeholders from the four standpoints and impact on the business. The issues were classified in a matrix with these two dimensions as their axes. This evaluation was carried out in a Materiality Workshop which took place in March 2014 with the participation of the corporate areas and of the environment, human resources and external affairs areas of the three operations.

## 3. VALIDATION

The matrices of material issues which resulted from the previous phase - one for each of the three operations and for the Antofagasta Minerals Group - were reviewed by the corporate areas. Subsequently, these matrices were discussed and analysed in workshops with the management teams of each of the three operations. The material issues to be included in the Sustainability Report of Antofagasta Minerals and the Reports of each of its three operations were the result of these final matrices.

### MATRIX OF MATERIAL ISSUES

Antofagasta Minerals<sup>1</sup>

		<ul style="list-style-type: none"> <li>▶ Contribution to local economic development, employment and local suppliers</li> </ul>	<ul style="list-style-type: none"> <li>▶ Sustainability strategy</li> <li>▶ Environmental incidents/conflicts.</li> <li>▶ Mining waste</li> <li>▶ Contribution to local social development</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ethics and integrity.</li> <li>▶ Compliance</li> <li>▶ Workplace safety and health</li> <li>▶ Labour relations</li> <li>▶ Water</li> <li>▶ Energy</li> </ul>
		<ul style="list-style-type: none"> <li>▶ Climate change</li> </ul>	<ul style="list-style-type: none"> <li>▶ Air</li> <li>▶ Engagement</li> <li>▶ Social incidents/conflicts</li> <li>▶ Mine closure</li> </ul>	<ul style="list-style-type: none"> <li>▶ Risk management</li> <li>▶ Business development</li> </ul>
		<ul style="list-style-type: none"> <li>▶ Corporate governance</li> <li>▶ Job quality</li> <li>▶ Natural and historical heritage</li> <li>▶ Other environmental impacts</li> <li>▶ Social impacts</li> </ul>	<ul style="list-style-type: none"> <li>▶ Value chain (contractors)</li> <li>▶ Biodiversity</li> </ul>	
	<ul style="list-style-type: none"> <li>▶ Indigenous peoples</li> </ul>	<ul style="list-style-type: none"> <li>▶ Talent attraction and retention</li> </ul>		
<ul style="list-style-type: none"> <li>▶ Product life cycle</li> </ul>	<ul style="list-style-type: none"> <li>▶ Human rights</li> </ul>			

<sup>1</sup> Each operation's matrix of material issues is presented in their respective Sustainability Report 2013.

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**WORKERS AND CONTRACTORS**



**SOCIETY AND COMMUNITIES**



**ENVIRONMENT**

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The Sustainability Report 2013 of Antofagasta Minerals is also available online at [www.aminerals.cl](http://www.aminerals.cl)

This Report is complemented by the business and financial information presented in the Annual Report 2013 of Antofagasta plc, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk), and by the reports of our four mining companies, available on their respective websites.

### CONTACT

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For further information, comments or enquiries about this Sustainability Report, please contact: [inforeporte@aminerals.cl](mailto:inforeporte@aminerals.cl)

### GROUP WEBSITES

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

### OFFICE IN CHILE

Apoquindo 4001 - 18<sup>th</sup> Floor  
Santiago, Chile  
Telephone: (56-2) 2798 7000

# LETTER FROM THE CHAIRMAN

*Jean-Paul Luksic*



As miners and Chileans, we are particularly interested in ensuring good relations between the mining industry and society. This calls for shared solutions to the social and environmental challenges we face, arrived at through dialogue between the State, communities, indigenous peoples, companies, contractors and suppliers, workers, academic centres, NGOs and other players. Only in this way will we be able to create and maintain the conditions required to continue developing a sustainable mining industry to the benefit of Chile and our shareholders.

As the Antofagasta Minerals Group, we are working to reflect this vision in how we interact with our surroundings. This is particularly the case of Minera Los Pelambres where we coexist with over 40 communities along the length of the Choapa Valley. This will be a long process whose first fruits will start to become apparent in late 2014.

As a Group, we are recognised for our capacity to innovate in the quest for more sustainable solutions to the challenges of large-scale mining. We were the first to operate with non-desalinated seawater and the first to use tailings thickening technology on an industrial scale. Today, 45% of the water we use comes from the sea and, depending on the operation, we recycle between 70% and 85%. Over the past couple of years, we have also sought alternatives for ensuring the energy required by our operations and projects at competitive prices and, moreover, using renewable sources. As from mid-2014, around 20% of the electricity used by Los Pelambres will be wind-generated.

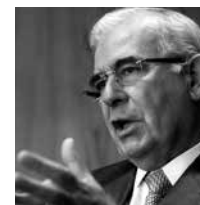
In May 2014, we were accepted for membership of the International Council on Mining and Metals (ICMM). This international organisation fosters the mining industry's sustainable development by requiring from its members a public commitment to high standards on safety and health, the environment, community relations and contribution to society. Our decision to seek membership illustrates the commitment of the Board of Directors to continued progress in these fields on a par with the industry's world leaders. I am convinced that Antofagasta Minerals has been and will be up to this challenge.

I would very particularly like to thank each of our workers for the work they do each day. It is thanks to them that we have emerged as the largest Chilean-owned private mining company.

**JEAN-PAUL LUKSIC**  
Chairman of the Board

## VISION OF THE CEO

*Diego Hernández*



In December 2013, we began implementation of a new programme to address safety and occupational health in a more integral manner, focusing on prevention of fatal risks and corporate culture. We are saddened to have to report that, nonetheless, three people<sup>1</sup> have lost their lives at our operations in the last 18 months. We need to make far more rapid progress in this area.

In order to continue growing and defending our operating margins in the context of a more demanding market, we have made important transformations in the structure of our business. We have launched a new corporate brand, strengthening identification of our operations as part of the same Group and, through a participative process, we have drawn up a new Charter of Values that underpins our leadership model and management of the performance of each of our workers. In July 2014, we also went on to create Minera Centinela, bringing together the operations of El Tesoro and Esperanza in a bid to take greater advantage of synergies.

In the case of the environment, we continue to innovate

in response to the scarcity of water and energy. Our new projects – Antucoya and Óxidos Encuentro – have been designed to operate with seawater and we continue to perfect the technology for thickening tailings. We have supported renewable energy projects by becoming a partner in the El Arrayán wind farm and the Alto Maipo run-of-the-river hydroelectric plant, and continue with geothermal exploration.

We have been proactive in seeking ways to manage emissions of particulate matter. We have also made further progress in the monitoring of our commitments so as to ensure compliance with the terms of all our environmental permits. We will continue to innovate in the quest for a model of mutually beneficial relations with communities, authorities and other stakeholders, based on transparency, in the medium and long term.

Finally, I would like to thank all our own workers and those of our contractors for their work and dedication. It is they who have allowed us to become a leader in the international copper industry.

## CHAIRMAN OF THE SUSTAINABILITY COMMITTEE

*Ramón Jara*



The Chairman of the Board's Sustainability and Stakeholder Committee, Ramón Jara, has been a director of Antofagasta plc since 2003. He also chairs the Fundación Los Pelambres and is a director of the Fundación Andrónico Luksic A.

### **What role does the Board's Sustainability Committee play?**

The Board's function is to ensure the viability of the business over time, generating economic and social value. Within this framework, the Committee monitors the Group's performance and strategies for addressing its challenges and risks as regards safety and health, relations with society and the environment. This includes reviewing and updating standards, monitoring indicators and targets and bringing the most complex issues to the attention of the Board.

### **What are the Board's priorities as regards sustainability?**

The first is the safety and health of people. It is crucial

we achieve and maintain the target of zero fatal accidents at our operations. Another key issue is relations with communities and other stakeholders. In this sense, we must adapt proactively to the evolution of the environmental institutional framework. In particular, we must improve compliance with our commitments and, to this end, have been drawing up policies, implementing systems and establishing targets.

### **How does the Board imagine community relations in ten years' time?**

The context in which we operate will be a key factor for the long-term success of the business and we must, therefore, be a true partner in the development of the communities and Regions where our operations are located. We want to work with the communities themselves and the public sector through strategic alliances in order to build a better future for all the players.

<sup>1</sup> Includes the accident in which a worker died in March 2014.

# MINING OPERATIONS AND PROJECTS

## ANTOFAGASTA MINERALS



- + Antofagasta Minerals operations and projects
- Cities and towns
- Ⓜ Antofagasta Minerals ports



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# BUSINESS AND STRATEGY

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## CHAPTER 01

Profile of Antofagasta Minerals Group

Business strategy

Value creation in the mining life cycle

Context of the operations



# PROFILE OF ANTOFAGASTA MINERALS GROUP

Antofagasta Minerals operates three copper mining companies: two in the Antofagasta Region (Minera Centinela and Michilla) and one in the Coquimbo Region (Los Pelambres). Two of these operations also produce gold, silver and molybdenum as by-products.

Minera Centinela is the result of the integration in July 2014 of the El Tesoro and Esperanza operations, forming one of the country's largest mining companies with high productivity standards and a competitive position in the industry. Antofagasta Minerals also has a mining project, Antucoya, which is in the final stage of construction and will start to produce copper in 2015. In addition, it has a portfolio of projects under development in Chile and the United States with great growth potential for the coming years and a world-scale programme of prospection for mining resources.

Antofagasta Minerals is the mining arm of Antofagasta plc and accounts for over 90% of the Group's income and EBITDA. Antofagasta plc also controls Ferrocarril de Antofagasta (transport) and Aguas de Antofagasta (water distribution).



## 1 THE EXISTING CORE BUSINESS

### LOS PELAMBRES

60% owned by the Group

This is Antofagasta Minerals' largest operation, accounting for 56% of the Group's output and close to 71% of its EBITDA. It produces copper concentrate with gold and molybdenum as by-products.

### CENTINELA

70% owned by the Group

This will be one of the country's largest mining companies. In 2013, Esperanza and El Tesoro accounted for 38% of the Group's output.

### ESPERANZA

Produces copper concentrate with gold as a by-product.

### TESORO

Produces copper cathodes.

### MICHILLA

74,2% owned by the Group

This is the oldest operation. Its mining operation as approved by the Board will end in December 2015. Produces copper cathodes.

OUTPUT	COPPER (tonnes)		MOLYBDENUM (tonnes)		GOLD (ounces)	
	2013	2014 (projected)	2013	2014 (projected)	2013	2014 (projected)
<b>Los Pelambres</b>	405,300	390,000	9,000	7,500	56,700	55,000
<b>Centinela</b>						
Esperanza	174,900	170,000			237,100	215,000
El Tesoro	102,600	95,000				
<b>Michilla</b>	38,300	45,000				
<b>TOTAL</b>	<b>721,100</b>	<b>700,000</b>	<b>9,000</b>	<b>7,500</b>	<b>293,800</b>	<b>270,000</b>

## 2 ORGANIC AND SUSTAINABLE GROWTH OF THE CORE BUSINESS

### CENTINELA MINING DISTRICT

The Esperanza Sur and Encuentro Sulphides projects were merged to reduce capital intensity and maximise value.

### CENTINELA-ESPERANZA

The project to reach design capacity of 105,000 tonnes of output at end-2015 is being implemented.

### ÓXIDOS ENCUENTRO

The feasibility study will be completed during 2014. This project will allow the Centinela-El Tesoro operation to maintain production of 100,000 tonnes through to 2023.

### LOS PELAMBRES

The prefeasibility study for increasing the current capacity of the processing plant by 15% was completed in 2013.

## 3 GROWTH BEYOND THE CORE BUSINESS

### ANTUCOYA (70% owned)

Construction of this project restarted at the beginning of 2013 and is within the timeframe and budget to start operation in the first half of 2015.

### TWIN METALS

This is the most advanced international project. Located in Minnesota, United States, it contains copper, nickel and platinum metals. Its prefeasibility study will be completed at the end of 2014.

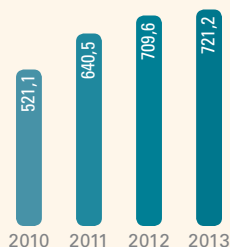
### ENERGY

The Group has investments in energy assets in Chile, with a particular emphasis on renewable energies.

➤ **FURTHER INFORMATION** about the business's products, markets, processes and figures can be found at [www.aminerals.cl/mineria-quiénes-somos/que-hacemos/](http://www.aminerals.cl/mineria-quiénes-somos/que-hacemos/) and in the Annual Report 2013 of Antofagasta plc, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

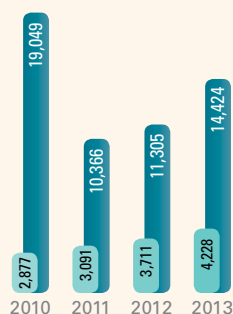
## ANTOFAGASTA MINERALS IN FIGURES

### COPPER OUTPUT (‘000 tonnes)



### WORKFORCE<sup>1</sup>

Own<sup>2</sup> ■ Contractors<sup>3</sup> ■



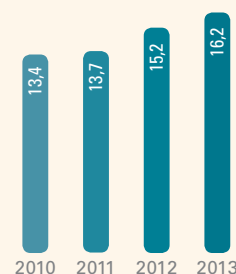
### FATALITIES

(own and contractors' workers)



### GROUP'S MINERAL RESOURCES

16,200 MILLION TONNES



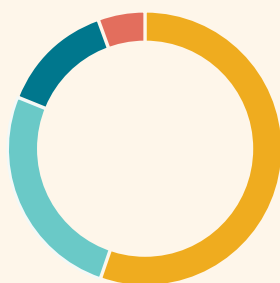
<sup>1</sup> Includes the Corporate Centre, Antucoya and other projects and explorations.

<sup>2</sup> Includes indefinite and fixed-term contracts.

<sup>3</sup> Includes contractors' workers at projects and operations.

### INCOME BY COMPANY 2013

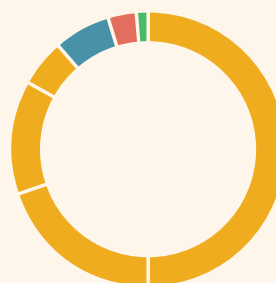
US\$ million



Los Pelambres	3,129.4
Centinela-Esperanza	1,454.4
Centinela-El Tesoro	747.4
Michilla	307.9
<b>TOTAL</b>	<b>5,639.1</b>

### INCOME BY PRODUCT 2013

US\$ million



<b>COPPER</b>	<b>4,998.0</b>
Los Pelambres	2,821.0
Centinela-Esperanza	1,121.7
Centinela-Tesoro	747.4
Michilla	307.9

<b>GOLD</b>	<b>382.5</b>
Los Pelambres	
Centinela-Esperanza	

<b>MOLYBDENUM</b>	<b>180.3</b>
Los Pelambres	

<b>SILVER</b>	<b>78.3</b>
Los Pelambres	
Centinela-Esperanza	

<b>TOTAL</b>	<b>5,639.1</b>
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### EBITDA BY COMPANY 2013

US\$ million

Los Pelambres	1,814.0
Centinela-Esperanza	649.2
Centinela-El Tesoro	426.4
Michilla	16.3
Exploration	-274.9 <sup>1</sup>
Others	-83.3 <sup>1</sup>
<b>TOTAL</b>	<b>2,547.7</b>

<sup>1</sup> Exploration and others are expenditure, not income.

# BUSINESS STRATEGY

## VISION 2018

By 2018, we want to be recognised as a highly profitable copper and by-products mining company, based in Chile, with an established reputation as a preferred partner locally and internationally that allows us to increase output to over 900,000 tonnes of copper per year and to expand our resource base. In order to achieve this, we have set ourselves the target of being a reference point as regards operational excellence, safety, talent management, labour relations, environmental management and community relations.

### HOW DID WE DEFINE OUR VALUES?

In order to develop a Group culture, we implemented a participative consultation process in each of our companies during 2013 and also carried out a survey. These initiatives were an invitation to reflect on what workers consider most important as regards values, leadership and culture. Three-quarters of the Group's workforce participated in these initiatives.

