

Module: Introduction - 2011 CDP Water Disclosure**Page: Introduction - 2011 CDP Water Disclosure****0.1****Introduction**

Please give a general description and introduction to your organization.

Rio Tinto is a leading international mining and metals group, combining Rio Tinto plc, a London listed public company headquartered in the UK, and Rio Tinto Limited, which is listed on the Australian Stock Exchange, with executive offices in Melbourne. The two companies are joined in a dual listed companies (DLC) structure as a single economic entity, called the Rio Tinto Group.

The Group finds, mines and processes the earth's mineral resources - metals and minerals essential for making thousands of everyday products that meet society's needs and contribute to improved living standards. To deliver superior returns to shareholders over time, Rio Tinto takes a long term and responsible approach to the Group's business. Thus Rio Tinto's strategy is to invest in and operate large, long term, cost competitive mines and businesses, driven not by choice of commodity but rather by the quality of each opportunity.

The Group's major products include aluminium, alumina, copper, diamonds, energy products, gold, industrial minerals (borates, titanium dioxide, salt and talc), and iron ore. Its activities span the world but are strongly represented in Australia and North America. There are also significant businesses in South America, Asia, Europe and southern Africa.

Wherever Rio Tinto operates, health and safety is the first priority. Group businesses also put sustainable development at the heart of their operations. They work as closely as possible with host countries and communities, respecting their laws and customs. For Rio Tinto it is important that the environmental effects of its activities are kept to a minimum and that local communities' benefit as much as possible from operations.

0.2**Reporting Year**

Please state the start and end date of the year for which you are reporting data.

Enter the period that will be disclosed.

Fri 01 Jan 2010 - Fri 31 Dec 2010

0.3

Reporting Boundary

Please indicate the category that describes the company, entities, or group for which you are reporting.

Companies over which operational control is exercised

0.4

Exclusions

Are there any geographies, activities, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

Yes

0.4a

List of Exclusions

Please describe any exclusion(s) in the following table.

Exclusion	Please explain why the geography, activity, facility or type of water input/output is excluded
Rio Tinto Alcan Packaging and Engineered Products businesses	Rio Tinto Alcan Packaging and Engineered Products businesses have been earmarked for divestment and have been excluded from 2010 data.
Rainwater runoff less than 100 ML per annum	Individual operations may elect not to report rainfall runoff that is estimated to be less than 100 Megalitres (ML) per annum.
Water input less than 1ML per annum	1 ML per annum is the lower threshold of internal water reporting.
Early stage new projects and closed operations	These facilities are not in operation.
Marine water withdrawn for salt production	Marine water withdrawn for salt production is considered to be water in ore and is not included in water withdrawals outlined in question 7.1. Marine water withdrawn for salt production in 2010 was 410,000 ML.

1.1

Does your company have a water policy, strategy or management plan?

Yes

1.1a

Please describe your policy, strategy or plan, including the highest level of responsibility for it within your company and its geographical reach

Geographical reach	Description of policy, strategy or plan	Position of responsible person
Entire company	The way we work: 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. This approach begins with our corporate policies, which are supported by strategies and standards that lay down the minimum acceptable requirements for behaviour or operating conditions.	Board/executive board
Entire company	Rio Tinto's environment policy: Rio Tinto has an overarching environmental policy which recognises that excellence in environmental performance, including water, is essential to our business success. We meet internationally recognised environmental standards and systems, and have Group wide standards, strategies, targets and systems to manage environmental risks. We also have a focus on identifying opportunities to improve environmental management at every stage of activity.	Other: Sub-set of the Board - Committee for Social and Environmental Accountability
Entire company	Rio Tinto's community policy: We have a community policy that requires us to understand the social, environmental and economic implications of our activities so we can optimise benefits and reduce negative impacts, both for the local community and for the overall economy. We communicate with communities throughout the life of our operations. By keeping communities fully informed of our activities and their consequences, they are well prepared for when things change. Likewise, we try to understand the changing needs of the community, and our effect on those.	Other: Sub-set of the Board - Committee for Social and Environmental Accountability
Entire company	Rio Tinto's water strategy: Our water strategy was developed in 2005, following internal and external consultation, and aims to manage long term risks and opportunities to secure our access to water. The water strategy supports Rio Tinto's environmental, community and sustainable development policies. The strategy is made up of mandated elements for sites to adopt plus broader programmes to understand emerging issues, develop new tools and support Businesses in implementation of the strategy. The main	Other: Rio Tinto Executive Committee

Geographical reach	Description of policy, strategy or plan	Position of responsible person
	<p>elements of the strategy are: 1. Water standard: Rio Tinto mandated a water standard in 2005 which sets down Rio Tinto's minimum expectations for water management. It applies to all Rio Tinto operations — from the exploration stage right through to closure — that helps to deliver consistent performance wherever we operate. The standard is audited at sites every two years as part of a Corporate audit programme, and annually as part of a site self audit; 2. Water targets: We set a Group water target to reduce our freshwater use per tonne of product by six per cent by 2013 from a 2008 baseline. The target is based on the combined performance of individual businesses. We also set business-level recycling targets and site based ecological targets to reduce impact on aspects of water use and discharge on the environment; 3. Business-level water strategies: Strategic programmes at the Business Unit level are developed for areas of regional or business level water risk in alignment with the Rio Tinto water strategy, for example Rio Tinto Iron Ore in Western Australia and Rössing Uranium in Namibia. Water is also closely linked to how we manage other resources and issues such as energy, climate change and biodiversity; 4. Site water management plan: Each site has a water management plan that sets the site's water objectives, outlines the key issues that need to be managed, the actions to mitigate water risk, accounting for water inputs and outputs, and accountabilities of personnel involved in water management across the site. This is linked to the site business planning process to ensure that appropriate budget is made for water management.</p>	

1.1b

Does the policy, strategy or plan specify water reduction, quality or efficiency targets or other water-related goals?

