

# Sustainable development review

*We are focused on long term sustainable development*

Our focus on sustainable development provides the framework in which our business operates. It allows us to maintain a highly regarded reputation that ensures ongoing access to people, capital and mineral resources. This in turn helps us to deliver better return for our shareholders, manage risk effectively, reduce environmental impacts, cut operating costs, attract and retain high calibre employees and provide more business development opportunities.

 [View more about our approach to sustainable development at www.riotinto.com](http://www.riotinto.com)

## Strategy

Sustainable development is an integral part of the way in which Rio Tinto conducts its business, with leadership coming from the board of directors and the chief executive.

Our global code of business conduct, *The way we work*, reinforces our commitment to integrate sustainable development thinking in the way we make decisions about finding, acquiring, developing, and operating assets around the world. To assist our people to understand what is expected of them, we launched *Leading at Rio Tinto* in 2009. This requires seven leadership competencies to be demonstrated at each level of our organisation and includes promoting sustainable development. It is being incorporated in our recruitment and selection, performance management and development planning processes.

Sound governance and high standards of conduct are sources of competitive advantage for us. They contribute to long term business success by securing access to talent and capital, enhancing reputation and improving operational performance and supply chain management. Environmental performance, community relations, employee wellbeing and transparency are just as important to us as the technical aspects of mining and processing.

We remain an active member of the International Council on Mining and Metals (ICMM) ([www.icmm.com](http://www.icmm.com)), which evolved from the Global Mining Initiative in 1998 and which aims to provide leadership on scientific and policy matters, maintain dialogue with all stakeholders, and promote best practice performance standards employing sustainable development principles.

## Key achievements

- *The way we work*, our global code of business conduct, and *Speak-OUT*, our confidential whistleblowing programme, were revised.
- Of the electricity we used in 2009, 70 per cent was from low carbon sources, mainly hydro.
- We achieved a 16 per cent reduction in our all injury frequency rate during 2009.
- We completed the health, safety and environment integration of Rio Tinto Alcan.
- Rio Tinto remains the largest private sector employer of indigenous Australians.
- Our new global leadership competency model, *Leading at Rio Tinto*, was launched.

## Materiality assessment

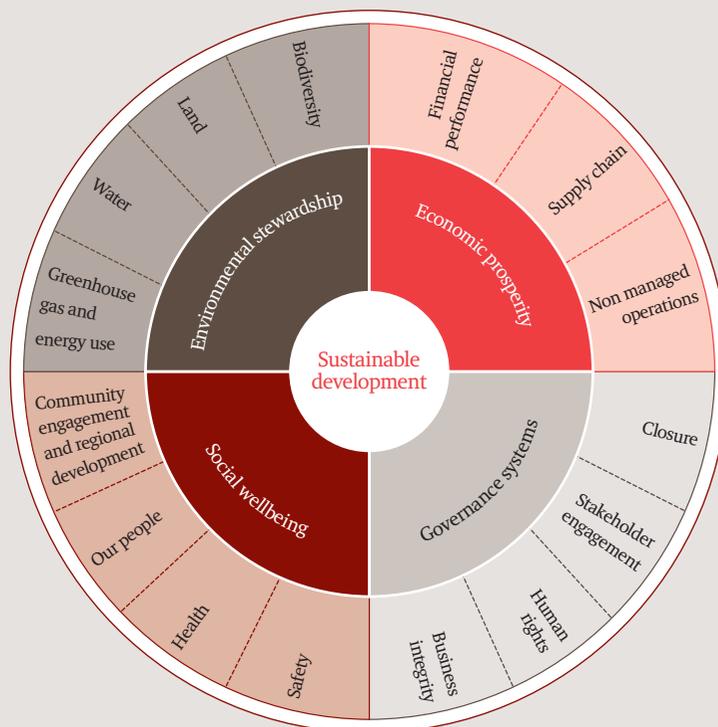
We use a materiality assessment to focus our report on our most significant sustainable development impacts.

Our assessment process has been developed in line with the Global Reporting Initiative (GRI) G3 guidance on materiality and completeness. It involves identifying issues affecting our business and its stakeholders, prioritising their importance over the next three years from internal and external perspectives and validating issue prioritisation.

Performance data for our most material sustainable development issues are subject to external assurance.

Omission from the issues covered in our report does not mean that the issue is not managed by the company.

In line with the outcomes of our assessment, we have also further discussed the most material issues – financial performance, safety and greenhouse gas emissions – in the product group operating and financial reviews within this *Annual report*.



- *Why gender matters*, a resource guide for our Communities work, was published.
- Our Pandemic Influenza Preparedness Plan was developed and rolled out to manage the swine influenza (H1N1) pandemic.
- We retained our listing on the FTSE4Good, Dow Jones Sustainability Indexes and Climate Disclosure Leadership Index, and ranked first on the Resources Global Professionals corporate governance survey.

### Key priorities

- Continue to reduce injury rates toward our goal of zero, including zero fatalities.
- Implement our improved contractor safety management system and our new health, safety and environment framework for major project development.
- Implement our wellbeing strategy to guide development of a global framework for local health and wellbeing programmes.
- Expand our employee diversity focus to address ethnicity and nationality.
- Continue engaging on and preparing for evolving energy and greenhouse gas (GHG) emission regulation.
- Embed our energy use and GHG emissions intensity reduction programmes.
- Explore ecosystem service values of our non operational landholdings, in particular carbon, water and biodiversity opportunities.
- Continue to strengthen our management systems by developing and implementing strategies to manage our key sustainable development risks and improve performance.
- Support our new Group wide health, safety, environment and communities performance targets, building on the successes and challenges of our previous targets.

### Goals and targets

We have set 2008 – 2013 targets for a range of sustainable development metrics including:

- Measuring progress towards our goal of zero injuries and zero fatalities through our all injury frequency rate.
- Thirty per cent reduction in the rate of new cases of occupational illness.
- Ten per cent reduction in the rate of employees exposed to an eight hour noise dose of more than 85 decibels.
- Operations having 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 which are consistent with the Millennium Development Goals.

- Six per cent reduction in total greenhouse gas emissions per unit of production. We are also targeting a further four per cent reduction by 2015, to deliver an overall ten per cent reduction.
- Six per cent reduction in our freshwater use per tonne of product.

### Performance data

Rio Tinto's sustainable development data are reported for calendar years and, unless otherwise stated, our inventories represent 100 per cent of the parameter 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.

Former Alcan operations (with the exception of the Engineered Products and Packaging divisions, which are in the process of being divested) have adopted our reporting definitions and have been included in our inventories since 1 January 2008.

