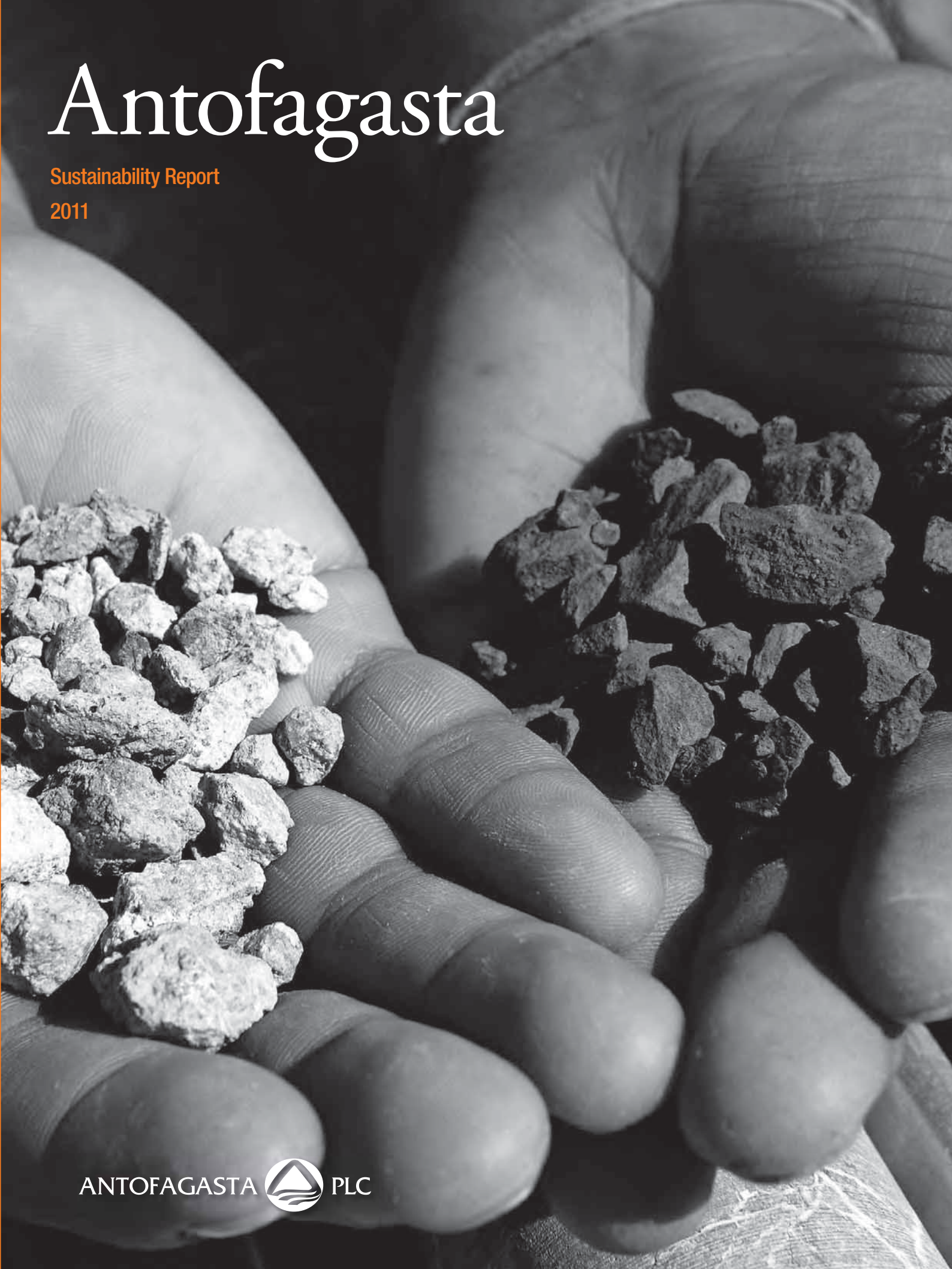


Antofagasta

Sustainability Report

2011



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Contact Information

Please address any comments or questions regarding the Sustainability Report or requests for further information to:

Rafael Quiroga G.

External Affairs Manager
 contacto@aminerals.cl

Or visit the Group's websites:

www.antofagasta.co.uk
 www.aminerals.cl
 www.fcab.cl
 www.aguasantofagasta.cl
 www.michilla.cl
 www.tesoro.cl
 www.pelambres.cl
 www.mineraesperanza.cl

United Kingdom Office

Cleveland House, 33 King Street, St James's
 London, SW1Y 6RJ, United Kingdom
 Phone: (44) 20-7808-0988

Chile Office

Apoquindo 4001 - Piso 18
 Santiago, Chile
 Phone: (56-2) 798 7000

Report application level, Sustainability Report Antofagasta plc 2011, according to Global Reporting Initiative (GRI)

REPORT APPLICATION LEVEL	C	C+	B	B+	A	A+	
STANDARD DISCLOSURES	G3 Profile Disclosures	Report on: 1.1 2.1 - 2.10 3.1 - 3.8 - 3.10 3.12 4.1 - 4.4 - 4.14 4.15		Report on all criteria listed for Level C plus: 1.2 3.9 - 3.13 4.5 - 4.13 - 4.16 4.17		Same as requirement for Level B.	
	G3 Management Approach Disclosures	Not required.	Management Approach Disclosures for each Indicator Category.		Management Approach Disclosures for each Indicator Category.		
	G3 Performance Indicators & Sector Supplement Performance Indicators	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.	REPORT EXTERNALLY ASSURED	Report on a minimum of 20 Performance Indicators, at least one from each of: Economic, Environmental, Human Rights, Labor, Society, Product Responsibility.	REPORT EXTERNALLY ASSURED	Report on each core G3 and Sector Supplement* Indicator with due regard to the Materiality Principle by either: a) reporting on the Indicator or b) explaining the reason for its omission.	REPORT EXTERNALLY ASSURED

* Sector supplement in final version.



About this report

Welcome to Antofagasta's fifth Sustainability Report. This report summarises our approach to sustainability issues and updates readers on our progress in 2011.

The report includes information on our three business divisions:

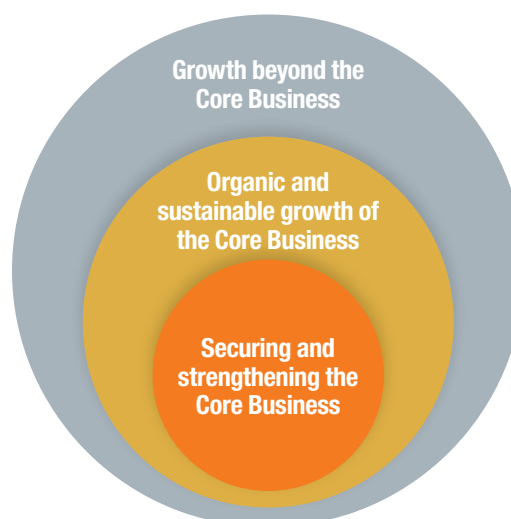
- Antofagasta Minerals - mining
- Antofagasta Railway Company - transport
- Aguas de Antofagasta - water

More in-depth information is provided for the mining division which represents around 95% of Group revenue. We also discuss exploration activities and projects in their early stages where relevant. Two of the Group's mining operations, Los Pelambres and El Tesoro, publish their own annual sustainability reports in Spanish and Michilla prepares a report used internally to raise awareness of sustainability.

This report covers the period 1 January 2011 to 31 December 2011. We report on the issues most material to our business and stakeholders, following the Global Reporting Initiative (GRI) G3.1 guidelines, including the Mining and Metals Sector Supplement. **This report is GRI-checked level A.** We are considering options for external assurance in future and continue to work to improve our data collection processes.

A full GRI Index for our reporting is available at www.antofagasta.co.uk/interior/investor/f_social.htm

The strategy for growing our mining business is based around three pillars:



Antofagasta at a glance

Mining

Antofagasta Minerals S.A. is the corporate centre for the mining division, based in Santiago, Chile. During 2011 its operations produced 640,500 tonnes of copper in concentrate and copper cathode, 196,800 ounces of gold and 9,900 tonnes of molybdenum in concentrate. Copper production is expected to increase to approximately 700,000 tonnes in 2012. > Page 28



1: The existing core business

Los Pelambres

A sulphide deposit located in Chile's Coquimbo Region, 240 km north of Santiago. It produces copper and molybdenum concentrates through a milling and flotation process.

> Page 28

Esperanza

A sulphide deposit located in Chile's Antofagasta Region, 1,350 km north of Santiago. It produces copper and gold concentrates through a milling and flotation process.

> Page 30

El Tesoro

El Tesoro is an oxide deposit located in Chile's Antofagasta Region, 1,350 km north of Santiago. It produces copper cathodes using a solvent-extraction electro-winning process.

> Page 32

Michilla

Michilla is a leachable sulphide and oxide deposit located in Chile's Antofagasta Region. It produces copper cathode using a solvent-extraction electro-winning process.

> Page 34

Production

	Copper (tonnes)		Molybdenum (tonnes)		Gold (ounces)	
	2011	2012 forecast	2011	2012 forecast	2011	2012 forecast
Los Pelambres	411,800	390,000	9,900	11,000	39,800	28,000
Esperanza	90,100	160-175,000			157,100	240-260,000
El Tesoro	97,100	100,000				
Michilla	41,600	40,000				
Total	640,600	700,000	9,900	11,000	196,800	280,000

Transport

The Antofagasta Railway Company plc, founded in 1888, is the main cargo transport system in Chile's Antofagasta Region, with a network of over 900 km in Chile and a controlling interest in the Ferrocarril Andino network in Bolivia. > Page 44

Volume transported

	Rail ('000 tonnes)	Road ('000 tonnes)
	2011	2011
Transport	6,419	1,896

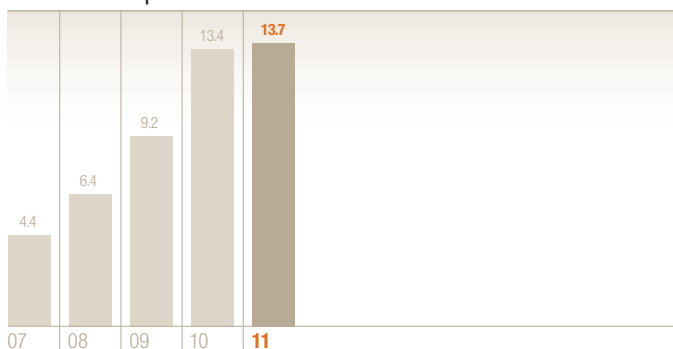
Water

Aguas de Antofagasta S.A. holds the concession for water distribution in Chile's Antofagasta Region. It produces and distributes potable water to domestic customers and untreated water to industrial customers. > Page 45

Volume sold

	('000 m ³)
	2011
Water	48,296

Mineral resources (including ore reserves) of the Group's subsidiaries **13.7bn tonnes**



2: Organic and sustainable growth of the core business

Telégrafo

Located in the Group's Centinela Mining District close to Esperanza and El Tesoro, a feasibility study is under way in respect of this project.

> Page 38

Caracoles

Located in the Centinela Mining District south of Telégrafo, a feasibility study is under way for this project.

> Page 39

Los Pelambres

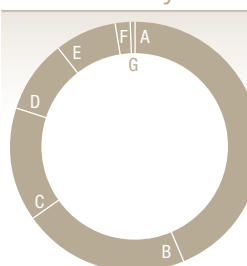
A pre-feasibility study is under way examining potential for long-term expansion of Los Pelambres. The resource base could potentially support a more than doubling of existing plant capacity.

> Page 39

Resources (billions of tonnes)

	2011
Los Pelambres	6.0
Telégrafo	3.0
Caracoles	1.3

Breakdown by subsidiaries



A Los Pelambres	6,006 mt @ 0.51% Cu
B Telégrafo	2,965 mt @ 0.34% Cu
C Esperanza sulphides	2,019 mt @ 0.36% Cu
D Caracoles	1,301 mt @ 0.41% Cu
E Antucoya	1,106 mt @ 0.31% Cu
F El Tesoro	260 mt @ 0.58% Cu
G Michilla	67 mt @ 1.57% Cu
Total	13.7bn tonnes @ 0.43% Cu

3: Growth beyond the core business

Antucoya

Antucoya is an oxide deposit located in Chile's Antofagasta region. The project is expected to enter into production from mid-2014.

> Page 40

Twin Metals

A copper-nickel-PGM deposit located in Minnesota, USA, which the Group is seeking to develop with Duluth Metals Limited. A pre-feasibility study is under way for the project.

> Page 41

Reko Diq

The Group is seeking to develop the Reko Diq deposit in Pakistan via the Tethyan joint venture company. International arbitration has been initiated to protect Tethyan's legal rights in relation to the project.

> Page 42

Energy

The Group has exploration and development projects relating to geothermal and coal gasification prospects, as well as investing in relevant power generation capacity in Chile.

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Group

EBITDA by division **US\$3,661m**



Revenue by division **US\$6,076m**



Antofagasta plc in Chile and Bolivia

Our existing operations are focused in Chile. 2011 saw the ramp-up of operations at Esperanza, a record year of production at Los Pelambres, the start of production from the Mirador deposit at El Tesoro, and an extension of Michilla's mine life.

We expect to continue making considerable progress with our growth projects in 2012 – with the start of construction of the Antucoya project, continuing with work on the feasibility study in respect of the Telégrafo and Caracoles projects and the pre-feasibility studies in respect of Los Pelambres and Twin Metals, as well as advancing with our substantial exploration programme.

The success of our existing assets and our growth projects is underpinned by our commitment to operating and growing in a sustainable manner.



PERU

BOLIVIA

ARGENTINA

CHILE

ANTUCOYA
MICHILLA
EL TESORO
ESPERANZA

LOS PELAMBRES

A GUAQUI, LA PAZ, VIACHA, COCHABAMBA, ORURO, SUCRE, POTOSI, RIO MULATO, UYUNI, ATOCHA, TUPIZA, VILLAZON, LAQUIACA, UJINA, AMINCHA, OLLAGUE, TUCOPILLA, CALAMA, MEJILLONES, ANTOFAGASTA, PRAT, BAQUEDANO, SOCOMPA, AUGUSTA VICTORIA, TALTAL, CHAÑARAL, COPIAPO, LA SERENA, OVALLE, COMBARBALA, ILLAPEL, LOS VILOS

Chairman's Letter

Because a talented workforce is essential to a strong future for our business, Antofagasta is committed to attracting, developing and retaining the best people to our team.



2011 was a growth year for Antofagasta PLC, and I am pleased to report that we have maintained our strong commitment to responsible and sustainable business practices alongside financial success.

Right across our businesses, we seek to nurture positive relationships with our stakeholders and to protect the natural resources on which we depend by managing our impacts responsibly.

During the year we have made progress on integrating and consolidating our commitment to sustainability throughout the business. We appointed new members to our Board Sustainability Committee, who will play a central role in helping the business anticipate and adapt to emerging social and environmental trends. We strengthened our risk management procedures and launched a revised Ethics Code to make our standards clear. Our mining division, AMSA, further embedded its key management systems on the assessment of environmental and social performance.

I deeply regret the death of one of our workers at the Antofagasta Railway Company in 2011. This tragic accident underlines the importance of our

continued focus on health and safety. We have fully investigated the causes and taken steps to prevent a recurrence. Safety remains a priority across all our divisions. To underline this, Antofagasta Minerals' senior risk management team personally visited each mining company during 2011 to discuss safety with managers.

We are proud of the contribution our businesses make to the economy in Chile and we want the communities near our sites to benefit from our presence. We continued to prioritise job creation, training and education during 2011, providing training in mining and other skills for 700 local people. This investment, along with our focus on attracting the next generation of employees through apprenticeships, university partnerships and a graduate trainee programme, will put us in a strong position to address an emerging challenge for our industry in Chile - access to skilled workers.

We seek to understand the views and needs of local people and to take these into account in the way we run our business. As part of this dialogue, Antofagasta Minerals has set up joint working committees with the community and in 2011 a formal grievance procedure was introduced to make sure any concerns are promptly addressed and resolved.

Maintaining good relations with our existing employees is a priority. Employee satisfaction rates remained high at 80% and there were no labour disputes during 2011. We will build on this strong performance in 2012.

Recognising the risks associated with climate change, energy security and water scarcity, we have continued to take steps to improve our environmental performance. Our approach includes investment in alternative and renewable energy generation such as Los Pelambres' recent long-term energy supply agreement with a windfarm in central Chile, a project in which the company has taken a 30% stake. When completed, it will be Chile's largest windfarm. We continue to pioneer the use of non-desalinated seawater, with Antucoya becoming the third of our operations to use this resource. Reducing our impacts as our business grows remains very challenging but we will continue to innovate and to report our progress openly.

Over the coming year our operating environment will continue to be shaped by sustainability issues such as access to resources and skilled labour, energy costs and community and employee relations. We will maintain our focus and commitment to improving our performance, and I look forward to updating you on further progress in 2012.

Jean-Paul Luksic F.
Chairman
Antofagasta plc

Facts and figures 2011

- **640,500** tonnes of payable copper produced.
- **3,091** direct workers at Antofagasta Minerals plus **10,366** contractors.
- Labour agreements reached at all mines between **2010 - 2011**.
- Contractors make up **70%** of our workforce.
- Antofagasta Minerals' total CO₂ emissions **1.76** million tonnes in 2011 (scope 1 and 2 emissions).
- **40%** of the water we use in our mining operations is seawater and we recycle up to **85%** of all the water we use
- **One** fatality at the Antofagasta Railway Company, **0** fatalities at Antofagasta Minerals, **0** fatalities at Aguas de Antofagasta.
- **3.2** average lost time injury frequency rate for Antofagasta plc.
- **96%** Antofagasta Minerals' workers responded to annual labour climate survey.
- **US\$ 20 million** invested in local communities.



Sustainability at Antofagasta

Sustainability strategy, governance and management

Stakeholder engagement

Ethics and human rights

Economic contribution

Public policy

Overview

Sustainability at Antofagasta

Antofagasta Minerals

Antofagasta Railway Company

Agua de Antofagasta

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Sustainability at Antofagasta

Our contribution to sustainable development is integral to the Group's long-term success.

Strategy and sustainability principles

Sustainable development forms an integral part of Antofagasta's decision-making process and the Board continues to place importance on a range of considerations, including health and safety, management of human resources, the environment and community relations. Each of Antofagasta plc's divisions – mining, transport and water – must manage environmental impacts, maintain positive relations with stakeholders (including employees and contractors, communities and authorities) and find opportunities to create social and environmental value. We continue to develop our approach to sustainability by formalising policies and procedures across the Group.

Managing sustainability performance supports the Group's business strategy in the following ways:

- **Maintaining a social licence to operate:** positive relationships with the communities near to our sites as well as with regulators and other stakeholders is critical to the smooth operation of the business and its future growth. Having clear social policies and engaging regularly with community members helps to avoid conflicts and maintains the Group's social licence to operate.
- **Complying with regulations:** carefully monitoring and managing the social and environmental impacts of our operations helps us to meet current and future regulatory requirements.
- **Attracting and retaining talent:** there is a growing shortage of skilled mining professionals in Chile, with the shortfall predicted to reach 20,000 by 2015. Antofagasta's focus on recruitment and training and positive employee relations will help it to access the labour resources it needs to secure, strengthen and grow its mining business.

Our ten 'Sustainable Development Principles' guide the decision-making and actions of our employees and contractors and help embed sustainability into the business. The principles and key social and environmental policies are included in our policy document, 'The Way We Think, The Way We Act' which is available on the Group's website.

The mining division, Antofagasta Minerals, has an environmental and social strategy that reflects these principles and defines how the mining companies will generate economic, social and environmental value.