Yes

1.1c

Please describe these water-related targets or goals

Geographical reach	Type of target/goal	Target/goal	Additional information
Global	Efficiency	Reduce our Group 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. The target is based on the combined performance of individual businesses.
Global	Efficiency	Each business has set a target based on the ratio of recycled water (water used more than once) to total water use, for the period of 2008 to 2013.	Individual business recycling targets have been set and are being monitored. See our Local sustainable development reports for details: http://www.riotinto.com/resources/3608_s_e_reports.asp

Geographical reach	Type of target/goal	Target/goal	Additional information
Global	Other: Water-related ecological target	Internal business level ecological water targets.	Ecological water targets have been set and are being monitored internally. These targets are set at the operation level and cover aspects including water quality, aquatic fauna, habitat and vegetation.

1.1d

You may explain here why your company does not have a water policy, strategy or management plan and if you intend to put one in place

1.2

What specific actions has your company taken to manage water resources or engage stakeholders in water-related issues?

Geographical reach	Type of action	Action	Outcomes
Global	Direct operations	Freshwater target: We set a Group water target to reduce our freshwater use per tonne of product by six per cent by 2013 from a 2008 baseline. The target is based on the combined performance of individual businesses.	During 2010, our freshwater use per tonne of product increased due to significant rainfall events in eastern Australia, which led to increased freshwater storage, and lower production or higher process water requirements at several businesses. These increases were largely offset by improved efficiency at our western Australia iron ore operations as production shifted to newer operations. It can be a challenge to meet our Group water target as factors other than site water management practices can affect our ability to meet it. For example, excessive rainfall as a result of cyclones in eastern Australia. However, there were significant improvements at the site level in a number of cases. For example, Diavik Diamond Mine in Northern Canada installed a new water pipeline to allow reuse of mine water from the open pit and underground for ore processing in place of freshwater. The Group target has also helped drive water efficiency actions at operations, raise the profile of water and develop better data collection systems, baselines and projections across the Group.
Global	Direct operations	Recycled water target: Rio Tinto requires all businesses to set a water recycling target for their business for the period 2008-2013. Progress against this target is tracked annually	Colowyo Mine in the USA focussed in 2009 on recycling water on site utilizing the large pit water trucks, and achieved a fivefold increase in the volume recycled. Other

Geographical reach	Type of action	Action	Outcomes
		by Rio Tinto.	operations such as Rössing Uranium mine in Namibia and Argyle Diamond Mine in Western Australia have made improvements in the recovery and reuse of seepage water. Rio Tinto Alcan's Alma operation in Canada improved water re-use in 2010 and reduced the use of freshwater from the municipal supply by 30% in comparison with the previous year.
Global	Direct operations	Ecological water targets: Rio Tinto requires each operation to have a local ecological water target to reduce the impact of water withdrawals and discharge on the surrounding ecology. These targets go beyond legal compliance limits and some examples focus on protecting aquatic flora and fauna, minimising groundwater abstraction, and further reducing sediment discharges. Approximately 60 percent of the ecological water targets are related to improvements in effluent and/or storm water runoff water quality.	An example of a site ecological target is at Rio Tinto Alcan's Lochaber hydropower facility in Scotland, the Lochaber power house sources water for power generation. In the past, the area around this intake was well known for salmon spawning but now the flows are too low because it was diverted to produce hydropower. Lochaber proposed to relocate their intakes upstream of a water fall (salmon cannot reach the intakes upstream of the water fall) which will create more than 7 km of additional river habitat for spawning salmon in the catchment.
Global	Direct operations	Reduced absolute withdrawals and/or consumption of water: Some of our businesses are located in arid regions and have experienced increased pressure on water supply.	Argyle Diamond mine in Western Australia has been working to reduce its use of water from Lake Argyle as a result of the lake's high environmental values. The mine achieved a 95% drop in water use from the lake since 2005 by using water pumped from the mine and maximising recycling by capturing the water that seeps from the tailings. Rössing Uranium mine in Namibia has focussed on reducing freshwater use by improving recovery of seepage water and reusing water in areas that do not require freshwater. Another example is Rio Tinto Coal Australia (RTCA) which has a number of operations located in the Hunter Valley of NSW. Droughts and reduced water supply have been a significant concern in recent years. Minimising the use of freshwater and maximising use of poorer quality water are important aims for the business. This was achieved via the construction of a large interconnecting pipeline between two of RTCA's operations.
Global	Direct operations	Site specific targets: The water standard requires every operation to develop site specific targets for operational areas that drive improvements in site specific risks associated with water management. These targets must be supported by a monitoring, checking and corrective action programme to verify compliance with targets. Operations which have identified water quality and discharges as a site specific risk would therefore be expected to have	Rio Tinto's water performance has been recognised at the 2011 Global Water Awards – part of the Global Water Summit. The award recognises the strategic approach we have taken to managing water since 2005 when we introduced our global water strategy.

Geographical reach	Type of action	Action	Outcomes
		appropriate internal water targets and indicators to address and reduce these risks.	
Global	Supply chain and watershed management	<p>There is a very close link between the conservation of biodiversity and responsible water management. For example, QIT Madagascar Minerals (QMM)'s biodiversity programme includes identifying opportunities to enhance biodiversity conservation and promote fast growing plantations for community use, biodiversity conservation, rehabilitation and dune stabilisation. It also seeks to restore the natural ecosystems and rehabilitate the land. In 2009, Kennecott Utah Copper in the USA joined with other contributing individuals and organizations to celebrate the reopening of the Gillmor Sanctuary South Shore Preserve. This waterway which closed about 2,600 years ago when shifting earth closed the waterways, will re-establish a wetland for the preservation of migratory birds. In 2008 Iron Ore of Canada completed a multi-year initiative to protect and enhance local fish habitat. Work commenced in 2002 with the transfer of over 2,000 brook trout and lake chub from Hakim Lake to the previously barren White Lake. Fish ladders were constructed in the outlet stream in 2008 marking the completion of the project. Monitoring of fish populations in White Lake is ongoing and continues to show that the fish population is thriving.</p>	<p>QMM mineral sands operation was recently recognised in receiving the South African Nedback Award for protecting and conserving the unique biodiversity of the mining operation and other related infrastructures and for building capacity for better use of the natural resources. Active engagement with local, national and international stakeholders was fundamental to the success of the project to build capability in the areas of communities, education and health.</p>
Global	Collective action	<p>Engaged with NGOs: Rio Tinto actively engages with organisations that are developing better ways to manage or report on water, for example, the World Business Council for Sustainable Development (WBCSD) water leadership group, World Economic Forum (WEF) water project, Johnson Freshwater Initiative in the US, Alliance for Water Stewardship, and the Global Reporting Initiative. Rio Tinto has partnerships with international NGOs such as Fauna & Flora International who we are working with our QMM operation to enhance our and biodiversity and watershed management. The Rio Tinto water strategy team has held internal regional water meetings for its water managers to improve on water management, with WWF Australia and the Nature Conservancy (TNC) participating. In collaboration with International Union for Conservation of Nature (IUCN), we have undertaken a preliminary assessment of the biodiversity value of forest conservation projects in Madagascar. This work is being developed as a pilot project as part of the WBCSD Ecosystem Valuation</p>	