We report in line with the Global Reporting Initiative (GRI) G3 guidelines at Application level A+.

We have implemented ICMM's ten sustainable development principles and disclosed the alignment of our policies, strategies, standards and practices with ICMM's principles and position statements on our website.

The remainder of this section details the status and implementation of our systems and approaches to manage our material sustainable development issues and our performance in these areas. Further information on our data definitions, reporting criteria, our GRI report and our target setting and assurance processes can be found on our website [www.riotinto.com](http://www.riotinto.com).

### Governance systems

*The way we work* reaffirms our commitment to corporate responsibility. It covers issues related to the workplace, human rights, communities and environment, business integrity, Group assets and information management and government, media and investor relations.

*The way we work* does not stand alone; it is supported by the Group policies, standards and guidance notes, which are available on our website, local laws and voluntary commitments. We are subject to the local laws of the many countries in which we operate. We build on compliance with these laws and where our policies and procedures are more stringent, we operate to those standards regardless of where our operations are located.

All employees are required to complete online or classroom training on *The way we work* every two years. Online training is available in 12 languages. We complete a variety of internal and external assurance activities to verify implementation of our Group wide systems and controls, see page 32.

### Business integrity

Rio Tinto conducts its business with integrity, honesty and fairness, building from a foundation of compliance with relevant local laws, regulations and international standards wherever we operate.

Business integrity training is required for all managers, of which 6,279 completed training covering anti-bribery, anti-corruption and political involvement during 2008 and 2009. We do not directly or indirectly participate in party politics and we do not make payments to political parties or individual politicians.

Mining is a heavily regulated industry and we maintain continuous dialogue with governments and public authorities at national, provincial and municipal levels. We make representations on matters affecting our business interests and those of our stakeholders.

We were a founding supporter of the United Nations Global Compact ([www.unglobalcompact.org](http://www.unglobalcompact.org)), a voluntary initiative for businesses to align their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption.

We are active in promoting transparency and high standards of corporate governance more widely, and support a number of voluntary initiatives designed to counter bribery and corruption, to promote transparency and to protect human rights. In particular, through ICMM we are a company endorsing member of the Extractive Industries Transparency Initiative (EITI) ([www.eitransparency.org](http://www.eitransparency.org)). We engage in the promotion and implementation of the EITI in candidate countries where we operate.

Additionally, we have a long standing partnership with the Dundee University Centre for Energy, Petroleum and Mineral Law and Policy to sponsor postgraduate

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studies contributing to the creation of a stable international legal and investment environment ([www.dundee.ac.uk](http://www.dundee.ac.uk)).

### Human rights

We support and respect human rights consistent with the United Nations Universal Declaration of Human Rights and we actively seek to ensure that we are not complicit in abuses committed by others. Rio Tinto endorses several international commitments and standards on human rights and remains dedicated to meeting them.

Training on human rights is provided for employees at the general manager level or above as well as our contract security personnel. Human rights training was completed by 2,797 employees during 2008 and 2009. There were no reported incidents of breaches of our human rights policy during 2009.

Richards Bay Minerals concluded its Broad Based Black Economic Empowerment transaction with a consortia of local businesses and community groups during 2009. It is now fully empowered in accordance with the South African Mining Industry Charter five years ahead of the required date in 2014.

Rio Tinto operates in a manner consistent with the UN Declaration on Indigenous Peoples and sovereign obligations. We respect the land connection of indigenous communities and work with them on their land in a spirit of reciprocity, transparency and recognition of their culture. We recognise that every indigenous community is unique and reach specific agreements with affected communities on how they want to engage with us in the development and performance of our operations.

### Stakeholder engagement

Genuine engagement with stakeholders is a critical element of successful business practice. Issues such as climate change, water and poverty alleviation are globally complex and require stakeholders to work together to explore and develop appropriate solutions.

Building strong working relationships with those who are affected by, or have an interest in, what we do is essential to our operations. We engage with a broad range of organisations and individuals including our employees, investors, governments, communities, academia, industry bodies, and civil society groups to help us identify and manage risks. We then implement internal controls to minimise threats and capitalise on opportunities presented through this exchange of sustainable development thinking.

We provide clear and timely communication concerning business performance and corporate developments through meetings, newsletters, websites, videos, and social media such as Twitter ([www.twitter.com/riotinto](http://www.twitter.com/riotinto)) and YouTube ([www.youtube.com/RioTintoVideos](http://www.youtube.com/RioTintoVideos)).

We are a member of a number of industry associations and of representative bodies including the World Business Council for Sustainable Development ([www.wbcsd.org](http://www.wbcsd.org)) and maintain active partnerships with other organisations to achieve our shared goals more effectively. We work closely with international and non governmental organisations to develop appropriate standards and guidelines for our industry.

During 2009 the US\$1 million annual Rio Tinto Prize for Sustainability continued to recognise significant contributions made by non profit, non governmental or civil society organisations promoting and implementing sustainable development. Trees, Water and People ([www.treeswaterpeople.org](http://www.treeswaterpeople.org)), based in the US and working in Central America, Haiti and the American West, was the most recent recipient of the prize.

### Closure

We have a multidisciplinary approach to closure planning, involving communities, human resource, environmental, engineering and financial specialists. Integrating closure planning into all aspects of our business, from the earliest stages of project development to the decommissioning of facilities, is essential to leave a positive legacy of sustainable development, minimise unforeseen financial impacts and ensure stakeholder expectations are met. Achieving a reputation for positive closure outcomes assists us to gain access for future projects.

At the end of 2009 our close down and restoration provisions were US\$6,916 million. Our closure management plans are updated every five years to ensure they address key risks, incorporate sustainable development opportunities and include accurate financial provisions. Since 2005 43 closure management plans have been completed, including eight in 2009. Guidance and best practice examples are shared across the Group to improve performance.

During 2009 our closure standard and guidance were updated to incorporate considerations for long life industrial type facilities following the Rio Tinto Alcan integration.

We have established a team of specialists to manage our legacy sites, the majority

of which were introduced to us through acquisitions, to ensure our closure standard and sustainable development principles are applied in these areas.

Our closure standard and communities standard require our operations to engage regularly with stakeholders, including employees, traditional land owners, local communities and governments. Together, we identify preferred sustainable development options for closure and seek stakeholders' endorsement. Examples include:

- Argyle diamond mine engages with Traditional Owners on rehabilitation methods for waste rock dumps and preferred vegetation types as it transitions to an underground operation.
- Kestrel coal mine, still with more than 20 years of predicted life, has surveyed local communities and employees on their expectations for closure and incorporated outcomes in post-closure land use plans as part of Rio Tinto Coal Australia's Mine Life Planning programme.
- Rio Tinto Alcan applied a "regional industrial development" process during the decommissioning of the Lannemezan and Anglesey smelters. This involved engaging with stakeholders and encouraging new post-closure uses for industrial facilities so as to maintain regional socio-economic benefits.

