

# Sustainable development

We believe our strong commitment to sustainable development provides Rio Tinto with a competitive advantage. This includes helping us to manage risks effectively, reduce environmental impacts, engage with our communities, decrease operating costs, provide additional business opportunities, attract high-calibre employees and ensure their health and safety and ultimately to deliver better returns for our shareholders.

## Sustainable development overview

### Key achievements

- Exposure to an average eight hour noise dose of more than 85 decibels was reduced by 4.3 per cent per 10,000 employees compared with 2008.
- We remained the largest private sector employer of Indigenous Australians.
- We retained our listing on the FTSE4Good and Dow Jones Sustainability Indexes.
- Identified as the sector leader in the Natural Value Initiative analysis on biodiversity and ecosystems management.

### Key priorities

- Eliminate workplace fatalities and continue to reduce incident and injury rates toward our goal of zero harm.
- Improve the identification and evaluation of higher consequence/lower frequency hazards.
- Continue to improve the diversity of our workforce and to focus on the health and wellbeing of employees.
- Maintain our energy use and greenhouse gas emission reduction programmes.
- Progressively rehabilitate our operational land as it comes out of use.
- Continue to enhance our approach to sustainable development to ensure it remains focused on the social, environmental, economic and governance issues most relevant to delivering our business strategy.

### Materiality assessment

We continue to refine our materiality assessment methodology to ensure this report remains focused on our most significant sustainable development issues.

Our process was developed in line with the Global Reporting Initiative (GRI) guidance ([www.globalreporting.org](http://www.globalreporting.org)). It involves identification and prioritisation of issues affecting our business and its stakeholders over the next three years.

The 2011 materiality assessment resulted in the coverage of the following topics in this report:

- Safety
- Health
- People
- Human rights
- Communities and social performance
- Greenhouse gas emissions and energy use
- Water
- Land
- Biodiversity
- Non-managed operations and joint ventures
- Economic contribution

Omission from the issues covered in our report does not mean that the issue is not managed by the Group. Please see our website for additional information.

### Our approach

We aim to integrate sustainable development into everything we do, wherever we operate. The Group's long-term vision is to become the sector-leading global mining and metals company. A distinctive capability in sustainable development ensuring ongoing access to people, capital and mineral resources is fundamental to this.

We have implemented a sustainable development framework which contains the "must have" building blocks, which must all work together to achieve leading performance and manage risk effectively.

This approach begins with our global code of business conduct, *The way we work*, supported by our corporate policies, strategies and standards that establish the minimum acceptable requirements for behaviour or operating conditions. Our policies are also supported by management systems to ensure appropriate implementation across the Group.

We continue to review our approach to sustainable development to ensure it remains focused on the risks most relevant to delivering our business strategy.

### Performance data

Our sustainable development performance data are reported for calendar years and, unless stated otherwise, represent 100 per cent of the parameters at each managed operation, even though Rio Tinto may have only partial ownership.

Data reported in previous years may be modified if verification processes detect material errors, or if changes are required to ensure comparability over time.

Wherever possible, data for operations acquired prior to 1 October of the reporting period are included. Divested operations are included in data collection processes up until the transfer of management control.

We report in line with the GRI G3 guidelines at Application level A+ and have implemented the International Council on Mining and Metals' (ICMM) sustainable development framework ([www.icmm.com](http://www.icmm.com)).

Further information on our data definitions, our GRI checked report and our alignment with the ICMM sustainable development principles and supporting position statement can be found on: [riotinto.com/sustainabledevelopment2011](http://riotinto.com/sustainabledevelopment2011)

### Safety

We are committed to achieving our vision of zero harm. Our safety strategy prioritises eliminating workplace fatalities and permanent damage injuries or illnesses. Leadership remains a crucial factor in achieving these priorities and creating a culture that will eliminate all injuries from the workplace over time. Our management system provides the framework for hazard identification, risk analysis and risk management into all aspects of our activities.

Regrettably, six people lost their lives whilst working at Rio Tinto managed operations and operations held for divestment in 2011. The events were an electric shock incident at the Iron Ore Company of Canada, two people drowning at Oyu Tolgoi in Mongolia, a drowning and a crush incident at Rio Tinto Iron Ore in Australia and a crush incident at Zululand Anthracite Colliery in South Africa (identified for divestment). We provided support and counselling to the families and workmates affected by these events. In addition, after each of these incidents, as is the custom at Rio Tinto, we conducted in-depth investigations of the causes of these incidents and ensured that the conclusions were communicated across the Group to prevent similar events from recurring.

We measure progress toward our goal of zero injuries through the all injury frequency rate (AIFR), which includes data for employees and contractors. At the end of 2011 our AIFR was 0.67, an improvement of two per cent over the last year.