Geographical reach	Type of action	Action	Outcomes
		<p>Initiative and includes assessment of water. Our biodiversity partners include: BirdLife International, Conservation International, Fauna & Flora International and Royal Botanic Gardens, Kew.</p>	
Global	Public policy	<p>Rio Tinto chairs the water working group for the International Council for Mining and Metals (ICMM) with a current project developing a consistent approach to water accounting. Rio Tinto co-chaired with the Australian government a government-industry working group in 2006 to develop a framework for strategic water management in the minerals industry (working group of the Ministerial Council on Mineral and Petroleum Resources, and the Minerals Council of Australia). Rio Tinto chaired a working group of government, industry, research and NGOs to produce a practical manual on water management in 2008 as part of the Australian government's "Leading practice sustainable development program for the mining industry". Rio Tinto is chairing the Minerals Council of Australia (MCA) working groups for industry associations to develop an industry water account. This account has been piloted with government in Australia.</p>	
Global	Community engagement	<p>An agreement was made with local Aboriginal people to conduct monitoring of water quality at the Diavik Diamond Mine in the Northwest Territories of Canada. An agreement was made with Traditional Owners for water monitoring of a significant spring at Argyle Mine in Western Australia. Our QMM mineral sands operation in Madagascar is a good example of working with the World Bank and the local water authority to provide a clean water supply to communities. By 2009 our Simandou project in Guinea had financed and managed the construction and installation of 36 water wells across 13 local villages. Replacement spare parts were sourced from local suppliers. The spare parts are stored in local villages and the maintenance and repair work is undertaken by trained local personnel. This minimises the period of time where a well is not functional, and thereby ensures constant reliable access to potable water for each of the villages. Our Murowa Diamonds project in Zimbabwe facilitated the surveying and eventual drilling of six borehole sites in the Murowa ward - four of which were successful and two of which turned out to be dry. These have been used to help local communities set up their own micro-irrigation systems,</p>	

Geographical reach	Type of action	Action	Outcomes
		which are designed to minimize water wastage.	
Global	Transparency	Engagement with investors: In 2010, Rio Tinto was invited to hold briefings on our water strategy with investors in London, Melbourne and Sydney. The briefings provided an overview of Rio Tinto's approach on water, progress with key programmes and case study examples. Feedback to investor groups continued in 2011.	
Global	Other: Water risk reviews	One of the main tools Rio Tinto has developed to help operations and projects identify risks and opportunities for managing water is the water risk review. The review assesses current water performance against a number of water management aspects. These include technical elements, such as water balances and water treatment; management elements, such as monitoring, measuring and stakeholder engagement; and corporate requirements, such as water targets.	The review has been undertaken by 43 operations and new projects since it was developed in 2005 and provides a holistic approach to operation water management. The review has led to improvements in performance through the development, for example, of water balances, the appointment of water champions and water teams, as well as providing a focus on improving water management at new projects.
Global	Other: HSE strategic risk reviews	Each business undergoes an HSE review once every four years, and the review protocol includes water management. The purpose of the review is to inform senior management of any strategic issues that may impact Group or business unit profitability, opportunity or reputation and provide an evaluation of their management against planned strategies, action plans and systems.	
	Other: Considering water-related issues in siting practices	Rio Tinto has an in-house system of risk management that applies throughout the company to identify operational risk and opportunity. The outcome of the process is a risk register for each part of the business, which is used as a management tool. The rating of risks is conducted through a standardised matrix taking into account probability and outcome. Depending on the category of risk, measures used to rate the consequence of risk include operating cost, capital expenditure, project timing, environment, community and reputational impact. We also require each new project to undergo a technical review including for environmental, social and economic aspects at various stages of development. Issues relating to the siting of the operation and its facilities are covered at this point including for water.	

Further Information

Note (question 1.1): Rio Tinto has a global water strategy that was approved by the Rio Tinto Executive Committee in 2005 and aims to manage long term risks and opportunities to secure our access to water. It contains mandated elements such as our water targets and water standard, in addition to strategic water management programmes that support businesses to manage water risk.

Access to water is critical to Rio Tinto's operations. The water strategy provides direction on water across more than 110 sites around the world, located in six geographical regions across seven different climate zones and producing a range of products. With production mainly from Australia and North America, we operate in more than 50 countries.

Attachments

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto Sustainable Development Policy.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20Sustainable%20Development%20Policy.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto Communities Policy.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20Communities%20Policy.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/The way we work_Rio Tinto.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/The%20way%20we%20work%20Rio%20Tinto.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto Water Use and Quality Control Standard.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20Water%20Use%20and%20Quality%20Control%20Standard.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto and Water.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20and%20Water.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto Biodiversity Strategy.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20Biodiversity%20Strategy.pdf)

[https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio Tinto Environment Policy.pdf](https://www.cdproject.net/Sites/2011/29/15829/CDP%20Water%20Disclosure%202011/Shared%20Documents/Attachments/CDPWaterDisclosure2011/WaterManagementandGovernance/Rio%20Tinto%20Environment%20Policy.pdf)

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2.1

Are you able to identify which of your operations are located in water-stressed regions?

Yes

2.1a

Please specify the method(s) you use to characterize water-stressed regions

Method used to define water stress	Please add any comments here:
Environmental assessment Internal company knowledge WBCSD Water Tool	

2.1b

Please list the water-stressed regions where you have operations and the percentage of your total operations in that area

Country	Region within country	Proportion of operations located in this region (%)	Further comments
Argentina		0 – 10	This proportion represents the number of operations in water scarce regions of this country as a percentage of total operations in Rio Tinto.
Australia		11 – 20	As above
Namibia		0 – 10	As above
Peru		0 – 10	As above
South Africa		0 – 10	As above
Spain		0 – 10	As above
United States of America		0 – 10	As above
Zimbabwe		0 – 10	As above

2.2

Do you use other indicators (besides water stress) to identify operations which are located in regions subject to water-related risk?