See page 44 and 48 for Antofagasta Minerals' environmental and social policies and strategy.



The way we think

SUSTAINABLE DEVELOPMENT PRINCIPLES

These Principles apply to the whole Antofagasta Group, including its contractors and suppliers. They will be communicated to all people participating in our activities. Their compliance must be guided and enforced by the corporate government in an integrated fashion with the overall management of the business.

1

PEOPLE COME FIRST

Respect fundamental human rights by placing special emphasis on safeguarding health and safety issues in the workplace and across all areas of activity.

2

THE DEVELOPMENT OF OUR BUSINESS REPRESENTS OUR DRIVING FORCE

Ensure the achievement of strategic objectives by integrating economic, social and environmental variables into the decision-making process throughout the value chain.

3

OUR ACTIONS ARE GOVERNED BY VALUES

Develop the business and ensure that our behaviour is in line with the ethical values of the company in terms of its responsibilities and commitments.

4

MANAGEMENT EXCELLENCE IS AN IMPERATIVE

Consider business administration processes that include planning, delegation, execution, monitoring and evaluation practices which ensure organisational effectiveness in resources management, innovation promotion and continuous improvement.

5

A PREVENTIVE APPROACH ASSURES AND STRENGTHENS THE QUALITY OF OUR ACTIONS

Identify and assess the risks and impact of our activities by setting objectives, actions and indicators to manage them.

6

RESPECT IS THE START OF A GOOD RELATIONSHIP

Promote mutual understanding with neighbouring communities paying attention to their cultural diversity and contributing to their development without creating dependent relationships.

7

RESPECT FOR THE ENVIRONMENT IS OUR RESPONSIBILITY

Prevent and control the impact of our activities, using natural resources efficiently, generating improvements in the environment where possible.

8

COMMUNICATION IS THE BASIS OF TRUST

Establish effective, direct, transparent and timely channels for dialogue with our stakeholders which consider their opinions and provide an account of our performance.

9

CUSTOMERS AND STAKEHOLDERS JUSTIFY OUR WORK

Generate value for those who use our products, services or programmes, both externally and internally, turning their requirements into a stimulus for our improvement.

10

COMPLIANCE WITH THE LAW AND OUR COMMITMENTS

Ensure compliance with applicable legislation and commitments to which we have voluntarily agreed. Applying standards based on best international practice where the law is considered insufficient.

Sustainability at Antofagasta

Overview

“Good governance is central to our business, and we believe that it is core to the Group’s ongoing development. For Antofagasta good governance is much more than a matter of compliance – it is about having the right people, culture and structures in place to make sure we make the right decisions for our business and for our shareholders. We strive to instill a culture throughout the Group which reflects our core principles of respect, honesty and transparency. In this report we discuss the key features of the governance structures, processes and people we have in place in order to achieve our objectives.”

Jean-Paul Luksic
Chairman

Key Board activities in 2011

Appointment of three new Directors to the Board, who bring a considerable range of experience and expertise in the international mining sector, with many years of operational, financial, strategic and corporate finance experience across a wide range of countries.

Approval of key steps in the Group’s growth plans, with approval of the Antucoya project and initiation of the feasibility study for the Centinela District and pre-feasibility study for the Los Pelambres District.

Approved updated Ethics Code, which was launched by the Chairman.

Ongoing review and monitoring of operational performance, including the ramp-up of Esperanza.

Reviewed the Group’s ongoing capital management, including approving total dividends of US\$1.1 billion which were paid out to shareholders during 2011.

Compliance with the UK Corporate Governance Code

The Company now reports under the UK Corporate Governance Code (the 2010 Code) which sets out governance recommendations and best practice provisions which apply to UK listed companies. The 2010 code applies in place of the Combined Code on Corporate Governance. The Company is required to report on the extent to which it complies with the main principles and the provisions of the UK Corporate Governance Code and explain the reasons for any non-compliance.

The Company complied with the detailed code provisions contained in the UK Corporate Governance Code throughout 2011 except as follows:

- the Board did not have a separately identified Chief Executive and hence at Board level there is no formal separation of the functions of Chairman and Chief Executive (provision A.2.1). The Board considers that its predominantly non-executive composition combined with the delegation of significant responsibility for operational management to a divisional level achieves an appropriate balance and prevents a concentration of power in its Executive Chairman;
- performance-related pay measures did not apply to Board members (principle D1). The Board considers this appropriate given its predominantly non-executive composition and the role of the only Executive Director, who is a member of the controlling family, as Chairman of the Board. Performance-related remuneration structures are in place for senior executive management in the Group; and
- Charles Bailey retired from the Board and also therefore from the Audit and Risk Committee, the Remuneration and Talent Committee and the Nomination Committee on 8 June 2011. Additional appointments were made to those Committees with effect from 1 July 2011, however for the intervening 22 days the Audit and Risk Committee and the Remuneration and Talent Committee did not comprise three independent Non-Executive Directors (provisions C.3.1 and D.2.1) and the Nomination Committee did not comprise a majority of independent Non-Executive Directors (provision B.2.1). No committee meetings were held during this intervening 22-day period.

Our governance structure

The Antofagasta plc Board ("the Board") is collectively responsible for the long-term success of the Group. It is responsible for the leadership and strategic direction of the Group, and for oversight of the Group's performance, its risks and internal control systems. The Board is assisted in the performance of its responsibilities by its four committees – the Audit and Risk Committee, the Remuneration and Talent Committee, the Nomination Committee and the Sustainability and Stakeholder Management Committee. More detail of the role of the Board and its committees is set out below.

The Group's businesses are divided into three divisions – mining, transport and water. The mining division represents over 90% of the Group's earnings.



Sustainability at Antofagasta

In 2011 the Group reviewed and updated its governance structures. The terms of reference and membership of the Corporate Sustainability Committee of the Board were renewed as part of the same process. Renamed the Sustainability and Stakeholder Management Committee, it has three members: Ramón Jara (chairman), Juan Claro and Tim Baker. Mr Claro and Mr Baker are independent directors in accordance with the UK Governance Code. The senior environmental and public affairs managers in each company are responsible for implementing Group-level policies and procedures. They report to their company's general manager and to the corporate centre.

See page 32.

Antofagasta PLC's Board has ultimate responsibility for sustainability. Key Board activities relating to sustainability in 2011 included approving and launching the revised Ethics Code. The Board is supported on sustainability matters primarily by the Sustainability and Stakeholder Management Committee which reviews sustainability policy and strategy and monitors Group sustainability performance. The Audit and Risk Committee reviews risk management processes across the business, including sustainability and reputational risks and the Remuneration and Talent Committee reviews and monitors the Group's human resources strategy. More information on the Group's governance structure, including terms of reference for all the committees, can be found in the 2011 Annual Report.

Audit and Risk Committee

Terms of reference

This Committee's purpose is to assist the Board in meeting its responsibilities relating to financial reporting and control matters. The Committee monitors the integrity of the financial statements and Directors' statements on internal controls and reviews the going concern basis prior to its endorsement by the Board. The Committee assists the Board in respect of risk and related controls and it reviews the effectiveness of the risk management process, and monitors key risks and mitigations.

Key activities relevant to sustainability in 2011

Review of the effectiveness of the risk management function and the Group's system of internal control, including reviews of the Group's key risks and related mitigations.

Conducted site visits to the Group's principal operations in 2011 and early 2012, with a focus on reviewing the risk management processes in place at each operation.

Nomination Committee

Terms of reference

This Committee reviews the composition of the Board including the balance between Executive and Non-Executive Directors and considers succession planning for both Executive and Non-Executive Directors and the Group's senior management.

Key activities relevant to sustainability in 2011

Appointing the new members of the Sustainability Committee.

Remuneration and Talent Committee

Terms of reference

This Committee is responsible for setting remuneration policy and for reviewing the remuneration of Executive Directors. The Committee is also responsible for monitoring the level and structure of remuneration of Group senior management.

Key activities relevant to sustainability in 2011

Review of the Group's Talent Management Strategy.

Sustainability and Stakeholder Management Committee

Terms of reference

This Committee's responsibilities include reviewing the Group's framework of sustainability policies and strategies including safety, health, environmental, social and stakeholder issues; monitoring the Group's performance in respect of sustainability matters; and reviewing the Group's sustainability reporting. Key issues of social responsibility are identified and assessed through the Group's risk management processes. See risk management, page 20.

Key activities in 2011

Review and approval of sustainability reporting by the Group.

Review of terms of reference for the Committee.

Management Systems

The Group has achieved certification to the international management standards ISO 14001, ISO 9001 and OHSAS 18001 at a number of sites (see table below). Antofagasta Railway Company is working towards certification to ISO 14001 and Aguas de Antofagasta aims to extend its certification to the food safety standard, ISO 22000, to cover all of its operations.

Certification	ISO 14001	ISO 9001	OSHAS 9001
Los Pelambres	✓	✓	✓
Esperanza*	–	–	–
El Tesoro	✓	✓	✓
Michilla	–	✓	✓
Antofagasta Railway Company	–	✓	✓
Aguas de Antofagasta	✓	–	–

*Esperanza is working towards obtaining these certifications in 2013.

Antofagasta Minerals has two management systems for monitoring progress on social and environmental performance, including key performance indicators.

See pages 44 and 48 for more information about the Assessment of Environmental Performance (AEP) and Assessment of Social Performance (ASP) tools.



Sustainability at Antofagasta

Material issues and risks

The Group's strategy focuses on the risks and opportunities that are most material to its business and its stakeholders. These are identified through our risk management and engagement processes.

The sustainability issues considered most material to the Group and the risks and mitigating measures relevant to those issues are listed in the table below.

Material issue

Health and safety: protecting the safety, health and wellbeing of employees and contractors.

See page 38 of this report for more information.

What are the risks?

Health and safety incidents could result in harm to the Group's employees, contractors or communities.

Ensuring safety and wellbeing is first and foremost an ethical obligation for the Group. Poor safety records or serious accidents could have a serious impact on the Group's production and reputation.

Managing the risks

The Group focuses on identifying, mitigating and managing the safety risks inherent in its different operations and development projects. The Group's goal is to create a safety culture through regular training and awareness campaigns for employees and contractors. It also aims to reach workers' families and local communities particularly on issues of road safety.

The Group requires all contractors to comply with its Occupational Health and Safety Plan, and this is monitored through monthly audit processes.

Talent: attracting and retaining workers and developing their skills.

See page 35 of this report for more information.

The Group's highly skilled workforce and experienced management team is critical to maintaining its current operations, implementing its development projects, and achieving longer-term growth. The loss of key individuals and the failure to recruit appropriate staff may have a negative impact on the performance of the existing operations and the growth of the Group.

The Group's performance management system is designed to provide reward and remuneration structures and personal development opportunities appropriate to attract and retain key employees.

The Group has in place a talent management system to identify and develop internal candidates for critical management positions.

New talent at Antofagasta Minerals is identified, recruited and developed through a trainee and graduate diploma programmes.

Labour relations: maintaining positive relations with employees, contractors and the unions that represent them.

See page 36 of this report for more information.

Failure to maintain good relationships with employees or the unions that represent them could impact on the Group's production, reputation and ability to recruit and retain workers.

Contractors make up around 70% of the Group's workers so maintaining good relations with contractors is important to ensure operational continuity.

There are long-term labour contracts in place at each of the Group's mining operations which help to ensure labour stability. The Group seeks to identify and address labour issues which may arise throughout the period covered by existing long-term labour agreements.

Contractors' employees are an important part of the Group's workforce, and under Chilean law are subject to the same duties and responsibilities as the Group's own employees. The Group's approach is to treat contractors as strategic associates.

Material issue

Community relations: maintaining positive relations with communities near to the Group's operations.

See page 43 of this report for more information.

Community investment: targeting community investment programmes to benefit local people.

See page 46 of this report for more information.

Reducing environmental impacts: including air quality, water quality and availability, greenhouse gas emissions, biodiversity and heritage.

See page 54 of this report for more information.

Resource use efficiency: including energy, water, fuel, land use and waste recycling.

See page 50 of this report for more information.

What are the risks?

Failure to adequately manage relations with local communities could have a direct impact on the Group's reputation and ability to operate at existing operations and the progress and viability of development projects.

Investing in communities is an opportunity for the Group to transfer capacity and maintain good relations with people close to its operations.

Charitable activities and donations must be carefully managed to ensure the Group's investments comply with anti-bribery and anti-corruption legislation and that they have the greatest positive impact on communities.

An operational incident which damages the environment could affect the Group's relationship with local stakeholders, its standing with the regulators and the Group's reputation, and ultimately undermine its social licence to operate and to grow.

The Group operates in challenging environments, including the Atacama desert where water scarcity and waste disposal are key issues.

Failure to balance rising energy needs with unreliable supplies of fossil fuels and climate change legislation could impact the Group's operations and reputation.

Managing the risks

The Group aims to contribute to the local development of the communities in which it operates, in particular through education, training, supporting economic activities and enhancing quality of life. The Group aims to ensure constant and transparent communication with local communities.

The Group makes a positive contribution to socio-economic development through paying taxes, creating employment, buying products and services and through social investments.

Community investment guidelines, introduced in 2011, co-ordinate the charitable activities and donations made by each operating company and ensure all donations comply with anti-bribery and anti-corruption laws.

The Group has a comprehensive approach to incident prevention. Relevant risks have been mapped and are monitored.

The Group's approach includes raising awareness among employees and providing training to promote operational excellence.

Potential environmental impacts are key considerations when assessing projects.

The Group has pioneered the use of sea water for mining operations in Chile and strives to ensure maximum efficiency in water use, achieving high rates of reuse and recovery.

The Group reduces the amount of waste its operations have to store by increasing recycling rates and reusing material where possible.

Operations aim to improve energy efficiency and use renewable energy sources where possible.

Sustainability at Antofagasta

Risk management & auditing

We identify and monitor risks to each division, including social and environmental issues, through the Group's central risk management system. In 2011 we took steps to ensure risks are monitored and managed consistently across the mining, water and railway divisions. The Directors of the Board's Audit and Risk Committee visited each of the divisions to assess progress against mitigation plans. The Corporate Risk Management team also visited the sites to make sure risks, including sustainability risks, were being managed consistently. Operational risk assessments were held with senior managers and operational staff to review that key strategic risks and ensure existing controls were adequate.

Risk assessments are held annually with the general managers and risk co-ordinators for each mining company to identify strategic sustainability risks and review and agree monitoring procedures and mitigation plans. The General Manager for each mining company ensures mitigation plans are followed and the risk co-ordinators are responsible for ongoing monitoring.

Each division undertakes regular internal operational audits to monitor compliance. In 2011, members of the Group's Audit and Risk Committee highlighted the importance of audit procedures during visits to each division.

The mining, water and railway companies assess their contractors' compliance with safety, human rights and labour standards, including criteria on fair wages, collective bargaining, paid overtime and vacations, and standards prohibiting child labour and forced labour.

Performance in 2011

Targets for environmental and social performance were set at Group level for the first time in 2010. The table below summarises the Group's progress in 2011.

Ambition	2011 Target	Progress	Comment	2012 Target
Zero fatalities for employees and contractors.	Zero fatalities for employees and contractors.	X	The Group regrettably did not meet this goal. There was one fatality at Antofagasta Railway Company. See page 68.	Zero fatalities for employees and contractors.
Reduce the lost-time injury frequency rate (LTIFR), the number of accidents resulting in lost time per million hours worked for employees and contractors.	Michilla* : Reduce LTIFR from 4.2 to 3.9	✓	Achieved and exceeded. LTIFR at Michilla was 3.1	Michilla : reduce LTIFR to 3.0
	El Tesoro : Maintain the LTIFR below 0.73	X	Failed. LTIFR at El Tesoro was 2.1	El Tesoro : reduce LTIFR to 1.2
	Los Pelambres : maintain LTIFR of 0.9	X	Failed. LTIFR at Los Pelambres was 1.8	Los Pelambres : reduce LTIFR to 1.3
	Esperanza : reduce LTIFR from 1.6 to 1.5	X	Failed. LTIFR at Esperanza was 2.4	Esperanza : reduce LTIFR to 1.4

*Michilla is an underground mining operation which poses greater safety risks than open pit mining and therefore has a higher accident rate.

Ambition	2011 Target	Progress	Comment	2012 Target
Improve accountability for and measurement of community contributions.	Gain formal approval of the Guidelines and implement a system for monitoring community contributions.	✓	Achieved. The Board approved the Community Investment Policy in 2011 which includes guidance to prevent bribery and corruption. Key performance indicators were designed and are part of Antofagasta Minerals' Assessment of Social Performance (ASP) tool.	Implement key performance indicators and improve measurement of community contributions.
Strengthen environmental protection at mining sites by implementing Antofagasta Minerals' protocol for classifying operational incidents with an environmental impact.	Reduce operational incidents with an environmental impact to no more than one per company.	✓	There were no incidents considered to have an environmental impact in 2011.	Zero operational incidents with an environmental impact according to the company protocol.
Water: Aguas de Antofagasta to attain the highest world-class water quality standards.	Implement the ISO 22000 standard in all its facilities by 2012.	👉	Ongoing. Following certification of the Taltal facility in 2010, the ISO 22000 standard was implemented at the Cerro Topater Filter Plant, Salar del Carmen Filter Plant and the La Chimba Desalination Plant in the city of Antofagasta. See page 75.	This goal is continuing in 2012.
Complete design and implementation of the Assessment of Social Performance (ASP) tool.	New target set for 2012.	New	We did not set ourselves a target for 2011 in this area. This is a new target for 2012. In 2011 the ASP tool was designed and approved by Antofagasta Minerals' executive team. Its implementation is one of the 2012 goals for all company performance contracts.	Introduce key performance indicators to regularly measure and report social performance in our operations. Include social performance indicators in monthly reports to the Antofagasta Board and regular reports to the Sustainability and Stakeholder Management Committee.
Generate energy from renewable sources.	New target set for 2012.	New	We did not set ourselves a target for 2011 in this area. This is a new target for 2012.	Reduce El Tesoro's CO ₂ emissions by 4% through use of solar energy by the end of 2012, from 2011 levels.



Sustainability at Antofagasta

Stakeholder engagement

The Group recognises the importance of stakeholder engagement at the local, national and international levels. Regular dialogue helps to identify and address sustainability risks and opportunities and to build strong relationships with key stakeholders based on trust and mutual benefit. It helps us to avoid conflict and contributes to the long-term success of the business.

The Group has identified its key stakeholders as: investors, employees and contractors, communities, local and national governments and regulators, and the media.

Our approach and engagement activities in 2011 included:

Stakeholder	How we engage
Investors	In addition to regular communications with investors on financial performance, in 2011 we continued to engage with the investment community on sustainability performance. Ongoing roadshows reach out to mainstream investors and sustainable and responsible investors. This engagement gives us useful feedback on our approach to sustainability issues and reporting. The Group also participated in the Carbon Disclosure Project (CDP) and CDP Water Disclosure Project.
Employees and contractors	<p>We communicate with employees and contractors through a range of channels including face-to-face meetings, individual annual performance reviews, intranet, newsletters, bulletin boards and social events. This is in addition to formal communications with employee representatives and union leaders.</p> <p>We get feedback from employees and contractors through an annual labour climate survey and the results are reviewed by senior management. They develop action plans to respond to key findings. The labour climate satisfaction score is a key social performance indicator for the Group. <i>See page 36.</i></p> <p>All operations designate a manager to oversee relationships with suppliers. An open door policy encourages suppliers to raise any issues or concerns. They are audited regularly to ensure compliance with the law and company standards.</p>
Communities	External Affairs teams at each operation and mining project oversee regular engagement with communities near to their sites. This occurs at all stages of the mining life-cycle from exploration to closure. In 2011 we formalised a grievance procedure for monitoring and resolving community concerns and ensuring they are addressed promptly. We monitor environmental issues such as air quality at some of our sites through joint community–company committees. Printed corporate publications, radio and TV broadcasts, company websites and organised site visits also help to inform local communities.
Governments	<p>We interact with officials in the government departments and public service authorities relevant to our activities at both a local and national level. This includes regular meetings and opinion surveys.</p> <p>We also engage with the national authorities, mainly through trade organisations such as the Sociedad Nacional de Minería de Chile (SONAMI) and Consejo Minero (the National Mining Council). <i>See public policy, page 27.</i></p>
Customers	<p>Antofagasta Minerals' commercial team conducts annual customer satisfaction surveys.</p> <p>Customer feedback is closely monitored by Aguas de Antofagasta (ADASA), the Group's water division, through research by the company and by the industry regulator – the Chilean Sanitary Services Commission (SISS).</p>
Opinion leaders	The group engages with opinion leaders including NGOs and the media and conducts reputation surveys to understand perceptions about its mining companies.