We continue to participate in initiatives to enhance closure planning guidance for our industry through recognised bodies such as the International Council on Mining and Metals, the Responsible Jewellery Council ([www.responsiblejewellery.com](http://www.responsiblejewellery.com)) and the Minerals Council of Australia ([www.minerals.org.au](http://www.minerals.org.au)).

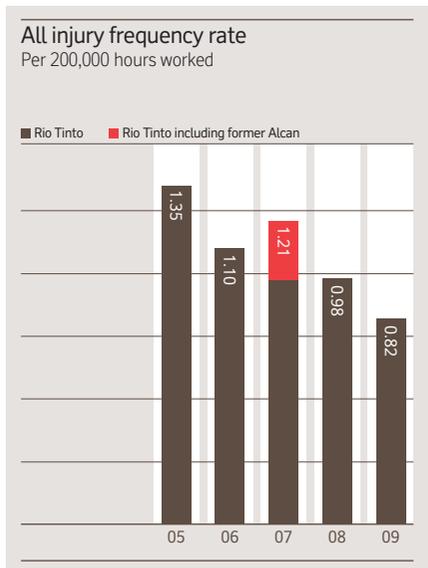
### Social wellbeing

We are committed to providing a safe and healthy workplace for our employees where their rights and dignity are respected. We set out to build enduring relationships with our neighbours that demonstrate mutual respect, active partnership, and long term commitment.

In 2009 we set new five year targets for a range of social wellbeing metrics which are discussed in the following sections.

### Safety

Our goal is to achieve zero injuries and zero fatalities. We believe that all injuries are preventable and our aim is for everyone to go home safe and healthy at the end of each day. We strive to create a culture where everyone



feels that they can make a difference in an environment where all employees and contractors have the knowledge, competence and desire to work safely.

Regrettably we did not meet our goal of zero fatalities in 2009. Four people were fatally injured while working at Rio Tinto managed operations. The fatal incidents occurred at the Lugo di Vicenza aluminium packaging operation in Italy, the Palabora copper mine and the Richards Bay Minerals titanium dioxide feedstock mine in South Africa, and at the Awaso bauxite mine in Ghana. We continue to provide support and counselling to the families and workmates who are impacted by these incidents. We shared the lessons from these and other serious incidents across our business.

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 2009 our AIFR was 0.82, an improvement of 16 per cent from 2008. Over the last five years we have reduced our AIFR by 46 per cent. Our lost time injury frequency rate has also improved and was 0.43 per 200,000 hours worked in 2009.

Low injury rates do not mean that serious incidents will not happen. Our Semi Quantitative Risk Assessment (SQRA) process provides a rigorous approach to the identification and evaluation of higher consequence / lower frequency hazards. The risk reduction resulting from application of the SQRA process is used as a Group wide leading indicator for safety performance. Additionally we undertook seven process safety reviews of our higher risk facilities in 2009.

We have also implemented a significant potential incident reporting measure which promotes identification, investigation and sharing of lessons learnt from critical incidents and introduced streamlined root cause identification training for leaders to reinforce our incident investigation processes.

Contractor safety was a particular area of focus for us in 2009. Following a review of internal and external best practices, we strengthened our health, safety, environment (HSE) and quality management systems for supplier and contractor management and met with senior leadership of major contract companies to raise the profile of our HSE management expectations.

Our Safety Leadership Development Programme continued to be a pillar of our sustainable safety process. An updated programme focused on developing HSE skills within the Group was launched in 2009.

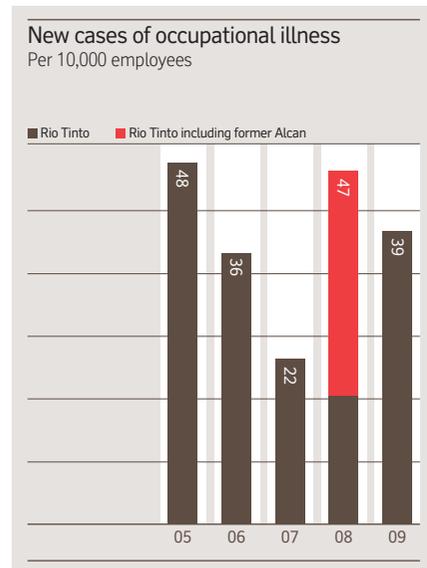
Rio Tinto has taken an active role in the Flight Safety Foundation, the world's foremost independent aviation safety organisation. We co-championed development of new aviation standards for the global mining and onshore resources industry. These new standards are being supported by a growing number of major mining companies and are expected to improve aviation safety for everyone involved in our industry.

We also support the Australian Royal Flying Doctor Service. The Rio Tinto Life Flight provides free of charge emergency jet services to patients in need of evacuation when time and distance are critical.

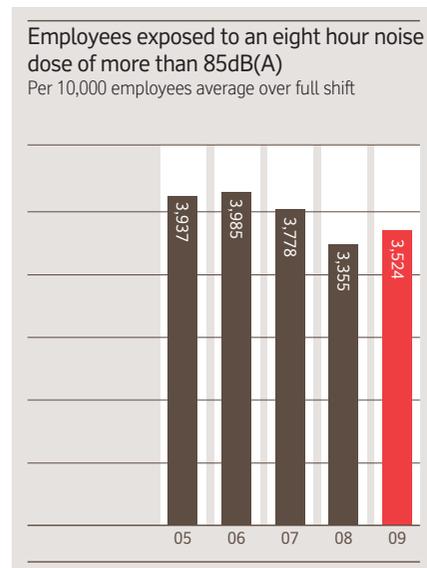
We are developing a framework to ensure new projects are managed safely and in line with our sustainable development requirements throughout their development life cycle. This framework will define our expectations for implementation of Group standards and systems, requirements for and training of leaders, and the assurance process for health, safety and environment engagements.

### Health

Our goal is no new cases of occupational illness. Whilst we have significantly reduced the number of occupational illness cases reported over the last five years, we have set a new Group target to further reduce the rate of new cases of occupational illness per 10,000 employees by 30 per cent between 2008 and 2013. The 2008 baseline for this target excludes operations that were divested or flagged for divestment during 2009. In 2009 we achieved a 21 per cent improvement.