Yes

2.2

Do you use other indicators (besides water stress) to identify operations which are located in regions subject to water-related risk?

2.2a

Please list the regions at risk where you have operations, the relevant risk indicator and percentage of your total operations in that area

Country	Region within country	Proportion of operations located in this region (%)	Indicator
Other: Australia, Canada, France, USA		0 – 10	Management of production impacts arising from water surplus; water surplus from storm events or groundwater dewatering for open pits or water quality aspects
Other: Cameroon, Canada, USA		0 – 10	Management of water quality from contamination from past legacy practices
Other: Australia, USA		0 – 10	Management of slope stability of open pit walls due to pore pressures and height of pit wall slopes
Other: Australia, Canada, France, Iceland, Madagascar, USA, South Africa, Zimbabwe		0 – 10	Management of mineral and non-mineral wastes and potential impact on water quality

2.2a

Please list the regions at risk where you have operations, the relevant risk indicator and percentage of your total operations in that area

Country	Region within country	Proportion of operations located in this region (%)	Indicator
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2.2b

You may explain here why you are not able to identify which of your operations are located in regions subject to water stress or water-related risk and whether you have plans to explore this issue in the future

2.3

Please specify the total percentage of your operations that are located in the regions at risk which you identified in questions 2.1 and/or 2.2

40%

2.3

Please specify the total percentage of your operations that are located in the regions at risk which you identified in questions 2.1 and/or 2.2

2.4

Please specify the basis you use to calculate the percentages used for questions 2.1 and/or 2.2

Basis used to determine percentage	Please add any comments here
Number of facilities	Percentage does not double account for operations in water stressed regions (2.1) and with other identified water related risks (2.2).

2.4

Please specify the basis you use to calculate the percentages used for questions 2.1 and/or 2.2

Basis used to determine percentage	Please add any comments here
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Further Information

Note (question 2.2a): Rio Tinto conducts periodic a Group water risk assessments to analyse Rio Tinto's strategic and operational water risks – including the social, environmental and economic aspects – with particular focus on understanding risks faced by operations in water stressed regions. Based on this analysis, operations and projects with water risk were prioritised and regional challenges and broader water issues were identified (eg indicators for question 2.2a).

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2.5

Are you able to identify which of your key water-intensive inputs (excluding water) come from regions subject to water-related risk?

No

2.5a

Please state or estimate the percentage of your key water-intensive inputs (excluding water) that come from these regions

Inputs	Proportion of material that comes from region at risk (%)	Unit used for calculating percentage	Regional information or further comments
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2.5b

You may explain here why you are not able to identify which of your key water-intensive inputs come from water-stressed regions and whether you have plans to explore this issue in the future

Rio Tinto has initiated a new programme to understand its water supply chain risk. The focus of this work is to understand which critical supply inputs for Rio Tinto has water risk associated with them. This is being done to understand what the significant risks in this area are so we can respond effectively. Two of our main water intensive supply inputs is water from third party suppliers and purchased electricity where water is required for use for cooling purposes in power generation or in producing hydroelectricity. Other critical supply inputs for minerals production include caustic soda, diesel, fuel oil, sulphuric acid, explosives, lubricants and greases. Determining whether there is significant water risk associated with their production is the focus of this project.

As a mining company, Rio Tinto is close to the top of the supply chain and provides raw and processed metals and minerals to our customers for use in downstream processes and products. Most of our significant water risks are associated with activities at our operations and processing facilities and on which we have a large focus on managing well. Increasingly our customers are asking for more information about how we manage water in the products they buy.

Rio Tinto has a comprehensive focus on understanding and managing the risk of our products. We have a product stewardship strategy in place to ensure our products are

responsibly produced and transported in a way that accounts for the social, environmental and economic aspects. As part of this strategy, our businesses are developing ISO-aligned life cycle assessments for their key products to better understand the environmental inputs and outputs for the specific products along their value chains. However, while water use data is gathered in these life cycle assessments, water data does not currently form part of the final impact assessments. This is because current life cycle information on water is not mature and there is no agreed methodology currently in place. Conducting life cycle assessments of products is an activity which is currently beyond regulatory compliance needs. Rio Tinto is participating in research in this area and is continuing to build water into the life cycle assessment of its products as the methodology matures.

3.1

Is your company exposed to water-related risks (current or future) that have the potential to generate a substantive change in your business operation, revenue or expenditure?

Yes

3.1a

Please describe the current and/or future risks to your operations, the ways in which these risks affect or could affect your operations and your current or proposed strategies for managing them

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
Other: Australia, Canada, India, Peru, USA, Zimbabwe	01. Physical: Declining water quality	Declining water quality (due to pollution and/or salt water intrusion of aquifers) leading to higher water- treatment costs	11 – 20	Increasing operating costs	Increasing our water reuse and recycling can help decrease our reliance on local water supplies. Rio Tinto requires all business to set a water recycling target for the period 2008-2013. Progress against this target is tracked annually by Rio Tinto. However, new water sources may also need to be identified to secure adequate supplies of freshwater. These will require additional infrastructure, pumping costs. Additional treatment options may be required to ensure sufficient supplies of water at suitable quality.
Other: Australia, Canada, France, India, Peru, South Africa, USA,	02. Physical: Flooding	Flooding (due to changing local hydrological conditions and/or rising sea	Current	Production and profit losses, damage to infrastructure, risk of personnel safety	Disruption to operations as a result of flooding from high rainfall events and cyclones has been experienced for example, in Australia. Rio Tinto water standard requires each operation to