Sustainability at Antofagasta

Ethics and human rights

The Group aims to meet high ethical standards and to be transparent about the way it works. It must also comply with increasing anti-bribery and anti-corruption legislation. In the longer term, pursuing projects around the world will make it even more important to have robust standards and procedures.

The Group's Code of Ethics sets the ethical standards that employees, contractors and business partners must meet. The Code covers compliance with laws and regulations, avoiding conflicts of interest, tackling fraud, bribery and corruption, ensuring good working conditions and avoiding child labour, and protecting confidential company information. It explains how employees can report concerns about ethical behaviour, along with procedures for investigating breaches of the Code. The Group has additional guidelines for ethical behaviour in giving or receiving gifts and invitations and a policy that bans facilitation payments.

The Ethics Code was updated in June 2011 to reflect the requirements of the new Chilean anti-bribery laws and UK Bribery Act. It was launched with a presentation from the Group's Chairman and the Antofagasta Minerals CEO.

This highlighted reporting channels and procedures, making all employees aware that they can report unethical behaviour or request guidance on an ethical issue, anonymously if necessary, using the Group's whistle-blowing procedure. This is available through the Group's external website and intranet. Six reports of suspected unethical behaviour were reported in the last six months of 2011 and these were all investigated by the Ethics Committee. Three reports related to misuse of company intellectual property, two involved conflict of interest and one related to breaching of our human resources policies.

The Ethics Committee is composed of the Vice President of Risk and Audit, the Vice President of Human Resources and Corporate Affairs and the Corporate Legal Manager. The work performed by the Ethics Committee is overseen by the Audit and Risk Committee. The Group uses a risk-based due diligence framework for assessing potential business partners for exploration projects and any relations with an associated person. The framework is used to evaluate corruption risks and ensure business partners meet the Group's ethical standards.

The Group respects the rights of everyone that comes into contact with its business, including employees, contractors, suppliers and the communities.

We recognise the impact that our operations can have on different groups and we have procedures in place to protect human rights in the following ways:





Overview

Sustainability at Antofagasta

Antofagasta Minerals

Antofagasta Railway Company

Agua de Antofagasta

Appendices

Sustainability at Antofagasta

Economic contribution

We aim to create value for shareholders and also to add value for a much wider range of stakeholders. Through our products, services, operations and investments, Antofagasta aims to contribute to sustainable development and bring lasting benefits to local communities and society.

This includes:

Products and services: Copper and molybdenum are used in a variety of products and equipment which society and business depend on, including construction, telecommunications networks and electrical and electronic products. The mining business in the Antofagasta Region depends on the reliable transportation of their products and supplies by the Antofagasta Railway Company. Thousands of people and businesses rely on the consistent supply of safe water provided by Aguas de Antofagasta.

Local socio-economic development: Antofagasta Minerals' Social Strategy commits its operations to providing training and support to help local people access employment opportunities. For example, Esperanza committed to hire at least 30% of its workers from the Antofagasta Region and the company developed an ambitious recruitment and apprenticeship programme to meet this goal.

Community investment: The Group provides financial support for community and charitable projects, contributing US\$20 million in 2011. This figure remained stable in 2011, considering that in 2010 the Group made an exceptional contribution – in the order of 5,000 million US\$ – specifically towards earthquake relief efforts.

Taxes, royalties and licensing fees: A portion of the wealth the Group generates is distributed through taxes paid by the company, its contractors, suppliers and its employees, royalties and licensing fees.

The Group measures the direct economic impact of its business including workers' salaries, taxes and payments to suppliers. *See below.* It is more challenging to measure indirect economic impacts and data is not currently available for this.

Economic value generated and distributed by the group	2011	2010	2009
	US\$m	US\$m	US\$m
Revenues from net sales, operating income and sales of assets	6,086.7	4,604.7	2,972.6
Investment income	23.3	16.5	13.2
Operating costs	(2,696.6)	(1,739.5)	(1,291.3)
Economic Value Generated	3,413.4	2,881.7	1,694.5
Employee wages and benefits	(296.7)	(245.6)	(200.3)
Community	(20.0)	(25.1)	(22.0)
Payments to providers of capital	(93.2)	(18.3)	(24.0)
Payments to government	(965.3)	(631.5)	(185.1)
Payments to shareholders	(1,924.0)	(939.3)	(871.9)
Economic Value Distributed	(3,299.2)	(1,859.8)	(1,303.3)
Economic Value Retained	114.2	1,021.9	391.2

Public policy

Antofagasta's businesses can be affected by political developments and changes to legislation in Chile, the UK and countries where the Group is pursuing development projects or conducting exploration activities. New and proposed legislation is monitored to enable the Group to anticipate, mitigate or reduce impacts to its operations. Through Chilean mining sector trade associations, Consejo Minero and Sociedad Nacional de Minería de Chile (SONAMI), Antofagasta Minerals engages with governments and industry on public policy, laws, regulations and procedures that impact its business. Employees in the mining division work closely with SONAMI on issues such as climate change and energy security, contributing to policy formation.

Aguas de Antofagasta participates through the Asociación Nacional de Empresas de Servicios Sanitarios. Antofagasta PLC is committed to ensuring that all of these discussions are undertaken in an ethical and responsible way and do not conflict with the Group's commitment to ethics and sustainable development.

No new laws or regulations with a significant impact on our business were introduced in 2011.

Awards and honours in 2011

Esperanza and **El Tesoro** were awarded the Benjamin Teplizky Prize by the Ministry of Mining in recognition of their efforts to improve safety.

Minera Michilla was awarded two prizes in the Annual Mining Safety Contest, awarded by the National Geology and Mining Service.

Minera El Tesoro won 'Best Report in Chile in 2011' for its Sustainability Report, awarded.

Minera Los Pelambres was awarded a prize by the Centre for Technological Studies of the Universidad Católica de Chile for innovating information exchange among people in different spaces (physical and virtual). Los Pelambres was also awarded the Ramsar Convention for the Americas prize in recognition for its effective management of the Laguna Conchalí Ramsar site.



Antofagasta Minerals is a member of the following trade associations:

- International Copper Association (ICA)
- International Molybdenum Association (IMO)
- Copper and Mining Research Centre (CESCO)
- Mining Council (Consejo Minero)
- National Mining Society (SONAMI)
- Antofagasta Industrial Association

Antofagasta Railway Company is a member of:

- Antofagasta Industrial Association

Aguas de Antofagasta is a member of:

- National Association of Sanitary Services Companies
- Latin American Association of Desalination and Reuse
- Antofagasta Industrial Association
- International Desalination Association (IDA)



Antofagasta Minerals

Sustainability strategy, governance and management

Environmental and social context of our operations

Employees and labour relations

Health and safety

Community engagement

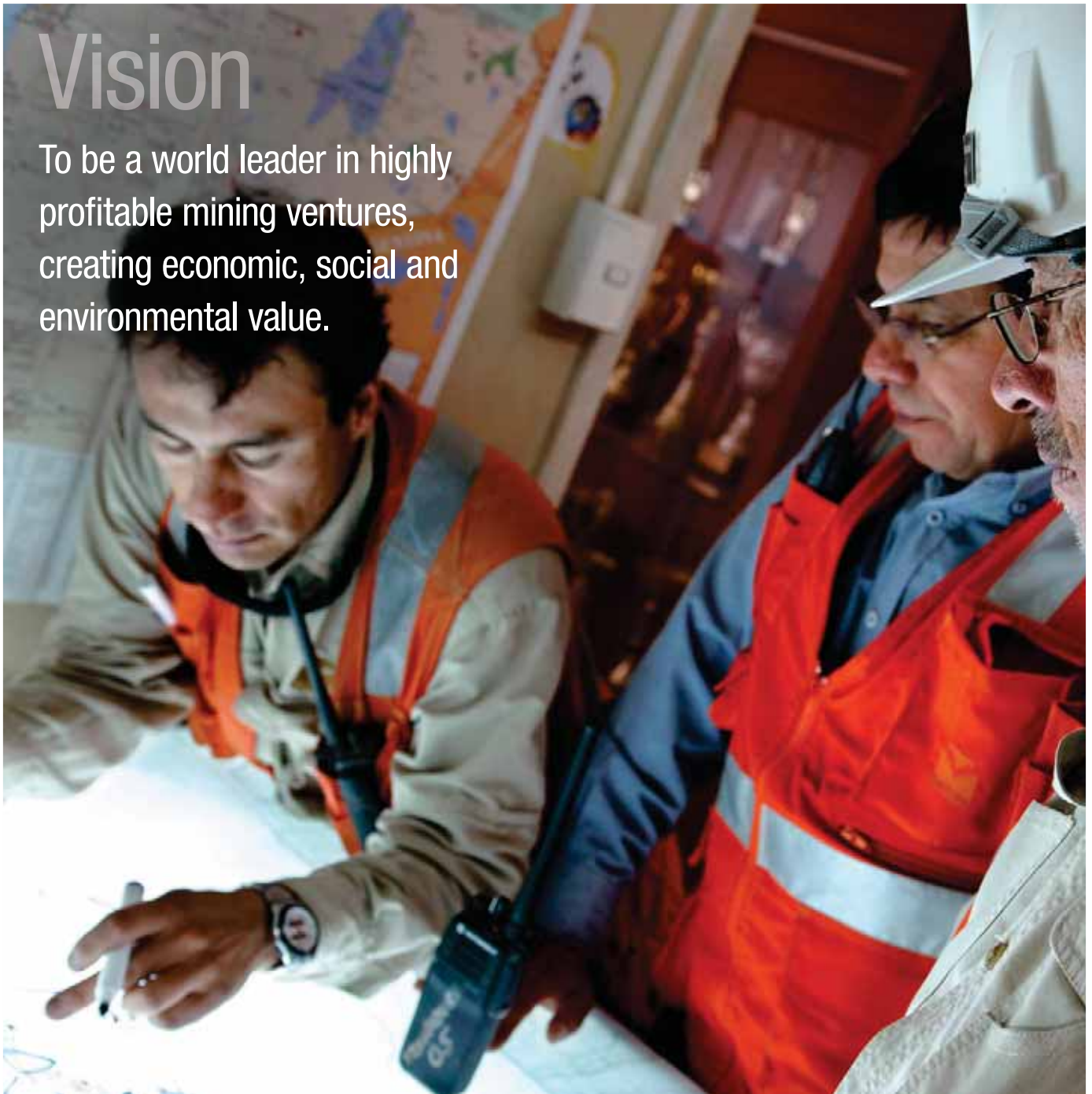
Environmental performance

Sustainability strategy, governance and management

Antofagasta Minerals' continued success depends on the availability of natural resources and the division's ability to maintain positive relationships with stakeholders including communities, regulators, employees and contractors. Managing social and environmental risks and seeking out opportunities for improvement is critical to the division's ability to operate and to grow.

Vision

To be a world leader in highly profitable mining ventures, creating economic, social and environmental value.



Antofagasta Minerals has put in place a strategy for generating economic, social and environmental value. This is focused on the issues of most significance to the business and its stakeholders, and has two core elements:

Responsibility towards society

To build relationships of trust and mutual benefit with stakeholders by taking action in three areas:

- **Responsible behaviour:** Prioritise the health and safety of employees and contractors, maintain a beneficial work environment, reduce negative impacts on society, engage with key stakeholders and monitor progress against commitments.
- **Risk management:** Identify, reduce and manage socio-political risks and be adequately prepared to manage any crises or incidents that occur.
- **Developing local human capital:** Contribute to local development within its area of influence through job creation, supporting local education, training, implementing initiatives to improve local quality of life and support the development of other economic activities.

Responsibility towards the environment

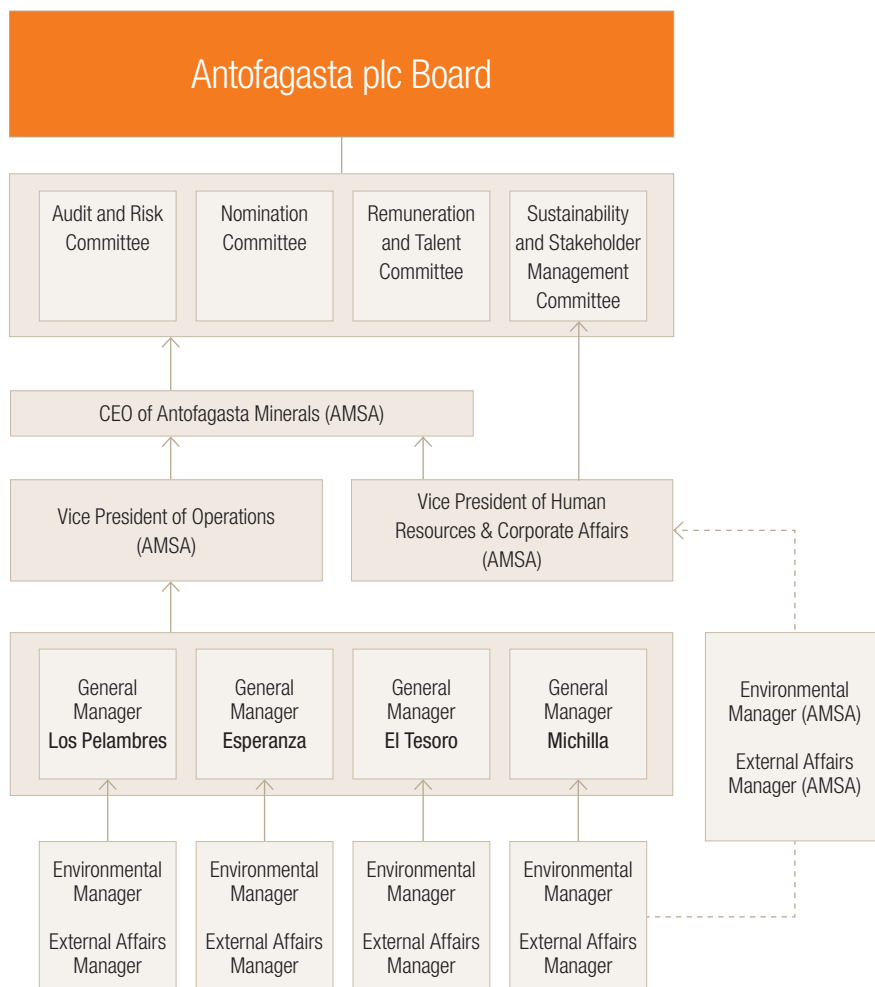
To use resources efficiently and protect the environment by taking action in three areas:

- **Operational efficiency:** Managing tailings and other waste, water, electricity, fuel consumption and land use.
- **Controlling environmental impacts:** Managing air and water quality, water availability, biodiversity, greenhouse gas emissions and environmental incidents.
- **Providing environmental benefits:** Enhancing biodiversity, protecting cultural heritage, raising environmental awareness and supporting environmentally friendly innovations.

Sustainability reporting

Antofagasta Minerals operates a decentralised management structure. Each mining company is empowered to implement the Group’s sustainability strategy in the most appropriate way for its operations and operating context.

Each company has its own environmental manager and external affairs manager, who are responsible for managing sustainability issues. They report performance to the operation’s CEO and work with the central Antofagasta Minerals team on the management of sustainability issues.



Sustainability strategy, governance and management

Management systems and auditing

Antofagasta Minerals has management systems, including key performance indicators, for monitoring progress on social and environmental performance across the mining companies:

The Assessment of Environmental Performance (AEP) tool, was introduced in 2010 and is structured around three dimensions: efficiency in the use of resources (water, fuel, energy); controlling environmental impacts (climate change, water quality, biodiversity, waste and air quality); and benefiting the environment (biodiversity conservation, enhancement of cultural heritage and support for alternative energy sources). Each mining company sets environmental goals that reflect local priorities.

See page 48.

In 2011 Antofagasta Minerals developed detailed standards for the aspects of environmental performance covered in the AEP tool. A set of 'Environmental Management Best Practice' handbooks help operational managers apply the standards to the specific challenges at their site. The handbooks cover the life-cycle of the mining process, from exploration to mine closure, and are aligned with international guidance, for instance, from the International Council on Mining and Metals (ICMM).

The Assessment of Social Performance (ASP) tool, was designed and validated throughout 2011 and will be implemented in all operations in 2012. The main issues covered are health and safety, labour relations, opportunities for employee development, stakeholder relationships and community investment.

See page 44.

By the end of 2012 we aim to gather baseline data for each of the social key performance indicators. This will enable each mining company to set goals for performance from 2013 and track progress towards them.

Sustainability key performance indicators and goals are included in the performance agreements between each mining company and Antofagasta Minerals. These are tracked through the monthly operational performance reviews and through reports submitted by the mining companies to the Board.

Regular internal operational audits monitor compliance across the mining companies. External auditors assess contractor compliance with safety, human rights and labour standards, including criteria on fair wages, collective bargaining, paid overtime, holidays, and standards prohibiting child labour and forced labour.

Integrating sustainability

Achieving its sustainability goals requires the support and expertise of all Antofagasta Minerals' employees and contractors. Each mining company's sustainability goals are embedded within its annual performance agreements with Antofagasta Minerals. They are reflected in employment contracts and remuneration and in agreements with contractor companies.

Antofagasta Minerals works to embed a culture of responsible environmental stewardship. For example, it publishes regular newsletters to share environmental news and tips to help employees reduce their impact on natural resources and behave responsibly.

Exploration: Social and environmental criteria are integrated into the early stages of the mining cycle, including exploration and project development, and form part of our due diligence processes. During the explorations stage, our 'Social & Environmental Best Practices Manual for Exploration' is used during planning and field work. Our External Affairs and Environmental Advisors work closely with the Exploration Health, Safety, Environment and Quality officer, responsible for overseeing management of sustainability-related risks at exploration sites. This helps to ensure that workers and contractors abide by minimum standards when dealing with local communities or the surrounding environment.

Social and environmental due diligence processes are also carried out during early investment phases to identify socio-political, operational, safety, environmental and reputational risks.

Project evaluation & construction: The design of new mining projects must follow our 'Asset Delivery System' developed in 2011, which lays down a set of minimum standards, including social and environmental standards, to be considered from the scoping study through to the pre-feasibility, feasibility and construction phases.

Operation: All operations regularly report on their environmental and social performance, measured through key performance indicators.

Closure: Antofagasta Minerals aims to close and decommission its facilities in a way that is environmentally safe. We have updated closure plans and provisions in place for all mining operations.

For example, since 2008 Los Pelambres has developed its closure plan for an old tailings dam at Los Quillayes that ceased to operate when replaced by the El Mauro dam. This plan was designed with the active participation of the neighbouring Cuncumén community, taking into account agreed criteria on safety, the environment and job opportunities for local people.

See case study, page 45.