Antofagasta Minerals reflected on the present, its history and the factors that have contributed to the success of its operations, imagining its future as a Group and the best road to attain this future.

The result of this process was a Charter of Values and a Mining Group Leadership Model (SEE PAGE 15), that serve as a management tool for achieving our Vision.

## OUR CHARTER OF VALUES

### Respect for others

We trust and respect people and have a genuine interest in their welfare. Their opinion matters to us and we relate to them openly and collaboratively. We build trust by fulfilling our commitments.

### Commitment to sustainability

We understand that commitment to sustainability calls for the creation of economic, environmental and social value. We respect our surroundings and relate to them proactively.

### Excellence in our daily performance

We always work to achieve the best results through operational discipline and by being austere and efficient and taking care of our resources.

### Responsibility for safety and health

We act responsibly as regards our own safety and health and that of others, identifying and controlling our risks and being aware of the impacts of our actions.

### Innovation as a permanent practice

We recognise and foster new ideas that enable us to improve our work practices and the way we relate to others in the quest to create value for the organisation, people and our surroundings.

### We are visionary

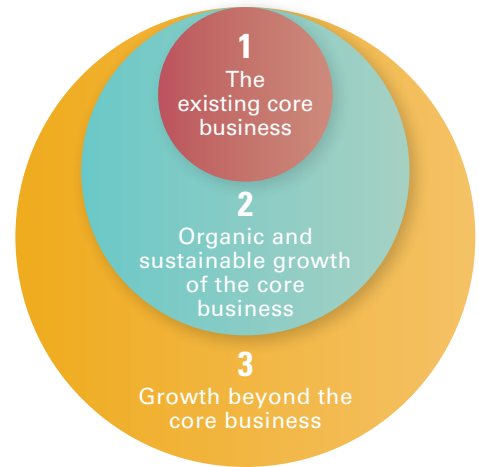
We are visionary in that we understand that our business strategy is long-term; we learn from our mistakes and have the flexibility and courage to address changing challenges.

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## STRATEGY

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In order to achieve its Vision, the Group has a well-defined business strategy based on strengthening its current operations and, building on this foundation, boosting growth. In line with this objective, the focus in 2013 was on strengthening the consolidation of Antofagasta Minerals as a Mining Group, with standards, targets and procedures common to all its operations and projects and, at the same time, fostering the exchange of knowledge, best practices and synergies.



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## NEW BRAND

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In March 2014, the Antofagasta Minerals Group launched an update of its corporate identity using a brand architecture that unites the image of all its companies. This new branding underscores the relationship that exists between the Antofagasta Minerals companies, communicating their shared attributes: Chilean, sustainable, innovative and connected.



# VALUE CREATION IN THE MINING LIFE CYCLE

## EXPLORATION



For the long-term future of a mining company, the success of its exploration programme is fundamental. Over the past five years, the Group has significantly increased its resource base through exploration activities.

The Group generally carries out its own exploration in Chile and Peru where it has greater advantages. Elsewhere, it generally prefers to partner with local companies.

## EVALUATION



The effectiveness of the evaluation and design of projects is key for maximising value in this stage of the mining cycle. The Group has great experience in project design and, through this, makes the best use of mineral deposits, employing innovative technical solutions.

Sustainability criteria are integrated into both design processes and project evaluation.

## CONSTRUCTION



Construction of a mining operation requires a large capital outlay. Effective cost management and the timing and efficiency of construction maximise the return on an investment project.

INVESTMENT INCOME

3-5 YEARS

1 2 3 3-5 YEARS

4 3-5 YEARS

### Exploration projects:

- Exploration programmes throughout Chile.
- Option contracts in North America, Latin America, Europe, Africa and Australia.

### 1 Twin Metals

The prefeasibility study and estimate of resources will be completed in 2014.

### 2 Los Pelambres - Project

**Resources:** 5,700 million tonnes of 0.52% copper + by-products.

### 3 Centinela Mining District

**Óxidos Encuentro resources:** 1,400 million tonnes of 0.40% copper + by-products.

### 4 Antucoya

**Estimated start of operations:** 2015

**Annual average output:** 85,000 tonnes.

The Group creates value throughout the mining cycle, drawing on its experience in the discovery of copper resources, their development and operation of the mines. Each stage of the mining cycle poses its own sustainability challenges and, for their management, it has in place a set of tools aligned with the relevant international standards. (SEE PAGE 18)

## OPERATION (EXTRACTION AND PROCESSING)



The Group's operations focus on its core business or, in other words, long-term mining production at a competitive cost. They depend on a number of key inputs such as labour, energy and fuel. In the case of copper concentrate, steel balls for the milling process are another important input and, in the case of cathodes, sulphuric acid.

## CLOSURE



Mining companies must plan their operations through to a site's closure, preparing specific measures for the safe decommissioning of the installations, guarding against possible impacts on people and the environment. All the Group's operations have closure plans that are currently being updated to comply with the additional requirements of a new mine closure law.

5 6 7 20+ YEARS

8 1-3 YEARS

**5 Centinela-Esperanza**  
**Start of operation:** 2011  
**End of operation:** 2059  
**Years in operation:** 3/49  
**Estimated output 2014:** 170,000 tonnes.

**6 Los Pelambres**  
**Start of operation:** 2000  
**End of operation:** 2037  
**Years in operation:** 14/38  
**Estimated output 2014:** 390,000 tonnes.

**7 Centinela-El Tesoro**  
**Start of operation:** 2001  
**End of operation:** 2022  
**Years in operation:** 13/22  
**Estimated output 2014:** 95,000 tonnes.

**8 Michilla**  
**Start of operation:** 1959  
**End of operation:** 2015  
**Years in operation:** 55/57  
**Estimated output 2014:** 45,000 tonnes.

# CONTEXT OF THE OPERATIONS

	LOS PELAMBRES	CENTINELA	MICHILLA
<b>GEOGRAPHIC AND CLIMATE CONDITIONS</b>			
<b>Location</b>	<b>Coquimbo Region, Choapa Province.</b> From the mine located in the Andes Mountains down to its port in Los Vilos, the operation has relations with some 40 communities.	<b>Antofagasta Region.</b> This operation is located 21 km from the town of Sierra Gorda in a desert area where other mining companies also have operations. The port is in Caleta Michilla.	<b>Antofagasta Region.</b> This operation is located in a desert and sparsely populated area close to Caleta Michilla.
<b>Climate</b>	Cold, high altitude.	Desert, high-altitude.	Desert, coastal.
<b>Rainfall</b> (annual average) <sup>1</sup>	81.8 mm.	4.2 mm.	4.2 mm.
<b>Altitude of mine</b>	3,800 metres above sea level.	2,300 metres above sea level.	800 metres above sea level.
<b>OPERATIONS AND PROCESSES</b>			
<b>Products</b>	Copper and molybdenum concentrate.	Copper concentrate with gold and silver and copper cathodes.	Copper cathodes.
<b>Type of operation</b>	Open pit mine.	Four open pit mines: Esperanza, Central, Noreste and Mirador.	Open pit mine, underground mine and underground operations rented from third parties.
<b>Process</b>	Flotation.	Flotation and leaching.	Leaching.
<b>Water sources</b>	Surface and groundwater.	Centinela-Esperanza: seawater; Centinela-El Tesoro: surface water acquired from third parties and groundwater from wells in Calama.	Seawater.
<b>Transport</b>	Copper concentrate is transported in a 120-km underground pipeline that crosses the valley down to the port.	Copper concentrate is transported in a 145-km underground pipeline. Copper cathodes are transported by truck to the port where they are shipped.	Cathodes are transported by truck.
<b>ENVIRONMENT</b>			
<b>Local environmental challenges</b>	<ul style="list-style-type: none"> <li>▶ Incident prevention.</li> <li>▶ Water quantity and quality.</li> <li>▶ Air quality.</li> <li>▶ Biodiversity.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Air quality.</li> <li>▶ Water: availability, other sources (seawater), eco-efficiency.</li> <li>▶ Mining waste (tailings).</li> <li>▶ Energy: availability, eco-efficiency, non-conventional renewable sources.</li> <li>▶ Environmental incidents.</li> <li>▶ Carbon footprint.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Incident prevention.</li> <li>▶ Marine biodiversity.</li> </ul>
<b>Biodiversity</b>	<p><b>Mine site:</b> Wetlands and Andean Plateau scrub, woods and wild fauna.</p> <p><b>Port:</b> Birds on conservation list, abundance of marine species and Lake Conchalí coastal wetland.</p>	<p><b>Mine site:</b> Sparse flora and fauna.</p> <p><b>Port:</b> aves y mamíferos marinos, flora y fauna bentónica.</p>	<p><b>Mine site:</b> flora and fauna.</p> <p><b>Port:</b> Marine birds and mammals.</p>

<sup>1</sup> Informe Pluviométrico Nacional, Dirección General de Aguas. Boletín 438 (December 2013).



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# SUSTAINABILITY IN THE MINING GROUP

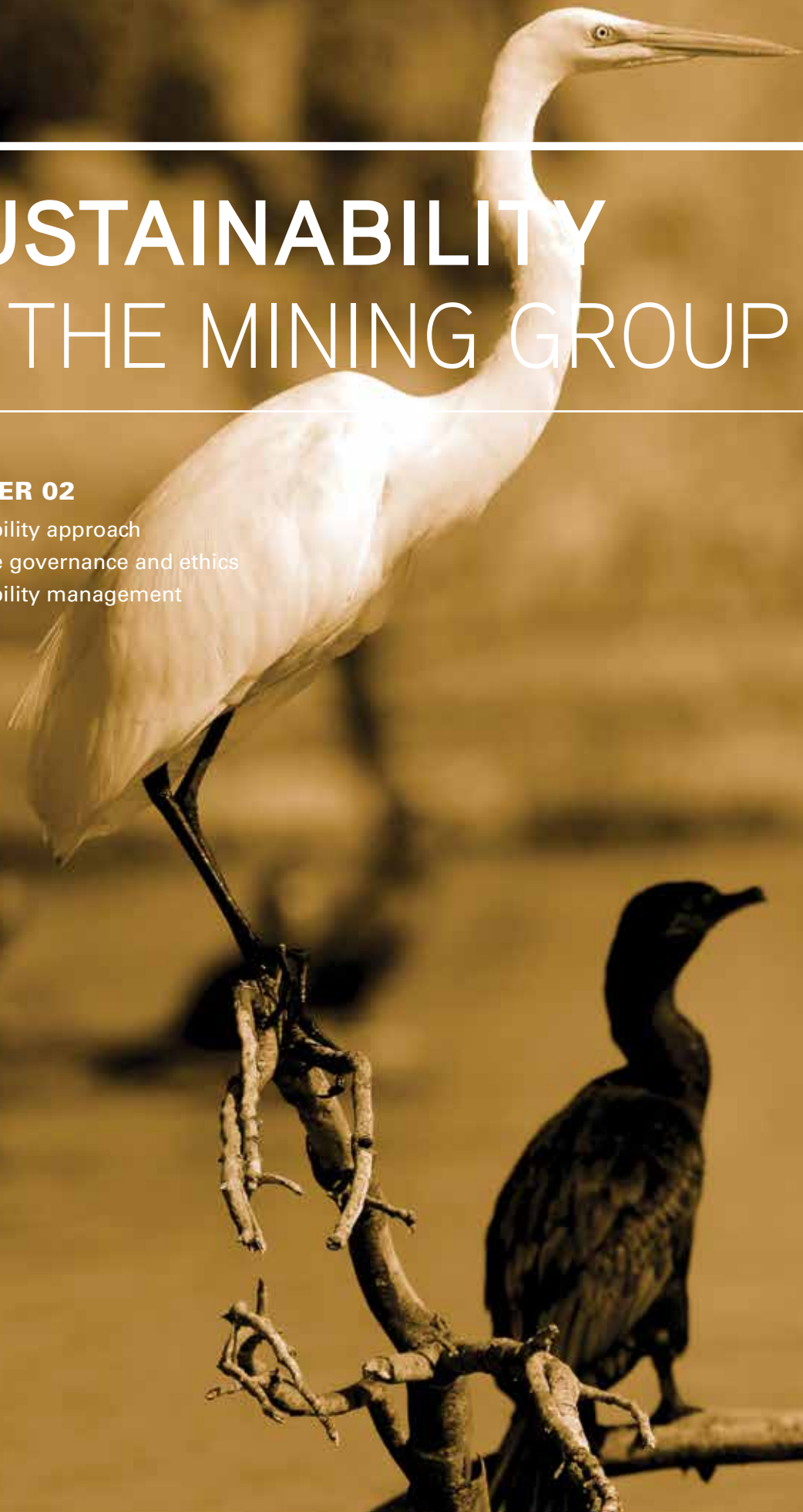
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## **CHAPTER 02**

Sustainability approach

Corporate governance and ethics

Sustainability management



# SUSTAINABILITY APPROACH

Sustainable development is an essential component of the Group's decision-making process and business strategy. Antofagasta Minerals has in place social and environmental strategies, both based on its values and Principles of Sustainable Development.<sup>1</sup>

## GUIDED BY BEST PRACTICES, POLICIES AND STANDARDS

The Group's social and environmental strategies define how it generates value in these fields. In the case of its social strategy, the focus is on responsible behaviour, risk management and the development of local human capital while its environment responsibility includes both the control of environmental impacts and the creation of environmental value.

### MEMBERSHIP OF ICMM

In May 2014, Antofagasta Minerals joined the prestigious International Council on Mining and Metals (ICMM) which brings together the world's largest mining producers. This industry association seeks to foster self-regulation in the mining and metals industry through the design and promotion of high social and environmental management standards.

In order to be accepted as a member, the company underwent a rigorous process of external evaluation of its policies and practices as regards corporate governance, safety and health, environmental management, stakeholder relations and contribution to society amongst other aspects addressed in the ICMM's ten principles. In addition, it undertook to remedy some gaps detected between its performance and the ICMM's requirements and to report annually in a verifiable manner about its progress on compliance with these principles.

➔ FOR FURTHER INFORMATION, see [www.icmm.com](http://www.icmm.com).

## PRINCIPLES OF SUSTAINABLE DEVELOPMENT

### SOCIAL STRATEGY

To build mutually beneficial relations of trust with stakeholders, implementing measures in three fields:

#### Responsible conduct

- ▶ Promotion of the safety and health of the Group's own workers and those of contractors.
- ▶ Good work climate.
- ▶ Reduction of negative impact on society.
- ▶ Relations with key stakeholders.
- ▶ Supervision of progress on commitments.

#### Risk management

- ▶ Identification, reduction and management of socio-political risks.
- ▶ Preparation to manage crises.

#### Development of local human capital

- ▶ Promotion of job creation.
- ▶ Support for local education.
- ▶ Improvement of local quality of life.

### ENVIRONMENTAL STRATEGY

To protect the environment and natural resources, implementing measures in three fields:

#### Operational efficiency

- ▶ Efficient water use.
- ▶ Efficient use of electricity and fuels.
- ▶ Use of land (territory).
- ▶ Waste management.

#### Control of environmental impacts

- ▶ Protection of water quality and availability.
- ▶ Protection of biodiversity and cultural heritage.
- ▶ Protection of air quality.
- ▶ Reduction of risk of environmental incidents.

#### Environmental value

- ▶ Use of renewable energies.
- ▶ Enhancement of biodiversity.
- ▶ Enhancement of cultural heritage.

<sup>1</sup> Available at [www.aminerals.cl/mineria-sustentabilidad/nuestro-enfoque-sustentable/principios-y-politicas](http://www.aminerals.cl/mineria-sustentabilidad/nuestro-enfoque-sustentable/principios-y-politicas).

## PEOPLE

The corporate model for management of human resources seeks to develop organisational capabilities in order to address the challenges implicit in the three pillars of the Group's business strategy.