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
Zimbabwe		levels) leading to disruption of operations			prepare and test emergency and contingency plans for flooding. Examples of mitigation controls employed at our operations include: locating key infrastructure in less flood prone areas; constructing diversions to protect mine pits and dumps; purchasing additional dewatering equipment; developing mine plans to allow continued process of ore when mine pits are flooded; and incorporating down time due to flooding in mine schedules.
Other: Australia, Canada, India, Peru, South Africa, USA	03. Physical: Increased water stress or scarcity (leading to e.g. disruption to operations, higher commodity/energy prices)	Increased water stress or scarcity leading to disruption to operations and/or higher energy prices	Current	Production and profit losses, increased operating costs	Rio Tinto water standard requires operations and projects to develop and maintain a site wide water balance that is appropriate to manage the site's water risks. The water balance must be capable of predicting future water requirements and evaluation the impacts of climate variation and climate change aspects so that water inputs and water outputs can be predicted over a longer time period. Increasing reuse and recycling will reduce operations' reliance on water sources. However, identification of new water sources may be required to secure adequate supplies of freshwater. These will require additional infrastructure, pumping costs. Additional treatment options may be required to ensure sufficient supplies of water at suitable quality.
Other: Australia, Canada	04. Physical: Other	Increased requirement for dewatering at some mines below water table leading to delayed approval and disruption of operations	Current	Impact on production, increasing operating costs, increasing greenhouse gas emissions	
Other: Australia, Canada, India, Peru, South Africa, USA, Zimbabwe	06. Regulatory: Higher water prices	Higher water prices	6 – 10	Increasing operating costs, potential water competition	The price of water is expected to increase in many areas we operate in. Internal studies are incorporating the future cost of water into project plans.
Other: Australia, Canada, India,	07. Regulatory: Increased difficulty in obtaining	Increased difficulty in permitting of new	Current	Delay to project approvals	There is a greater focus on water-related aspects in the approval conditions for new

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
Peru, South Africa, USA, Zimbabwe	operations permit	facilities due to water-related issues			projects in many areas in which we operate in. By setting high standards in water management, we believe that we are very well-placed to manage the increased expectations on water management set by government.
Other: Australia, Canada, India, Peru, South Africa, USA, Zimbabwe	08. Regulatory: Mandatory water efficiency, conservation, recycling or process standards (leading to higher costs)	Mandatory water efficiency, conservation, recycling or process standards leading to higher compliance costs	11 – 20	Increasing operating costs	Rio Tinto requires all business to set a freshwater efficiency target and a water recycling target for the period 2008-2013. Progress against this target is tracked annually by Rio Tinto. To meet these targets several existing operations are investigating opportunities to modify existing infrastructure and/or water management practices to improve water recycling/reuse. A capital investment is generally required for construction and/or modification of existing infrastructure to improve water recycling/reuse. However, these opportunities may result in cost savings for reduced water use and improve water supply.
Other: Australia, Canada, Peru, South Africa, USA	09. Regulatory: Regulation of discharge quality/volumes leading to higher compliance costs	Increased restrictions on discharge volumes or quality leading to higher operating costs	Current	Increasing operating costs	Rio Tinto water standard requires all operations and new project to develop and implement criteria on water abstraction, dewatering, effluent/discharge or water quality when government regulations are absent, insufficiently protective or ambiguous to ensure protection of surface water and ground water resources. The criteria must have formal approval from the operation's managing director and be consistent with internationally accepted limits, thresholds, guidelines and methodologies.
Other: Australia, Canada, India, Peru, South Africa, USA, Zimbabwe	10. Regulatory: Regulatory uncertainty	Regulatory uncertainty leading to loss of development opportunity or increasing compliance costs	Current	Increasing capital costs, increasing operating costs, loss of profit (eg loss of development opportunities)	Rio Tinto's water strategy encourages businesses to proactively engage with policy processes to ensure that mining aspects are effectively covered. Regulatory changes and potential changes in price structure are primarily managed at the business level. At a corporate level, Rio Tinto is involved at the national level on changes to water policy. For example, in Australia, we are active in engaging via the Minerals Council of Australia on supporting the

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
					National Water Initiative.
Other: Australia, Canada, India, Peru, South Africa, USA, Zimbabwe	11. Regulatory: Statutory water withdrawal limits/changes to water allocation	Statutory water withdrawal limits/changes to water allocations constraining future growth or leading to disruptions to operations	6 – 10	Increasing capital costs, increasing operating costs, loss of profit (eg loss of development opportunities)	Each business and site's risk assessment process reviews the risk of water assurance. Additionally, at the Corporate level, emerging risk is reviewed as part of our Group water risk assessment.
Other: Australia, Peru, South Africa, USA, Murowa	14. Other: Litigation	Litigation by stakeholders with competing water claims	Unknown	Increasing operating costs, reputational damage	Evolving regulatory standards and expectations can result in increased litigation and/or increased costs, all of which can have an adverse effect on earnings and cash flows. We maintain a watching brief on developments in this area, and take steps where appropriate to ensure that we minimise the potential risks.
Other: Australia, Canada, India, Peru, USA, Zimbabwe	16. Other: Reputational damage	Reputational damage due to water management practices	Current	Loss of profit, reputational damage	Rio Tinto's water strategy links good water performance directly with reputation. Future access depends on our performance and reputation in managing water responsibly and in a sustainable manner. Rio Tinto's reputation for acting responsibly plays a critical role in our success as a business and our ability to generate shareholder value. These values are expressed through the principles and standards of conduct set out in The way we work.
Other: Australia, Canada, Peru, USA, Zimbabwe	17. Other: Inadequate infrastructure (leading to disruption in operations)	Inadequate infrastructure or failures leading to disruption of operations	6 – 10	Increasing capital and operating costs, production and profit loss	To meet the requirements of the Rio Tinto water standard, operations and new project must design, construct and operate water infrastructure in accordance with appropriate practices, relevant standards and regulatory requirements. Infrastructure maintenance strategies are developed based on the risk associated with the infrastructure and the equipment manufacturers; recommendations.
Other: Australia, Peru	Other: Community outrage	Community outrage due to water management practices	Unknown	Loss of profit, reputational damage	Wherever we operate, we seek to understand the social, environmental and economic implications of our activities so we can optimise benefits and reduce negative impacts, both for the local community and for the overall