Reported illnesses are mostly related to stress, musculo-skeletal disorders, and noise induced hearing loss. Therefore ongoing reductions will require further improvements in the management of risks posed by manual handling and noise exposure, as well as supporting healthy lifestyles through workplace wellbeing programmes.



We have also set a new Group target of a ten per cent reduction in the number of employees exposed to an eight hour noise dose of more than 85 decibels by 2013 from a 2008 baseline. In 2009, the number of employees reported as exposed increased by six per cent per 10,000 employees, primarily due to further improvements in monitoring programmes and operational changes such as moving from surface to underground

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activities, leading to changed exposure profiles at a number of our operations.

Assessing major noise sources and then implementing practical and cost effective noise controls is complex, particularly for heavy mobile equipment and noise sources in smelters. We have therefore established a community of practice to share learning and assist with the development of more effective noise reduction methods, including engineering solutions and alternative ways of working.

During 2009 our Pandemic Influenza Preparedness Plan was revised to incorporate the lessons we learned from the first wave of the H1N1 pandemic virus. Our European and North American sites were affected by the second wave, and the plan assisted them to manage the situation with minor disruptions to their daily activities.

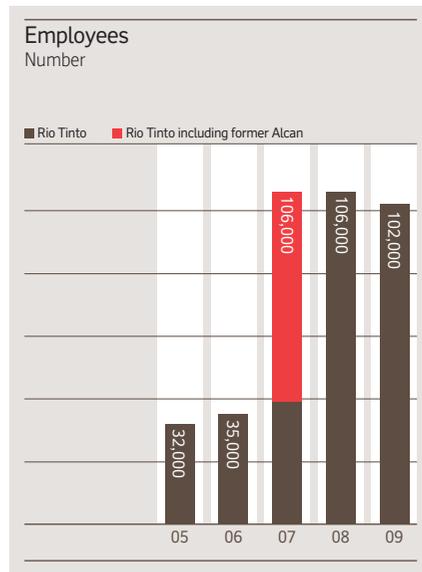
We believe that supporting healthy lifestyles will reduce health related risks such as fatigue, stress and obesity, with resultant improvements in health and safety performance and productivity.

Our new health and wellbeing strategy will result in greater support for our employees to lead healthier lives. We have continued to roll out our "Achieve Health" programme at our Australasian businesses and more than 3,000 of our people around the world signed up for our Be Active challenge in 2009. Four months after the challenge ended 65 per cent of people surveyed rated their health as above average or excellent, compared with only 33 per cent before the challenge started.

Rio Tinto operates in countries where the prevalence of HIV, tuberculosis and malaria is high. We are working closely with the international community engaged with these problems not only in Africa, but globally. Where we have operations located in regions with a generalised HIV epidemic (as defined by UNAIDS) we actively encourage all employees to know their HIV status through voluntary testing. We also require that all employees and their nominated partner have affordable access to treatment, care and support, including antiretroviral drugs.

### Our people

Rio Tinto employs on the basis of job requirements and does not discriminate on grounds of age, ethnic or social origin, gender, sexual orientation, politics, religion or disability. Group companies employ disabled people and accept the need to maintain and develop careers for them. If an employee becomes disabled and, as a result, is unable to perform his



or her current duties, every effort is made to offer suitable alternative employment and to assist with retraining. We do not employ forced, bonded or child labour and we actively favour local employment where local candidates meet job requirements and laws allow. We recognise the right of all employees to choose to belong to a union and seek to bargain collectively. We strive to build a workforce that is aligned with our values, and that represents the diverse communities and geographies in which we operate.

In 2009, we employed 102,000 people, including the Group's proportionate share of consolidated companies and equity accounted units. Of these approximately 28,000 were located in North America, 28,000 in Europe, 20,000 in Australia and New Zealand, 8,000 in Africa and 7,000 in Latin America.

As a result of the impact of the global financial crisis on Rio Tinto, we reported a planned reduction of 14,000 roles globally (8,500 contractor and 5,500 employee roles) in 2008. The workforce was reduced by around 16,000 with careful monitoring to ensure no discrimination occurred and that the organisation has the talent necessary to deliver shareholder value in the future.

A diverse and skilled workforce is critical to our business success in the long term. Excluding the chief executive, 20 per cent of the chief executive's executive committee are women. However, we have not met our target of 20 per cent representation of women in senior management by 2009, achieving a 13 per cent representation. In 2010, our diversity focus will be expanded to address ethnicity and nationality.

By engaging with our employees about the business and their career aspirations, implementing individual development planning, coaching and feedback processes and valuing each individual's contribution, we position the organisation to achieve change and improvement in this key risk area.

Our total rewards strategy is designed to attract, retain and motivate our workforce. Base pay is reviewed regularly and adjusted taking into account the individual's role and local market trends as necessary. We also offer allowances, bonuses, share plans and healthcare benefits appropriate to the local markets. Short term incentive plans allow individuals to participate in the financial success of the business, while long term incentive plans help align individual objectives with shareholder interests.

As a result of the first Group wide employee engagement survey in 2008, targeted actions were implemented across the Group to increase levels of employee engagement in the areas of business leadership and direction, image and corporate social responsibility, and safety. The impact of these actions will be measured in a further survey in 2010.

Approximately 380,000 attendances were recorded for training courses in health, safety, environment, sustainable development and technical/operational skills in 2009. This is a significant increase on 2008 and is primarily due to increased availability of technology based learning.

We employ graduates from many disciplines including mining and process engineering; geology and geosciences; finance; human resources; health, safety and environmental sciences. In 2009, 200 graduates attended our Graduate Development Programme and we employed over 600 apprentices. Our targeted representation of women in the graduate intake fell slightly to 29 per cent in 2009.

Our local employment commitments are often managed through directly negotiated community benefit agreements. For example, in 2009:

- We remained the largest private sector employer of indigenous Australians and maintained our proportion of indigenous Australian employees at eight per cent of our Australian workforce.
- In Madagascar a transparent job seeker database was developed to assist with employment of local people. We now have 512 local employees and a Malagasy managing director.

- In Oman, where there is not an established pool of highly skilled potential employees, we almost met our five year commitment to locally hire 70 per cent of the Sohar Aluminium smelter workforce within its first year of operation.

Rio Tinto expects all employees to treat each other and external contacts with integrity, fairness and respect in line with our values. Our *Speak-OUT* programme was revised and reinforced in 2009, providing employees with an independent and confidential means of reporting concerns to senior managers.