Environmental and social context of our operations

	Los Pelambres	Esperanza	El Tesoro	Michilla
Location	Activity is concentrated along the agricultural Choapa Valley. Los Pelambres comes into contact with around 40 communities from its deposit in the Cordillera de los Andes to its port at Los Vilos. Coquimbo Region.	Located a few kilometres from El Tesoro, and 30km from the nearest community at Sierra Gorda. The port is located on the outskirts of Caleta Michilla. Antofagasta Region.	Operates in a desert area with a mining tradition. Sierra Gorda, the nearest populated area is 21km away and has 800 inhabitants. Its main activity is providing mining services. Antofagasta Region.	Operates in a coastal desert area with little population, close to Caleta Michilla, with 250 inhabitants whose main activity is providing mining services and small-scale artisanal fishing. Antofagasta Region.
Climate	High altitude cold climate.	High altitude desert climate.	High altitude desert climate.	Coastal desert climate.
Rainfall - Annual average millimetres	100	5	5	3
Altitude - Metres above sea level	3,800	2,300	2,300	800
Contribution of the mining sector to regional GDP ¹	14.6%	54.3% of the Antofagasta Region GDP.	54.3% of the Antofagasta Region GDP.	54.3% of the Antofagasta Region GDP.
Regional poverty rate ²	12.3%	7.3%	7.3%	7.3%
Regional unemployment rate ³	8.3%	7.7%	7.7%	7.7%
Operation and processes				
Products	Copper and molybdenum concentrate.	Copper concentrate with gold.	Copper cathodes.	Copper cathodes.
Operation	Open pit mine.	Open pit mine.	Three open pit mines: Tesoro Central, Tesoro Noreste and Mirador Run-of-Mine ("ROM") operation.	Underground Estefanía mine and open pit mine called Lince, and other underground operations leased to third-parties.
Processing	Flotation	Flotation	Leaching	Leaching
Water source	Local surface water and groundwater.	Non-desalinated sea water.	Surface water from third-party supplier and groundwater from wells in Calama.	Non-desalinated sea water.
Transport	Copper concentrate is transported via a 120km underground pipeline crossing farming communities.	Copper concentrate is transported across the Atacama desert through a 145km pipeline.	Cathodes are transported by truck to a transfer station, then onward by train.	Cathodes are transported by truck on public roads.
Environment				
Local environmental challenges	<ul style="list-style-type: none"> Preventing incidents Water quality Air quality Biodiversity 	<ul style="list-style-type: none"> Preventing incidents Marine biodiversity Air quality 	<ul style="list-style-type: none"> Preventing incidents Water conservation Air quality 	<ul style="list-style-type: none"> Preventing incidents Marine biodiversity
Biodiversity	<p>Operation: Wetland and high plateau thickets. Sclerophyll and waterleaf forests, wildlife.</p> <p>Port: Protected bird species; abundance of marine life; and the Conchalí Lagoon coastal wetlands.</p>	<p>Operation: Sparse flora and fauna.</p> <p>Port: Marine birds and mammals, benthic flora and fauna.</p>	<p>Operation: Sparse flora and fauna. The water well is located among desert thicket vegetation and fauna.</p> <p>This operation does not have a port.</p>	<p>Operation: Sparse flora and fauna.</p> <p>Port: Marine birds and mammals.</p>

¹ Central Bank of Chile. Figure in 2009.

² National survey CASEN 2009 (National Socio Economic Characterization Survey).

³ Institute of National Statistics – 2010. The rate includes both the unemployed and those seeking work for the first time.



Employees and labour relations

Recruiting and retaining a highly skilled workforce is essential to the success of our business.

Our approach

We develop the skills of employees through training and development, invest in initiatives to widen the talent pool and focus on maintaining good relationships with employees, unions and contractors. Protecting the health and safety of employees is also a priority.

In 2011, Antofagasta Minerals employed 13,457 people, including contractors. This significant reduction in our workforce compared to 2010 is due to the completion of construction at Esperanza in early 2011, which means fewer contractors are now needed at the site. The number of contractors at Los Pelambres also decreased by around 500 workers as expansion of the plant finished.

	Employees*			Contractors**		
	2011	2010	2009	2011	2010	2009
Los Pelambres	827	723	696	4,306	4,857	6,853
Esperanza	877	854	514	2,249	11,200	5,483
El Tesoro	536	533	483	1,643	1,408	1,571
Michilla	588	566	491	1,380	1,133	1,027
Corporate Centre***	263	201	167	787	451	381
Total workers	3,091	2,877	2,351	10,366	19,049	15,315

* Includes both long-term and fixed-term contracts.

** Includes both short-term project contractors and long-term contractors.

*** Includes exploration.

What is the issue?

There is a shortage of skilled workers in the Chilean mining sector. With around US\$90bn of planned investment in mining up to 2020, the industry will need to hire around 44,000 additional workers to meet predicted demand.¹ Lack of trained mining professionals could push labour costs up or even prevent projects from going ahead. Attracting and retaining staff from truck drivers to plant managers is an ongoing challenge for Antofagasta Minerals, its contractors and its peers. The mining division works to expand its talent pool and to upskill and retain its workforce. The potential for labour disputes in Chile has increased in recent years with rising copper prices and labour shortages resulting in increased pressure from labour unions. Maintaining constructive relationships with employees, contractors and the unions that represent them is essential

¹ Labour Force in Chile's big mining industry. Diagnosis and recommendations, 2011-2020. By Chile Foundation.

Working with contractors

Contractors make up around 70% of Antofagasta Minerals' workforce. The ratio of employees to contractors varies from site to site, according to the business model for each operation. The mining companies aim to build long-term, mutually beneficial relationships with contractors. Contracting companies are expected to meet high employment and safety standards. Goals in areas such as health and safety and productivity are included in their performance contracts. Contractors are expected to pass on performance bonuses to incentivise their

employees. Antofagasta Minerals sets a minimum salary for contractor employees that is almost double that set by Chilean law. Contractors access the same accommodation, food and facilities as employees at our mining camps.

The mining division uses internal and external audits to assess contractor compliance with safety, human rights and labour standards, including policies on fair wages, collective bargaining, paid overtime and vacations, and those prohibiting child labour and forced labour.

Employees and labour relations

Labour relations

Antofagasta Minerals aims to maintain constructive relationships with its workers and the six labour unions that represent them through regular communication and consultation. Labour representatives are involved in decision-making that affects the workforce as early as possible. There were no labour disputes among employees or contractors during 2011.

Collective agreements are in place at all mining operations that cover remuneration and terms and conditions of employment. Most of Antofagasta Minerals' employees are unionised and any employment benefits agreed with unions are given to non-unionised employees as well. In 2011, there were four collective bargaining processes with unions at the operations, which were all successful. The agreements covered salaries, working hours, the terms of variable bonuses and employment benefits. The mining companies discuss collective agreements with union representatives before they are due for renewal.

Percentage of workers unionised

	2011	2010	2009
Los Pelambres	57%	65%	59%
Esperanza	56%	44%	56%
El Tesoro	66%	71%	68%
Michilla	60%	62%	68%

Employees are encouraged to voice their concerns through meetings with human resources managers at the operations. The mining companies keep a record of concerns raised by union and non-union employees to make sure they are investigated and addressed promptly.

Mine managers keep employees informed about the business through a range of channels, including the intranet, newsletters, bulletin boards and social events.

Employee satisfaction is monitored every year through a labour climate survey and on average across the mining companies 96% of workers responded to the survey in 2011. We are pleased that worker satisfaction in 2011 remained stable at 80%. The survey results at each mine are shared with operational managers, and managers of teams with lower than average satisfaction scores are required to develop improvement plans. Human resources managers support this process and monitor the effectiveness of any changes made.

Talent, training and development

Training for employees enables us to keep improving the skills of our workforce in line with the current and future needs of the business. Providing personal development opportunities helps to motivate employees and keep them with the company long term. Supervisors are responsible for identifying the skills and competencies that their workers need through annual performance meetings, and for supporting them in fulfilling these needs. The central budget available for training and development in 2012 has increased by around 30%.

Corporate training programmes in 2011 included training managers at four levels (trainee, first-time manager, middle manager and senior manager) to develop their leadership capabilities through the Antofagasta Minerals management diploma. The programme is delivered with the Adolfo Ibáñez University School of Business and was completed by 118 employees in 2011.

In 2011, the average number of training hours per person increased at El Tesoro, Los Pelambres and Michilla. To ensure it had the necessary workforce to operate, Esperanza trained a large number of new apprentices during its construction in 2010. Its training hours decreased significantly in 2011 with the completion of the apprentice programme.

See case study on boosting local employment, page 46.

Average hours of training per person (own employees)

	2011	2010	2009
Los Pelambres	372*	267	264
Esperanza	179*	418	72
El Tesoro	54*	34	29
Michilla	53	48	35
Corporate Centre	36	22	19

* Includes hours of training for mining apprenticeship programmes.

CASE STUDY

Developing managers

Antofagasta Minerals has partnered with the Adolfo Ibáñez University since 2010 to develop its employees' skills and meet the demands of a growing business.

Through intensive on-site classes, online course material and tutorials and a real-life team project, participants develop skills in leadership, people management, risk management, finance, innovation and sustainability. Antofagasta Minerals has had positive feedback from participants and professors, who find the course relevant and helpful in a changing national and global context. In 2011, 118 employees participated in the course, including supervisors and managers.

We invest in training and partner with universities, technical colleges and peer companies to increase the number of skilled mining professionals and make sure we can continue to access the talent needed to grow our operations.

We aim to widen the talent pool for future recruitment through the following initiatives:

- An apprenticeship programme for training school leavers from local communities. Apprentices are trained for mine and plant operation roles such as plant maintenance and truck driving. The Group aims to include female apprentices in this programme as part of its strategy for widening the talent pool. In 2011, 116 apprentices joined the mining operations.
- A graduate trainee programme, started in 2010, to attract young professionals to the company. In 2011, 17 engineering and geology graduates took part and most of them were offered full-time positions with the business.
- A partnership between mining companies in Chile to identify and address the shortage of mining professionals, raise awareness of mining as a career choice and work towards developing fast-track training programmes.

Diversity

Women account for 15% of the workforce across the mining division, compared with the national average for the mining industry of 6%. It is challenging to increase female representation, given the traditionally low number of women working in the mining sector and the fact that only 37% of Chilean women currently participate in the job market.¹ However, recruiting and training more women is a key part of the Antofagasta Minerals' talent strategy, and presents an opportunity to boost female employment and widen the available talent pool.

The mining companies introduced a number of initiatives to increase representation of women. For instance, both El Tesoro and Esperanza worked with IGUALA, a Chilean organisation that promotes gender equality in the workplace and made a number of changes to their recruitment process. This included updating the language of job adverts so that they would be more likely to appeal to women, providing information to potential candidates about how women's careers are supported at the mines and posting recruitment notices on the IGUALA website. They updated recruitment forms so that a candidate's gender is not disclosed during the initial selection process. At both mines regular forums are held for female employees to share ideas for improving the working environment.

Antofagasta Minerals is committed to creating jobs in the areas where it operates and the mining companies recruit people from local communities.

See page 46 [refer to community section].

Percentage of female employees

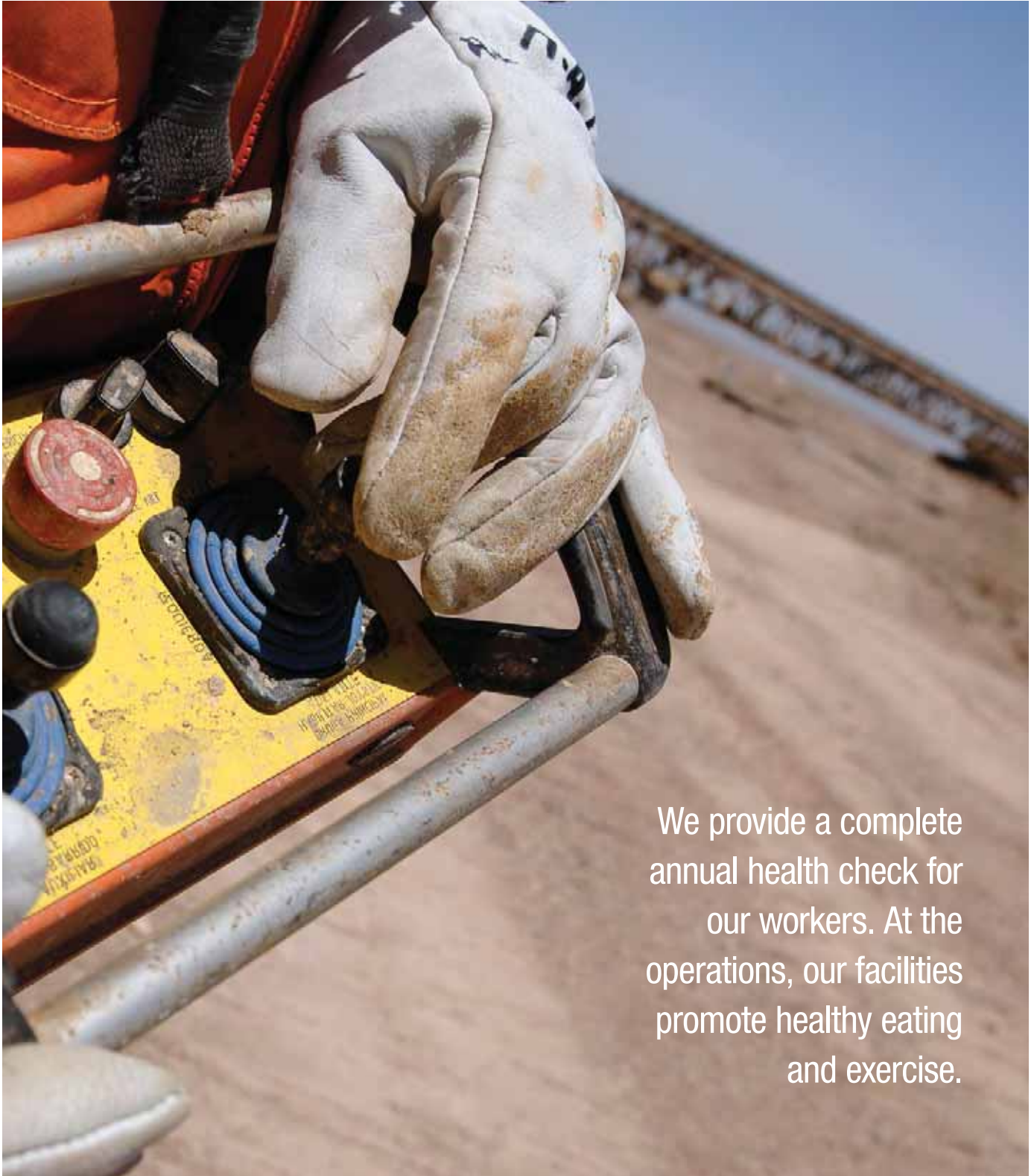
	2011	2010	2009
Los Pelambres	8%	5.5%	5.3%
Esperanza	11.2%	11.5%	11.5%
El Tesoro	10%	7.5%	8.1%
Michilla	5%	4.2%	4.5%
Corporate Centre*	24%	20%	22%
Mining Industry average in Chile	6%	6%	6%

* Includes exploration.

¹ Instituto Nacional de Estadística.

Health and safety

Protecting the health and safety of employees, contractors and local communities is the first of our Sustainable Development Principles and we have a company-wide target of zero fatalities.



We provide a complete annual health check for our workers. At the operations, our facilities promote healthy eating and exercise.

Managing safety risks

Mining operations are designed to withstand earthquakes, floods and other catastrophes and have procedures in place to manage a crisis. Each mine has a health and safety management system in place aligned to the international standard OHSAS 18001 (see page 17) and detailed safety standards for activities such as drilling and blasting, handling explosives, working from heights and operating machinery or vehicles. Annual risk management workshops held with employees and contractors are used to review safety risks and mitigation plans. Risk managers at each mine are responsible for monitoring these risks. Regular internal and external audits are used to check employees' and contractors' compliance with safety procedures and standards.

Reporting performance

Key performance indicators for safety are included in the Group-wide Assessment of Social Performance (ASP) tool. Incidents and near-miss incidents are recorded through an online system and safety managers report performance to the mine's senior management each week. The General Manager of each mine reviews weekly incident reports and monthly reports are shared with Antofagasta Minerals' Chief Executive Officer and Vice-President of Operations. Employee performance against safety KPIs is monitored and linked to individual remuneration. For instance, at Los Pelambres, 25% of individual workers' bonuses are awarded based on whether the site's lost-time injury frequency target has been met. Contractor remuneration is also linked to safety performance.

See box, page 20.

Contractor safety

Contractors must demonstrate that they have adequate safety management systems, standards and procedures in place in order to be hired by Antofagasta Minerals. Safety requirements are included in their contracts and bonuses are linked to safety performance.

Contractor compliance with safety procedures is regularly reviewed and contracted workers have the same safety standards and equipment as our employees. For example, at El Tesoro new recruits, whether employees or contractor employees, must take written tests and are observed on the job to ensure they have the technical skills and understanding to perform their job safely. This also helps managers to identify training needs and content for future safety campaigns.

What is the issue?

Extracting and processing copper is associated with a number of health and safety risks including vehicle accidents, machinery accidents, falls from height, falling rocks or equipment, fire, explosions and electrocution. Workers can be exposed to dangerous chemicals, inhale dust or their hearing can be damaged by noise.

Three of the Group's four mines (Los Pelambres, Esperanza, El Tesoro), are open pit mines with extraction taking place above ground, which poses fewer risks than underground mining. Mining processes at these sites are increasingly automated which means operations can be controlled remotely by computer, reducing risks for workers.

Antofagasta Minerals works to identify and raise awareness about these risks to prevent injuries and health problems among its workers and contractors. Contractors make up more than 70% of our workforce so ensuring contractors understand and meet our health and safety standards is a priority.

Preventing negative impacts on the health and safety of the people who live close to our operations is equally important. Our operations control dust and monitor air quality and water quality (see page 54). The mining companies also have standards for safe driving to ensure vehicles driven to and from the mining sites are operated safely.

Health and safety

Performance in 2011

There were no fatalities at our operations in 2011 and the total number of accidents also fell. However, the lost-time injury frequency rate increased at three of the four mines. The average LTIFR for the mining companies increased to 2.1 injuries per million hours worked in 2011 compared with 1.6 the previous year (see table). The increased LTIFR shows that despite fewer accidents happening at our mines overall, there were more serious accidents. This highlights the need for continued vigilance to avoid fatal accidents in future.

The LTIFR increased despite the reduction in the number of accidents due to changes in the size of our workforce. During 2011 the size of the workforce was reduced by almost 40% as the construction of Esperanza and expansion of Los Pelambres came to an end.

See page 20.

One of the biggest increases in the LTIFR was at El Tesoro which we believe was partly due to more accidents happening during a site-wide maintenance shutdown.

Embedding risk management and incident reporting procedures was a particular focus in 2011. In August 2011, Antofagasta Mineral's risk management team visited each mine and held a workshop with senior managers and contractors to review safety risks and agree procedures for managing them and reporting incidents consistently. The aim was to encourage the mines to share good practice examples and to make sure that each operation has a thorough risk-based approach to managing safety.

The mines introduced a number of initiatives to embed risk management procedures and make preventative actions more effective. For example:

- Before the weekend shift starts at Los Pelambres, employees and contractors identify which of the scheduled tasks pose the most significant safety risks. This enables them to prioritise their monitoring and risks management activities.
- El Tesoro updated its employees' and contractors' job descriptions to include specific responsibilities for managing risks, including safety. This encourages workers to take individual responsibility for safety as part of their day-to-day job.
- A network of 70 risk safety champions was established at Michilla. The network includes contractors and employees and each champion was trained to help them spot potential risks or hazardous behaviour. They provide leadership and raise awareness of safe working practices.
- Both El Tesoro and Esperanza were awarded the Benjamin Teplizky Prize by the Ministry of Mining for their ongoing commitment to managing safety. Michilla was awarded two prizes in six categories of the National Geology and Mining Survey's Annual Mining Safety Contest, recognising the work of the mine's safety committee and its senior risk manager.