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
					economy. We communicate with communities throughout the life of our operations. By keeping communities fully informed of our activities and their consequences, they are well prepared for when things change. Likewise, we understand the changing needs of the community, and our effect on those. Our Communities standard requires all of our sites have mechanisms that track and resolve legitimate complaints from community members.
Australia	Other: Closure risks	Inability to meet closure commitments (eg aquifer recharge, acid rock drainage)	Unknown	Increasing operating costs, reputational damage, community outrage	Rio Tinto Closure standard covers the design, development, operation and closure of all our operations to ensure that we leave a positive legacy. Under the requirements of the Closure standard, business decisions taken from the earliest stages of project development must integrate closure considerations to minimise financial, social and environmental risk from the outset. We use multi disciplinary teams to develop, implement and review closure plans. These teams include experts in community relations, human resources, environmental management, finance and engineering. Our closure management plans are progressively updated and reviewed every five years throughout the life of the operation to make sure that they continue to address key risks and financial provisions for eventual closure accurately.
Australia	Other: Environmental stress	Environmental stress due to disposal of surplus water	Unknown	Increasing operating costs, reputational damage, community outrage	Extracting water from below ground and discharging volumes surplus to operational requirements alters the local environment and has potential cultural, heritage and recreational implications. In planning and managing our operations, we recognise the inherent value of water and employ a hierarchy of solutions for surplus water in order to limit adverse impacts on the environment and our neighbours. As part of this, significant work has been undertaken to investigate alternative non-industrial uses, subsurface disposal options and understand the

Country or geographical reach	Risk type	Risk description	Timescale (years)	Potential business impact	Risk management strategies
					hydrogeological and biodiversity implications of continuous discharge into local water ways. The following concepts are being investigated to help further enhance surplus water management moving forward: containing surplus water in mined-out pits and then discharging it seasonally; using surplus water for irrigation and agricultural production; re-injecting surplus water into local aquifers; and using surplus water for local town and mine operation water supplies. Any surplus water discharge is managed to meet corporate and regulatory standards and guidelines.

3.1b

Please explain why you do not consider your company to be exposed to any water-related risk in its operations

3.1c

Please explain why you do not know if your company is exposed to any water-related in its operations and if you have plans to assess this risk in the future

3.2

What methodology and what geographical scale (e.g. country, region, watershed, facility) do you use to analyze water-related risk across your operations?

Risk methodology	Geographical scale
Rio Tinto has completed periodic Group wide water risk assessments to analyse Rio Tinto's strategic and operational water risks – including the social, environmental and economic aspects – with a particular focus on understanding the risks faced by operations and new projects in water stressed regions.	Other: Both regional and site specific focus

Attachments

<https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/RiskAssessment-Operations/Rio Tinto Communities Standard.pdf>

<https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/RiskAssessment-Operations/Rio Tinto Closure Standard.pdf>

<https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/RiskAssessment-Operations/Rio Tinto Product Stewardship Strategy.pdf>

Page: 2011-water-riskassess-sc

3.3

Do you require your key suppliers to report on their water use, risks and management?

No

3.4

Is your supply chain exposed to water-related risks (current or future) that have the potential to generate a substantive change in your business operation, revenue or expenditure?

Don't know

3.4a

Please describe the current and/or future risks to your supply chain, the ways in which these risks affect or could affect your operations and your current or proposed strategies for managing them

Country or geographical reach	Risk type (to supplier)	Risk description	Timescale (years)	Potential business impact (to responding company)	Risk management strategies (by responding company)
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3.4b

Please explain why you do not consider your supply chain to be exposed to any water-related risks

3.4c

Please explain why you do not know if your supply chain is exposed to any water-related risk and if you have plans to assess this risk in the future

Rio Tinto has initiated a new programme to understand its water supply chain risk. The focus of this work is to understand which critical supply inputs for Rio Tinto has water risk associated with them. This is being done to understand what the significant risks in this area are so we can respond effectively to minimise risk. Two of our main water intensive supply inputs is water from third party suppliers and purchased electricity where water is required for use for cooling purposes. Other critical supply inputs for minerals production include caustic soda, diesel, fuel oil, sulphuric acid, explosives, lubricants and greases. Determining whether there is significant water risk associated with their production is the focus of this project.

Further Information

Note (question 3.3): Our global statement of business conduct as it relates to the Procurement function, The way we buy, reflects how our corporate philosophy meets the operating demands of our business units, while ensuring that we conduct our procurement in a manner that upholds Rio Tinto's values of accountability, respect, teamwork and integrity. To prequalify as a supplier, business partners generally must be able to demonstrate strong organisational commitments to: corporate governance; health and safety; human rights and labour practices; socio-economic welfare of local/indigenous communities; natural resource conservation and management; carbon and greenhouse gas emission reduction; energy and fuel efficiency; and waste minimization.

Attachments

https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/RiskAssessment-SupplyChain/The way we buy_Rio Tinto.pdf

Page: 2011-Water-4-Impacts

4.1

Please describe any detrimental impacts to business related to water your company has faced in the past five years, their financial impacts and whether they have resulted in any changes to company practices

Detrimental water-related impacts to the business over the past five years have included:

- Production loss due to flooding of mine pits (eg Force majeure for Rio Tinto Coal Australia in 2010, ERA Ranger in Northern Territory, Australia, suspension of processing in 2010-11).
- Down time/production loss during repair of infrastructure damaged by flooding (eg repairs following cyclonic rainfall events in the Pilbara region of Western Australia).
- Interruptions to shipping of products to customers: Iron ore shipments from Western Australia are particularly vulnerable to disruptions by tropical cyclones.
- Production loss due to lack of water for energy supply – hydroelectric power (eg Rio Tinto reported that low snow and rain levels in the Saguenay region of Quebec during the first half of 2010 led to reduced power generation and the subsequent need to purchase power or curtail aluminium production).
- Production loss due to lack of water for processing.
- Production was lost due to poor quality process water

Actions taken/changes to company practices have included:

- Relocated infrastructure to allow for greater protection from flooding.
- Upgraded infrastructure to allow for greater protection from flooding.
- Obtained access to alternate water sources to protect against lack of water.
- Constructed additional infrastructure and/or changed water management practices to improved recycling/reuse.
- Inclusion of climate change in engineering design of new projects so that it is sufficiently robust for likely extreme events.
- Rio Tinto Alcan has entered into a new \$500,000 research partnership with the Ouranos, a consortium working to better understand the impact of climate change on the Lac Saint-Jean basin in Quebec, Canada over the coming years. This joint effort will help provide a clearer picture of the future regional climate in the Lac Saint-Jean basin area, and the research projects will aim to better understand the impact of climate change on Rio Tinto Alcan water resource management operations, as well as improve hydrological forecasting in the short and long term.