### Community engagement and regional economic development

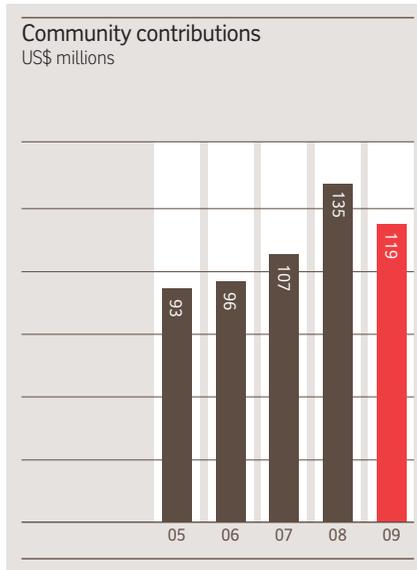
By understanding our socio-economic interaction in the regions where we operate, we optimise benefits and reduce negative impacts for communities and our operations alike. This interaction includes relationships with local suppliers, training and local employment, support for small to medium enterprises, optimal distribution of taxes and royalties, and support for multilateral socio-economic programmes. Infrastructure developed for our mines or processing plants can also benefit local communities and local businesses and governments.

Increased cash availability and wealth resulting from our presence in regions where there was previously little can inflate the price of goods and services locally. We manage such scenarios to avoid these negative outcomes. At our mineral sands project in Madagascar, for example, we developed and implemented influx and inflation mitigation strategies together with the local community.

Women in communities often disproportionately bear the burden of change brought about by mining and other developments. In recognition of this, we have launched *Why gender matters*, a guide to better incorporate gender considerations in our communities work. The guide is available on our website, [www.riotinto.com](http://www.riotinto.com).

To enable us to target the delivery of socio-economic programmes reflecting the priorities of local communities, we conduct community baseline, social impact and social risk assessments to identify potential positive and negative impacts of our presence, including human rights impacts. We use this information along with community input to develop multi-year communities plans at each operation.

During 2009 we completed 19 site managed community assessments, and we improved how we monitor progress



of findings and corrective actions identified through these assessments.

We have systems that actively involve communities in decision making processes about issues affecting them. At our Weipa bauxite mine, land management processes ensure that all relevant traditional landowners are consulted and their inputs sought together with our staff about land clearing on the mining lease.

In 2009, Rio Tinto businesses supported 2,479 socio-economic programmes covering a wide range of activities including health, education, business development, housing, environmental protection and agricultural development.

We spent an estimated US\$119 million on community assistance programmes in 2009 and payments into benefits receiving trusts set up in directly negotiated community impact benefit agreements. This is in addition to direct and multiplier economic contributions.

Without a planned approach to local enterprise development, local and sustainable supply chain opportunities can be eroded by a global approach to procurement. Accordingly, Rio Tinto Procurement developed a strategy to specifically nurture local business linkages in 2009. Similarly, Rio Tinto Alcan's regional industrial development programme seeks to facilitate downstream and diversified economic development.

In 2009 we established a Communities target, which requires all operations to have in place by 2013 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.

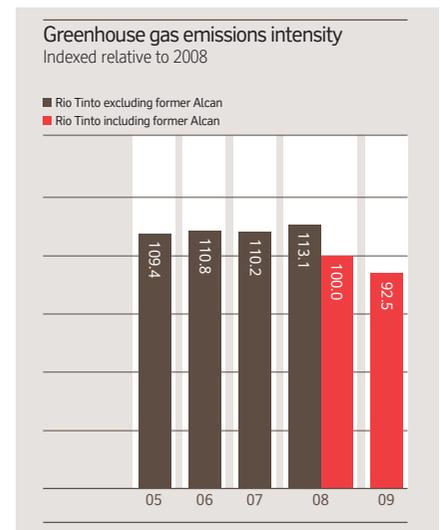
### Environmental stewardship

We continue to proactively manage climate change, water, land stewardship, biodiversity, mineral and non mineral waste, air quality and closure. These programmes include input from our local communities as well as from experts in these fields, and are supported by our external partnerships with BirdLife, Earthwatch, Fauna & Flora International and Royal Botanic Gardens, Kew.

In 2009 we set new five year targets for a range of environmental metrics which are discussed in the sections below. We also made progress with the development of a formal relationship with IUCN.

### Greenhouse gas emissions

We accept the urgent need for climate change action and recognise the issue as being one of our greatest challenges and opportunities. Reducing the greenhouse gas (GHG) emissions intensity of our production is a key performance indicator for the Group and we aim to improve the energy intensity of all our operations. We are also working to identify step change opportunities to improve our performance over the longer term.



As a result of the Alcan integration, the emissions intensity of our production decreased by ten per cent between 2007 and 2008, reflecting the high percentage of low carbon energy within Alcan's smelter portfolio. Removing the effect of this acquisition, our intensity would have increased in 2008.

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In 2009 we set a new target to reduce our total GHG emissions intensity by six per cent between 2008 and 2013. A further four per cent reduction is targeted to give an overall ten per cent reduction by 2015 as a result of the expected completion of planned capital projects. We index our performance relative to 2008 as the base year.

During 2009, our GHG emissions intensity reduced by 7.5 per cent, largely as a result of divesting the Ningxia aluminium smelter in China, which is powered by coal based electricity, and reduced production at a number of operations with a higher than average emissions intensity. We expect some reversal of this positive performance in future years as production levels increase.

Our total GHG emissions, defined as the sum of on site emissions and those from the net purchase of electricity and steam minus net carbon credits voluntarily purchased from, or sold to, recognised sources, were 41.0 million tonnes of carbon dioxide equivalent, nearly nine million tonnes lower than in 2008. This is the result of asset divestments and reduced levels of production at some operations. Rio Tinto's on site emissions were 26.1 million tonnes in 2009.

We operate in an energy intensive sector and we seek to improve the greenhouse gas emissions over the full life cycle of our products. For instance, Rio Tinto Alcan is a leader in the development of energy efficient aluminium smelting technology. While it represents 71 per cent of the Group's energy use, it only produces 64 per cent of our total GHG emissions due to its low carbon energy portfolio.

We recognise that there are significant GHG emissions associated with the transportation, processing and use of Rio Tinto's products. In 2009, the three most significant sources of indirect emissions associated with our products were:

- Approximately 4.5 million tonnes of CO<sub>2</sub>-e associated with third party transport of our products and raw materials.
- An estimated 120 million tonnes of CO<sub>2</sub>-e associated with customers using our coal in electricity generation and steel production.
- Approximately 330 million tonnes of CO<sub>2</sub>-e associated with customers using our iron ore to produce steel. These emissions are not in addition to the coal use emissions above, as some customers use both our iron ore and our coal to produce steel.

Emissions associated with third party transport and combustion of our coal reduced significantly in 2009 with the divestment of Rio Tinto Energy America.