The model includes key value factors for each pillar of the business, defines its strategic focus for 2013 and 2014 and stipulates the tools for its achievement.

In 2013, as part of this model, a process for management of corporate talent was designed with the aim of preparing succession plans for key posts both at the corporate level and in the Group's different companies.



## HUMAN RESOURCES MANAGEMENT MODEL

	<b>1 The existing core business</b>	<b>2 Organic and sustainable growth of the core business</b>	<b>3 Growth beyond the core business</b>
<b>Key value factors</b>	<ul style="list-style-type: none"> <li>▶ Develop talent with experience in the Group's different operations.</li> <li>▶ Guarantee the availability and continuity of the Group's own human resources and those of third parties for each operation.</li> <li>▶ Align incentives with performance and results.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ensure the availability of professional teams with the appropriate profiles for projects.</li> <li>▶ Guarantee the availability of personnel suitable for the different stages of projects.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Develop talent with projection for international growth.</li> <li>▶ Ensure implementation of corporate human resources processes in international offices.</li> </ul>
<b>Strategic focus 2013-2014</b>	<ul style="list-style-type: none"> <li>▶ Strengthen the corporate culture: Implementation of the new Charter of Values and Leadership Model.</li> <li>▶ Implement the organisational model to enhance the Group's competitiveness.</li> <li>▶ Homogenise, standardise and strengthen the development cycle, including talent management and succession programmes, management of performance, merit and young professionals.</li> </ul>		
<b>Tools</b>	<ul style="list-style-type: none"> <li>▶ Implement a new IT system for human resources management.</li> <li>▶ Manage change and communications.</li> <li>▶ Strengthen the structure and capabilities of the human resources area.</li> </ul>		

# CORPORATE GOVERNANCE AND ETHICS

Solid corporate governance is fundamental for the organisation's long-term success. The Board of Directors of Antofagasta plc, the highest governance body of Antofagasta Minerals, is committed to ensuring that all the Group's structures and procedures reflect the best principles of corporate governance.

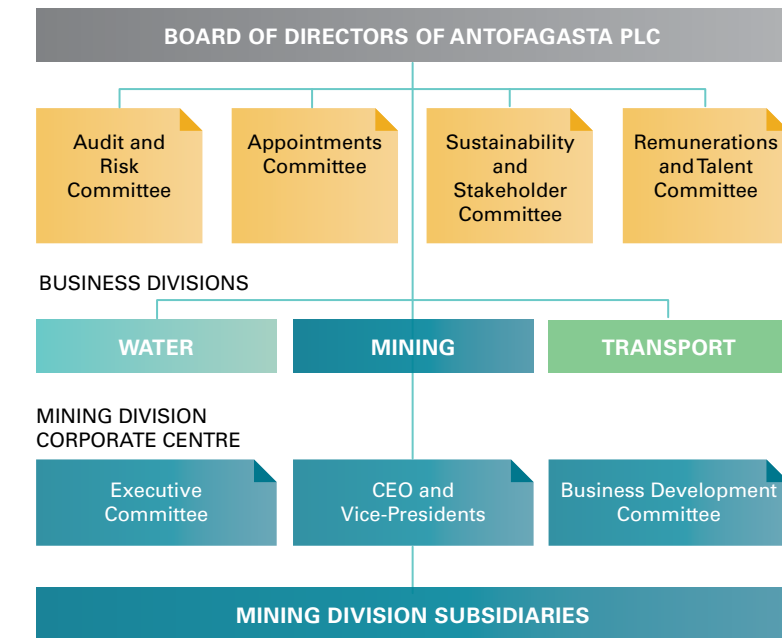
## BACKED BY SOLID GOVERNANCE

### DECISION-MAKING BODIES

The Board of Directors of Antofagasta plc is a collegiate body with 11 members. It is the body responsible for the success of Antofagasta Minerals in the long term. Its functions include strategic leadership of the Group, the definition of policies and targets and supervision of economic, social and environmental performance, risks and internal control systems. It is the Board that is ultimately responsible for the company's sustainability. The priorities it has established are safety and health, ethical conduct, human resources management, the environment and community relations.

The Board is assisted by four committees that include the Sustainability and Stakeholder Committee. This Committee periodically visits the Group's operations to review their sustainability performance and promote best practices. In 2013, it held five meetings. (📌 SEE PAGE 89, ANNUAL REPORT 2013)

The Board delegates responsibility for implementation of the Group's strategy and financial objectives to



its senior management. The CEO of Antofagasta Minerals is responsible for managing the mining division of Antofagasta plc and, for this purpose, is supported by the Executive Committee, formed by the nine corporate vice-presidents and the general managers of Los Pelambres, Centinela, Michilla and Antucoya. A regular formal process of review of operational performance also takes place through which companies report their results to the Corporate Centre.

### REORGANISATION

In 2013, a reorganisation of the Group took place in order to better align its structure with its strategic objectives and future challenges. It was decided to concentrate legal management in a vice-presidency exclusively for this purpose and to underscore the Group's commitment to sustainability by creating a Vice-Presidency of Corporate Affairs and Sustainability. In line with this, Environment and External Affairs units at the level of each operation were also merged.

📌 FOR FURTHER INFORMATION about governance bodies, the responsibilities, role and composition of the Board of Directors and evaluation of the Board's performance, see the Annual Report 2013, available at [www.antofagasta.co.uk/~media/Files/A/Antofagasta/pdf/annual-reports/ar-2013.pdf#page=81](http://www.antofagasta.co.uk/~media/Files/A/Antofagasta/pdf/annual-reports/ar-2013.pdf#page=81).

## COMMITTED TO HIGH ETHICAL STANDARDS

### CODE OF ETHICS AND ETHICS COMMITTEE

The Group has a Charter of (SEE PAGE 8) and a Code of Ethics that govern all its workers and contractors. The Code of Ethics refers to issues such as conflicts of interest, corruption and bribery, confidential company information, the safeguard of working conditions, discrimination and harassment, human rights, respect for neighbouring communities and mechanisms for reporting infringements of the Code of Ethics. In 2012, the Code of Ethics was reviewed, along with other internal control systems, to ensure full compliance with legislation in Chile and the United Kingdom on whose stock market the shares of

Antofagasta plc, the Mining Group's parent company, are traded.

The Ethics Committee and the norms in force seek to guarantee full compliance with the Code of Ethics and the Committee investigates any reports of non-compliance. It is formed by the Vice-Presidents of Finance, Human Resources, and Corporate Affairs and Sustainability and meets regularly. Its work is overseen by the Board of Director's Audit and Risk Committee.

### AWARENESS AND COMPLAINTS

The Code of Ethics and anti-corruption norms form part of the induction process of the companies that make up the Mining Group. Regular training is also provided

for those areas or persons most exposed and, each two years, a mass e-learning refresher course is provided. The Group's contractors are also informed about the Code of Ethics and anti-corruption norms.

Workers and contractors can report any unethical conduct through the channels provided by the Mining Group (website, intranet and a free telephone line) and are able to do so anonymously. They can, in addition, make their report directly to any member of the Ethics Committee. In 2013, complaints of an ethical nature received through the established channels were investigated and discussed at meetings of the Ethics Committee and reported quarterly to the Audit and Risk Committee.

## HUMAN RIGHTS

The Group respects the rights of its own workers and contractors and those persons who have contact with the business as reflected in the following practices:



### Workers

- ▶ No employment of minors.
- ▶ Payment of fair wages, provision of high-quality accommodation and meal services and high safety and health standards.
- ▶ Maintenance of good labour relations.
- ▶ Opportunities for training and development.
- ▶ Monitoring of worker satisfaction.
- ▶ Prevention of discrimination, harassment and bullying.



### Contractors

- ▶ High safety and health standards and appropriate working conditions including the wage level and benefits.



### Society

- ▶ Mechanisms to prevent corruption and facilitate reporting of malpractices.
- ▶ Generation of a positive social, economic and environmental legacy from exploration through to mine closure.
- ▶ Prevention or mitigation of environmental and social impacts.



### Communities

- ▶ Respect for communities' rights, culture and heritage.
- ▶ Identification and early and proactive management of potential impacts.
- ▶ Engagement in constant dialogue from exploration through to mine closure.
- ▶ Listening and response to grievances.
- ▶ Support for community development.
- ▶ Fulfilment of commitments.

### INDIGENOUS PEOPLES

Chile has ratified Convention 169 of the International Labour Organization on the rights of indigenous peoples.

At present, the Group does not have operations or projects close to indigenous communities. It is, nonetheless, preparing specific guidelines so that its workers are sensitive to these cultures and respectful of the rights of indigenous peoples.

# SUSTAINABILITY MANAGEMENT

Sustainability management supports the Group's business strategy, strengthening its social licence to operate, increasing its operational efficiency and facilitating access to resources. Its sustainability approach focuses on the opportunities and risks that are most significant for Antofagasta Minerals and its stakeholders.

## SUSTAINABILITY IN THE MINING CYCLE

Sustainability is an integral part of the decision-making process and practices of each stage of the life cycle of the Group's business and it, therefore, has in place specific procedures and guidelines for managing social and environmental issues:

### EXPLORATION

- ▶ Manual of Best Environmental and Social Practices for exploration.

### OPERATION

- ▶ Social Performance Evaluation (EDES) and Environmental Performance Evaluation (EDA).
- ▶ Manual of Best Environmental Practices.
- ▶ Incorporation of social and environmental targets in the performance agreements of the four operations.

### EVALUATION AND CONSTRUCTION

- ▶ Corporate standard for the design of mining projects (ADS) that includes chapters on environmental and social standards.

### CLOSURE

- ▶ Periodic update of closure plans and provisions, complying with the requirements established by Law N° 20.551 on Closure of Mine Sites and Mining Installations and by Supreme Decree N° 41/2012.  
(● SEE PAGE 43)

## PERFORMANCE EVALUATION AND MANAGEMENT

### EVALUATION OF SOCIAL AND ENVIRONMENTAL PERFORMANCE

Environmental Performance Evaluation (EDA, for its acronym in Spanish), introduced in 2010, is a set of key environmental indicators structured around three dimensions: operational efficiency (water, electricity, fuels, land use and waste management), control of environmental impacts (water quality, biodiversity, cultural heritage, air quality and environmental incidents) and benefits for the environment (renewable energies and enhancement of biodiversity and cultural heritage).

Social Performance Evaluation (EDES, for its acronym in Spanish), introduced in 2012, comprises a set of indicators related to responsible conduct, management of social risks and development of local human capital.

Each company establishes its environmental and social targets according to local priorities. EDA and EDES indicators, like safety indicators, are included in each mining company's performance agreement with Antofagasta Minerals and are monitored through regular reviews of operational performance and monthly reports to the Board of Directors. In 2014, cultural indicators and the Leadership Model will also be included in these agreements.

➤ FOR FURTHER INFORMATION, see page 50 of the Annual Report 2013, available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk).

## AUDITS AND CERTIFICATIONS

Internal audits take place in order to control performance compliance in all the mining operations as well as contractors' compliance with their obligations to workers. Each year, external auditors also evaluate contractors' compliance with legal requirements, safety standards and human and labour rights as

well as with corporate norms on the minimum wage, collective bargaining, payment of overtime, holidays and the prohibition on forced and child labour.

In the case of the management systems implemented by the Group's companies, Los Pelambres and Centinela-El Tesoro have ISO

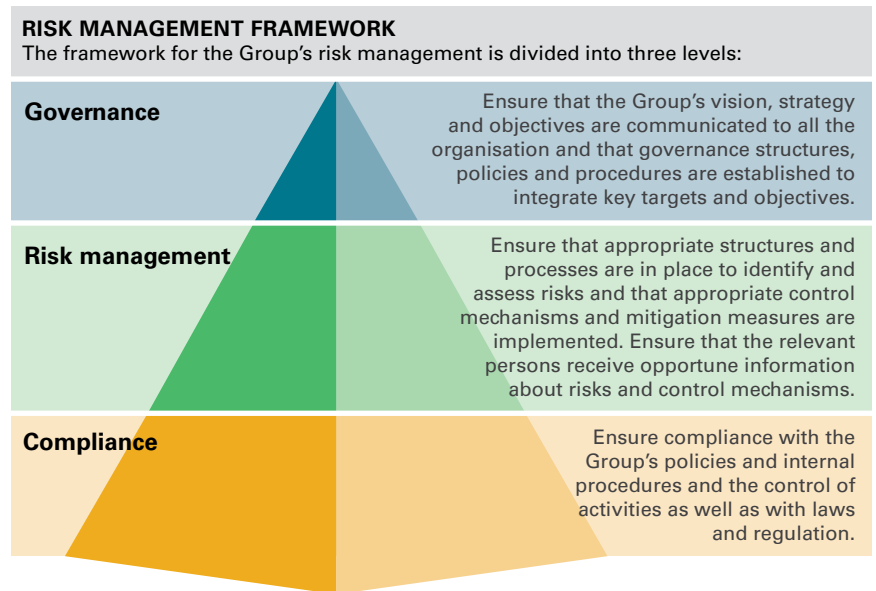
14001, ISO 9001 and OHSAS 18001 certification while Michilla has ISO 9001 and OHSAS 18001 certification as well as an environmental management system aligned with ISO 14001. Centinela-Esperanza is in the process of diagnosis for future ISO 14001 certification.

## RISK MANAGEMENT MODEL

It is the Board of Directors of Antofagasta plc that is ultimately responsible for risks. It is assisted by the Audit and Risk Committee in reviewing the effectiveness of the management process, the monitoring systems and measures to control risks.

Each company's risks, including social and environmental risks, are identified and controlled through the Corporate Risk Management System and are regularly reported to the Board's Audit and Risk Committee, with the support of the Sustainability and Stakeholder Committee.

The general managers of each operation are responsible for leading and supporting their company's risk management in accordance with the guidelines established at the corporate level. Each year, workshops take place with each company's senior executives in order to identify and analyse strategic risks, including those with a social and/or environmental impact, and review the evaluation and effectiveness of control mechanisms. Each company's risk management is reported to different bodies in the Corporate Centre.



➔ **FOR FURTHER INFORMATION** about risk management, responsibilities and its focus in 2013 as well as details of the principal risks and the corresponding mitigation measures, see the Annual Report 2013 of Antofagasta plc (pages 24-27), available at [www.antofagasta.co.uk/](http://www.antofagasta.co.uk/)

## PRINCIPAL STRATEGIC RISKS



### Context and market

- ▶ Access to and availability of strategic resources.
- ▶ Commodity prices.
- ▶ Exchange rate.
- ▶ Political, legal and regulatory risks.



### Business development

- ▶ Operational risks.
- ▶ Project development.
- ▶ Growth opportunities.
- ▶ Identification and estimation of mineral reserves and new resources.



### Sustainability

- ▶ Safety and health.
- ▶ Community relations.
- ▶ Environmental management.
- ▶ Talent management.
- ▶ Labour relations.

## COMPLIANCE

Antofagasta Minerals seeks to ensure compliance with its commitments and the applicable legislation.

Chile's Superintendency of the Environment fined Minera Los Pelambres on the grounds of a delay in compliance with some of the commitments established in Environmental Approval Resolution (RCA 38), related to the construction of an archaeological park. The mining company considered this sanction

unjustified and appealed against the fine. At the date of completing this Report, the Environmental Tribunal had yet to rule on this appeal.

The Group carefully monitors and manages the social and environmental impacts of its operations and this contributes to compliance with present and future legal requirements as well as with international standards and best practices.

The Group is aware that political events and legal reforms may affect its businesses and, therefore, monitors new laws and bills. Through industry associations such as Chile's Mining Council and the National Mining Society (SONAMI), it also participates in discussions about public policy, laws and regulation that may affect its business.

In 2013, the Mining Group's companies certified their Crime Prevention Model for the second consecutive year.