5.1

Do water-related issues present opportunities (current or future) that have the potential to generate a substantive change in your business operation, revenue or expenditure?

Yes

5.1a

Please describe the current and/or future opportunities, the ways in which these opportunities affect or could affect your operations and your current or proposed strategies for exploiting them

Country or geographical reach	Opportunity description	Timescale	Potential business impact	Strategy to exploit opportunity
Other: Water scarce parts of Australia, Africa	Increasing use of recycled water onsite to reduce dependency on freshwater (eg	Current		Improved tailings densities and alternative water storage (in-pit tailings). New tailings dam will be designed with a penstock to allow more water to be harvested.

Country or geographical reach	Opportunity description	Timescale	Potential business impact	Strategy to exploit opportunity
	recycling more water from the tailings dam)			
United States of America	Reduce water related infrastructure risk	Current	Operational resilience as a result of climate variation	Critical pipeline survey and reliability engineering; improved dynamic model of water system that includes climate change modelling.
South Africa	Increasing available water supply	Current		Reducing water use by implementing new technology to prevent main water losses; access to more water from an existing source as sustainability studies on a river catchment to prove water could be abstracted without adverse impacts.
Canada	Maximise recycling and reduce pressure on sensitive environment	6 – 10		Maximize use of recycle water to reduce freshwater take from sensitive environment by constructing a pipeline from process plant. Increase effluent water quality by decreasing total suspended solids contents to allow recycling of water into the process. Also, by improving water quality of the final effluent, the impact in the receiving environment will be significantly reduced.
Other: Canada and other countries	Design criteria to allow reuse of water and operate almost closed loop.	Current		Design criteria has been drafted for the construction of new smelters and specifies water management criteria and efficiency guidelines.
Canada	Reduce water consumption	Current		Increase sprinklers efficiency in the slag cooling field to reduce water consumption in that sector.
Australia	Reuse surplus water	6 – 10		Project to understand feasibility of using surplus water for irrigated agricultural purposes as an opportunity to reuse surplus water for economic benefit.
India	Water conservation	Current		Installed rain water harvesting on most structures. Reuse of waste water in medicinal plant garden.
Australia	Water conservation	6 – 10		Preferential use of poor quality use for processing which is considered unsuitable for other uses.
United States of America	New project - Multiple sources of water for future operations to minimize risk	Current		Developed water acquisition strategy that identified multiple potential sources of water for future operation.
United States of America	New project - Beneficial use of mine dewatering water	Current		Treated mine water transported to irrigation district for beneficial use.
Australia	Improving water quality	Current		Installed new wetland for polishing of waters prior to release.

5.1b

Please explain why you do not consider water-related issues to present opportunities to your company

5.1c

Please explain why you do not know whether water-related issues present opportunities to your company

Further Information

Note (question 5.1a) The success of Rio Tinto's water strategy is predicated on gaining recognition as a responsible water manager based on good performance at the operational level. Rio Tinto recognises that a well-regarded reputation as a water manager has an important part to play in maintaining our current operational licences and in building the case to get access to future mineral resources.

New projects and existing operations are investigating opportunities to improve their water use efficiency and recycling/reuse in order to meet their water targets. During new project development, study teams incorporate water efficiency approaches into their design criteria and develop water use and recycling / reuse targets for operational areas.

Water-related opportunities currently being investigated by existing operations include:

- Alternate beneficial uses for surplus water to minimise disposal
- Modifications to existing infrastructure and / or water management practices to improve recycling/reuse
- Installation of additional water treatment facilities to reduce on-site water inventories (allowing for additional storage capacity during flood events)
- Potential financial opportunities associated with the management of water-carbon-biodiversity aspects in the management and restoration of catchments.

There are potential financial opportunities associated with the management of water-carbon-biodiversity aspects in the management and restoration of catchments. We manage just over 41,000 square kilometres of land, excluding our exploration leases. As a result, we are a major user and owner of land, biodiversity and water resources. This can present significant risks to our operations when coupled with the changing ecosystem service legislative frameworks. Three of the most significant risks include biodiversity compensation (through offsetting), rights to access and use water, and mitigation and offsetting of our carbon emissions. These present both financial and reputation threats but also opportunities for our operations.

A capital investment is generally required for construction and/or modification of existing infrastructure to improve water recycling/reuse. However, these opportunities may result in cost savings for reduced water use and improve water supply.

Page: 2011-Water-6-tradeoffs

6.1

Has your company identified any linkages or trade-offs between water and carbon emissions in its operations or supply chain?

Yes

6.1a

Please describe the linkages or trade-offs and the related management policy or action

Linkage or trade-off	Policy or action
Climate change and water	Rio Tinto is implementing programmes that encourage operations to understand and adapt to changes in climate, such as increased or reduced rainfall. The impact of climate change brings higher levels of uncertainty and risk to available water supplies. We need to understand how these are affected and what the impact will be for our operations and nearby communities. At the site level, the key tool to managing water flows is the water balance. We are seeking ways to incorporate more accurate climatic variations (such as long term rainfall trends) into site water balance predictions and have developed operational guidelines. This is essential to ensuring an adequate water supply for operations and projects and for designing appropriate flood control measures. Rio Tinto has worked with external climate change modelling groups to develop regional climate change projections for areas of greater risk to available water supplies such as in Australia and South Africa as an input to operational planning. There is an opportunity to use these models to better understand the potential impacts arising from climate change on water supplies for our operations and local communities, and to develop adaptation strategies to minimise this risk.
Water and energy	Water and energy are intrinsically linked – water is often needed to generate energy and energy is used to supply and manage water. Energy is a fundamental part of most operational water processes; it enables pit dewatering, tailings flow, water treatment, water use and recycling, dust suppression and desalination. Water can form the basis of energy processes, such as hydroelectricity generation and is an essential element in the cooling of power stations. For a number of Rio Tinto operations, hydropower is an important power source, either directly or as a component of the regional electric grid mix. In 2010, approximately 67% percent of Rio Tinto's electric energy mix was attributable to hydropower. Often improving the performance in one area can impact on performance in the other. For example, treating water to improve its quality can require significant amounts of energy. Investing in recycling technologies also require significant amounts of energy for pumping and moving water around the facility. A business must ensure that improvements to one aspect do not negatively impact another. Rio Tinto has set targets for energy, climate change and water and our operations should understand that this interrelationship is important.
Carbon, water and ecosystem services	Rio Tinto recently developed a partnership with the International Union for Conservation of Nature (IUCN) to address environmental issues relevant to our business. The key programmes to start this year include a natural capital project to identify and quantify biodiversity and ecosystem service values in key regions including water.