Due to global demand, coal is likely to remain a significant source of energy for the foreseeable future. We are therefore investing in developing and commercialising carbon capture and storage (CCS) technology. In particular, we continued to progress our studies on the Hydrogen Energy California project, a joint venture with BP. Rio Tinto is a founding member of the Global CCS Institute and supports other collaborative efforts to deploy the technology, such as the CO<sub>2</sub>CRC's Otway Basin geosequestration project in Australia.

Where we can influence our customers, we work to develop efficient downstream processes, and our metals and minerals can bring energy and emissions benefits. For example:

- Uranium is used in low carbon power generation.
- Our high purity ductile iron is used in the production of wind turbines.
- Aluminium makes cars lighter, reducing the amount of fuel used during their operation, and it can be efficiently recycled.

During 2009 climate change legislation was debated in a number of jurisdictions in which we operate. Rio Tinto continued to participate in collaborative efforts to promote effective public policy frameworks to address climate change, including the US Climate Action Partnership and submissions on proposed legislation to governments in Australia, the US, the EU and Canada. A comprehensive programme is under way to prepare the Group for climate legislation.

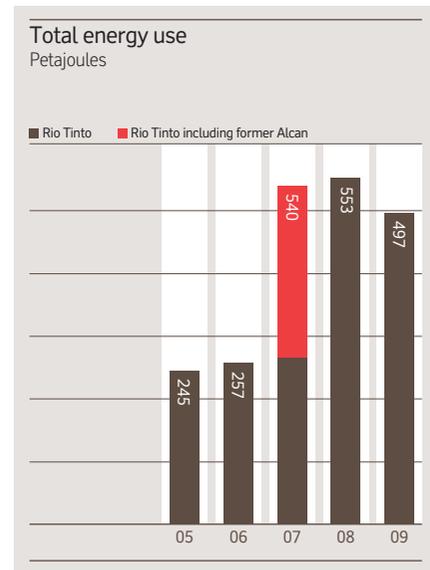
Rio Tinto's operations are exposed to the physical risks of climate change. In 2009 our Energy & Climate Strategy group commenced a review of progress in identifying, managing and communicating these risks to better coordinate and support the integration of projected physical climate change risks in project planning and operations.

### Energy use

Rio Tinto both consumes energy in its operations and produces it, with significant electricity generation at our hydropower facilities in Canada and in other locations. Our smelting and mineral processing operations are energy intensive and depend on hydroelectricity, nuclear power, coal, oil, diesel and gas to keep them running.

This year our energy use decreased from 553 to 497 petajoules. This change has been influenced by the divestment of the energy intensive Ningxia aluminium smelter and reduced production for some commodities.

Rio Tinto uses a significant portfolio of hydro, nuclear and other renewable power sources



in its energy mix, which represented 70 per cent of our electricity use in 2009. A number of new projects and technology upgrades that are either under way or planned will ensure that we use electricity available from our hydroelectric sources with greater efficiency.

To drive improvement in energy efficiency our businesses have set a range of local energy targets that cover nearly three quarters of the Group's energy use.

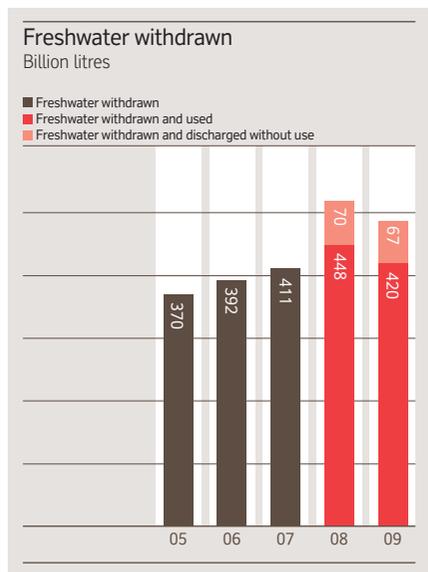
The Group is working to reduce the energy intensity of new projects through demand reduction using asset design and the development of alternative sources of energy supply. We are also currently developing step change technologies for several of our products, including the drained cathode cell for aluminium production. This has the potential to significantly reduce the amount of energy required to produce aluminium.

### Water

Our water strategy provides a framework for addressing water related business risk and improving performance, and we focus on ways to minimise the amount of water we remove from the environment, reuse it whenever we can, and return it to the environment meeting regulatory limits.

Following the increase arising from the inclusion of water withdrawal data for the former Alcan operations in 2008, our freshwater withdrawal decreased by six per cent to 487 billion litres in 2009, with lower water demand at a number of operations where production was reduced.

We set a new Group water target to reduce our freshwater use per tonne of product



by six per cent by 2013 from a 2008 baseline. Freshwater use excludes water that is extracted for ground control and discharged without use in our processes. In 2009 we increased our freshwater use per tonne of product by four per cent. Although total freshwater use did decrease this year, the scale efficiencies achieved with high production rates in 2008 were not maintained as water use is not directly related to production rates at all operations. Internal local recycling and ecological targets support the Group water target.

We continued to support the development of water strategies at our businesses aligned with the Rio Tinto water strategy, and supported new projects to ensure that efficient practices are in place at mine commencement. Our water risk reviews support this strategic work and a total of 40 operations and new projects have completed reviews since 2005, including five in 2009.

Rio Tinto engages with governments on emerging water policy. We chair a water working group as part of the Minerals Council of Australia with the main focus in 2009 being development of a water account for Australian industry as part of a government-industry project to report on consistent water metrics across industry. We also engage on key water initiatives with organisations committed to sustainable water management such as the World Economic Forum.

### Land

We manage just over 41,000 square kilometres of land, excluding our exploration leases. At the end of 2009 our activities had impacted nine per cent of this area. Our disturbance

footprint doubled in 2009, primarily because the land utilised for Rio Tinto Alcan's hydroelectric dams in Quebec was reported for the first time in terms of Rio Tinto's reporting definitions, following full implementation of our land use stewardship standard by former Alcan operations.

In line with leading practice, we aim to rehabilitate land as it comes out of mining use rather than waiting until all operations at the site have ceased. By the end of 2009, 24 per cent of our disturbed land (excluding land disturbed for hydroelectricity dams) had been rehabilitated. An internal rehabilitation target helps to drive performance improvements.