## STAKEHOLDER RELATIONS

The Group relates with different stakeholders at the local, national and international levels. It seeks to understand their needs, prevent conflicts and build mutually beneficial relations based on trust that support its social licence to operate and grow.

### MAIN STAKEHOLDERS



#### Investors

The Group maintains direct communications with its investors, providing them with information through vehicles that include meetings and roadshows, its website, its Financial Statements and Annual Report, the Carbon Disclosure Project and the Water Disclosure Project.

FOR FURTHER INFORMATION, see [www.antofagasta.co.uk/investors.aspx](http://www.antofagasta.co.uk/investors.aspx).



#### Local communities

Good relations with communities and other local stakeholders are crucial for the Group's operation and growth. All its operations, therefore, have teams responsible for managing relations with local stakeholders.

(SEE PAGES 29 AND 30)



#### Clients

Most of the Group's sales are to industrial clients who refine or process copper. The Group's marketing team is responsible for building long-term relations with these clients. Approximately 75% of the Group's output goes to Asian markets.



#### Government and authorities

Changes in legislation and regulation can affect the Group's business. Antofagasta Minerals, therefore, works with mining industry organisations to establish dialogue with the government on public policy, legislation and regulation relating to its business.



#### Workers

The Group directly employs some 4,200 people. It carries out an annual Work Climate Study in order to receive feedback about worker satisfaction and identify areas for improvement.

(SEE PAGE 23)



#### Contractors

Around 14,400 contractors' workers provide services for Antofagasta Minerals' operations and projects. The average ratio of its own workers to those of contractors is 1:3. It, therefore, seeks to build long-term relations with contractors, based on high performance standards.

(SEE PAGE 28)

In Chile, Antofagasta Minerals belongs to the Mining Council, the National Mining Society (SONAMI) and *Acción RSE*, an organisation that promotes corporate social responsibility. Internationally, it is a member of organisations that include the International Council on Mining and Metals (ICMM), BSR and the International Copper Association (ICA). Locally, its mining companies participate in initiatives such as CREO Antofagasta, *Región Fértil*, business associations and organisations that promote regional development.



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# SUSTAINABLE PERFORMANCE




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## **CHAPTER 03**

Workers and contractors  
Society and communities  
Environment

# FOCUS ON MOST MATERIAL ISSUES

After analysing the materiality of sustainability issues, Antofagasta Minerals decided to focus on those that are most material, defining the related risks, targets, its performance in 2013 and its challenges for 2014.

	RELATED RISKS <sup>1</sup>	TARGET	PERFORMANCE 2013	CHALLENGES 2014
<b>CORPORATE GOVERNANCE</b>	Operational and project development.	Ensure world-class sustainable development standards.	<b>Achieved<sup>2</sup></b> (📍SEE PAGE 16)	Close gaps detected during the process of admission to the ICM. (📍SEE PAGE14)  Define and implement a new corporate Charter of Values. (📍SEE PAGE 8)
 <b>WORKERS AND CONTRACTORS</b>	Safety and health.	Eliminate occurrence of fatal accidents.	<b>Not achieved<sup>3</sup></b> Two fatal accidents occurred, with the death of one worker at Los Pelambres and one at Centinela-Esperanza.	Achieve and maintain zero fatalities.  Implement 100% of the new safety and health model.
 <b>SOCIETY AND COMMUNITIES</b>	Community relations.	Strengthen relations with communities, ensuring social licence to operate and grow.	<b>Underway</b> A new relations model – <i>Somos Choapa</i> (We Are Choapa) – was designed for Los Pelambres.	Implement the <i>Somos Choapa</i> Plan in Los Pelambres.  Design and implement a plan of relations with the city of Antofagasta.
 <b>ENVIRONMENT</b>	Environmental management.	Avoid environmental impacts at operations and projects.	<b>Achieved</b> No incidents with an environmental impact occurred.	Zero incidents with environmental impact.
	Political, legal and regulatory.	Comply with Environmental Approval Resolutions (RCAs). <sup>4</sup>	<b>Achieved</b> 99% compliance with commitments in RCAs.	100% compliance with commitments in RCAs and with communities.

<sup>1</sup> See Annual Report 2013, page 26.

<sup>2</sup> The admission process began in the last quarter of 2013 and concluded in May 2014 with the Group's acceptance for membership.

<sup>3</sup> A third fatal accident occurred in March 2014.

<sup>4</sup> An Environmental Approval Resolution is the official document issued by the Environmental Evaluation Service once a project's evaluation has been completed. It indicates the specific conditions under which the project has been approved and compliance with these conditions is a legal obligation.



# LABOUR RELATIONS

*Based on respect and dialogue*

The Group has been characterised by very good labour relations with both its own workers and its contractors. Sound labour relations, grounded in trust, permanent dialogue and quality of life at the camps and installations of the Group's operations, are conducive to the achievement of its strategic objectives and help prevent conflicts and ensure operational continuity.

## RELATIONS WITH UNIONS

The Group has eight unions: two at Los Pelambres, four at Minera Centinela, one at Michilla and one at Antucoya (which will start operations in 2015). An average 53% of the Group's workers belong to a union.

In 2014, the collective contracts at Los Pelambres, Centinela-Esperanza and Michilla expire and, as of 30 July 2014, the first two companies had successfully concluded collective bargaining processes.

Good labour relations are reflected in the fact that none of the operations of Antofagasta Minerals have experienced labour conflicts since starting their activities.

In 2013, the Group drew up guidelines for labour relations that seek to "develop visions and objectives shared with workers and unions on the basis of relations of trust, collaboration and shared interests through which it is possible to reach agreements in situations of a common vision and facilitate understanding when interests diverge".

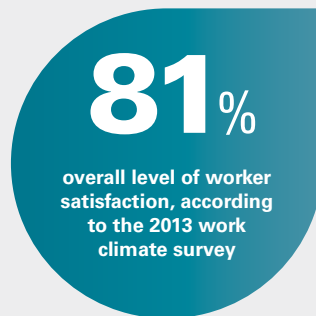
## COMMUNICATION AND DIALOGUE

Internal communications were reinforced in 2013 through face-to-face meetings, the intranets of the respective companies, newsletters, bulletin boards and social events.

In 2013, 95% of workers answered the annual work climate survey,

which showed an overall 81% level satisfaction. This survey is designed to identify the strengths and weaknesses of each area across 11 dimensions. The results for each area are used to design specific plans to close gaps. The worst evaluated dimension was recognition (with a 66% satisfaction rating whereas this should ideally reach over 80%) and this, therefore, became a focus of human resources management for 2014.

Workers can communicate concerns directly to their supervisors or do so confidentially through the procedure for reporting irregularities and infringements of corporate ethics.



## QUALITY OF WORKING LIFE

Antofagasta Minerals attaches great importance to ensuring a good quality of life for its workers and contractors. Its companies, therefore, invest constantly in improving the infrastructure of camps and the services these provide, including programmes to foster a healthy life style and, in canteens, a healthy menu. Contractors' workers at operations have access to the same accommodation and meal services as the Group's own workers.



## CHALLENGES

- Maintain the Group's track record of excellence in labour relations.
- Implement action plans based on the 2013 survey to improve the work climate.

# SAFETY AND HEALTH

*Prevent risks to care for lives*

Risks to workers' safety and health are intrinsic to mining processes. For the Mining Group, the safety and health of all those who work at its companies is its paramount value. It, therefore, focuses on strengthening its culture of risk management, with a commitment to eliminating fatalities at all its operations and, in this way, caring for the lives of all its workers.

## SAFETY RESULTS

In 2013, the Group did not achieve its target of zero fatalities. Two people lost their lives as a result of one accident at Los Pelambres and another at Centinela-Esperanza. In March 2014, it was further saddened by another death, that of a contractor's worker at this latter operation.

In response, Antofagasta Minerals has reinforced implementation of its strategic model for managing safety and health risks which focuses on eliminating fatalities. In line with this, reporting of high-potential quasi-accidents allows it to preventively address risks before they cause harm. Similarly, the Mining Group is implementing across all its operations a process of risk prioritisation and definition of non-negotiable critical controls, a methodology that draws on best industry practices.

As regards indicators of safety performance, the graph shows the Total Frequency Index, TFI (which includes accidents with and without lost time) and the Frequency Index, FI (including only lost time accidents). Despite an 18% increase in its workforce in 2012-2013, the Group continued to reduce the number of accidents, achieving a TFI of 3.9 and an FI of 1.1 in 2013. These figures are for the total of its own workers and those of contractors.

## MANAGEMENT OF SAFETY RISKS

In 2013, the Corporate Safety and Health Area was strengthened in order to standardise best practices and ensure strategies and management systems that are consistent across operations and projects. To this end, a model is being implemented that applies to both the Group's own workers and those of contractors.

Its four pillars are:

- 1 Management of safety risks
- 2 Management of health risks
- 3 Reporting criteria
- 4 Leadership.

The key aspects of the model are the identification of risks with the potential to cause a fatal accident and the reporting of quasi-accidents.

All operations have in place a management system that is

aligned with the OHSAS 18001 standard. Safety managers report functionally to the Corporate Safety and Health Area as well as submitting performance reports to their company's general manager who, in turn, reports weekly to the Vice-President of Operations of Antofagasta Minerals. Performance is also reported to the Board of Directors on a monthly basis.

In addition, safety performance is one of the factors taken into account in the bonuses received by senior management and workers.

Contractors must also comply with the strategic model for managing safety and health risks and this is enforced through a plan of internal audits.

## SAFETY OF THE INSTALLATIONS

The installations of the Group's companies are built to withstand extreme weather conditions and earthquakes. Similarly, the physical

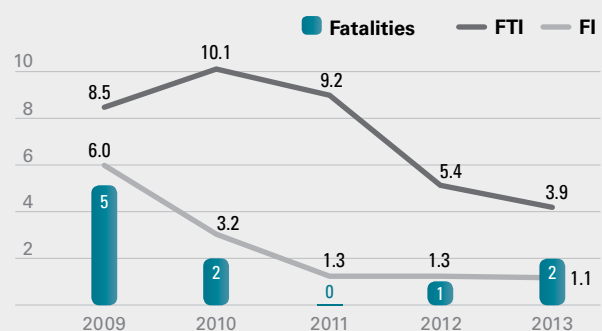
## SAFETY

### TOTAL FREQUENCY INDEX (AIFR)

N° of accidents with and without lost time per million hours worked.

### TOTAL FREQUENCY INDEX (LTIFR)

N° of lost time accidents per million hours worked.





and chemical stability of tailings dams and other installations must comply with the strict requirements established in their environmental permits and this is audited regularly. The Group's companies also have in place operational procedures for the control of emergencies that include both internal drills and drills in coordination with the relevant public services and local organisations.

### A CULTURE OF SAFETY

In order to achieve the Group's targets, it is crucial to ensure that workers are properly aware of safety risks, training them in their identification, prevention, mitigation and management. Its operations hold regular meetings to review the incidents that have occurred and identify their causes as well as to share best practices and the lessons learned.

### MANAGEMENT OF HEALTH RISKS

Occupational health plans seek to avoid workers' exposure to agents that could affect their health and cause professional illnesses. Incentives for healthy conduct and to encourage them to report events that could affect their health are another of the Mining Group's priorities in this field. In addition, all Antofagasta Minerals' workers are encouraged to use the complete annual check-ups that are fully financed by the company.

The design of work stations and equipment takes into account workers' health and wellbeing. Mining camps have gyms and sports infrastructure for the use of the Group's own workers and those of contractors and their canteens offer a choice of healthy menus.

### CHALLENGES

- In each operation, identify the five events that pose a fatality risk, using the new strategic model for managing safety and health risks; for example, rock falls, contact with electricity, work at altitude, collisions, etc.
- In each of the mining companies and projects, prepare a baseline of the general health of all workers that reduces exposure to agents with an effect on health.

	Lost Time Injury Frequency Rate LTIFR						All Injury Frequency Rate AIFR						Number of Fatalities					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
<b>Mining industry*</b>	5.8	4.0	3.6	3.1	2.8	2.1	n/a	n/a	n/a	n/a	n/a	n/a	43	35	45	26	25	25
<b>Mining Council**</b>	3.2	2.3	1.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	8	8	n/a	n/a	n/a
<b>Los Pelambres</b>	1.3	1.3	0.9	1.8	0.7	1.3	6.6	3.6	2.6	4.6	2.3	3.5	—	4	2	—	—	1
<b>Centinela-El Tesoro</b>	2.0	1.7	0.5	2.1	0.7	0.4	6.6	6.0	4.6	5.6	2.7	1.5	—	1	—	—	—	—
<b>Michilla</b>	4.4	3.2	4.2	3.1	3.1	1.8	12.1	9.9	8.8	6.7	7.3	5.2	—	—	—	—	1	—
<b>Centinela-Esperanza</b>	1.6	1.5	1.6	2.4	1.0	1.2	8.2	15.0	14.7	16.8	9.8	5.1	—	—	—	—	—	1
<b>AMSA (including exploration and projects)</b>	5.4	6.0	3.2	1.3	1.8	0.9	13.1	23.0	13.6	24.9	9.0	4.9	1	—	—	—	—	—
<b>MINING INDUSTRY</b>	<b>2.2</b>	<b>1.7</b>	<b>1.6</b>	<b>2.1</b>	<b>1.3</b>	—	<b>8.2</b>	<b>8.5</b>	<b>10.1</b>	<b>9.2</b>	<b>5.4</b>	—	<b>1</b>	<b>5</b>	<b>2</b>	—	<b>1</b>	<b>2</b>

Figures include own workers and contractors' workers.

FI : N° of lost time accidents during the year per million hours worked.

TFI : N° of accidents with and without lost time during the year per million hours worked.

\* Source: Chile's National Geology and Mining Service (SERNAGEOMIN).

\*\* Figures from Chile's Mining Council, a business association that represents a number of large mining companies with operations in the country.

n/a: Not available. The Mining Council has not published comparable statistics for 2012 and 2013.

# DEVELOPMENT

*Attracting, developing and retaining talent*

Antofagasta Minerals seeks to be a preferred employer and, to this end, invests in its workers' development and the attraction and retention of new talent, thereby helping to expand the supply of qualified personnel available to the industry. It wants to help its workers realise their full potential, without discriminating and seeking to incorporate women into the mining industry.

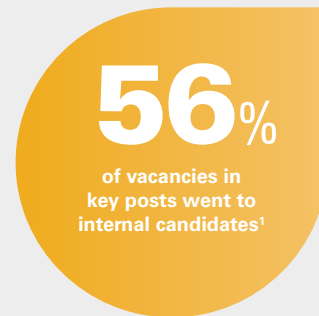
## COMMON IDENTITY

The Group is implementing a series of initiatives that seek to strengthen a common identity and standardise best practices across all its operations. In 2013, through a participative process, six corporate values were defined that reflect and project the values defined with the companies and serve to guide the key processes of the business strategy. Three-quarters of all the Group's workers participated in the definition of these values.

In 2013, the system of performance management for supervisors and

executives was standardised in order to increase its transparency and objectiveness and facilitate comparison across all the Group. The aim of this system, which provides clarity about the performance expected of each worker, is to put greater emphasis on merit and internal mobility whilst also aligning workers' targets with the Group's objectives.

In 2013, the Group began to emphasise internal mobility, particularly between operations. During the year, 56% of key vacancies were filled internally.



A single model of talent management and succession plans for key positions was also designed and implemented in 2013.

In 2014, progress has been achieved on increasing awareness of the corporate values and on the implementation of a Leadership Model based on:

- ▶ **Respect for others**
- ▶ **Responsibility for safety and health**
- ▶ **Commitment to sustainability**
- ▶ **Excellence in our daily performance**
- ▶ **Innovation as a permanent practice**
- ▶ **We are visionary**



<sup>1</sup> Internal mobility between 1 July 2013 and 30 April 2014.