	Lost Time Injury Frequency Rate (LTIFR)					All Injury Frequency Rate (AIFR)					Number of fatalities				
	2011	2010	2009	2008	2007	2011	2010	2009	2008	2007	2011	2010	2009	2008	2007
Chilean mining industry*	3.1	3.6	4.0	5.8	5.9	n/a	n/a	n/a	n/a	n/a	26	45	35	43	40
Mining Council**	n/a	1.9	2.3	3.2	3.4	n/a	n/a	n/a	n/a	n/a	5	8	8	6	10
Los Pelambres	1.8	0.9	1.3	1.3	1.7	4.6	2.6	3.6	6.6	5.3	–	2	4	–	–
Esperanza	2.4	1.6	1.5	1.6	n/a	16.8	14.7	15.0	8.2	n/a	–	–	–	–	–
El Tesoro	2.1	0.5	1.7	2.0	1.2	5.6	4.6	6.0	6.6	13.1	–	–	1	–	–
Michilla	3.1	4.2	3.2	4.4	2.6	6.7	8.8	9.9	12.1	12.8	–	–	–	–	1
AMSA including exploration	1.3	3.2	6.0	5.4	n/a	24.9	13.6	23.0	13.1	n/a	–	–	–	1	–
Mining	2.1	1.6	1.7	2.2	1.8	9.2	10.1	8.5	8.2	9.0	–	2	5	1	1

Data includes workers and contractors.

LTIFR – Number of accidents with lost time during the year per million hours worked.

AIFR – Number of accidents with and without lost time during the year per million hours worked.

* Statistics from Chile's National Geology & Mining Service (Servicio Nacional de Geología y Minería).

** Data from the Chilean Mining Council (Consejo Minero), an industry association which represents a number of large mining companies in Chile.

Training and awareness

Antofagasta Minerals has a team of safety experts that train and supervise workers and contractors and all new workers and contractors complete a health and safety induction course before entering the mining operations. Employees and contractors also attend refresher workshops on safety policies and procedures every year. In 2011, workers were trained on a range of topics such as driving mine vehicles safely, locking equipment securely after use, first aid and controlling safety risks. The mines use personal identification systems for machinery, so that machines can only be operated by authorised and appropriately trained personnel.

The mines update workers on safety procedures and policies using magazines, posters, the intranet, DVDs and TV screens on site. Extended site management meetings that focus on safety and seminars with members of the mine's safety committee help raise awareness of safety initiatives among workers.

The companies run campaigns highlighting specific safety messages. For instance, in 2011 they ran a campaign called 'Care for yourself, care for me', which encourages workers to intervene and stop behaviour that could cause an accident. Another campaign called the 'Shadow of danger' encouraged workers to recognise hazards from machines, processes or activities. Workshops and videos highlighted the potential 'shadow of danger' from fluids, hazardous substances, high pressure piping, loading, machinery, hanging objects, electrical systems and roads.

Promoting health and safety

Workers have an annual medical examination to identify health problems as early as possible. Occupational health plans are in place to prevent common conditions including musculoskeletal injuries, breathing difficulties caused by dust, hearing loss and fatigue.

See page 38.

The mining companies run healthy living programmes to promote healthy eating and exercise and tackle tobacco, drug and alcohol abuse. El Tesoro, Esperanza and Los Pelambres have gyms and other sporting facilities and offer healthy eating options in cafeterias. Managers listen to feedback from workers about camp facilities and make changes when necessary. For instance, car parking spaces near to workers' rooms at Los Pelambres were closed in 2011 in response to complaints about traffic noise.

Road safety is an issue for the mining companies because vehicles travel to and from the sites carrying workers and materials. The mining companies have programmes for improving road safety in the Antofagasta Region. For instance, El Tesoro's traffic safety campaign, called 'I'm waiting for you', raises awareness among local people of the effects of traffic accidents and the importance of road safety. Los Pelambres fitted workers' vehicles with a tracking device that sends data to a traffic management unit. The unit

CASE STUDY

Raising awareness for road safety

Increased traffic is one of the social impacts of mining operations. Our companies collaborate with national and regional agencies in charge of road safety to raise awareness among drivers and pedestrians. They focus on communities, contractors and workers and distribute safety advice through local radio stations and schools, sending traffic accident prevention messages on the most frequently travelled roads and encouraging people to observe traffic signals. Before the summer holiday season, as traffic flows increase, Antofagasta Minerals disseminates precautionary messages by handing out entertaining brochures to pedestrians in Antofagasta city and on main roads in the region.

In June 2011 Esperanza ran an awareness programme for school children in their local communities. Using role play exercises, the company encouraged students to consider how they can look after themselves better when on the roads and avoid traffic accidents. Students were given backpacks with reflectors to make them more visible on the road.

monitors drivers' behaviour and ensures they drive responsibly both on and off site. Michilla transports workers from their homes in the nearby city of Antofagasta to the mine camp each day. The company has strict standards for safe driving, including a minimum journey time, and drivers are trained to drive up to the site.

Antofagasta Minerals' mines are constructed to withstand the impact of earthquakes. The mining companies have crisis management and evacuation plans in place to protect the safety of its workers and local people during and after an earthquake. Working with local emergency services, the mining companies hold drills to practice co-ordinating resources in the event of an emergency. The mines also help emergency services cope when their resources are stretched. For instance, in 2011 Los Pelambres provided fire-fighters and water trucks to help control a fire in the region.





Community relations

We aim to develop relationships of trust and mutual benefit with local communities and other stakeholders throughout the mining lifecycle, from exploration to operation and site closure.

Our approach

Our Social Relations Policy (available for download at www.antofagasta.co.uk) sets out our commitment to stakeholders. It states that the mining companies must:

- Foster respect among workers and contractors for the culture, customs and values of local communities and indigenous people.
- Develop partnerships that encourage employment, generate wealth and build local capacities in the long term, rather than creating short-term economic dependency.
- Listen and talk to stakeholders, responding quickly to grievances and integrating people's views into plans for the business.

Antofagasta Minerals can only be successful if the communities where we operate support our presence. We aim to develop relationships of trust and mutual benefit with local communities and other stakeholders throughout the mining lifecycle, from exploration to operation and site closure. Each mining company has an external affairs manager with overall responsibility for community relations, including social investment programmes and stakeholder engagement. In recent years we have focused on defining our values and long-term goals for contributing to communities. Our social strategy is based around the three pillars of responsible behaviour, managing social risks and developing local human capital. This is supported by principles and procedures such as our Social Relations Policy, a community investment policy (approved in 2011) and a mechanism enabling stakeholders to raise any concerns.

What is the issue?

Mining operations can have an impact on communities through, for example, an increase in temporary workers while a mine is being built or extended, increased road traffic, rising dust levels and increased demand for water or other scarce resources.

Managing these kinds of impact is particularly challenging at our largest mine, Los Pelambres, which comes into contact with around 40 traditionally agricultural communities in the Choapa Valley as well as artisanal fishermen at the operation's port at Los Vilos.

The Group's other three mining operations are situated in the sparsely populated Atacama desert. The nearest community to El Tesoro is located at Sierra Gorda, 21km from the site, while Esperanza is 30km from the same town. Michilla is located on a plateau, 25km from a small community of 250 inhabitants at Caleta Michilla.

In 2010 and 2011, we developed an 'Assessment for Social Performance' (ASP) tool that includes a set of key performance indicators (KPIs). These are now integrated into the Group's reporting system. See page 32. In 2011 the mining companies continued to implement the Group's social strategy and the ASP tool.

Behaving responsibly

Health and safety

Work environment

Stakeholder engagement

Managing social impacts

Follow-up on commitments

Managing social risks

Crisis management

Developing local human capital

Education and training

Local entrepreneurship

Community quality of life

Community engagement

The mining companies engage regularly with local stakeholders through formal and informal channels as part of their commitment to maintain good relationships, based on mutual trust between local people and the mining companies. These channels include face-to-face meetings, joint community-company committees, newsletters, events, surveys and media broadcasts. Local residents and authorities can also contact the External Affairs team at each mining company to give their feedback and raise concerns at any time. Los Pelambres and, more recently, El Tesoro and Esperanza formed joint community-company and multi-stakeholder committees to better understand and monitor relevant issues such as air and water quality. Other committees jointly manage social and economic issues such as improving agricultural practices in the area and channelling community investment.

Los Pelambres engages with around 120 social organisations in the Choapa Valley through 19 community-company committees. Through the committees, company management listens to community members and strives to find mutually beneficial solutions.

In 2011 Antofagasta Minerals introduced a formal grievance procedure for monitoring and resolving community concerns. When a community member raises a concern, the mining company's External Affairs team is responsible for recording the details, passing it to the appropriate function within the company and monitoring the resolution of each complaint. The proportion of complaints that were responded to within 20 days is one of the key performance indicators in the Assessment for Social Performance (ASP) tool. For example, in 2011 residents of Sierra Gorda, near to Esperanza and El Tesoro, raised concerns through our grievance procedure about dust levels from the mining operations. Technical experts from El Tesoro and Esperanza investigated the concerns promptly and held two joint meetings with the residents.

Antofagasta Minerals conducts an annual perception study comprising surveys, interviews and focus groups with local communities, authorities, workers and contractors. The survey provides feedback to the mining companies on how people perceive their performance in five key areas: economic contribution, environmental and social performance, communication and trustworthiness. The results help the mining companies to understand community concerns and to construct an annual Reputational Index that reflects key stakeholders' perceptions.

In 2011 community members near to Los Pelambres were most concerned about potential negative environmental impacts from the mine, although the overall percentage of individuals who raised this issue decreased. We believe this is probably due to there being no operational incidents with a significant environmental impact during 2011. People were also concerned about public safety and crime. The results from the Group's three other mining companies also showed that environmental impacts were the most significant concern. Additional concerns for stakeholders at Esperanza were the local economy and falling income levels as the construction of Esperanza finished and fewer workers were needed at the site. Similarly, stakeholders near to El Tesoro and Michilla were concerned about the mining industry's contribution to economic development and job creation. We maintain open channels of communication with stakeholders to address their concerns by, for example, sharing information on how we meet environmental standards.

Los Pelambres and El Tesoro produce detailed sustainability performance reports for local stakeholders (available online at www.pelambres.cl and www.tesoro.cl). In 2011 El Tesoro's report received the 'Best Report in Chile' award from Acción RSE, a Chilean not-for-profit organisation that promotes sustainable development. Los Pelambres has also received this prize in previous years.

CASE STUDY

Developing joint site closure plans at Los Quillayes

In 2010 Los Pelambres began closing a tailings dam at Los Quillayes. Two years earlier in 2008, the company and the community representatives had begun working together in this project through the 'Dam Closure Committee'. This committee reflects a new approach to building long-term relationships with local people by involving them in the company's operational decisions regarding dam closure. Our approach at Los Quillayes exceeds Chilean legal requirements. This level of dialogue and transparency is also helping to build greater trust with local stakeholders.

As a result of the committee's work, a remediation technique known as 'phytostabilisation' was introduced. It involves reforesting the dam with native species, accelerating the natural blending process with the surrounding landscape. This project also produces social benefits creating jobs for the neighbours who formed a cooperative to manage the nursery they built to grow local plant species.

During 2011 the committee began a pilot test by reforesting 30 hectares of the tailings dam with different native species.

The Committee publishes updates through its website (www.mesaquillayes.cl).

Community relations

CASE STUDY

Boosting local employment at Esperanza

Antofagasta Minerals prioritises employment for people from the Antofagasta Region but the lack of skilled mining professionals can make it difficult to recruit local residents for permanent positions.

When we began the construction of Esperanza, we developed a new approach to training programmes to improve the skills of residents in small communities and help them gain permanent positions within the mining industry. This approach benefited local people and our business, as it helped us to secure a workforce for the new mine and protect our social licence to operate.

Esperanza developed a programme to select, train and hire mining apprentices locally. The company worked with local authorities to recruit apprentices from small communities who could be trained to operate the mine. Apprentices were selected on the basis of their behavioural competencies and communication skills, rather than their formal qualifications. The programme focused on improving the apprentices' skills so that they could meet company standards, without the benefit of prior qualifications.

In total, around 60% of Esperanza's workforce had no previous mining experience, and those who were recruited through the apprenticeship programme have proved to be an excellent addition to our workforce.

Community investment

Antofagasta Minerals invests in communities by providing education and training for local people; generating jobs and supporting local suppliers; and making charitable donations to improve the lives of people close to its operations. In 2011 we implemented community investment guidelines to ensure each of the mining companies takes a consistent approach to deciding which social projects to support and to increase the effectiveness of our community investments. Contributions will now be recorded centrally, enabling improved monitoring and, in future, the ability to report on the impact of our investments. The guidelines will also help to ensure that all donations comply with anti-bribery and anti-corruption laws. Over time we hope to target more of our community investment to projects that benefit communities beyond the life of our mines.

Key performance indicators for community investment are included in the Assessment for Social Performance (ASP) tool and will be measured from April 2012. Social indicators include the amount of money invested, number of community projects and number of people benefiting from them, among others.

Examples of community investment in 2011 are:

Providing education and training for local people

We understand that closing a mining site can have a significant impact on local communities. This inspires our efforts to add long-term social value in the areas close to our operations. We do this by educating and training local people and investing in initiatives to improve people's quality of life, leaving them better equipped for when our operations reach the closing stage of the mining life-cycle.

El Tesoro funded training for 120 people from the cities of Antofagasta and Calama through courses on modern farming, irrigation techniques and caring for livestock.

Thirty people were trained as mining apprentices to maintain and operate heavy machinery through a partnership with the government and non-governmental organisations. At the end of the course all of them were hired full-time by El Tesoro.

Since 2010 El Tesoro has funded a language and communications study programme at the Caracoles School in Sierra Gorda, a nearby settlement, which improves students' performance in the national Spanish literacy test (SIMCE). In 2011, El Tesoro also partners with the University Católica del Norte, the University of Antofagasta and some local technical colleges to exchange scientific and technical information and provide vocational training and on-site visits.

Los Pelambres trained 402 people through 14 different vocational courses including driving, waitressing and hotel management. A science, technology and sustainability education programme called 'Cordillera a Mar' was delivered

at 36 schools in the Choapa Province, training 95 teachers and involving more than 6,500 students from primary and secondary schools. Los Pelambres also granted scholarships to people from the low-income communities of Los Vilos, Illapel and Salamanca to study at the Pascual Baburizza Agricultural College of Los Andes. Financial assistance was provided to a further 80 students with academic merit and limited resources from the High Student Achievement Centre of Salamanca, to complete their higher education in La Serena and Coquimbo.

At Esperanza, three apprenticeship programmes for mine operation and plant maintenance were launched in 2011 for local people from Sierra Gorda, Mejillones and Antofagasta. A total of 130 individuals took part, of which 110 were hired by Esperanza at the end of the course. The results of a study we commissioned from the Adolfo Ibáñez University into the impact of this programme will be ready in 2012. This will help us to replicate the programme across our other mining companies.

Michilla continued to sponsor training courses to encourage entrepreneurship at Caleta Michilla. The company also provided financial support for the local school and the Mejillones Industrial Institute, encouraging students to pursue mining sector jobs. The company is also partnering with Juan José Latorre School to develop joint education plans and work experience placements.

Generating jobs and supporting local suppliers

Antofagasta Minerals strives to employ a significant proportion of local workers and contractors. In 2011 the majority of employees and contractors came from the Antofagasta Region. During construction, all of the mining companies run training programmes for local people. Most recently, the construction of Esperanza offered the greatest opportunity for us to train local people through apprenticeships. Most of the participants that received training have joined the business in full-time positions. In total in 2011, almost 700 local people received training in mining and other skills supported by Antofagasta Minerals.

Improving quality of life for local people

Antofagasta Minerals tries to improve the quality of life for local people near to our operations. We do this by improving infrastructure and connectivity, by funding community organisations, creating public spaces, and funding sports and cultural events. We focus our investment to meet the needs of local people and authorities.

Examples of programmes include: a funding competition called "Together we can grow more", led by Los Pelambres, now in its seventh consecutive year; and El Tesoro's project to recover the Ojos de Apache site and convert it into a recreational area, west of Calama. El Tesoro's community funding scheme involves employees in projects to improve the quality of life of local people.

CASE STUDY

Supporting employee projects in the community

At El Tesoro an annual community funding contest promotes greater social interaction between workers and local communities. The initiative has grown from three projects in 2007 to 15 in 2011, targeting Calama, Antofagasta and Sierra Gorda.

In total almost US\$30,000 were awarded this year and more than 170 workers from the company, and their families, volunteered for a range of projects and organisations. Employees and their families choose to contribute to the projects that mean most to them, including education, sports and religious groups.

Employees involved in the projects expressed a sense of pride in company values and said it improved their understanding of the lives and needs of local people. Beneficiaries have told us that the employees' involvement demonstrates the company is taking a real interest in improving quality of life beyond providing funding.

Percentage of workers resident in the region where the company operates

(employees only)

Los Pelambres	57%
Esperanza	58%
El Tesoro	60%
Michilla	99%

Environmental Performance

Guided by the Group's Sustainable Development Principles and environment policy, Antofagasta Minerals' environment strategy is to use resources efficiently, control negative impacts and provide environmental benefits such as renewable energy. This helps us to reduce business costs, ensure compliance with regulations and build good relationships with local stakeholders.

The mining division has a management system in place to measure and manage the environmental impact of each mining operation. The companies' performance is monitored through the Assessment of Environmental Performance (AEP) tool that includes key performance indicators. In 2011 we formalised standards for environmental performance in line with the AEP tool.

Achieving operational efficiency

Efficient use of water

Efficient use of electricity and fuel

Land use (territory)

Waste management

Controlling environmental impacts

Safeguard of quality and availability of water

Protection of biodiversity and cultural heritage

Safeguard air quality

Reduce risk of environmental incidents

Providing benefits to the environment

Use of renewable energy

Enhancement of biodiversity

Enhancement of cultural heritage

What is the issue?

Climate Change

Climate change is predicted to have a significant impact on Chile with associated changes in weather patterns, rising temperatures and reduced rainfall. To help address this, the Chilean government has set a target to reduce the country's carbon footprint by 20% by 2020. Chilean law already requires that 5% of energy generation must be from renewable sources and this will rise to 10% by 2020. The Group intends to meet this target and play its part in helping Chile reduce its carbon emissions through energy efficiency and the exploration of alternative energy sources such as geothermal, wind and solar.

Climate change and energy

Our approach

As our operations grow, energy consumption is likely to increase in line with production. At the same time, Antofagasta Minerals is committed to playing its part in helping Chile reach its goal to reduce the nation's carbon footprint, for instance, by using renewable energy and supporting the exploration of new energy sources. We recognise the risks associated with climate change and the physical impact it could have on our operations and surrounding communities. In 2011, more than 10% of the Group's total operational spending was on energy, making energy use a significant part of our current operational costs.

See pages 51 and 52.

We are focusing on improving energy efficiency and finding alternative and renewable sources of energy.

2011 summary of environmental performance

- Antofagasta Minerals' emitted **1.76** million tonnes of CO₂ equivalent (scope 1 and 2 emissions).
- Water use **38.5** thousand m³.
- **40%** of water used was sea water, **30%** more than in 2010.
- Los Pelambres **doubled** its waste **recycling rate**.
- Los Pelambres met its target for **air quality** at four of five air quality monitoring stations.
- **No operational** incidents with a significant environmental impact.