In 2009 we formalised a programme to explore the threats and opportunities for the Group arising from emerging green markets in biodiversity, carbon, water and other ecosystem services. The Natural Capital Project has commenced exploring the ecosystem service values of our extensive non operational landholdings. Through our collaboration with the IUCN economics group we have undertaken a preliminary assessment of the biodiversity value of forest conservation projects in Madagascar. This groundbreaking work is being developed as a pilot project as part of the WBCSD Ecosystem Valuation Initiative. Rio Tinto also sponsored an IUCN paper on the cost of Reducing Emissions from Deforestation and Degradation (REDD). This paper was published as part of the Copenhagen Climate Change discussions in December 2009.

### Biodiversity

The potential for impact on biodiversity makes our projects sensitive for external

stakeholders and employees. Rio Tinto's future success depends on our ability to manage these issues. Our biodiversity strategy, launched in 2004, provides this management framework with a goal to have a "net positive impact" (NPI) on biodiversity.

We continue to work with our conservation partners to improve implementation of the strategy and have commenced piloting offset methodologies in Madagascar and the Hunter Valley, Australia.

Tools and methodologies have been developed to assess the biodiversity values of Rio Tinto's landholding. In 2009 a methodology for developing biodiversity action plans (BAPs) was completed in collaboration with Fauna & Flora International (FFI). A public version of this methodology is available on the FFI website ([www.fauna-flora.org](http://www.fauna-flora.org)).

Thirty two per cent of our operations where the baseline biodiversity status had been fully assessed ranked as having very high biodiversity values and 21 per cent ranked with high values in 2009. Our biodiversity values assessment has now been rolled out to the former Alcan operations, enabling implementation of our biodiversity strategy.

2009 also saw a strong focus on the implementation of BAPs at sites with very high and high biodiversity values. Rio Tinto Coal Australia completed regionally focused BAPs for five sites in New South Wales and Queensland. BAPs are under development at a further 23 sites in seven countries. Biodiversity action planning will continue through 2010 at sites that have been ranked as having very high and high biodiversity values. An internal target supports our goal of achieving NPI at these sites.

### Economic prosperity

We use our expertise to harness resources, creating prosperity for our shareholders, employees, communities, governments and business partners.

Our direct economic contribution into the local and regional economies where we operate was US\$44,844 million in 2009. This amount includes:

- US\$6,696 million spent on wages and salaries.
- US\$21,363 million in value add, equivalent to the sum of all labour payments, the taxes and royalties disbursed to governments and others, plus all returns to capital.

### Supply chain

We adopt a life cycle view of our products so as to maximise the value to society while minimising negative impacts of products,

## Sustainable development review continued

and encouraging those along the supply chain to adopt similar practices.

In 2009, we spent US\$23,481 million on goods and services with over 58,000 suppliers, a US\$6,172 million reduction compared to last year, due to reduced capital spending, capacity curtailment and cost reductions. Our programme of supplier engagement includes sustainable development criteria in its contracts, and our statement of procurement principles is available on our website.

Payments to suppliers are a major benefit to the economy, generating employment and creating wealth. As an example in 2009 a US\$200 million mining contract was awarded to a joint venture between native title holders the Eastern Guruma and a mining services company, NRW. The contract to build, mine and transport iron ore from Rio Tinto's Western Turner Syncline deposit is the first significant mining joint venture for the Eastern Guruma people, and continues the comprehensive Rio Tinto commitment to indigenous contracting in the Pilbara region of Western Australia.

We develop and regularly update lifecycle assessments for all our major products, including aluminium, iron ore, copper, coal, uranium, gold and silver. By understanding the health and environmental impacts and benefits of our products over their complete life cycle, we gain knowledge on how to improve our processes, expand our information to the marketplace, and differentiate our products from our competitors.

This knowledge is also used to ensure compliance with new chemicals regulations, such as the European Union Registration, Evaluation, Authorisation and Restriction of

Chemicals legislation and the UN Globally Harmonized System of Classification and Labelling of Chemicals.

Rio Tinto is engaged in industry wide stewardship initiatives to support responsible production and help develop leading practices and recognised standards. We are an active member of the Responsible Jewellery Council, and of stewardship initiatives for other commodities such as uranium, copper, steel and aluminium.

The supply of our products often involves marine transportation which can impact oceans, and we have joined the World Ocean Council to help create a responsible ocean business community. We completed a strategic review of environmental risk related to our shipping activities as part of our marine stewardship programme.

### Non managed operations

Rio Tinto holds ownership interests in companies it does not manage. However, we remain closely engaged through membership of the boards of directors and of technical committees. We believe that the principles in *The way we work* are universal. In our dealings with joint venture partners and non controlled companies in which we participate, we therefore make every effort to ensure that the standards of conduct in *The way we work* are respected at all times.

Examples include Escondida copper mine in Chile, the Grasberg copper-gold mine in Indonesia, and the Oyu Tolgoi copper project in Mongolia.

Rio Tinto has a 30 per cent interest in Escondida, which is managed by BHP Billiton. Our seats on the mine's Owners' Council allow us regular input on strategic and policy matters. We also played a part in establishing the Escondida Foundation, which is funded by one per cent of the mine's pre-tax profits and is the vehicle through which Escondida fulfils some of its social responsibilities.

The Grasberg mine is majority owned and operated by Freeport-McMoRan Copper & Gold. Rio Tinto has a 40 per cent joint venture interest in Grasberg's 1995 mine expansion and is represented on the joint venture's operating committee. There were two fatalities at Grasberg in 2009.

Both Rio Tinto and Freeport-McMoRan support the Voluntary Principles on Security and Human Rights and continue to work together to ensure practice is consistent with these principles. At least one per cent of the mine's net sales are committed to support village based programmes which represents cumulative funding of US\$400 million since 1996.

The mine continues to refine its management of its tailings discharge, including containment, understanding revegetation and long term closure options. There have been significant improvements in tailings management at the Grasberg mine, including construction of lateral dikes to limit the surface area disturbed by tailings deposition in the lowlands and protect adjacent river systems, diversion of the Ajkwa river system to preserve its water quality and enhance tailings retention within the deposition area, successful progressive rehabilitation of the now inactive tailings within the Ajkwa diversion area and of new islands forming at the mouth of the diversion area, and completion of an ecological risk assessment.

Rio Tinto and Ivanhoe signed an Investment Agreement with the Mongolian Government to develop the Oyu Tolgoi copper-gold project in 2009. As a result we increased our stake in Ivanhoe to 19.7 per cent.

This 30 year agreement commits all parties to supporting the regional development of the South Gobi region. It also commits Oyu Tolgoi to employing a minimum of 60 per cent Mongolian workers, including contractors, during construction and 75 per cent Mongolian workers, including contractors, during operations. It further commits Oyu Tolgoi to no less than a 90 per cent Mongolian workforce as direct employees of the business throughout the life of the operation. There was one fatality at Oyu Tolgoi in 2009.