## TRAINING AND DEVELOPMENT

On average, each of the Group's workers received 112 hours of training in 2013. The largest drop was in Centinela-Esperanza, followed by Los Pelambres, while in Centinela-El Tesoro and Michilla, there was an increase.

The principal training and development initiatives implemented included:

### ► Apprentices programme:

Projects and operations give priority to hiring local workers. In many cases, however, they lack the required skills and the Group's companies have, therefore, made a special effort to train apprentices in mining trades. This has been particularly successful at Centinela-Esperanza where many workers were recruited after completing the apprentices programme. In addition, Minera Centinela has offered special courses for women from neighbouring communities, some of whom now work there.

► **Young professionals:** This initiative is designed to recruit young professionals with the potential to become future leaders and to develop their capabilities by giving them a real post in the organisation and offering them internships within the same company or in other companies. Since this initiative was launched in 2010, 114 young professionals have been incorporated into the programme of whom 24% are women.

► **Training of supervisors:** In 2014, a pilot programme will be designed and implemented to train heads of units in order to develop the capabilities and knowledge required to exercise a supervisory role.

### ► Participation in industry initiative:

The Group actively supports efforts to expand the supply of qualified

workers available to the mining industry and, through Chile's Mining Council, collaborates in initiatives such as the Mining Skills Council. This industry initiative seeks to address in a joint and coordinated manner the need to better tailor the supply of training, in qualitative as well as quantitative terms, to demand in the mining labour market.



## INCORPORATION OF WOMEN

Diversity as regards gender is a challenge in many sectors of the economy, including mining. Women account for only 6% of the Chilean mining industry's labour force. At Antofagasta Minerals, their participation is above the Chilean average for the sector but much remains to be done. In 2013, 8% of its workers and 14% of its supervisors were women.

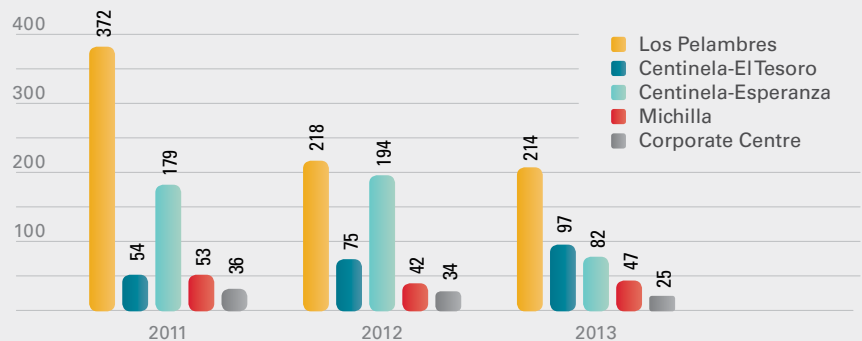
In March 2014, Vivian Blanlot joined the company's Board of Directors.

## CHALLENGES

- In 2014, efforts will focus on strengthening the Mining Group's culture and identity, based on its six values, and on completing implementation of the new human resources management model.

## TRAINING

Hours of training per capita (annual average for own workers)<sup>1</sup>



<sup>1</sup> Does not include Antucoya.

# MANAGEMENT OF CONTRACTORS

## *Transferring best practices*

In Chile, large mining companies have opted to outsource specialised services that are not part of their core business. Contractors' workers account for over 74%<sup>1</sup> of the Group's workforce and it, therefore, seeks to establish long-term relations with them and to transfer best practices to them.

### CONTRACTORS

The number of contractors employed by the Group varies from year to year, depending principally on the scale of projects under construction.

In 2013, 14,424 contractors' workers were working for the Group, including contractors providing services for both operations and projects. The increase of 3,119 people as compared to 2012 was explained principally by temporary personnel required for construction of the Antucoya project.

Contractors can be divided into those who provide temporary services related to the construction of a mine and those employed at operations (who may provide permanent services such as catering, transport, accommodation management and maintenance).

### ALIGNING CONTRACTORS WITH THE BUSINESS

Antofagasta Minerals requires that contractors guarantee minimum standards for their workers. These

include safety and health conditions and a minimum wage approximately 70% above the legal minimum as well as compliance with social security laws, which is enforced through audits.

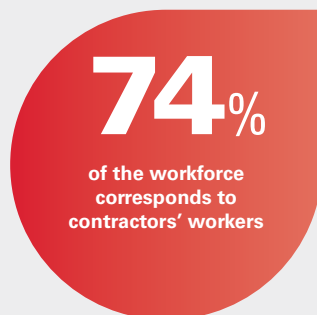
Like the Group's own workers, contractors must adhere to the corporate Code of Ethics. In 2013, a special effort was made to ensure compliance with common standards among the contractors who provide services to the Group's different business units. This included safety and health, labour relations, management of human resources and environmental performance. During the year, the foundations were laid for implementation of an

integral contractor management model which also involves the Corporate Procurement Area and the active participation of other areas such as Safety and Occupational Health as well as Human Resources. Progress was also achieved in the implementation of a single system of accreditation and registration of contractors which increases the efficiency of contract management.

The four areas of the Group which regulate collaboration with suppliers in different fields are standardising their requirements and procedures across the different operations in order to achieve greater efficiency in the management of suppliers.

### CHALLENGES

- Share a management model based on values with contractors and facilitate the transfer of best practices, particularly as regards management of human resources and labour relations.
- Strengthen the capabilities of the professionals responsible for administering contracts with contractors.



<sup>1</sup> Does not include Antucoya since this is at the project stage.





# ECONOMIC DEVELOPMENT

*An opportunity for growth of all the players*

Today's mining industry is a platform for the economic development of the areas where it operates. The Group's companies play a very important role in the economy of the Coquimbo Region and increasingly also the Antofagasta Region. Access to jobs and opportunities for entrepreneurship are highly valued by local communities as a factor in mutually beneficial relations with the company.

## THE GROUP'S STRATEGY

It seeks to contribute social value through job creation, local entrepreneurship, training and support for education as well as by strengthening local infrastructure.



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

Antofagasta Minerals fosters local employment, seeking to provide opportunities for inhabitants of the areas where it has its operations, doing so particularly through its apprentices programmes, training for employability and opportunities for local women.

Similarly, it seeks to boost the regional economy through procurement and the hiring of regional suppliers. In 2013, local companies participated in supplier development programmes implemented by the Group's companies.

Los Pelambres progressed towards certification under the Chilean government's *Sello Pro Pyme* (Pro SME Seal) which ensures that smaller suppliers receive payment within no more than 30 days.

## STRATEGIC ALLIES

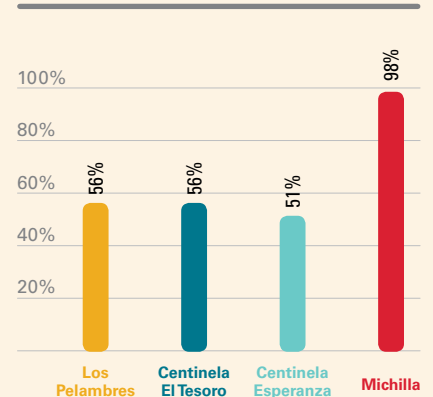
The establishment of strategic alliances with organisations external to the Group's companies is a key mechanism for the harmonious development of the Regions where they have their operations. In line with this, Los Pelambres designed the *Somos Choapa* (We Are Choapa) project as well as participating in CREO Antofagasta, a plan for this city's integral development, and in the *Región Fértil* (Fertile Region) programme.

## CHALLENGES

- Achieve greater knowledge of the positive and negative impacts of the Group's activities.

## LOCAL EMPLOYMENT

Own workers in 2013



<sup>1</sup> Antofagasta Minerals defines local workers as those who live in the Region where they work while local suppliers are those with offices in the Coquimbo or Antofagasta Regions.



## CONTRIBUTION TO THE COUNTRY



### Exports

12.3% of Chile's mining exports.



### Tax payments

US\$ 604.4 million in taxes paid in Chile.<sup>1</sup>

The Group's workers paid US\$ 44.1 million in taxes.<sup>2</sup> On average, each paid US\$ 7,680 in 2013.



### Sales

US\$ 5,654.4 million in sales, equivalent to all the country's fruit exports and 1.6 times its salmon exports.



### Employment

Two of each 1,000 Chileans works at Antofagasta Minerals.<sup>3</sup>

In 2013, the Group employed a total of 18,652 people, including its own and contractors' workers.

## CONTRIBUTION TO THE ANTOFAGASTA AND COQUIMBO REGIONS



### Percentage of regional exports<sup>4</sup>

18% of the total exports of the Antofagasta and Coquimbo Regions.



### Contribution to regional GDP<sup>5</sup>

11% of the GDP of the Antofagasta and Coquimbo Regions.



### Investment in the community

US\$ 26.6 million in projects in education, training, quality of life and promotion of economic activities.

<sup>1</sup> Includes corporate income tax, mining tax, royalty and withholding taxes.

<sup>2</sup> Calculated using the average wage of a worker of Antofagasta Minerals Group divided by the number of direct workers and multiplied by the applicable tax rate.

<sup>3</sup> Calculated using the total workforce of Antofagasta Minerals, including its own and contractors' workers, and Chile's total labour force as reported by the National Statistics Institute (INE).

<sup>4</sup> Calculated using the total exports of Antofagasta Minerals (all products marketed by the Group are exported except for the 40% of molybdenum sold in Chile) and the sum of exports of the Antofagasta and Coquimbo Regions in 2012. At the date of completing this Report, the official figure for 2013 was not available.

<sup>5</sup> Calculated using the Economic Value Generated by Antofagasta Minerals in 2013 and the sum of the GDP of the Antofagasta and Coquimbo Regions in 2012. At the date of completing this Report, the official figure for 2013 was not available.



The Group's objective is to create value for its shareholders and the other stakeholders with whom it relates, contributing to sustainable development through its products, operations and investments as well as through the benefits generated for local communities and society.

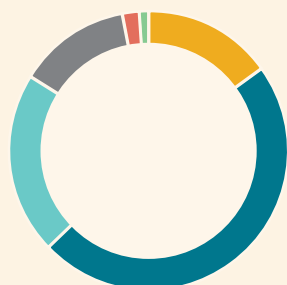
## DISTRIBUTION OF VALUE GENERATED

US\$ million

	2012 <sup>1</sup>	2013
<b>ECONOMIC VALUE GENERATED</b>		
SALES REVENUES (includes operating income and sales of assets)	6,428.4	5,654.4
INCOME FROM INVESTMENTS (includes only investments)	18.8	11.1
OPERATING COSTS (includes supplies, materials, contractors, depreciation, amortisation, administrative costs, exploration costs and others)	-2,838.6	-2,700.5
	<b>3,608.6</b>	<b>2,965.0</b>
<b>ECONOMIC VALUE DISTRIBUTED</b>		
WAGES AND BENEFITS (includes "second category" personal income tax)	-358.7	-389.2
INVESTMENTS IN THE COMMUNITY (includes donations, community initiatives and contributions through the Fundación Minera Los Pelambres)	-25.5	-26.6
PAYMENTS TO PROVIDERS OF CAPITAL (interest expenses)	-85.6	-61.8
PAYMENTS TO THE STATE (includes income tax, mining tax, royalty and withholding taxes)	-702.9	-604.4
PAYMENTS TO SHAREHOLDERS (dividends)	-1,140.2	-1,427.1
	<b>-2,312.9</b>	<b>-2,509.1</b>
<b>ECONOMIC VALUE RETAINED (devoted principally to reinvestment)</b>	<b>1,295.7</b>	<b>455.9</b>

<sup>1</sup> The figures for 2012 differ from those published in the previous year's report because the present table includes only Antofagasta Minerals whereas in previous reports the Aguas de Antofagasta and Ferrocarril de Antofagasta subsidiaries were also included.

2013



Economic value retained	15%
Payments to shareholders	48%
Payments to the State	21%
Wages and benefits	13%
Payments to suppliers	2%
Investment in the community	1%

# COMMUNITY RELATIONS

## *Building trust and mutual benefit*

In Chile, there is a climate of distrust of private companies as well as growing opposition to energy and mining projects that often includes legal action. The Group aspires to develop relations of trust and mutual benefit with the communities to which it relates through mechanisms that include dialogue and fulfilment of its commitments.

Mining operations affect neighbouring communities, generating not only impacts but also opportunities. This is particularly important in the case of Los Pelambres which is located in a valley that is also home to more than 40 communities.

Respect and sustainability are two of the Group's six values and reflect its commitment to engaging in dialogue with the community and other stakeholders in a bid to respond to their concerns and incorporate their views into its business plans whilst also fostering its workers' and contractors' respect for the culture, customs and values of local communities.

### ENGAGING

In line with Antofagasta Minerals' social strategy, its mining companies



maintain permanent relations with neighbouring communities and other local stakeholders. To this end, each company has a relations plan that includes formal and informal channels of communication such as meetings to provide information, working groups, written media and radios and visits to the mine site.

In 2013, Los Pelambres developed a new relations model known as *Somos Choapa, Valle Sustentable* (We Are Choapa, A Sustainable Valley).

The Group's companies in the Antofagasta Region participate in local development alliances such as CREO Antofagasta, *Región Fertil* and the Association of Industrialists of Antofagasta and Mejillones.

### FEEDBACK

Each company has a formal mechanism for receiving and investigating complaints from the community and other external players about the impacts of the mining activity or any of its contractors. In 2013, 100% of these complaints were responded to within the timeframe established by the Procedure for Management of External Complaints. Centinela and Michilla worked together to increase awareness of their mechanisms for obtaining feedback and receiving complaints and concerns, organising door-to-door visits and meetings with different stakeholders. Thanks to these efforts, 15 people used these mechanisms to register a complaint in 2013, up from two in 2012.<sup>1</sup>

A register of compliance with commitments was also created to record the promises made to stakeholders by authorised company representatives and ensure their fulfilment within the established timeframe. In 2013, both Centinela and Michilla fulfilled 100% of their

### SOMOS CHOAPA

In 2013, Los Pelambres began work on the design of a relations model, *Somos Choapa* (We Are Choapa), with public and private participation. Its aim is to foster new forms of participation and opportunities to build, together with the community, a path for the sustainable development of the Choapa Province.

This process seeks to jointly develop a common vision that will serve to guide public and private investment, improving its tailoring to the area's needs. To this end, it seeks to establish a working alliance that includes municipal governments and other public sector players in the Region (or present in the area) as well as the communities.

<sup>1</sup> Does not include Los Pelambres.



commitments while, in the case of Los Pelambres, the figure reached 97%. Each operation also carries out annual perceptions and reputation studies through which it evaluates the opinions of workers, contractors, neighbours and local leaders about its environmental and social performance, economic contribution, communications and trustworthiness. In 2013, the survey covered 2,500 people in places close to the Group's operations and authorities and leaders of the Antofagasta and Coquimbo Regions as well as workers.

The Group has in place a management system called Social Performance Evaluation (EDES). It forms part of the performance agreement that each operation has with the Corporate Centre and includes a set of key performance indicators related to the three dimensions of the Group's social management strategy: responsible conduct, risk management and development of human capital. The system uses the results of the feedback tools discussed above for monitoring purposes and to provide lessons about the prevention and mitigation of possible situations of conflict with communities.

#### IMPACT MANAGEMENT

Antofagasta Minerals' social strategy seeks to prevent social impacts in local communities. At the operations stage, these impacts relate principally to truck traffic and each company permanently implements preventive and educational road safety programmes. For example, Los Pelambres has control points, its trucks are equipped with GPS and it has in place programmes for management of noise and particulate matter. All the different companies also participate actively in different local and regional safety committees and activities.

Projects at the construction stage have social prevention plans that take into account the possible impacts of an influx of external workers.

The Group's companies have risk management plans through which to effectively address possible undesired events that would affect the social context in which they operate.