Environmental Performance

Performance in 2011

Antofagasta Minerals has measured its carbon emissions according to the Carbon Disclosure Project's methodology since 2008.¹ This includes scope 1 emissions, which are emissions from sources that are controlled or owned by Antofagasta Minerals, and scope 2 emissions, which covers emissions from purchased electricity. In 2010 Antofagasta Minerals began reporting some Scope 3 emissions. These are the result of other indirect emissions, such as the extraction and production of purchased materials and fuels and transport in vehicles not owned or controlled by Antofagasta Minerals.

In 2011, Antofagasta Minerals emitted 1.76 million tonnes of CO₂ equivalent (CO₂e) compared with 1.18 million tonnes in 2010 (scope 1 and 2 emissions). The increase is due to rising energy use with the expansion of Los Pelambres and Esperanza's first full year of operation, resulting in a 23% increase in Group copper production to 640,500 tonnes. At our other operations, emissions either decreased slightly or remained constant.

Carbon footprint - emissions by scope (tonnes of CO₂ equivalent)

	2011	2010	2009
Scope 1: direct emissions	454,562	426,649	360,695
Scope 2: indirect emissions	1,311,620	757,555	645,974
Scope 3: travel and contractor emissions	536,502	n/a	n/a
Total	1,766,182*	1,184,204*	1,006,669*
	(Total including scope 3 emissions 2,302,68)		

* Scope 1 and 2 emissions only.
n/a: not applicable.

Our scope 2 emissions increased by almost 50% from 0.75 million tonnes of CO₂ in 2010 to 1.3 million tonnes of CO₂ in 2011. This was due to a significant rise in the emissions factor of the energy grid that supplies Los Pelambres' electricity. As well as affecting our total CO₂ emissions, this increase affected CO₂ emission intensity. In 2011, CO₂ emission intensity was 2.76 tonnes of CO₂ emitted per tonne of fine copper produced (scope 1 and 2 emissions). This is an increase of 0.49 tonnes (21%) per tonne of fine copper produced, compared with 2010 (2.27).

Breakdown of CO₂ emissions in 2011 (tonnes of CO₂ equivalent)

	Scope 1 Direct emissions	Scope 2 Indirect emissions	Scope 3 Travel & contractor emissions	Total Emissions 1 + 2 + 3	CO ₂ emissions intensity (total CO ₂ emissions per tonne of fine copper produced)
Los Pelambres	159,275	510,429	129,982	799,686	1.63
Esperanza	152,535	475,518	10,617	638,670	6.97
El Tesoro	118,077	215,811	331,707	665,595	3.43
Michilla	24,675	109,862	64,197	198,734	3.20
Total for Antofagasta Minerals	454,562	1,311,620	536,502	2,302,685	2.76

¹ CDP: The Carbon Disclosure Project is a non-governmental organisation that holds figures for greenhouse emissions and global warming. For more information visit its website <http://www.cdproject.net/>.

What is the issue?

Energy

Energy consumption is increasing in Chile by around 7% annually and production is struggling to meet this growing demand. The energy-intensive mining sector accounts for approximately 50% of the country's total energy consumption. The amount of energy used to extract a tonne of copper will rise as older operations typically produce lower grade ore and the ore will tend to be in less accessible areas. Rising energy needs, reliability of supplies of fossil fuels, decreasing precipitation affecting hydropower projects and climate change legislation keep energy security and energy efficiency high on the Group's agenda.

Chile's energy system is divided into two regional grids with distinct energy compositions. The SING grid supplies the north, including the Atacama desert where three of the Group's mining operations are located. It is powered mostly by imported coal and natural gas. Its emission factor is double that of the SIC grid, powered mainly by hydropower, which supplies the centre and south of Chile where our biggest operation, Los Pelambres, is located.

In 2011 Antofagasta Minerals undertook a study to understand the potential effects of climate change on the business and identify future energy needs and potential CO₂ emissions. We identified a baseline for greenhouse gas (GHG) emissions from 2011 and projected future emissions up to 2020. According to the study, we can expect our greenhouse gas emissions to increase by 3% from 2012 to 2017 as the grade of mineral ore that we extract decreases. The study enabled us to identify and analyse plans to mitigate our climate change impact and we are developing 'Climate Change Guidelines' for the division. These will help us manage the risks and realise the opportunities related to climate change.

Energy efficiency and alternative sources

In 2011 energy consumption increased compared to 2010, due to increased production at Los Pelambres following the completion of the mine expansion in 2010. Energy consumption also increased with Esperanza's first full year of operation. Decreasing ore grade, which requires more energy to extract, was also a factor at some mines. Reducing energy consumption is a challenge as ore grades decrease and we respond to this challenge by striving for maximum efficiency and finding alternative energy sources.

We monitor energy efficiency in terms of energy intensity, which we measure as kilowatt hours per tonne of fine copper produced.

KWh per tonne of fine copper produced

	2011	2010	2009
Los Pelambres	3,270	3,124	3,048
Esperanza	7,151	n/a	n/a
El Tesoro	3,015	2,993	2,775
Michilla	3,634	3,664	3,659

n/a: not applicable.



The mining companies are exploring a number of options to increase the proportion of energy generated from alternative and renewable sources. Using its geographic location on a mountain slope to its advantage, Los Pelambres already generates around 10% (118,864,000 KWh), of its total energy consumption from the braking of mineral conveyor belts.

At El Tesoro, we are completing the construction of a solar energy plant that will reduce El Tesoro's CO₂ emissions by 4% by the end of 2012. Heat from the solar energy plant will replace 55% of the diesel used in the site's boilers for the electro-winning process. In 2012 we plan to pilot a photovoltaic solar concentration plant with the same technology used in El Tesoro.

Antofagasta Minerals is investing in a 115MW wind farm project near Los Pelambres which will provide approximately 20% of the site's energy requirements and will be operating in 2014. Energía Andina S.A, a joint venture between Antofagasta Minerals and Origin Energy Australia, is focused on the exploration and development of geothermal energy prospects in Chile. It has been granted 15 concessions to date and eight projects are in the exploration phase, each with potential capacity of 100 - 200MW. In 2012 the company will conduct feasibility studies to assess the viability of the projects. If successful, drilling of geothermal production wells will begin in 2013 and Energía Andina could be producing energy by 2016.

Mulpun Energy, a joint venture between Antofagasta Minerals and Carbon Energy Limited of Australia, continues to work on its underground coal gasification (UCG) project near Valdivia in southern Chile. This technology transforms coal into synthetic gas that can be used to generate electricity with a lower emission factor. In August 2010 the division received environmental approval for the first stage of the project, which allows construction and operation of a pilot scheme, including the first UCG panel and on-site facilities, and engineering studies in relation to the trial project were undertaken in the second half of the year.

Fuel efficiency

Fuel is used for transporting and moving material extracted from mines and represents a significant portion of production costs. Mine size and layout and the size of trucks used on the site are some of the factors affecting fuel efficiency. In 2011, Los Pelambres made some changes to its mining plan that reduced the distances covered by trucks at the site, improving its fuel efficiency from 0.43 litres per tonne (2010) to 0.33 (2011). Michilla is relatively less fuel efficient because it requires smaller trucks operating over a large distance, and as the pit grows deeper over time, the distance travelled by trucks increases. The reduction in fuel use at Michilla was due to the temporary suspension of part of its operations during the year.

Fuel efficiency (Litres of fuel per tonne of material moved)

	2011	2010	2009
Los Pelambres	0.33	0.43	0.43
Esperanza	0.35	n/a	n/a
El Tesoro	0.32	0.33	0.37
Michilla	0.55	0.60	0.55

n/a: not available



Water

Our approach

Using water efficiently and recycling it wherever possible is a central concern for the mining operations. All of our mines have water management plans in place and they strive to use water efficiently and recycle or reuse it. Our operations recycle up to 85% of the water used in their processes through a system of industrial water recirculation. The rest is lost either through evaporation or from being trapped in tailings or waste ore.

The mining companies monitor the quantity and quality of the water they use and report on these key performance indicators every month. This is one of the KPIs that affect each company's bonus. The mines also ensure that emissions of wastewater meet quality standards.

To reduce demand on surface and groundwater sources Antofagasta Minerals has pioneered the use of sea water in the mining process in Chile. Michilla began using non-desalinated sea water in the 1990s and, on a much larger scale, Esperanza also operates using non-desalinated seawater. We have recently approved the Antucoya project to operate using non-desalinated sea water.

As both water availability and water quality are important social issues, each mining company engages with local communities to understand their concerns and evaluates how to reduce its impact on local water demands. This is most relevant for Los Pelambres, as it is situated within an agricultural valley. In 2011 it relocated one of its surface water intakes so that from 2012 it will be able to collect water from the naturally lower quality upper section of the Pelambres river. This will improve the quality of water downstream which is used by the local communities. El Tesoro continues to collaborate with the water authority to collect information to better understand and manage the Calama wellfield.

What is the issue?

Water is a key input for mining and mineral processing. All of our operations are in water-stressed regions. Three of our mines operate in the extremely arid conditions of the Atacama desert. The fourth one is situated at the source of an agricultural valley.

Antofagasta Minerals' main challenge is to operate and to grow sustainably by preventing and controlling the impact of our activities and being efficient in the use of natural resources.

When using surface and groundwater, we have strong water management programmes to recirculate water and to intensively monitor basin water quality and quantities (flows and levels). We have also pioneered the use of alternative water sources. Michilla has used seawater since the 1990s and our newest operation, Esperanza, was built to operate using non-desalinated seawater.

In the longer term, climate change is likely to have an impact on the freshwater resources in Chile, with changes in precipitation and increased temperatures, predicted to reduce the availability of water.



ECOSISTEMA DE LA LAGUNA

UN REFUGIO PARA LOS CICLOS DE



Laguna CONCHALI

La biodiversidad es una expresión de agua, ya sea dulce o salada, que conforma un ecosistema, donde convive una inmensa diversidad biológica, incluye todo el peces de peces, crustáceos, moluscos y aves que constituyen el hogar con otros animales y comunidades vegetales.

Es un ambiente donde la sustentabilidad y el equilibrio ecológico son posibles. Un refugio esencial para que se continúen los ciclos de vida.

A biodiversity is an expression of water, either fresh or salt water, that forms an ecosystem, where a vast biological diversity coexists, including fish, crustaceans, mollusks and birds that constitute the home with other animals and plant communities.

It is an environment where sustainability and ecological equilibrium are possible. This is an essential refuge for the completion of the cycles of life.



Environmental Performance

Performance in 2011

Water use and efficiency

In 2011 Antofagasta Minerals' total water consumption increased as a result of Esperanza's first full year of operation and Los Pelambres' higher copper production. Water efficiency, measured as the total amount of water used per tonne of mineral processed, remained relatively stable in 2011 when compared to 2010.

The Group continued to recycle up to 85% of the water it uses. In 2011 our use of sea water increased significantly by 30%. Up to 40% of our total water consumption was sea water in 2011, compared with 10% in 2010.

Activities to improve water recycling and reduce consumption of high quality water in 2011 included a project at Los Pelambres to recover high quality cooling water from plant compressors and reuse it in the molybdenum plant, reducing the need for additional replacing part of a good quality water make-up feed

Antofagasta Minerals continues to pilot the Water Accounting Framework developed by the Sustainable Minerals Institute at the University of Queensland to identify areas for further improvement. The Group also participated in the second annual CDP Water Disclosure Project that measures water management across some of the world's most water intensive companies.

El Tesoro sources water from wells near Calama and from a third party supplier. It has implemented a management plan in agreement with the National Water Authority and local representatives that will enable it to carefully manage the extraction of ground water and to continue to use an amount of water well below its legally authorised limit. The company has given the authorities access to data on their online water management system. This system alerts the company if a change in water volume or quality is detected that could have an impact on the local environment.

Water consumption* ('000s of m³)

	Source	2011	2010	2009	2008
Los Pelambres	Surface water	12,286	10,276	9,512	14,521
	Groundwater	6,721	6,568	4,786	5,192
Esperanza	Sea water	13,912	250	n/a	n/a
	Third-party supply ***	199	1,150	946	535
El Tesoro**	Groundwater	1,878	1,989	2,237	2,584
	Third-party supply ***	1,511	1,667	853	64
Michilla	Sea water	1,959	2,136	2,053	2,341
Total		38,466	24,036	20,387	25,237

* These numbers do not include rainfall that accumulates in the tailings dams of Los Pelambres nor the moisture content of the ore.

** Includes water required for Run-Of-Mine treatment.

*** Industrial grade water provided by ADASA, Antofagasta PLC's water business.

Water efficiency* (m³ of make-up water per tonne of mineral processed)

	2011	2010	2009
Los Pelambres	0.30	0.30	0.32
Esperanza	0.67	n/a	n/a
El Tesoro**	0.28	0.25	0.25
Michilla	0.41	0.42	0.37

* These numbers do not include: Rainfall that accumulates in the tailings dams of Los Pelambres nor the moisture content of the ore

** Site make-up not including Run-Of-Mine treatment.

n/a: not applicable

Water quality

Michilla, Esperanza and El Tesoro are located in the dry Atacama Desert where there are no fresh water resources. Therefore protecting fresh water from pollution by contact with mineral or reagents is not an issue. Los Pelambres, located at the top of an agricultural valley, constantly monitors local surface and ground water quality upstream and downstream of its operations to make sure that local community supplies or the environment are not affected by the operation. Local communities are involved in water management through participative monitoring and a permanent 'working group on water' that includes community and company representatives.

We monitor water quality and marine biodiversity at our port facilities in Michilla and Los Vilos.

Environmental Performance

Waste management

What is the issue?

Mining operations generate significant amounts of waste rock, spent ore and tailings (processed rock). The quantity of waste depends on whether the mine is open pit or underground, its production and the minerals' grade affects the amount of material removed to produce a tonne of copper.

Finding a solution for storing significant levels of mining waste that is both physically and chemically stable is a key issue for Antofagasta Minerals. Due to its location in an agricultural valley, tailings management is a priority for Los Pelambres to prevent heavy metals or sulphates leaching into the ground and water courses. The failure of a tailings facility could have a major impact on local communities, the environment and the Group's workers.

Mining waste streams

	Los Pelambres	El Tesoro	Michilla	Esperanza
Context	Extracts copper and molybdenum ore from an open pit. Produces copper concentrate from copper sulphides through a flotation process.	Extracts copper ore from an open pit. Produces copper cathodes from copper oxides through a leaching process.	Extracts copper ore from an underground mine and an open pit. Produces copper cathodes from copper oxides and sulphides through a leaching process.	Extracts copper and gold ore from an open pit. Produces copper concentrate from copper sulphides through a flotation process and, to a lesser extent, from copper oxides.
Origin and destination of mining waste	Material from the mine that is below the cut-off grade for sale is sent to waste dumps. The operation generates tailings from the flotation process. These are stored in the El Mauro tailings dam.	Material from the mine that is below the cut-off grade for sale is sent to waste dumps. Spent ore from the leaching process is deposited in waste dumps.	Material from the mine that is below the cut-off grade for sale is sent to waste dumps. Spent ore from the leaching process is deposited in waste dumps.	Material from the mine that is below the cut-off grade for sale is sent to waste dumps. The operation generates tailings from the flotation process. These are stored in a thickened tailings dam on site.
Chemical reagents used	The flotation process uses frothers, lime and flocculants.	The leaching process mainly uses sulphuric acid and organic reagents.	The leaching process mainly uses sulphuric acid and organic reagents.	The flotation process uses frothers, lime and flocculants.

Mining waste

Antofagasta Minerals carefully manages mining waste to reduce the amount of waste produced and safely dispose of it according to legal requirements.

At Michilla and El Tesoro where leaching is used to extract copper, each operation designs and maintains special storage facilities for waste gravel that are authorised by the Chilean environmental authorities.

Los Pelambres has a range of measures in place to ensure the safety of inhabitants near to tailings facilities and protect local water courses from leaching of heavy metals or sulphates. Its Quillayes dam is no longer in use and it has established a larger dam at El Mauro. Both dams are built to resist extreme weather, such as flooding and high-magnitude earthquakes, and are carefully monitored and maintained. Safety features are built into their construction to prevent accidental release of tailings into both surface and underground water courses. The pipeline to Los Pelambres' El Mauro Dam includes overflow ponds to prevent leaks. At Quillayes, the Cuncumén River was diverted through a tunnel to keep its water from mixing with the dam's waters. We are piloting an environmental remediation plan known as phytostabilisation for the closure of the old tailings dam. We aim to cover 400 hectares with top soil and then plant it with species which will reduce the risk of contamination and leaching.

See page 45.

Taking advantage of its geographical location, Esperanza has developed a thickened tailings deposit, one of the largest in the world. This reduces water consumption and the risk of soil contamination, and means that tailings are more stable during operations and after the mine has closed. It also reduces dust levels. This is an innovation never used at such scale before and its operation has presented challenges as the tailings system has not performed exactly according to design at the actual processing rate. In response, Esperanza has developed and submitted a contingency plan to the environmental authorities.

The mining companies have groundwater and surface water monitoring systems in place to ensure that water quality or flow is not affected. At Los Pelambres, the quality of the water is monitored at several points throughout the valley and the measurements are published annually on www.pelambres.cl. Water quality is also monitored at Esperanza's tailings facility, although the facility is located in the desert where no underground water sources have been identified.

In 2011, the total volume of mining waste (waste rock, tailings and gravel) produced at our operations increased by 11.5% from 2010 levels, due to Esperanza's first full year of operation.

Mining waste management (million tonnes)

	2011			2010			2009		
	Waste rock	Tailings	Gravel	Waste rock	Tailings	Gravel	Waste rock	Tailings	Gravel
CONCENTRATION DEPOSITS									
Los Pelambres	60.0	63.3	n/a	67.4	57.4	n/a	79.5	46.2	n/a
Esperanza	61.2	20.0	n/a	39.7	n/a*	n/a	37.4	n/a	n/a
LEACHING DEPOSITS									
El Tesoro	54.2	n/a	9.7	66.0	n/a	9.4	34.0	n/a	10.9
Michilla	6.0	n/a	4.6	5.1	n/a	5.4	0.0	n/a	5.4
Total	181.5	83.2	14.3	178.2	57.4	14.8	151.7	46.2	16.3
Total mining waste (waste rock, tailings & gravel)		279			250.3			214.2	

* Esperanza began a ramp-up for its operation in the last quarter of 2010.

Environmental Performance

Hazardous and non-hazardous waste

Our processing operations create hazardous industrial waste that we must manage carefully such as used oils, rags and batteries. We hold this hazardous waste in compliance with regulations on site until it is removed and disposed of by authorised contractors. In Los Pelambres, we reuse oil as a raw material for the preparation of explosives used in the blasting process. Our other mining companies send their used oils to cement companies to be incinerated as an alternative fuel in energy co-generation. In 2011, Los Pelambres launched a new hazardous waste management plan to improve the storage, freight and disposal of hazardous waste.

The mining companies aim to reduce the amount of industrial waste they produce, including scrap metal, wood, cardboard and domestic waste such as food from cafeterias at mine camps. Non-hazardous waste is recycled where possible.

Recycling

All the companies improved their recycling rates in 2011 through a variety of approaches including expanding composting plants and improving systems for classifying and separating waste. The main wastes recycled are oil (reused in the blasting process or sent to cement factories), food waste from cafeterias (composted), metal (sold as scrap) and wood (donated to the local community).