## Goals and targets

## Trends

## Progress to date

Our safety goal is zero injuries and zero fatalities.		
Progress is measured through our all injury frequency rate (AIFR) per 200,000 hours worked.	^	Two per cent reduction in our all injury frequency rate compared with 2010 and a 30 per cent reduction compared with 2008.
30 per cent reduction in the rate of new cases of occupational illness per 10,000 employees between 2008 and 2013.	^	78 per cent reduction in the rate of new cases of occupational illness compared with 2008.
Ten per cent reduction in the rate of employees per 10,000 employees exposed to an eight hour noise dose of more than 85 decibels between 2008 and 2013 <sup>(a)</sup> .	^	4.3 per cent decrease in the rate of employees potentially exposed to an average eight hour noise dose of more than 85 decibels compared with 2008.
Six per cent reduction in total greenhouse gas emissions intensity between 2008 and 2013. We are also targeting a further four per cent reduction by 2015, to deliver an overall ten per cent reduction.	^	3.8 per cent reduction in our total greenhouse gas emissions intensity compared with 2008.
Six per cent reduction in our freshwater use per tonne of product between 2008 and 2013.	∇	2.7 per cent increase in our freshwater use per tonne of product compared with 2008.
Our diversity goal is to employ people based on job requirements who represent the diversity of our surrounding communities.		
We are targeting:		
• Women to represent 20 per cent of our senior management by 2015.	—	• Women represented 14 per cent of our senior management in 2011.
• Women to represent 40 per cent of our 2015 graduate intake.	^	• Women represented 35 per cent of our 2011 graduate intake.
• 15 per cent of our 2015 graduate intake to be nationals from regions where we are developing new businesses.	^	• 21 per cent of our 2011 graduate intake were nationals from regions where we are developing new businesses.
All operations have in place locally appropriate, publicly-reported social performance indicators that demonstrate a positive contribution to the economic development of the communities and regions where we work, consistent with the Millennium Development Goals, by 2013.	^	35 per cent of our operations have locally appropriate publicly reported social performance indicators in place after two years.

Key: ^ Improving performance    ∇ Declining performance    — Static performance

(a) We mitigate the risk of hazardous noise exposure (> 85 decibels averaged over eight hours) in the business through implementation of hearing conservation programmes, which includes the use of hearing protection. However, reducing noise levels through engineering or similar solutions is our preferred approach. The target is designed to drive noise reduction by means other than the reliance on hearing protection.

## Performance data 2007-2011

	2011	2010	2009	2008	2007
<b>Social</b>					
All injury frequency rate (per 200,000 hours worked)	0.67	0.69*	0.81	0.95	1.21
New cases of occupational illness (per 10,000 employees)	11	21**	38	47	22
Employees potentially exposed to an average eight hour noise dose of more than 85dB(A) (per 10,000 employees)	3,389	3,524**	3,570**	3,522**	3,720**
Employees (number) <sup>(a)</sup>	68,000	77,000	102,000	106,000	106,000
<b>Environment</b>					
Greenhouse gas emissions intensity (indexed relative to 2008)	96.2	96.2**	92.7**	100.0	NA <sup>(b)</sup>
Total energy use (petajoules)	516 <sup>(c)</sup>	513**	496	556**	540 <sup>(d)</sup>
Freshwater used (billion litres)	443	439**	413**	448**	NA <sup>(e)</sup>
Land footprint – disturbed (square kilometres)	3,485	3,453	3,410	1,373	1,154
Land footprint – rehabilitated (square kilometres)	422	420	402	471	418
<b>Direct economic contribution</b>					
Value add (US\$ million) <sup>(a,f)</sup>	38,193	33,812	21,363	28,412	17,241
Payments to suppliers (US\$ million) <sup>(a)</sup>	28,444	27,486	23,481	29,653	16,277
Community contributions (US\$ million)	294	166	119	140	107

\* Numbers corrected from those originally published following verification of data at selected operations. The 2010 AIFR was previously reported as 0.66.

\*\* Numbers amended from those originally published to ensure comparability over time. Amendments due to changes in measurement and calculation methodologies or immaterial updates to data.

(a) These figures include the Group's share of joint ventures and associates.

(b) Excluding the former Alcan operations, our greenhouse gas emissions intensity was 110.4\*\* in 2007 compared to 113.2\*\* in 2008.

(c) Two thirds of our energy use in 2011 came from low greenhouse gas emitting hydro, nuclear and other renewable power sources.

(d) This figure includes former Alcan operations. Excluding former Alcan operations our total energy use in 2007 was 266 petajoules.

(e) In 2007 we withdrew 411 billion litres of freshwater. This includes freshwater that was extracted for ground control and discharged without use in our process.

(f) Value add is the sum of labour, payments to governments and returns on capital invested in operations.