In 2013, no significant social incidents occurred that had the potential to affect people's safety, public order, operational continuity or the company's reputation. There was a protest by residents of Cuncumén when weather conditions caused particulate matter to peak but this was resolved in a matter of hours through dialogue and specific commitments on the part of Los Pelambres to prevent a recurrence.

#### CHALLENGES

- Implement the new *Somos Choapa* relations model at Los Pelambres.
- Strengthen the public identity of Antofagasta Minerals Group, building on the relations and reputational capital of its operations.



# COMMUNITY INVESTMENT

*Greater participation and better results*

The company's investment in the community is one of the tools through which it seeks to generate mutual benefit by sharing with communities the opportunities afforded by mining activity. The Group seeks to make participative and sustainable investments in the community to the benefit of both its companies' social licence and local development.

In the case of investment in the community, the Mining Group's social strategy stipulates that it focus on projects which enhance quality of life in nearby communities and on the development of human capital through education and training, offering opportunities for incorporation into the mining industry and, where possible, strengthening other economic sectors.

In 2013, the Group devoted US\$ 26.6 million to community investment projects and the different companies implemented a total of more than 135 projects that benefited over 6,000 people in neighbouring communities. In addition, progress was achieved in the implementation of a quarterly community investment report.

➤ SEE PAGE 18



Investment in the local community has long-term benefits that will endure beyond the mining activity.

**US\$ 26.6 million**

invested in the community in 2013 in projects in education, training, quality of life and the promotion of economic activities through the Group's different companies and Fundación Minera Los Pelambres

## MAIN INVESTMENTS IN 2013



- **HEALTH CENTRE FOR ALTO CHOAPA:** A contribution of US\$ 5 million for the construction of a Family Health Centre (CESFAM) in Chillepin, operated by the national health service, to attend the inhabitants of the upper valley of the River Choapa.



- **DRINKING WATER FOR SIERRA GORDA:** A contribution of US\$ 2.5 million for the construction of two drinking water tanks for Sierra Gorda and Baquedano that will significantly improve the quality and reliability of supply.



- **DRINKING WATER FOR CALETA MICHILLA:** A contribution of US\$ 500,000 (a quarter of the total cost) to provide drinking water for the inhabitants of Caleta Michilla who previously depended on deliveries by a cistern truck.



- **FREE WI-FI FOR SIERRA GORDA:** An investment of US\$ 200,000 to provide free Wi-Fi in the principal public spaces of Sierra Gorda (town centre, health centre, school, fire station and library).



Antofagasta Minerals develops projects that seek to improve the quality of life and welfare of the local community.

The long-term approach adopted by Antofagasta Minerals' companies also includes measures to achieve short-term improvements in the community's quality of life. One example of such measures is the *Juntos Crecemos Más* (Together We Grow More) programme of Los Pelambres which makes available a fund to which the community can present bids for financing for joint initiatives to improve quality of life and local human capital.

The Group seeks to contribute to the development of the local community and, principally, its new generations, through access to high-quality education. In 2013, it continued to implement initiatives to facilitate the access of young people from neighbouring communities to secondary and higher education through the award of scholarships.

Los Pelambres continued to implement its Quality of Education Management Programme in three schools in the Choapa Valley. Similarly, Minera Centinela contributed to education through donations to schools and students in

Sierra Gorda and Baquedano as well as through alliances with the Region's universities and secondary schools.

The Group recognises the importance of the development of capabilities and has, therefore, historically made contributions and investments in this field. An example of this is the apprentices programme implemented by Centinela-Esperanza, launched in 2008, which provides training for people from the local community. Los Pelambres has also made significant contributions in this field, either as a company or through its foundation, *Fundación Minera Los Pelambres*.

In 2013, Centinela-El Tesoro in alliance with the Sierra Gorda municipal government implemented a skills development programme to facilitate insertion of the town's young people into the labour market.

### PROMOTION OF OTHER ECONOMIC ACTIVITIES

In 2013, Los Pelambres continued to provide technical assistance to over 200 small farmers. In addition, through *Fundación Minera Los Pelambres*, it continued to implement projects related to the economic development of the Choapa Valley.

Antofagasta Minerals has also supported cultural activities. One of the most important initiatives of this type in 2013 was the staging of the *La Tirana* musical in the old Chacabuco nitrates office as well as in Mejillones and Antofagasta. Los Pelambres also sponsored a tour by the ballet company of Santiago's Municipal Theatre which attracted an audience of over 17,000 in the Coquimbo Region. The cultural programme of the *Centro Andrónico Luksic* in the town of Los Vilos is also highly valued in the area.



## CHALLENGES

- Complete preparation of guidelines for relations with indigenous peoples, based on ILO Convention 169 and on the ICMM's statement of principles on indigenous peoples and mining.
- Design a plan to coordinate the contributions and communications of the Group's operations and projects in the Antofagasta Region.
- Perfect selection processes for the community investment initiatives that the Group supports in order to ensure they are sustainable in the medium and long term and reflect stakeholders' priorities.

# ENVIRONMENTAL CONTEXT

In their construction, operation and closure, mines require important amounts of energy and water, produce waste and can affect the quality of natural resources such as water, the air, biodiversity and land use. Antofagasta Minerals seeks constantly to mitigate its environmental impacts through the efficient use of resources, guaranteeing access to them and, when opportunities arise, adding value for its stakeholders.

## ENVIRONMENTAL MANAGEMENT MODEL

Antofagasta Minerals' environmental strategy focuses on using resources efficiently, controlling impacts and adding environmental value. Its management in this field is based on identification of risks and the monitoring of control mechanisms. It measures its performance using indicators included in the Environmental Performance Evaluation (EDA) tool introduced in 2010 (SEE PAGE 18). This approach helps to ensure permanent management of those environmental issues that are critical for the business through compliance with regulation and to maintain good relations with stakeholders.

The Group has identified seven critical issues for its environmental management: water, air, biodiversity, climate change, waste, heritage and land use. For each of these, it has defined guidelines which were approved by the Executive Committee in 2012. In 2013, it drew up specific plans for the application of these guidelines in each operation, which is permanently monitored through the EDA.

## REGULATORY CONTEXT IN CHILE

The Framework Environmental Law (Law N° 20.417), passed in 2010, is Chile's main piece of environmental legislation.

The institutions charged with application and enforcement of this law are the Ministry of the Environment, which defines public policy on environmental matters; the Environmental Evaluation Service (SEA), which assesses projects' impact; and the Superintendency of the Environment, which supervises compliance with the law and companies' commitments. In addition, the law created the specialised system of Environmental Tribunals which report to the Supreme Court.

All projects must submit an Environmental Impact Study (EIA) if they could affect the health of people, the environment or the quantity or quality of renewable natural resources or significantly alter the landscape, the ways of life of human communities, monuments or places of natural heritage and/or areas set aside for conservation.

The SEA must determine whether baseline studies have properly identified a project's impacts and whether the proposed measures are sufficient to mitigate, compensate or repair these impacts. This evaluation process includes formal procedures for stakeholder consultation. No project can be implemented (or modified once approved) before formally obtaining environmental authorisation in the form of a legally binding document known as an Environmental Approval Resolution (RCA).







# AIR

## Proactive management of particulate matter

Mining operations have to move and stockpile large quantities of crushed rock, minerals, waste rock, gravel and sediments and do so using dirt roads. The activity, therefore, generates emissions of particulate matter that can affect air quality.

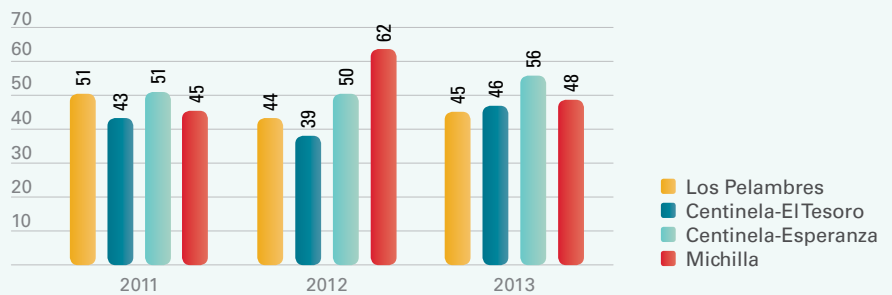
Avoidance of an impact on air quality in neighbouring communities as a result of emissions of particulate matter is a priority for the Group's operations and projects and, particularly Los Pelambres which is the operation closest to inhabited areas.

The available information indicates that the emissions of neither Centinela-Esperanza nor Centinela-El Tesoro are affecting air quality in the town of Sierra Gorda, close to which three other mining companies are also located. However, given that the Group plans to continue growing in this area, it made an important effort in 2013 to research the behaviour of particulate matter in this town. Thanks to this work, a predictive model was designed through which, based on the emissions associated with Centinela's mining plans and weather conditions, it is possible to predict air quality in Sierra Gorda 72 hours in advance. With this information, the operation will be able to adjust its mining plans to prevent episodes of saturation triggered by wind, temperature or other weather conditions.

### MEASUREMENT OF AIR QUALITY

Air quality is measured according to the average concentration of particulate matter. In those operations subject to an air quality norm, the concentration remained within legal limits.

**AVERAGE ANNUAL CONCENTRATION OF PM10<sup>1</sup>**  
Micrograms / m<sup>3</sup>



### PARTICIPATIVE MONITORING

Inhabitants of the area around Los Pelambres regularly express concern about air quality and, in 2013, the company undertook to implement 27 measures to control particulate matter. These have since been regularly monitored in order to verify compliance with these commitments. This initiative was the result of joint work with the Valle Alto community and requires its ongoing involvement in periodic verification on the ground of the correct application of these mitigation measures.

### CHALLENGES

- In order to reduce emissions in 2014, Centinela-Esperanza plans to encapsulate its conveyor belt and seal its stockpile with domes.



<sup>1</sup> PM Particulate matter.

# WATER

## Efficiency and use of seawater

In many parts of Chile, water is a scarce resource, a situation aggravated by rising demand, non-sustainable practices and climate change. Mining activities can affect both the availability of water and its quality due to the leaching of heavy metals and sulphates from waste dumps and tailings dams.

**45%**

of the water used by the Group in 2013 was seawater and 55% corresponded to sources on land

Antofagasta Minerals seeks to ensure that it does not affect the availability and quality of water in neighbouring communities and the ecosystems around its operations.

### RESPONSIBLE WITHDRAWAL

The Group's Environmental Guidelines establish its interest in promoting innovation and best water management practices including the use of seawater and water recycling. In line with this, it has pioneered the use of non-desalinated seawater. Its newest operation, Antucoya – still at the construction stage – will also use seawater while Los Pelambres and Centinela-El Tesoro use water from sources on land.

Since 2010, the group has participated in the Global Water Disclosure Project (WDP), seeking to maintain a high standard of transparency and providing investors, other companies and the authorities with information about the business's risks and opportunities as regards water scarcity issues.

### WATER EFFICIENCY

Water reuse rates depend on a range of factors and, in the Group's companies, vary between 71% and 85%, depending on the characteristics of each operation.

All its operations have Water Management Plans that include water accounting. In 2013, the different companies continued to progress in identifying opportunities for improving their water efficiency. Los Pelambres, for example, tested techniques for reducing evaporation from its tailings dam and for recovering water from tailings. Similarly, Centinela-Esperanza continued to improve operation of its tailings thickening system and the deposit's management.

### NON-DESALINATED SEAWATER IN NEW OPERATIONS

Michilla (1992) and Centinela-Esperanza (2010) were pioneers in the use of non-desalinated seawater for their processes. New projects like Antucoya (in the final phase of construction) and Óxidos Encuentro will also operate with seawater.

Centinela-Esperanza took on another unprecedented challenge for a project of its size and characteristics when it replaced the traditional tailings dam with technology for depositing thickened tailings. Its main advantages include greater stability, a lower risk of infiltration and less emissions of particulate matter from its surface.





**WATER QUALITY**

Los Pelambres and Centinela constantly monitor the quality and availability of water, reporting to the authority. Due to its proximity to agricultural communities, Los Pelambres is involved in local water management bodies, participating in working groups with the community through which participative monitoring takes place and in the River Choapa water committee. In addition, it collaborates with rural drinking water committees.

The Centinela-Esperanza desalination plant discharges brine into the sea

while the salt extracted by the Michilla plant is used to compact roads. The Group does not make other discharges.

Water loss at operations occurs in the form of water retained in tailings and evaporation from dams, tailings deposits and water storage ponds as well as through the evapotranspiration system (wood) at the Los Pelambres port.

Water from the operations' sewage treatment plants is used to control particulate matter or is recycled back into the process.

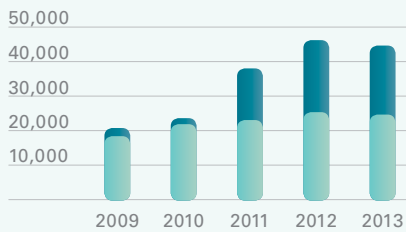
**CHALLENGES**

- Continue to seek opportunities to improve water reuse.
- Ensure that water availability and quality in neighbouring communities and nearby ecosystems are not affected in the short and long term.

**SEAWATER vs CONTINENTAL WATER**

Consumption ('000 m<sup>3</sup>)

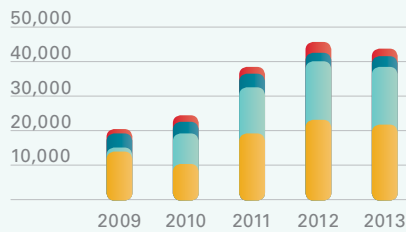
- Seawater
- Land sources



**WATER CONSUMPTION BY COMPANY**

Withdrawals ('000 m<sup>3</sup>)

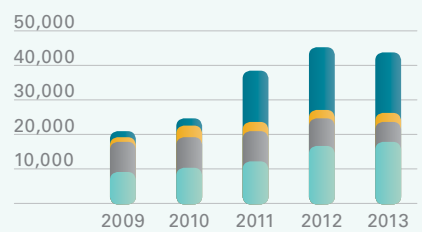
- Los Pelambres
- Centinela-El Tesoro
- Centinela-Esperanza
- Michilla



**PRINCIPAL WATER SOURCES**

Withdrawals ('000 m<sup>3</sup>)

- Seawater
- Groundwater
- Surface water
- Supplied by third parties



# ENERGY

## New renewable sources

The high price of energy affects the competitiveness of the Chilean mining industry while new power generation projects face strong opposition from local communities and NGOs. In this context, the Group has focused on the incorporation of renewable energies as a source of supply for its operations.

Energy, including fuels – principally diesel – and electricity, accounts for around 10% of the costs of Antofagasta Minerals. Ensuring supply at a competitive price is, therefore, key for the business’s economic sustainability. Despite its efforts to increase energy efficiency, the Group’s consumption will continue to increase, due principally to the drop in ore grades – which occurs when mines age – and the increasing depth of its pits and underground mines. This implies that longer distances have to be travelled to access the mineral and to reach dumps, thereby increasing fuel consumption, and that more mineral has to be processed in order to produce the same amount of copper. Moreover, while the option of operating with seawater, rather than using land sources, has many advantages, it means that water has to be pumped from the coast to the mine site, increasing electricity consumption. The Group constantly seeks new ways of increasing the efficiency of its electricity and fuel use and, in order to

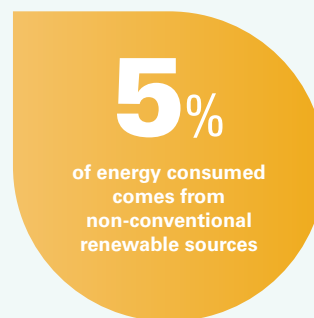
guide its analysis and studies, keeps a monthly record of its operations’ consumption.