For the second consecutive year, Los Pelambres nearly doubled its recycling rate. It plans to construct a waste separation system in 2012 to further improve this figure. In 2011 Esperanza launched a new integrated waste management plan, known as R3, to help it to reduce, reuse and recycle more waste. The R3 plan includes separating waste streams at source, and running education campaigns to encourage workers to recycle more often. In 2011, 25% of all waste generated was recycled and reused.

Recycling rates* (tonnes recycled per total waste generated)

	2011	2010	2009
Los Pelambres	0.70	0.43	0.25
Esperanza**	0.05	Between 0.1 and 0.5**	Between 0.1 and 0.5**
El Tesoro	0.73	0.48	0.39
Michilla	0.62	0.60	0.56

* Includes domestic waste and hazardous and non-hazardous industrial waste.

** Data is estimated based on information supplied by contractors.

Air quality and dust management

Our approach

Air quality management, including particulate matter emissions, is a priority for Antofagasta Minerals. All operations use dust monitoring stations and have implemented a number of dust prevention methods such as:

- Continuous watering of the roads leading to the mining pit to prevent dust being stirred up.
- The use of sprinklers and dust suppressant (foam) applied to the ore when it travels on conveyor belts from the crusher to the mill.

Protecting air quality is particularly important at Los Pelambres due to its proximity to local communities. The site uses an online system to monitor air quality and early warning alerts are issued when climatic and meteorological conditions increase the possibility of exceeding the company's dust level. The system issues predictions five days in advance, allowing time for the operation to adjust its activities. When needed, different functions of the mine work together to prevent rising dust levels, including the planning, operation, environmental and community functions. A joint company-community committee monitors compliance with these measures.

Performance in 2011

Air quality is measured as the average concentration of particulates in the air measuring 10 micrometres or less (PM10). Air quality remained within the legal limit at all sites in 2011. As well as a monitoring station at its central camp facility, Los Pelambres has four monitoring stations closer to the communities for which the company has set targets well below the legal limit. In 2011 the company met these targets at the monitoring stations located near the communities, with air quality results between 22ug/m³ and 36ug/m³; but it failed to meet the target set for its central camp facility. The company continues to invest in measures to improve air quality such as: asphaltting 14km of main roads and ramps which is estimated to reduce traffic-related particulate emissions from these roads by approximately 90%, and using foam which has reduced particulate emissions from the site's main crusher by 95%.

In El Tesoro, the increase in PM10 concentration was due to a temporary increase of road traffic while its new sports facilities were constructed. In 2011 the company began to monitor particulate matter below 2.5ug/m³ to prepare to meet new regulations under discussion that would impose stricter dust emission standards. El Tesoro is planning a study in 2012 into the technical and economic feasibility of implementing an air quality prediction model based on weather and operating parameters.

What is the issue?

Mining operations involve moving large amounts of earth, which causes dust, impacting local air quality. For mines with operations in close proximity to communities, such as Los Pelambres, dust control is a critical issue.

Annual average concentration of PM 10* (micrograms (ug) per m³)

	2011	2010	2009
Los Pelambres (camp facility)	51.0	41.8	40.0
Esperanza	50.6	68.2	54.7
El Tesoro	42.7	32.8	35.8
Michilla	44.9	47.8	64.8

* The figures in this table are an annual average for air quality at the monitoring stations located at the main camp for each monitoring station.



CASE STUDY

Highlighting biodiversity in the Antofagasta Region

The coastline of the Antofagasta Region is rich with plant and animal life. This contrasts sharply with the Atacama desert, one of the driest areas on earth, where both plant and animal life struggle to exist.

To celebrate the rich biodiversity of the coastline and the contrasting starkness of the Atacama desert, we published a biodiversity field guide. The book brings together information that each of the Group's mining companies have collected through environmental assessments and monitoring programmes. The guide highlights examples of animals and birds, their habitats, behaviours and conservation status. We hope that by sharing biodiversity information from our companies and showcasing some of the amazing plants and species in the area, it will help to raise people's awareness of biodiversity in the Antofagasta Region. It describes the species identified, including two reptiles, five mammals, 14 organisms that live on the seabed, 28 plants and 35 bird species.

Environmental Performance

What is the issue?

Mining operations impact natural habitats and affect plant and animal species. There is growing awareness of the importance of biodiversity conservation in Chile, and the government is considering legislation to create a Biodiversity and Protected Areas Service which would oversee a national approach.

Los Pelambres faces the greatest biodiversity challenge due to its location and scale. Esperanza, El Tesoro and Michilla are located in the Atacama desert, the driest desert in the world, where fewer animal and plant species can be found. Los Pelambres, Esperanza and Michilla must also protect marine biodiversity at their port facilities in Los Vilos and Caleta Michilla.

Biodiversity and land use

Antofagasta Minerals recognises the importance of protecting local ecosystems and biodiversity. Biodiversity protection plans are developed for every mine in compliance with regulations and take into account the interests of different stakeholders including farmers and landowners, local communities and non-governmental organisations.

Antofagasta Minerals' efforts to promote biodiversity focus in particular on the Choapa Valley where Los Pelambres is located. Los Pelambres voluntarily restored land to create a nature sanctuary at the Laguna Conchali wetlands which have significant biological diversity and are now a park and local attraction. The site is declared a Wetland of International Importance under the Ramsar Convention. The mining company has also put in place programmes to protect peat lands and one of the few remaining Chilean Palm forests. All of these sites provide habitats for endangered species.

In 2011 Los Pelambres invested in reforestation projects to replace woodland previously cleared for mining operations, to support local biodiversity and comply with the environmental agreements governing its mining licences. Esperanza, El Tesoro and Michilla, located in the Atacama desert, measure and monitor biodiversity for the few species that have been found in the area, such as the Andean Fox and some migratory birds. In 2011 we developed a 'flora and fauna field guide' for these locations and it will be published in 2012 (see case study page 60). El Tesoro has an agreement with the Wildlife Rescue and Rehabilitation Centre of the University of Antofagasta (CRRFS) to rehabilitate and release any animals found injured in the area.

Esperanza and Michilla monitor the biodiversity of the marine environment around their shipment pier located in Caleta Mejillones. Los Pelambres supports marine biodiversity and bird life, as well as the development of sustainable fishing at Los Vilos through its charity, Fundación Minera Los Pelambres.

In 2011 El Tesoro began a project to improve the area around the Ojos de Opache desert spring, clearing more than 5,000 tonnes of waste and debris. This oasis, located 11km west of the city of Calama, is a natural pool rich in native flora and fauna biodiversity.

Antofagasta Minerals applies a land use indicator for measuring the proportion of agricultural land occupied by its mining facilities. Los Pelambres owns 140,000 hectares of which it has designated 3% (4,380 hectares) for industrial use. Of this 3%, only 13 hectares could be suitable for farming. Michilla, El Tesoro and Esperanza are located in the desert where farming is not feasible.

Environmental incidents

Chilean environmental law requires mining companies to report operational incidents that result in an impact on the environment. To increase transparency and consistency, Antofagasta Minerals uses a corporate procedure to identify, classify and report these incidents. Sites have reported all incidents, even minor ones, to the national authority, helping to build trust with environmental regulators and communities as well as internal awareness within our companies.

In 2011 there were no operational incidents resulting in environmental impact at our sites. El Tesoro reported four operational incidents to the authorities although none of these is considered to have had an environmental impact. These are described in detail in El Tesoro's 2011 Sustainability Report (pages 108 and 109), available at www.tesoro.cl. In 2011 we paid two fines totalling US\$41,000 that related to incidents in previous years.



Antofagasta Railway Company

The company

Sustainability strategy and management

Employees and labour relations

Health and safety

Community engagement

Environmental performance

Overview

Sustainability at Antofagasta

Antofagasta Minerals

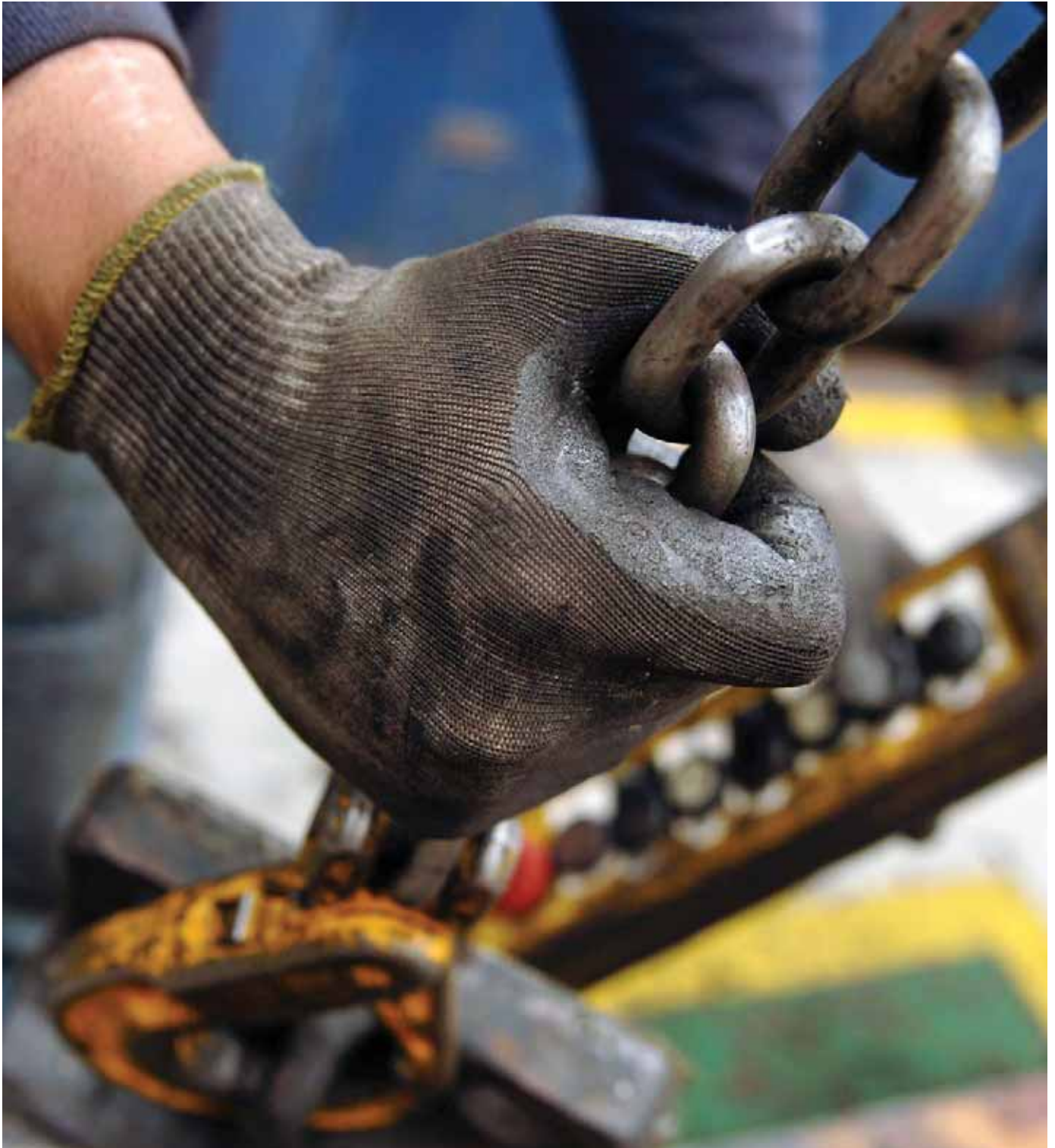
Antofagasta Railway Company

Agua de Antofagasta

Appendices

Antofagasta Railway Company

Antofagasta Railway Company has been providing transportation services in the north of Chile for 123 years. Founded in London in 1888, it is now wholly owned by the Group and continues to play an active role in the economic development of the Antofagasta Region.



The Company

With a total workforce of 848 employees and 393 contractors, the company operates a network of over 900km of railway track. It is one of the leading transport providers for the Antofagasta Region, carrying copper cathodes and sulphuric acid for the mining industry.

Combining railway and road transport with cargo transfer, shipment and storage services, the company offers both domestic and international transport solutions. Internationally, Antofagasta Railway Company transports zinc and lead concentrates from Bolivia via the border town of Ollagüe, the connection point with Empresa Ferrovial Andina S.A. in which it has a 50% interest. The network also extends to the north of Argentina and other destinations.

Antofagasta Railway Company was the first railway company to cross the Atacama Desert and connect Chile to Bolivia, Argentina and Peru. It has played a key role in the Region's development and has supported the growth of the local mining sector by moving inputs for the mining processes and the resulting products. Since the end of the 1980s, when passenger services ceased, the company has been exclusively dedicated to the transport of cargo.

Sustainability strategy and management

Ensuring the safety of our employees and the general public is critical to our business and its reputation. The key strategic challenges for the company are to safely co-exist with communities that over time have settled around our railway lines.

The main sustainability issues for our business are:

- **Impacts on neighbouring communities:** Although most of our tracks run through the sparsely populated Atacama desert, parts of our railway track run through urban areas. We operate around 20km

of track in the city of Antofagasta and 11km in Calama, as well as shorter sections through smaller towns. With the expansion of these cities which have grown dramatically as a result of recent economic development in the region, many people come into contact with the railway and some people have built their homes a few metres from the line.

Preventing pedestrian and car accidents when people cross our tracks are key concerns. Antofagasta Railway constantly works to improve and maintain its railway crossings and raise community safety awareness.

The railway is an important part of Antofagasta's infrastructure and the company contributes to regional development as well improving buildings and infrastructure. However, noise, vibrations and traffic delays are associated with the railway and these can disturb local people. The company works to understand and address community concerns.

- **Health and safety of workers:** Working with heavy machinery and transporting hazardous materials (such as sulphuric acid) poses risks for our employees. All our employees and contractors must go through rigorous health and safety training as part of their induction, with regular refresher training throughout their career. We carry out regular audits of our internal systems and processes and we adhere to all relevant safety regulations and industry standards. Our health and safety management system is based on the OHSAS 18001 standard and the company has ISO 9001 certification.
- **Reducing environmental impacts:** In line with the Antofagasta Group's sustainable development principles, the Railway Company aims to measure and reduce its main environmental impacts. It does this by reporting its carbon emission and water consumption through the Carbon Disclosure Project, being efficient in the use of fuel and energy, and using renewable energy where possible. This reduces costs as well as greenhouse gas emissions.

Antofagasta Railway Company

Employee statistics

	2011	2010	2009
Total number of employees	848	839	826
Local workers	92%	93%	91%
Affiliated to a union	56%	38%	39%
Women workers	7%	7%	7%
Number of contractors	393	435	450

Investment in training

	2011	2010	2009
Total training hours	23,198	16,918	17,432
Average training hours per employee	29	21	20
Workers trained in health and safety	51%	40%	40%
Total investment in employee training	US\$166,283	US\$132,030	US\$145,146

Employees and labour relations

The expansion of mining projects in the region means that competition for skilled and semi-skilled labour is very high in Antofagasta. This makes recruitment and retention a major challenge for the company and we regularly review our remuneration and promotion policies to ensure our salaries and benefits are competitive. We recognise that a motivated workforce is central to our operations and helps us meet our business objectives.

The majority (92%) of our employees come from the local area. Our permanent staff are responsible for all operational, administrative and technical tasks, except track maintenance, for which we employ contractors. Total contractors numbered 393 in 2011, which is around 40 fewer people than in 2010, as a result of the completion of expansion projects.

More than half (56%) of our workforce is unionised and we negotiate collective bargaining agreements well in advance of the legal deadline. There were no labour disputes in 2011.

We strengthened our internal communications by launching a newsletter, upgrading bulletin boards and circulating a growing number of informative emails among workers.

Workers can raise concerns through members of the human resources team at any time. We conduct an employee satisfaction survey every two years and put plans in place to address concerns. The next survey will be conducted in 2012 and since the 2010 survey we have strengthened internal communications and training programmes and offered coaching to enhance middle managers' communication skills.

Antofagasta Railway Company invested US\$166,283 in employee training and skills development in 2011. This represents a total 28.74 hours per employee, up 37% compared to 2010. Our focus on technical training for middle management has also increased. We see investing in our people as a critical strategy not only to improve individual employee performance but also to increase retention.



Antofagasta Railway Company

Health and safety

Our workers and contractors face health and safety risks from moving trains and other machinery. We manage these risks through a Health and Safety Management System, based on OHS18001. We encourage a culture of individual responsibility for safety, whereby employees look after their own health and safety as well as that of their colleagues.

We deeply regret the death of one Antofagasta Railway Company worker in 2011 in the city of Calama, who was hit by a train. We investigated the cause of the accident and found that proper safety procedures had not been followed and that the train had not been properly secured. After the accident, a number of workers were dismissed for failing to follow safety procedures. Information to further raise employees' awareness of health and safety procedures, and to avoid accidents in future, was circulated through an intensive internal communications campaign. Posters were placed in visible spots around the company and these are replaced regularly with different safety themes. The recruitment process has been strengthened and union leaders agreed to the introduction of financial incentives and penalties to bolster safety performance from 2012.

The lost-time injury frequency rate (LTIFR) remained stable in 2011 compared to 2010. We will strive to reduce this in 2012, although the rate remains well below our historic average. Of the 20 incidents recorded last year, strains comprised the most common form of injury.

Safety performance

	2011	2010	2009	2008
Fatalities	1	-	-	-
Lost-time injury frequency rate (LTIFR)	9.6	9.5	12.0	14.1
All injury frequency rate (AIFR)	28.3	25.9	33.9	37.1

Note: the LTIFR and AIFR figures for Antofagasta Railway Company have been restated to include data from all four of its subsidiaries: FCAB, EPS, TRAIN, FCAB Embarcadores and FCAB Ingenieros y Servicios. In previous years only FCAB was included.

In 2011 we introduced several new safety initiatives to prevent accidents, such as improving the railings on flatcars used to transport large machinery, changing the location of brake levers in tank cars to reduce the risk of injury to train engineers and introducing new safety standards for handling cargo.

More than 1,000 employees and contractors took our health and safety induction training programme in 2011. We ran a series of safety courses on specific activities including hoisting and driving. We are also introducing new equipment to protect workers' hearing.

We updated the health and safety regulations for contractors. Among other changes, we now require contractors to carry out their scheduled audits and monthly meetings with the assistance of one of our risk prevention officers.

Public safety

Preventing accidents on our tracks is a company priority. We deeply regret one death on our railway lines in 2011. A homeless person was run over by a train after falling asleep on the track. We are concerned about the incident and are working to raise awareness among homeless groups about the danger of settling close to the tracks.

To prevent accidents, the company is focusing its efforts on:

- **Awareness-raising campaigns:** In 2011, we ran a safety information campaign for residents who live close to the railway, as part of a wider safety awareness drive that also included public talks and outreach efforts with community groups in Antofagasta. We ran a series of public discussions on topics such as the dangers of leaving rubbish on the tracks and we distributed printed material to over 2,000 households in an effort to improve safety at railway crossings. This was a central theme of our annual children's drawing contest that attracted more than 170 students from Antofagasta schools and more than 11,000 people who voted. We also distributed information on the street on Railroad Crossing Awareness Day.

– **Improving safety at railway crossings and lines:**

We doubled the number of derailing detectors on our tracks over the last year. During the year the detectors successfully identified several faults and helped to avoid the possibility of major accidents.

- **Improving safety for workers and the public:** In 2011, we continued to install stoplights at the most hazardous crossings on our lines. For instance, a new stoplight crossing was installed on the Mejillones line at a location where military personnel regularly cross the track.

There were no significant social conflicts with our neighbours during 2011.

Community engagement

The Antofagasta Railway Company has extended its community engagement activities over the last year. Our work in this area is led by a dedicated Community Relations Unit, which was established in 2010 to help us obtain and respond to community concerns and strengthen our contribution to its development. The Unit coordinates meetings with key community stakeholders, including municipal authorities, neighbourhood associations and civil society organizations. Any member of the public can get in touch with our community relations team via telephone, email or the company web page.