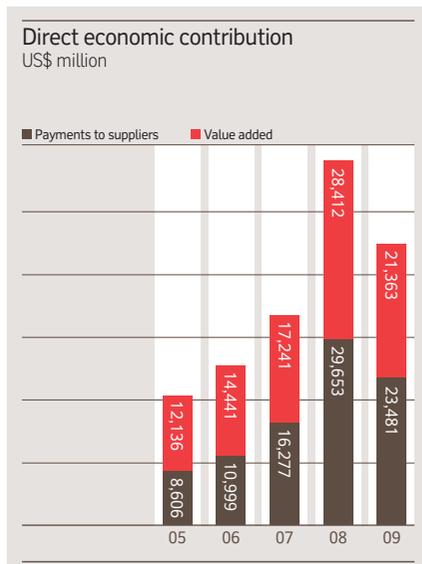
### Assurance

Our Corporate Assurance function has accountability and responsibility for providing assurance to the board that:

- Rio Tinto's policies, standards and controls are adequately designed and effective for their intended purpose; and that
- These policies, standards and controls are consistently implemented by all Rio Tinto sites on a timely basis and as designed.

In addition, we engaged an independent external assurance organisation, PricewaterhouseCoopers (PwC), to provide the board of directors of Rio Tinto plc and Rio Tinto Limited assurance on selected sustainable development subject matter, as explained below.

PwC's assurance statement satisfies the requirements of subject matters one through four of the ICMM assurance procedure while our online GRI report has been checked by GRI, satisfying subject matter five of the ICMM procedure.





## Independent Assurance Report to the Directors of Rio Tinto plc and Rio Tinto Limited on selected sustainable development subject matter

For the purposes of this Report, the Group comprises Rio Tinto plc and Rio Tinto Limited and the entities they control as at 31 December 2009 (hereafter "Rio Tinto").

As a founding member of the International Council on Mining and Metals (ICMM) Rio Tinto has committed to obtaining assurance over specified subject matter in its Report in line with ICMM's *Sustainable Development Framework: Assurance Procedure* (the ICMM Assurance Framework).

We have been engaged to provide limited assurance on selected sustainable development subject matter (the "selected subject matter") included in the Sustainable Development Review Section ("SDR Section") of Rio Tinto's *Annual report* (the "Annual Report") for the year ended 31 December 2009.

### The selected subject matter

The selected subject matter was chosen by Rio Tinto with consideration given to the subject matters contained within the ICMM Assurance Framework ("ICMM Subject Matters"). It comprises the following information reported within the SDR Section of the *Annual report*:

- Rio Tinto's assertion that it has incorporated the requirements of the ten Sustainable Development principles of the ICMM into its own policies, strategies and standards ("ICMM Subject Matter 1")
- Rio Tinto's assertions regarding the approach that it has adopted to identify and prioritise its material sustainable development risks and opportunities included within the SDR Section of the *Annual report* ("ICMM Subject Matter 2")
- Rio Tinto's assertions regarding the existence and status of implementation of systems and approaches used to manage the following sustainable development risk areas ("ICMM Subject Matter 3"):
  - Safety
  - Health
  - Greenhouse gas emissions
  - Energy use
  - Water
- The following performance data related to the material sustainable development risks identified under ICMM Subject Matter 3 ("ICMM Subject Matter 4"):
  - All injury frequency rate
  - Lost time injury frequency rate
  - Number of fatalities

- New cases of occupational illness per 10,000 employees
- Employees exposed to an 8 hour noise dose of more than 85 dB(A) per 10,000 employees average over a full shift.
- Total greenhouse gas emissions
- Total energy use
- Total freshwater withdrawn

We note that the selected subject matter did not extend to:

- Rio Tinto's self declared application level of the Global Reporting Initiative ("GRI") G3 Sustainability Reporting Guidelines ("ICMM Subject Matter 5") or
- The alignment of Rio Tinto's sustainability policies against ICMM position statements.

### Respective responsibilities of Rio Tinto management and PricewaterhouseCoopers

The directors of Rio Tinto are responsible for preparing the selected subject matter based on Rio Tinto Criteria for Reporting on Sustainable Development Performance (the "Reporting Criteria"). The Reporting Criteria are available on Rio Tinto's website [www.riotinto.com/ourapproach](http://www.riotinto.com/ourapproach).

Our responsibility is to express a conclusion on the selected subject matter based on our procedures. The procedures selected depend on our judgment, including an assessment of the risks of material misstatement.

We read other information included within the SDR section in the *Annual report* and consider whether it is consistent with the knowledge obtained through our procedures. We consider the implications for our report if we become aware of any apparent material inconsistencies with the selected subject matter. Our responsibilities do not extend to any other information.

This report, including the conclusion, has been prepared for Rio Tinto to assist the directors in reporting Rio Tinto's sustainable development performance. We consent to the inclusion of this report within the *Annual report* to enable Rio Tinto's members to verify that the Directors have discharged their governance responsibilities by commissioning an independent assurance report in connection with the selected subject matter. We do not accept or assume responsibility for our work or this report to anyone other than the directors as a body and to Rio Tinto save where terms are expressly agreed and with our prior consent in writing.

### Inherent limitations

Non-financial performance information is often subject to more inherent limitations than financial information, given the

characteristics of the subject matter and the methods adopted for the definition and gathering of information. Qualitative interpretations of relevance, materiality and the accuracy of sustainable development data and assertions are subject to individual assumptions and judgements. It is important to read the subject matter in the context of Rio Tinto's Reporting Criteria.

### Assurance work performed

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) – "Assurance Engagements other than Audits and Reviews of Historical Financial Information" issued by the International Auditing and Assurance Standards Board ("ISAE 3000"). Our procedures applied to the selected subject matter primarily comprised:

- Making enquiries of relevant management of Rio Tinto
- Evaluating the design of the key processes and controls for managing and reporting the subject matter
- Testing, on a selective basis, the preparation and collation of the subject matter prepared by the management of Rio Tinto
- Undertaking analytical procedures over the reported data
- Reviewing a sample of relevant management information and documentation supporting assertions made in the subject matter

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement under ISAE 3000. It generally excludes procedures such as testing the operating effectiveness of controls and corroborative data testing.

### Conclusion

Based on our review, which is not an audit, nothing has come to our attention which causes us to conclude that the selected subject matter for the year ended 31 December 2009 has not been prepared in all material respects in accordance with the Reporting Criteria.

PricewaterhouseCoopers

Liza Maimone, Partner  
Melbourne, 5 March 2010  
Liability Limited by a Scheme under Professional Standards Legislation