### NON-CONVENTIONAL RENEWABLE ENERGIES

Antofagasta Minerals seeks to incorporate non-conventional renewable energies (ERNC) into its energy matrix and, since 2012, has measured the contribution of the kWh generated by alternative sources. In 2013, this reached 5% of total consumption, thanks to three initiatives: power generated at Los Pelambres by taking advantage of the braking system of its conveyor belts from the mine to the plant, a solar thermal plant at Centinela-El Tesoro and photovoltaic panels at Michilla’s centre for the management of industrial waste.

In 2014, Antofagasta Minerals took a 40% stake in the Alto Maipo project for the construction of two run-of-the-river hydroelectric plants with an installed capacity of 531 MW. As from

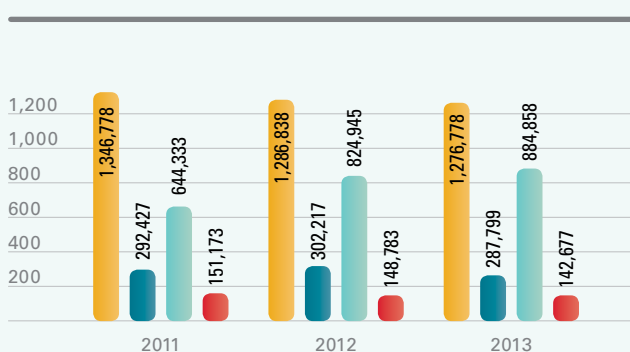
2015, Los Pelambres will consume approximately 30% of the project’s total output. In addition, as from mid-2014, around 20% of the power used by Los Pelambres will be supplied by the new El Arrayán wind farm (115 MW) and, as a result, renewable sources will account for the majority of its consumption.



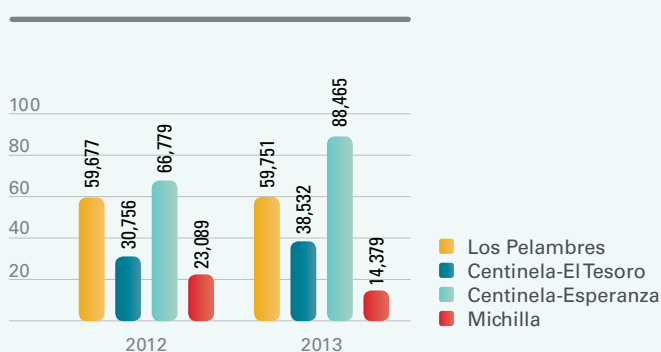
### CHALLENGES

- Continue to seek new sustainable supply alternatives for the operations.

**TOTAL ELECTRICITY CONSUMPTION**  
MWh



**TOTAL FUEL CONSUMPTION**  
m<sup>3</sup>





# CLIMATE CHANGE

## Understanding in order to manage

In Chile, the main effects of climate change will be higher temperatures and lower rainfall in the north and centre of the country. The country has voluntarily set two targets: a 20% reduction in carbon emissions by 2020 and that, by 2025, renewable sources will account for 20% of total power generation. Chile generates 0.2% of world carbon emissions.

In the Northern Interconnected Grid (SING) which supplies electricity to the Group's operations in northern Chile, generation is primarily coal-fired, resulting in a high level of greenhouse gas (GHG) emissions. Moreover, operating with seawater implies heavy power consumption, principally for transport of the water to the mine site, and this has an impact on indirect emissions.

### MANAGING EMISSIONS

In line with its environmental guidelines on climate change, Antofagasta Minerals has measured its carbon emissions using the Carbon Disclosure Project methodology since 2009. In 2013, the Group emitted 2,229,407 tonnes of Scope 1 and 2 CO<sub>2</sub>, corresponding principally to fuel and electricity consumption. The intensity of emissions reached 3.09 tonnes of CO<sub>2</sub>/tonne of copper produced, up by 5% on 2012. These figures were

verified by an external audit. In 2013, emissions increased at Centinela and Los Pelambres due to higher fuel and electricity consumption.

The Group recognises the risks and opportunities of climate change and the importance of measuring, mitigating and reducing its GHG emissions. Since 2012, Centinela-El Tesoro has complemented its electricity supply with a solar thermal plant that, in 2013, avoided emission of 6,831 tonnes of CO<sub>2</sub>e, equivalent to 2% of total emissions (Scopes 1 and 2) and 5.4% of Scope 1 emissions.

In 2013, the Group compensated for all the emissions of its corporate building (Scopes 1, 2 and 3) by planting 8,000 native trees in Chilean Patagonia which was equivalent to neutralising 4,000 tonnes of CO<sub>2</sub>.

### DENDROCHRONOLOGICAL STUDY

The increase in extreme weather events such as recurring droughts in different regions of the world and the progressive reduction of water resources in arid and semi-arid areas will have repercussions for all the activities that depend of these resources.

In order to better understand the phenomenon and how it may affect the Group, a study was carried out at Los Pelambres to reconstruct climatic variables (water flow and rainfall) based on the growth rings of the area's endemic species. Using this information, it will be possible to estimate the future behaviour of these variables and plan, manage and ensure the operation's sustainable development.

### GREENHOUSE GAS (GHG) EMISSIONS

Tonnes of CO<sub>2</sub> equivalent

	Scope 1 direct emissions <sup>1</sup>	Scope 2 indirect emissions <sup>2</sup>	Total emissions	Intensity of CO <sub>2</sub> emissions <sup>3</sup>
Los Pelambres	179,923	551,568	731,491	1.80
Centinela-El Tesoro	125,366	234,972	360,338	3.51
Michilla	60,293	115,711	176,004	4.60
Centinela-Esperanza	242,977	717,620	960,597	5.49
Corporate offices (Santiago and Londres)	142	835	997	-
<b>TOTAL</b>	<b>608,701</b>	<b>1,620,706</b>	<b>2,229,407</b>	<b>3.09</b>

<sup>1</sup> Scope 1: Fuel consumption, extinguishers, diesel used in back-up generating sets, refrigerants and decarbonation.

<sup>2</sup> Scope 2: Electricity.

<sup>3</sup> Defined as the sum of Scope 1 and 2 emissions divided by each company's output.

### CHALLENGES

- Continue to seek opportunities for developing renewable energies or incorporating them into the Group's matrix, thereby reducing GHG emissions.

# MINING WASTE

## Innovating in solutions

Mining operations generate significant quantities of waste rock, spent ore, leached minerals (gravel) and tailings. The amount of waste depends on the size of the operation and the type of mine (open pit or underground). Production methods and ore grades also affect the amount of material that has to be extracted in order to produce each unit of copper.

### RESPONSIBLE MANAGEMENT OF MINING WASTE

In mining, it is necessary to ensure the physical and chemical stability of mining waste and avoid contamination of both surface water courses and groundwater.

Mining waste comprises waste rock,<sup>1</sup> gravel and tailings. Michilla and Centinela-El Tesoro, which use leaching to produce copper, have authorised gravel dumps. Los Pelambres and Centinela-Esperanza, which use flotation, store their waste in a conventional dam and a thickened tailings deposit, respectively.

Los Pelambres has two tailings dams, designed to withstand earthquakes and other catastrophes and including all the safety features required to prevent contamination of water courses. The Los Quillayes dam, which has reached the closure stage, is preparing an environmental mitigation plan using phytostabilisation while the

El Mauro dam has been defined as having a useful life through to 2037.

In July 2013, a Supreme Court ruling ratified that El Mauro's design and operation fully comply with legal requirements and safety standards. As well as requesting that the corresponding technical authorities monitor the dam and prepare contingency plans for possible emergencies, the Supreme Court stipulated that Los Pelambres must "implement a permanent mechanism for control and monitoring of operation of the dam's installations". The company will, therefore, continue to implement and innovate in all the actions required to operate a facility of its characteristics in line with best industry practices and the legislation in force in Chile.

In 2013, the organic growth of the Group's operations was reflected in a 6% increase in the total volume of mining waste generated (waste rock, tailings and gravel).

### THICKENED TAILINGS

Antofagasta Minerals is recognized for its willingness to innovate. The technology for thickening tailings (with a higher content of total solids than traditional tailings) adopted by Centinela-Esperanza is a good example of this in that it was the first operation in the world to implement industrial-scale use of this technology. Replacement of a traditional tailings dam with a thickened tailings deposit has a number of environmental benefits since it uses less water, has less impact on the surrounding area and reduces dust emissions.

The new system's operation as designed has proved a challenge but the investments required to achieve this are being implemented.

Its advantages are, nonetheless, evident and the lessons learned will be applied in the Group's future projects in this geographic area.

### VOLUME OF MINING WASTE GENERATED 2013

Million tonnes

	Waste rock	Tailings	Gravel
<b>SULPHIDES DEPOSITS</b>			
Los Pelambres	69.88	63.53	n/a
Centinela-Esperanza	96.91	31.09	n/a
<b>OXIDES DEPOSITS</b>			
Centinela-El Tesoro	52.78	n/a	7.48
Michilla	12.14	n/a	9.08

n/a: Not applicable

<sup>1</sup> Waste rock: Material extracted that it is not economically attractive to process due to its low copper content.

### CHALLENGES

- Achieve optimum functioning of Centinela's thickened tailings deposit.



# CLOSURE OF OPERATIONS

## *Responsibility throughout the life cycle*

Antofagasta Minerals has closure plans for all its operations. These have been approved by Chile's National Geology and Mining Service (SERNAGEOMIN) and will have to be updated in 2014 when the regulatory five years will have passed since their previous update. To date, the Group has experience of only one closure – that of the old Los Quillayes tailings dam at Los Pelambres (a process that has yet to conclude) – and is preparing for the closure of Minera Michilla where, unless an extension is decided, exploitation will conclude in 2015.

### CLOSURE PLANNING

By law, Antofagasta Minerals must plan the closure of its operations long before this occurs so they can be decommissioned safely as regards both people and the environment. Chilean legislation requires that mining operations have closure plans approved by SERNAGEOMIN and that they are updated every five years.

In 2012, Chile's law on mine closures was modified. In the most important changes, this implied increased requirements as regards the physical-chemical stability of the infrastructure, dams and tailings deposits and financial provision for the closure process.

In November 2014, all the Group's operations will have to present updated closure plans.

This legal obligation is particularly relevant in the case of Michilla, the company closest to the end of its operations.

**5** CLOSURE PLANS

approved by the environmental authorities as of 31 December 2013

### LOS QUILLAYES TAILINGS DAM

In 2008, Los Pelambres signed an agreement with communities at the head of the Choapa Valley about closure of the Los Quillayes tailings dam. After a process of dialogue between the community and the company's technical areas, a solution was arrived at that included phytostabilisation of some areas of the dam. Phytostabilisation consists in the planting of vegetation on the surface of the tailings in order not only to permit recovery of the ecosystem that existed prior to the dam but also to neutralise and avoid emission of pollutants such as dust.

In a pilot stage, 30 hectares were planted with native trees, with results as of 2013 indicating that of the 11 species tried, nine had adapted well.

### CHALLENGES

- Update all closure plans in order to comply with the new legislation in force.



# OTHER ENVIRONMENTAL IMPACTS

## Identification, prevention and mitigation

Mining operations affect their surroundings and it is, therefore, important to be proactive in identifying potential impacts so as to prevent and mitigate them or, if no other alternative exists, compensate for them in order to avoid damage to the surrounding area and relations with communities and other stakeholders. The Group, therefore, seeks to prevent and manage potential impacts on historical heritage, natural habitats and local species of flora and fauna.

Antofagasta Minerals has a solid track record in the prevention and management of its impacts and seeks to generate environmental benefits in its areas of influence.

### BIODIVERSITY AND ECOSYSTEM SERVICES

Centinela-Esperanza, Michilla and Los Pelambres monitor biodiversity in the marine environment around their shipment areas (Caleta Michilla and Los Vilos) in order to ensure its protection.

Efforts to foster biodiversity focus on the Choapa Valley – where Los Pelambres is located – due to its greater natural richness. The mining company restored the Lake Conchalí wetland which had been used as an unauthorised rubbish dump, transforming it into a nature sanctuary. Recognised in 2000 as a wetland of global importance under the Ramsar Convention,<sup>1</sup> this park is now a well-known local attraction. The company has also implemented programmes for the protection of other wetlands and one of the few remaining Chilean palm woods, all of which are home to threatened species.

In 2013, Los Pelambres acquired the 746-hectare Santa Inés property, known for its great biodiversity value, in order to conserve it and provide

opportunities for scientific research and environmental education at the local and regional level. The property includes a unique area of relic Valdivian forest<sup>2</sup> as well as ravine woods and sclerophyllous vegetation.

### CULTURAL HERITAGE

Under its Environmental Guidelines, the Group promotes cultural heritage, financing research and its diffusion in order to foster its preservation. The Group's different companies have financed books to preserve memory about topics of great heritage value and have also created physical infrastructure that can be used for this purpose. Examples of the latter are the *Centro Andrónico Luksic Abaroa* and the exhibition hall soon to open in Monte Aranda to display local rural art and the archaeological remains found in the area of El Mauro.

### WASTE AND RECYCLING

The Group strives to reduce generation of industrial waste such as scrap, wood and cardboard. To this end, its companies have designed waste management plans and have facilities for recycling. Los Pelambres and Centinela-El Tesoro also have in place composting programmes for the domestic waste produced by their canteens and camps.

### EVALUATION OF ECOSYSTEM SERVICES

In 2012, the Group developed a new tool with which to calculate the biodiversity value of specific sites. It takes into account all the different forms of natural capital – biodiversity, mineral resources and others – and types of environmental impact and includes a quantitative assessment of the risks and opportunities of intervention. Through this tool, it is, therefore, possible to incorporate environmental value as one of the variables in a project's evaluation.

**0** INCIDENTS  
with an  
environmental  
impact in 2013

<sup>1</sup> The Ramsar Convention is a treaty for the protection of wetlands of international importance and the planning of their sustainable use. For further information, see <http://www.ramsar.org>.

<sup>2</sup> This relic forest corresponds to the remains of woodland split up during the last Ice Age which became isolated due to the effects of climate change and the encroachment of the desert and was preserved over time only because of the area's coastal mist.





In order to measure its recycling rate, the Group uses its EDA environmental management tool. (SEE PAGE 18)

The striking increase seen at Centinela-Esperanza is explained by an important campaign to recycle wood stockpiled in its waste yards since the project's construction while the drop at Centinela-El Tesoro was a natural process reflecting a reduction in waste generation and, therefore, of the material available for recycling.

At the corporate level, campaigns constantly take place to encourage workers to recycle batteries, paper, plastic bottles and electronic waste.

**LAND USE**

Under its Environmental Guidelines, the Group seeks to minimise its impact on land use. In 2013, it implemented a land use model for the Centinela Mining District, a new tool that will permit better projection

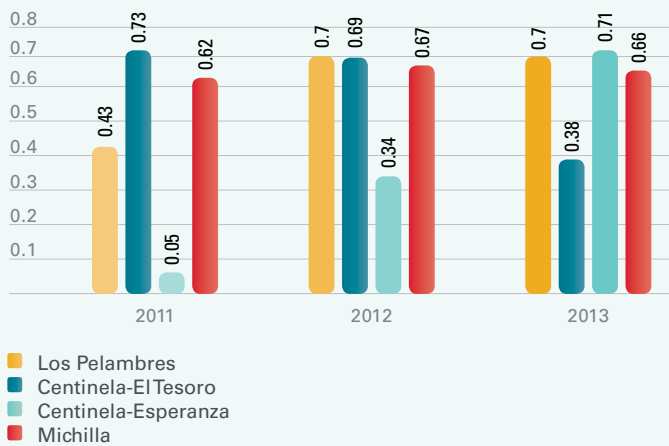
and planning of land use, taking into account both the present situation and future developments.

**INCIDENTS WITH ENVIRONMENTAL IMPACT**

In 2013, no operational incidents with an environmental impact occurred at the Group which has in place a corporate procedure for identifying, classifying and reporting such situations. Under this protocol, incidents that meet certain pre-established criteria of seriousness must be formally reported to the corresponding authorities.