We fund projects that contribute to the social wellbeing of Antofagasta with a focus on promoting the culture and heritage of the region. In 2011, Antofagasta Railway Company invested US\$600,000 in a variety of community activities.

We support cultural projects that encourage individuals and communities to come together and celebrate the region's heritage. We support initiatives that promote education, as well as local and regional development.

Highlights of our programme in 2011 include:

- **Cultural Station:** The railway has played an important role in the region's history. We aim to continue that cultural legacy by using the company's

Public safety performance

	2011	2010	2009
Crossings with stoplights	65%	61%	52%
Crossings with automatic barriers	20%	20%	13%
Number of incidents involving third parties	51	51	59
Number of third-party people injured	7	15	14
Third-party fatalities	1	2	-

train yard and other historic buildings for educational, cultural and regional heritage purposes. Three years ago, we launched the 'Culture Station', a permanent events space on our premises where science exhibitions, book fairs, public seminars and other community activities take place. In 2011, more than 70,000 people attended or took part in events held here, more than three times the number in 2010. We restored an old company building, converting it into a permanent exhibition space for the city, of which there are few. This provides a first-class setting for exhibiting collections from regional and national museums, attracting around 177 visitors each day. In 2011 it housed exhibitions from the National Arts Museum, the national child science museum and the Colchagua rural life museum. For the third year in a row, the company was involved in an Androniko Luksic Foundation project called 'Let's go to the theatre'. The project makes classical plays available to vulnerable children from under-resourced schools. Up to 3,500 people attended events related to the project in 2011 and many children improved their communication skills through theatre workshops.

- **Zicosur International Book Fair:** We hosted a ten-day multicultural event on the platform of our station in Antofagasta City. More than 30,000 visitors attended the book fair, which also held singing, dancing and poetry events, in the first book fair ever held in the region.



Environmental performance

We are committed to managing our footprint and reducing our impacts wherever we can and we have developed an Environmental Management Programme to manage and measure our progress. The greatest potential environmental impacts from our operations are the transport of hazardous substances and the control of toxic waste. We have rigorous standards in place to ensure these are treated with great care. Other priorities include the efficient use of resources such as fuel, energy and water.

We encourage workers and local people to care for the environment. For instance, as part of our 'Care for Your Life, Care for Your Train' programme and anti-litter campaign, we conducted three cleaning operations during 2011, removing 200 tonnes of rubbish along a 9km stretch of track and provided anti-litter information to over 1,000 households.

We manage our impact on the environment by:

- **Ensuring full compliance:** We track our performance and compliance with regulation through regular internal and external audits in accordance with the OHSAS 18001 standard. All our facilities are inspected each month and the Group's Risk Management team conducts an annual assessment to ensure our standards continue to meet external legal requirements.
- **Mitigating impacts:** Rail travel is among the most carbon-efficient means of transportation and we are working hard to further improve efficiency. Our electric and diesel locomotives account for 90% of our carbon emissions. To reduce fuel and electricity use, we ensure locomotive engines are turned off when not in use for more than 30 minutes and at the end of all journeys. We developed an exhaust colour chart and encourage engineers to regularly record the colour of exhaust fumes to enable better monitoring. In 2011, our total fuel consumption was 28.36 million litres, while our electricity consumption was just over 2,500,000 KWh. The figures are marginally higher than last year, but consistent with our historic average.

We are promoting the use of renewable energy as part of the Group's commitment to mitigating its impact on climate change. The Antofagasta Railway company is among the first in the region to use solar power, for example to light its stations and power public address systems and automated track signals.

Environmental incidents

In 2011, there were two minor environmental incidents. The first occurred on the track between Pampa and Cumbre, and the second at Conchi station, where in both cases, small amounts of sulphuric acid (a hazardous material) were spilled. These incidents were a result of human error as cylinder lids had not been screwed on tightly enough and control systems had not been properly implemented. Employees were able to promptly recover the material and dispose of it, minimising environmental damage. Additional control systems have been put in place to ensure systematic checks.

Waste

We comply fully with environmental regulations for storage, removal, transport and disposal of dangerous waste, domestic waste and industrial waste. In 2011 we generated 756.59 metric tonnes of waste, of which 473.33 tonnes was hazardous. All solid hazardous waste is disposed of by authorised companies. In 2011, 55 tonnes of waste was reused. Most of this comprised waste oil and batteries. In 2012, we hope to find additional markets for hazardous waste that is reusable.

We continued initiatives to encourage workers to separate solid waste and to reduce, reuse and recycle. In 2011 we produced 220 tonnes of solid domestic waste, compared to 230 tonnes in 2010. In 2012, we intend to add plastics in addition to paper and cardboard to our recycling efforts.

The company's wastewater treatment plants enable us to reuse water for industrial purposes and irrigation. Third-party experts regularly evaluate the waste effluent from our operations and the Group's water company.

Environmental performance

	2011	2010	2009	2008
Carbon footprint (scope 1 & 2)				
Tonnes of CO ₂ equivalent emissions (CO ₂ e)	111,068	100,000	102,000	84,215
Fuel use				
Annual total fuel consumption (litres)	28,356,590	27,633,520	28,156,240	26,399,660
Efficiency				
Cubic meter of fuel consumed per net tonne kilometre (NTK) of cargo carried	20.56	20.2	19.4	20.2
Electricity use				
Annual total electricity consumption (KWh)	2,516,466	2,499,000	2,481,787	2,543,562



Aguas de Antofagasta

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Aguas de Antofagasta

Since 2003, Aguas de Antofagasta has produced clean drinking water for more than 150,000 domestic and commercial customers in the cities of Antofagasta, Calama, Taltal, Tocopilla and Mejillones. The company also holds the concession to collect, treat and dispose of wastewater in Taltal, Tocopilla and Mejillones.



The company

Situated in one of the driest places on earth, our services play a vital role in enhancing the health and wellbeing of those living in the Antofagasta region.

We use technology and alternative water sources to meet demand and manage scarce resources. Our network of water pipes now stretches over 1,140km.

Aguas de Antofagasta is the first company in Latin America to provide desalinated potable water. Our desalination plant supplies 60% of the city of Antofagasta and 15% of Taltal. In 2011 our Board approved a US\$120 million investment to build a second desalination plant to supply the southern area of Antofagasta. Its construction is planned for 2014, once all environmental permits are obtained. The company is also investing to improve its wastewater pre-treatment plants and hazardous waste disposal systems.

Aguas de Antofagasta obtains its water from mountain catchments and from sea water desalination. Our activities are regulated by the national agency, Superintendencia de Servicios Sanitarios (SISS), which oversees water provision in Chile. Meeting the SISS's standards for quality, reliability and tariffs is a priority for the business.

The region's local water sources carry traces of arsenic due to the high mineral content. Aguas de Antofagasta has reduced arsenic level to less than 0.01 parts per million, which is in line with the World Health Organization (WHO) standard and Chilean regulations. This ensures our customers can enjoy safe drinking water piped to their homes.

In 2011, Aguas de Antofagasta provided direct jobs for 267 people and employed 107 contractors.

Sustainability strategy and management

Aguas de Antofagasta's strategic challenges relate to: ensuring continuous access to water, ensuring water quality and providing excellent customer service. Our actions are guided by three strategic ambitions:

- **Innovation and technology:** Aguas de Antofagasta continues to use innovative desalination technology to ensure a continuous, long-term supply of potable water in one of the world's most arid regions.
- **World-class standards:** Aguas de Antofagasta has invested in up-to-date purification technology to guarantee that the water we provide is safe for domestic use. Our processes meet World Health Organization standards and Chilean regulations. In 2011, we continued to update our water quality systems and extended the internationally recognised ISO 22000 standard across all our operations. Aguas de Antofagasta wastewater treatment operations are certified to ISO 14001 and the company has an Occupational Health and Safety Management System in place.
- **Service excellence:** Aguas de Antofagasta aims to give customers excellent potable water quality, pressure and continuity of supply.

Aguas de Antofagasta

Customers and water supply

Aguas de Antofagasta focuses on providing safe and clean water to its customers. The main sustainability issues for our business are:

- **Communicating with customers:** Timely and open communication with customers is critical, especially during unplanned interruptions to their water supply, which can be caused by third-party interventions causing pipe ruptures and problems with water pressure. The company has a variety of public communication channels to keep stakeholders fully abreast of emerging issues. Customers can give their feedback via dedicated email services, telephone lines and public forums.
- **Disaster preparedness:** Water sources, water production and distribution infrastructure and wastewater management facilities are subject to risks of a natural disaster including earthquakes and tsunamis. Aguas de Antofagasta's emergency committee is responsible for preventing and managing these risks.

In 2011 the company finished a study simulating the effects a tsunami could have on its desalination plant, identifying the risks and developing contingency plans, including plans for co-ordinating with local emergency authorities.

Northern Chile's 'Altiplano Winter' is a weather phenomenon marked by heavy summer rainfall that often results in floods that can muddy the water and increase silt levels. The company's Emergency Committee evaluates climate risks and implements contingency plans to reduce the risk of extreme weather events affecting potable water production.

Our customers are at the heart of what we do and we must ensure they receive the highest quality water at the right pressure, as well as collecting and disposing of wastewater safely and efficiently. Customers are most concerned about being quickly informed of any unexpected interruption to their water supply. We have improved our communication channels for informing customers about unexpected emergency work that temporarily interrupts our services. We contact them via email, automatic telephone calls and upload information to our website. We have a 24-hour telephone line for enquiries and we liaise closely with regional, municipal and mayoral authorities.

The annual customer satisfaction survey by the water authority, SISS, lowered Aguas Antofagasta's overall satisfaction grade from 6 to 5 (7 being the highest score) in 2011, compared with 2010. The result associates to an incident that occurred in March 2011 when a natural algae bloom caused potable water to have an unpleasant odour.

See environmental management, page 81.

Employees and labour relations

With job opportunities increasing in the region, competition for talented staff is growing. Being a responsible, inclusive employer helps us to recruit and retain staff as well as offering competitive remuneration and rewarding our employees' loyalty and skills. Our human resource strategy stresses continued support for individual learning and skills-building for the 267 people we employ.

In 2011 we increased the average training hours from 45 to 56 hours per employee and 61% participated in the company's annual training programme to further develop their technical skills. We also continued our 'talent programme' with Universidad del Desarrollo (University for Development), which was introduced in 2010 to increase leadership skills.

Investment in training

	2011	2010	2009
Average hours of training per employee	56.1	44.6	37.7
Total investment in employee training (US\$)	151,230	119,636	89,283

Forty-seven employees from all levels and departments participated in our annual Innovation Contest. The competition encourages interdisciplinary teams to work together to tackle the company's strategic challenges, allocating each team a budget to develop their ideas to improve company practices. It fosters teamwork and leadership skills and all entries are assessed by Aguas de Antofagasta's executive team against the criteria of innovation, sustainability and benefits to the company.

In 2011, we began working with a Chilean government body called Corfo which promotes entrepreneurship and innovation. We began to implement Corfo's Supplier Development Programme, working with suppliers to help them meet company standards. Running for two years and funded jointly by Aguas de Antofagasta and the Chilean state through Corfo, the programme is designed to improve our contractors' performance standards. The first step of the programme is to analyse gaps in suppliers' procedures and practices.



We have a constructive relationship with the two labour unions representing around 65% of our employees. We are transparent in our labour negotiations and aim to address employee concerns before they escalate.

Aguas de Antofagasta continues to adhere to the collective agreements signed in 2009 and 2010 with our two unions. These set out our commitment to act as a responsible employer and to meet all our legal and contractual obligations with regards to pay, social provision and employee benefits. There were no industrial disputes in 2011.

Health and safety

We encourage employees and contractors to take an active role in protecting their own health and wellbeing. In 2011 we worked with contractors to revise their risk management procedures. We introduced a standardised approach to identifying and managing risks according to their risk level, considering criteria such as the size of the task, the magnitude of the risk, the number of contractors employed and the type of work involved. We agreed improvement plans for each contractor company with progressive targets, appropriate to the size and capacity of each company.

In 2011 we continued to improve our safety record. Our accident frequency rate reduced from 5.6 in 2010 to 5.1 in 2011. We investigate all accidents and share lessons through dedicated monthly meetings.

Safety performance

	2011	2010	2009	2008
Fatalities	0	0	0	0
Lost-time injury frequency rate (LTIFR)	5.1	5.6	7.0	11.5
All injury frequency rate (AIFR)	21.5	22.4	16.8	21.6

Contractor health and safety

Aguas de Antofagasta has built up a strong culture of safety and we want to bring all our contractors, whether large firms or small, up to the same safety standards. Our revised Occupational Health and Safety plans are helping us achieve this goal. As well as sharing best practice information, our new approach introduces monthly evaluations of contractors' health and safety performance against our standards. It provides contractors with a framework for continuous improvement. The changes are communicated to employees and contractors through monthly meetings, refresher workshops and training.



CACTÁCEA
OREOCEREUS
FOSSULATUS

Community engagement

Being responsive to the needs of our community stakeholders is fundamental to our strategy. In 2011 we held a series of meetings with community organisations across the region to strengthen our relationships with community leaders and get a better understanding of their expectations. Together we drew up a number of action plans that will be implemented during 2012, relating to providing more information about the desalination process. This includes plans to organise community visits to the desalination plant.

Our community investment activities seek to enhance Antofagasta's human capital and its unique culture, focusing on developing its young people, entrepreneurial capacities and regional pride. The company is developing performance indicators to make its community investment more effective and better aligned with its long term business strategy.

Key community projects in 2011 included:

The 'Our North' programme: We worked with 70 students from five high schools in Antofagasta, Calama, Taltal, Tocopilla and Mejillones to build their entrepreneurship and innovation skills. We are encouraging other sponsors to support the programme and extend its reach.

Aguas de Antofagasta Botanical Garden: Around 11,200 people have learnt something new about biodiversity since we set up Antofagasta's only botanical garden in 2010 in our corporate office. The 3,100m² garden today boasts 480 species of flora. The garden runs a free interactive Environmental Education Programme to teach local school children and community members about Antofagasta's rich biodiversity. More information is available at www.jardinbotanico.aguasantofagasta.cl.

Fertile region: This programme aims to engage companies, trade unions, universities, schools, public institutions and civil society in creating an "innovation ecosystem" for the region. As part of the project, Aguas de Antofagasta has hosted a number of conferences and debates to stimulate debate and share expert knowledge. Read more about the programme at www.regionfertil.com.



CASE STUDY

Hi-tech water efficiency system

Takadu is a world-leading Israeli technology designed to monitor the distribution and provision of drinking water. The system provides real-time information on leaks, breaks and other inefficiencies. It analyses flow and pressure inside pipes and factors in external data, such as climate and seasonal water use. The information is automatically collected centrally for detailed analysis.

2011 was the first full year in which we used the system and we were able to detect leaks better, improve equipment availability, reduce minimum night time flow, and decrease the time it took us to respond to problems in our water pipes. Aguas de Antofagasta expects the use of Takadu will help to reduce water losses and increase overall efficiency.

Environmental performance

Aguas de Antofagasta works to continually improve environmental performance, guided by its environmental policy and management system. Our environmental policy focuses on using natural resources efficiently, implementing our environmental management systems, constantly monitoring our performance and promoting understanding of environmental issues among employees and contractors.

Environmental performance

	2011	2010	2009
Carbon footprint (scope 1 & 2)			
Tonnes of CO ₂ equivalent emissions (CO ₂ e)	6,071	6,378	8,702
Fuel use			
Litres per year	653,528	712,577	1,093,061*
Efficiency			
m ³ of fuel per m ³ of potable water produced (tCO ₂ e/m ³)	0.001127	0.001087	0.001099
Electricity use			
KWh per year	5,041,000	4,485,125*	4,312,402*

*These figures have been restated.



Water sources are scarce in the Antofagasta Region and demand is growing steady with increased local mining investment. Aguas de Antofagasta's main environmental challenge is to ensure a continuous and long-term supply of water. The company has pioneered the use of desalination and we continue to explore this option to reduce pressure on the scarce natural water sources located in the mountains, protecting the region's fragile water system. Reducing water losses during distribution is central to our commitment to use resources efficiently and deliver a constant supply of water to customers. We achieve this by constantly updating and improving our distribution infrastructure. For instance, in 2011 we introduced a new technology for monitoring and reducing water leaks. *See box.*

Environmental management

In February 2011, we achieved ISO 22000 certification for water safety at Taltal. The standard is designed to improve water safety management through the supply chain, and we began to implement the standard at our filtering plants at Salar del Carmen and Cerro Topater, as well as our desalination plant at La Chimba throughout 2011. Our objective for 2012 is for all our facilities to gain certification to this standard. If successful, Aguas de Antofagasta would be the only water and sewage utility in Latin America to have achieved full ISO 22000 accreditation.

All our wastewater treatment and distribution operations are certified to ISO 14001. We have also achieved certification for wastewater collection facilities in Taltal, Mejillones, Tocopilla and Calama and are working to certify Antofagasta City in 2013.

Our environmental team tests and monitors our systems to make sure they can cope in the event of a natural disaster. *See page 80.*

We had one environmental incident in March 2011. An unprecedented rise in

sea temperature resulted in an algae bloom, causing desalinated potable water to have an unpleasant odour. Water remained safe for human consumption but the company decided to stop supplying water from the desalination plant until the problem was solved four days later. We regret any inconvenience caused to customers and we ensured that those affected were supplied with drinking water from alternative sources. The company has been fined following the incident and we are now in the process of appealing against the fine.

To prevent this happening again, we added a new step to the desalination process so that drinking water is aired, helping to control the smell. The company also shared information with the scientific community and others in the desalination industry to help them deal with this problem.

We adjusted our procedures for handling hazardous waste to comply with new regulations that came into effect in April 2011. Through our waste separation and recycling programmes, in 2011 we recycled 2 tons of paper and cardboard, half a ton of plastic, 30kg of tin and 78kg, of printing toners and we produced 53kg of compost used to fertilise the site's botanical garden.

Energy and climate change

Aguas de Antofagasta aims to improve energy efficiency and reduce use of fuel and electricity. Desalinating sea water is the most energy-intensive part of our operations. Our electricity consumption increased to just over 5,000 MWh in 2011, a 12% increase compared with 2010.

In 2011 fuel consumption was reduced by 8.3%, mainly because old vehicles in the company's fleet were replaced with newer and more efficient vehicles.

We report our emissions through the Carbon Disclosure Project and monitor the carbon dioxide emissions of our administrative services as well as our operations.



Appendices

Summary GRI Content Index

Statement GRI Application Level Check

Summary GRI Content Index

The table below provides a summary version of the G3.1 Indicators of the Global Reporting Initiative (GRI), including the supplement for the Mining and Minerals Sector contained in the printed version of this report. The full version of the Content Index, including the answer to all GRI indicators, is found in the on-line version of this report available at the Antofagasta plc websites:

<http://www.aminerals.cl/webamsa/index.html#/reportes-de-sustentabilidad-del-grupo/home/>

http://www.antofagasta.co.uk/interior/investor/f_social.html.

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Statement GRI Application Level Check

GRI hereby states that **Antofagasta plc.** has presented its report "Antofagasta plc. Sustainability Report 2011" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 24 August 2012

A handwritten signature in black ink, appearing to read "Nelmara Arbex".

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 6 August 2012. GRI explicitly excludes the statement being applied to any later changes to such material.

Sustainability Report 2011

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

Antofagasta plc

33 King Street
London SW1Y 6RJ
United Kingdom

Apoquindo 4001 - Piso 18
Las Condes, Santiago
Chile



Visit www.antofagasta.co.uk
for further information