**RECYCLING RATE**

Waste recycled as percentage of total waste generated



**CHALLENGES**

- Continue to meet the target of zero operational incidents with an environmental impact.
- Deepen implementation of the new tool for evaluation of ecosystems.



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# APPENDICES

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## CHAPTER 04

Assurance Statement

GRI Index

An aerial, high-angle photograph of a mining operation at night. The scene is dominated by large, dark mounds of earth and rock, illuminated by the headlights and work lights of various pieces of heavy machinery. In the foreground, a large piece of equipment, possibly a conveyor or a large excavator, is visible with its lights on. In the middle ground, another piece of machinery, possibly a truck or a smaller excavator, is parked on a dirt path. The overall atmosphere is industrial and somewhat somber due to the dark, monochromatic color palette.



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

Santiago, August 22, 2014

Messrs. Shareholders and Directors  
Antofagasta Minerals S.A.

### **Independent Professionals Report**

We have reviewed the 2013 Sustainability Report of Antofagasta Minerals S.A., for the year finalized on December 31, 2013. Antofagasta Minerals S.A. management is responsible for the 2013 Sustainability Report.

Our review was performed in accordance with the attestation work standards established by the Chilean Institute of Public Accountants. A review is substantially less in scope than an exam, the objective of which is the expression of an opinion regarding the 2013 Sustainability Report. Consequently, we do not express such an opinion.

Within the scope of our work we reviewed the adequacy and implementation of the G4 GRI Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI G4).

In addition, we performed on a sample testing basis, among others, the following procedures:

- work planning according to relevance and volume of the information presented in the 2013 Sustainability Report;
- 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 G4, including indicators of the GRI Mining and Metals Sector Supplement developed in conjunction with the International Council on Mining and Metals (ICMM);
- interviews with different executives responsible for the information in the 2013 Sustainability Report;
- verification, based on testing, that the data included in the 2013 Sustainability Report is consistent with the documentary evidence reviewed and/or comes from verifiable supporting information sources;
- verification that the financial information included in the 2013 Sustainability Report is derived from accounting records or from audited financial statements as of December 31, 2013 by another firm of independent auditors.

The verified and no verified indicators are detailed on pages 48 to 50 of the 2013 Sustainability Development Report.

Based on our review, we have no knowledge that the 2013 Sustainability Report of Antofagasta Minerals S.A., for the year finalized as of December 31, 2013, is not presented in all its material aspects, in accordance with the "core" option of the sustainability reporting guidelines G4 of the Global Reporting Initiative.



Mathieu Vallart



PricewaterhouseCoopers

PwC Chile, Av. Andrés Bello 2711 - piso 5, Las Condes - Santiago, Chile  
Teléfono: (56 2) 2940 0000 | www.pwc.cl



100 AÑOS  
PwC CHILE

# GLOBAL REPORTING INITIATIVE CONTENT INDEX (GRI G4), Core Option

## GENERAL STANDARD DISCLOSURES

General Standard Disclosures	Page number (or link)	External assurance
<b>STRATEGY AND ANALYSIS</b>		
<b>G4-1</b>	2, 3	Assured p. 47
<b>G4-2</b>	2, 3, 19, 22. Annual Report 2013 Antofagasta plc (pp. 6, 9, 26, 27)	Assured p. 47
<b>ORGANISATIONAL PROFILE</b>		
<b>G4-3</b>	Cover	Assured p. 47
<b>G4-4</b>	6. Annual Report 2013 Antofagasta plc (p. 16) Separatas companies	Assured p. 47
<b>G4-5</b>	1. The parent company of Antofagasta Minerals is located in the city of Santiago	Assured p. 47
<b>G4-6</b>	6. Annual Report 2013 Antofagasta plc (pp. 2, 3)	Assured p. 47
<b>G4-7</b>	6. Antofagasta Minerals has the legal form of a corporation	Assured p. 47
<b>G4-8</b>	6. Annual Report 2013 Antofagasta plc (pp. 16, 17)	Assured p. 47
<b>G4-9</b>	6, 7	Assured p. 47
<b>G4-10</b>	27	Not assured
<b>G4-11</b>	23, 28	Assured p. 47
<b>G4-12</b>	10, 11, 28	Assured p. 47
<b>G4-13</b>	6. Annual Report 2013 Antofagasta plc (pp. 7, 8)	Assured p. 47
<b>G4-14</b>	The preventive principle is established in the Group's Sustainable Development Principles. Its fifth principle states that "A preventive approach ensures and strengthens the quality of our actions"	Assured p. 47
<b>G4-15</b>	14	Assured p. 47
<b>G4-16</b>	14, 20	Assured p. 47
<b>MATERIAL ASPECTS AND BOUNDARIES</b>		
<b>G4-17</b>	The Annual Report 2013 covers Antofagasta plc, the controller of Antofagasta Minerals as well as Aguas de Antofagasta and Ferrocarril de Antofagasta; these two companies are not covered in the Sustainability Report 2013.	Assured p. 47
<b>G4-18</b>	Cover	Assured p. 47
<b>G4-19</b>	Cover	Assured p. 47
<b>G4-20</b>	51	Assured p. 47
<b>G4-21</b>	51	Assured p. 47

## GENERAL STANDARD DISCLOSURES

General Standard Disclosures	Page number (or link)	External assurance
<b>G4-22</b>	Changes in measurement bases or indicators are included as explanatory notes in the respective section.	Assured p. 47
<b>G4-23</b>	This Report covers only Antofagasta Minerals. In previous years, reports covered all the operations of Antofagasta plc, including Aguas de Antofagasta and Ferrocarril de Antofagasta. As in the 2012 Report, as regards Antofagasta Minerals, this Report covers its present operations: Minera Michilla, Minera Los Pelambres and Minera Centinela. The latter is the result of the merger of El Tesoro and Esperanza. In the profile and section on labour relations, information about the Antucoya project is also included.	Assured p. 47
<b>SHAREHOLDER ENGAGEMENT</b>		
<b>G4-24</b>	20	Assured p. 47
<b>G4-25</b>	20. The company has identified its principal stakeholders considering those that are part of its value chain, may be affected by the company's operations or could affect its business.	Assured p. 47
<b>G4-26</b>	20	Assured p. 47
<b>G4-27</b>	Cover	Assured p. 47
<b>REPORT PROFILE</b>		
<b>G4-28</b>	Cover	Assured p. 47
<b>G4-29</b>	Sustainability Report 2012, Antofagasta plc (September 2013)	Assured p. 47
<b>G4-30</b>	Annual	Assured p. 47
<b>G4-31</b>	1	Assured p. 47
<b>G4-32</b>	Cover. 47	Assured p. 47
<b>G4-33</b>	Cover. 47	Assured p. 47
<b>GOVERNANCE</b>		
<b>G4-34</b>	16. Annual Report 2013 Antofagasta plc (pp. 80 to 82, 89)	Assured p. 47
<b>G4-35</b>	16. Annual Report 2013 Antofagasta plc (pp. 80 to 82, 89)	Assured p. 47

## GENERAL STANDARD DISCLOSURES

General Standard Disclosures	Page number (or link)	External assurance
<b>G4-36</b>	16. Annual Report 2013 Antofagasta plc (pp. 80 to 82, 89)	Assured p. 47
<b>G4-37</b>	Annual Report 2013 Antofagasta plc (p. 84)	Assured p. 47
<b>G4-38</b>	Annual Report 2013 Antofagasta plc (pp. 82, 83)	Assured p. 47
<b>G4-39</b>	Annual Report 2013 Antofagasta plc (p. 82)	Assured p. 47
<b>G4-40</b>	Annual Report 2013 Antofagasta plc (pp. 88, 89)	Assured p. 47
<b>G4-41</b>	17. Annual Report 2013 Antofagasta plc (pp. 85 to 87)	Assured p. 47
<b>G4-42</b>	16. Annual Report 2013 Antofagasta plc (pp. 81, 82)	Assured p. 47
<b>G4-44</b>	Annual Report 2013 Antofagasta plc (pp. 83, 84)	Assured p. 47
<b>G4-45</b>	16, 19. Annual Report 2013 Antofagasta plc (pp. 81, 82, 85 to 88, 89)	Assured p. 47
<b>G4-46</b>	16, 19. Annual Report 2013 Antofagasta plc (pp. 81, 82, 85 to 88, 89)	Assured p. 47
<b>G4-51</b>	Annual Report 2013 Antofagasta plc (pp. 91, 92, 95)	Assured p. 47
<b>G4-52</b>	Annual Report 2013 Antofagasta plc (pp. 91, 92, 95)	Assured p. 47
<b>ETHICS AND INTEGRITY</b>		
<b>G4-56</b>	8, 9, 14, 17	Assured p. 47
<b>G4-57</b>	17	Assured p. 47
<b>G4-58</b>	17	Assured p. 47

## SPECIFIC STANDARD DISCLOSURES

DMA or indicators	Page number (or link)	External assurance
<b>CATEGORY: ECONOMIC</b>		
<b>MATERIAL ASPECT: ECONOMIC PERFORMANCE</b>		
<b>G4-DMA</b>	14, 17, 29	Assured p. 47
<b>G4-EC1</b>	31	Assured p. 47
<b>MATERIAL ASPECT: INDIRECT ECONOMIC IMPACTS</b>		
<b>G4-DMA</b>	14, 17, 29, 31	Assured p. 47
<b>G4-EC7</b>	34, 35	Assured p. 47
<b>G4-EC8</b>	29, 30	Assured p. 47
<b>MATERIAL ASPECT: PROCUREMENT PRACTICES</b>		
<b>G4-DMA</b>	17, 29	Assured p. 47
<b>G4-EC9</b>	30. This information was not available and will be obtained for the next report.	Not assured
<b>CATEGORY: ENVIRONMENT</b>		
<b>MATERIAL ASPECT: ENERGY</b>		
<b>G4-DMA</b>	14, 36, 40	Assured p. 47
<b>G4-EN3</b>	40	Assured p. 47
<b>MATERIAL ASPECT: WATER</b>		
<b>G4-DMA</b>	14, 38, 39	Assured p. 47
<b>G4-EN8</b>	38, 39	Assured p. 47
<b>G4-EN9</b>	38, 39	Assured p. 47
<b>G4-EN10</b>	38, 39	Assured p. 47
<b>MATERIAL ASPECT: BIODIVERSITY</b>		
<b>G4-DMA</b>	14, 36, 44	Assured p. 47
<b>G4-EN11</b>	44	Assured p. 47
<b>G4-EN12</b>	44	Assured p. 47
<b>MM2</b>	44	Assured p. 47
<b>G4-EN13</b>	44	Assured p. 47
<b>MATERIAL ASPECT: EMISSIONS</b>		
<b>G4-DMA</b>	14, 36, 37, 41	Assured p. 47
<b>G4-EN15</b>	36, 41	Assured p. 47
<b>G4-EN16</b>	36, 41	Assured p. 47
<b>G4-EN18</b>	36, 41	Assured p. 47
<b>G4-EN19</b>	36, 41	Assured p. 47
<b>G4-EN21</b>	37	Assured p. 47
<b>MATERIAL ASPECT: EFFLUENTS AND WASTE</b>		
<b>G4-DMA</b>	14, 36, 42, 44	Assured p. 47
<b>G4-EN23</b>	44, 45	Assured p. 47
<b>MM3</b>	36, 42	Assured p. 47
<b>G4-EN24</b>	44, 45	Assured p. 47

## SPECIFIC STANDARD DISCLOSURES

DMA or indicators	Page number (or link)	External assurance
<b>MATERIAL ASPECT: COMPLIANCE</b>		
G4-DMA	36	Assured p. 47
G4-EN29	20	Assured p. 47
<b>MATERIAL ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT</b>		
G4-DMA	28	Assured p. 47
G4-EN33	28	Assured p. 47

### CATEGORY: SOCIAL

#### SUB-CATEGORY: LABOUR PRACTICES AND DECENT WORK

<b>MATERIAL ASPECT: EMPLOYMENT</b>		
G4-DMA	14, 15, 17, 20	Assured p. 47
G4-LA2	23	Assured p. 47
<b>MATERIAL ASPECT: LABOUR/MANAGEMENT RELATIONS</b>		
G4-DMA	14, 17, 23	Assured p. 47
MM4	23	Assured p. 47
<b>MATERIAL ASPECT: OCCUPATIONAL HEALTH AND SAFETY</b>		
G4-DMA	14, 17, 24	Assured p. 47
G4-LA6	24, 25	Assured p. 47
<b>MATERIAL ASPECT: TRAINING AND EDUCATION</b>		
G4-DMA	14, 15, 17, 26	Assured p. 47
G4-LA9	27	Assured p. 47
G4-LA10	27	Assured p. 47
<b>MATERIAL ASPECT: DIVERSITY AND EQUAL OPPORTUNITY</b>		
G4-DMA	17, 26	Assured p. 47
G4-LA12	27	Assured p. 47
<b>MATERIAL ASPECT: SUPPLIER ASSESSMENT FOR LABOUR PRACTICES</b>		
G4-DMA	17, 20, 28	Assured p. 47
G4-LA15	28	Assured p. 47

#### SUB-CATEGORY: HUMAN RIGHTS

<b>MATERIAL ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>		
G4-DMA	23, 28	Assured p. 47
G4-HR4	23, 28	Assured p. 47

## SPECIFIC STANDARD DISCLOSURES

DMA or indicators	Page number (or link)	External assurance
<b>SUB-CATEGORY: SOCIETY</b>		
<b>MATERIAL ASPECT: LOCAL COMMUNITIES</b>		
G4-DMA	14, 17, 20, 32	Assured p. 47
G4-SO1	32	Assured p. 47
G4-SO2	32, 33, 37	Assured p. 47
<b>MATERIAL ASPECT: MINE CLOSURE</b>		
MM10	43	Assured p. 47
<b>MATERIAL ASPECT: GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY</b>		
G4-DMA	32	Assured p. 47
G4-SO11	32	Assured p. 47

## G4-20, 21: BOUNDARY OF EACH MATERIAL ASPECT WITHIN AND BEYOND THE ORGANISATION

DIMENSION	MATERIAL ASPECT	WHERE DO IMPACTS OCCUR?				
		Within the Group				Outside the Group
		AMSA Group	Los Pelambres	Centinela	Michilla	
<b>Strategy, governance, ethics</b>	Ethics and integrity	x	x	x	x	x (contractors)
	Compliance	x	x	x	x	x (contractors)
	Risk management	x	x	x	x	x (contractors)
	Business development	x	x	x	x	
	Sustainability strategy	x	x	x	x	
	Corporate governance	x				
<b>Environment</b>	Water	x	x	x	x	
	Energy	x	x	x	x	
	Environmental incidents/conflicts	x	x	x	x	
	Mining waste	x	x	x		
	Air	x	x	x	x	
	Mine closure	x	x	x	x	
	Climate change	x	x	x	x	
	Biodiversity	x	x	x	x	
	Natural and historical heritage	x	x	x		
	Other environmental impacts	x	x	x	x	
<b>Society</b>	Contribution to local social development		x	x	x	
	Contribution to local economic development, employment and local suppliers		x	x	x	
	Engagement	x	x	x	x	
	Social incidents/conflicts		x	x	x	
<b>Employment</b>	Workplace safety and health	x	x	x	x	x (contractors)
	Labour relations	x	x	x	x	
	Value chain (contractors)	x	x	x	x	x (contractors)
	Job quality	x	x	x	x	
	Talent attraction and retention	x	x	x		



## **SUSTAINABILITY REPORT 2013**

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### **Coordination**

External Affairs, Antofagasta Minerals

### **Content**

Kodama & Mex

### **Design and production**

Loreto Cammas Design / Collaboration: Sebastián Paublo and Pilar Bunster

August, 2014

*The paper used to print this report was made from sustainably managed forests.*