Module: 2011-Water-Account

Page: 2011-Water-7-Withdrawals

7.1

Are you able to provide data, whether measured or estimated, on water withdrawals within your operations?

Yes

7.1a

Please report the water withdrawals within your operations for the reporting year

Country or geographical reach	Withdrawal type	Quantity (ML/yr)	Proportion of data that has been verified (%)	Comments
Australia	Surface	329300		See notes 1, 2 and 6.
Australia	Groundwater	128500		See note 6.
Australia	Wastewater	0		See note 3.
Australia	Municipal water	15400		See note 6.
Canada	Surface	249600		See notes 1, 2 and 6.
Canada	Groundwater	10900		See note 6.
Canada	Wastewater	0		See note 3.
Canada	Municipal water	8000		See note 6.
France	Surface	7600		See notes 1, 2 and 6.
France	Groundwater	6900		See note 6.
France	Wastewater	0		See note 3.
France	Municipal water	3400		See note 6.
South Africa	Surface	21000		See notes 1, 2 and 6.
South Africa	Groundwater	5900		See note 6.
South Africa	Wastewater	0		See note 3.
South Africa	Municipal water	15100		See note 6.
United Kingdom	Surface	321000		See notes 1, 2 and 6.
United Kingdom	Groundwater	0		See note 6.
United Kingdom	Wastewater	0		See note 3.
United Kingdom	Municipal water	600		See note 6.
United States of America	Surface	15600		See notes 1, 2 and 6.
United States of America	Groundwater	38100		See note 6.
United States of America	Wastewater	0		See note 3.
United States of America	Municipal water	2000		See note 6.
Other: Rest of Africa	Surface	10500		See notes 1, 2 and 6.
Other: Rest of Africa	Groundwater	5000		See note 6.
Other: Rest of Africa	Wastewater	0		See note 3.
Other: Rest of Africa	Municipal water	3000		See note 6.
Other: Rest of Europe	Surface	100		See notes 1, 2 and 6.
Other: Rest of Europe	Groundwater	8500		See note 6.

Country or geographical reach	Withdrawal type	Quantity (ML/yr)	Proportion of data that has been verified (%)	Comments
Other: Rest of Europe	Wastewater	0		See note 3.
Other: Rest of Europe	Municipal water	100		See note 6.
Other: Asia, New Zealand, Central America, South America	Surface	200		See notes 1, 2 and 6.
Other: Asia, New Zealand, Central America, South America	Groundwater	700		See note 6.
Other: Asia, New Zealand, Central America, South America	Wastewater	0		See note 3.
Other: Asia, New Zealand, Central America, South America	Municipal water	0		See note 6.

7.1b

Please explain why you are not able to provide data for water withdrawals

7.2

Are you able to provide data, whether measured or estimated, on water recycling/reuse within your operations?

Yes

7.2a

Please report the water recycling/reuse within your operations for the reporting year

Country or geographical reach	Quantity (ML/yr)	Proportion of data that has been verified (%)	Comments
Australia	57600	0 – 25	
Canada	103300	0 – 25	
France	0	0 – 25	
South Africa	51500	0 – 25	
United Kingdom	0	0 – 25	

Country or geographical reach	Quantity (ML/yr)	Proportion of data that has been verified (%)	Comments
United States of America	65400	0 – 25	
Other: Rest of Africa	20800	0 – 25	
Other: Rest of Europe	0	0 – 25	
Other: Asia, New Zealand, Central America, South America	0	0 – 25	

7.2b

Please explain why you are not able to provide data for water recycling/reuse within your operations

7.3

Please use this space to describe the methodologies used for questions 7.1 and 7.2 or to report withdrawals or recycling/reuse in a different format to that set out above

Notes (question 7.1)

1. Rainwater and runoff is included as Surface Water
2. Surface water includes marine water withdrawals. In 2010, marine water made up 63% of Rio Tinto's surface water withdrawals.
3. Rio Tinto does not import any wastewater from external organisations, however approximately 600ML of wastewater is transferred for reuse between individual operation units that are in close proximity.
4. Marine water withdrawn for salt production is considered to be the raw ore source for production and is considered to be water in ore. Marine water withdrawn for salt production in 2010 was 410,000ML, which is not included in total water withdrawals.
5. These water withdrawals do not include water diverted for the generation of hydroelectric power. For 2010, 112,797,000ML of surface water was used for hydroelectric power generation.
6. Rio Tinto defines freshwater as potable water or good quality raw water with total dissolved solids (TDS) less than 1,500 milligrams per litre, pH 5-9, and individual dissolved constituents (metals, anions etc) at concentrations suitable for agricultural / livestock or irrigation use (based on local/regional/national guidelines). PricewaterhouseCoopers has verified 100% of our freshwater withdrawn. Please refer to our independent assurance report at: http://www.riotinto.com/annualreport2010/performance/independent_assurance_report.html.

Note (question 7.2) Recycled/reused water reported is the volume of water that is recovered to be used more than once before being returned to the environment or lost. It does not take into account the number of cycles that recycled water is used for and may underestimate the volume of water demand satisfied by recycling/reuse rather than further withdrawals.

7.4**Are any water sources significantly affected by your company's withdrawal of water?**

Don't know

7.4a

Please list any water sources significantly affected by your company's withdrawal of water.

Country	Water source	Impact	Company action and outcomes
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7.4b

You may explain here why your company's withdrawal of water does not significantly affect any water sources

7.4c**Please explain why you do not know if any water sources are significantly affected by your company's withdrawal of water**

Our response of 'don't know' is based on the definition of 'significantly affected' used by this survey. The definition says that if a site withdraws more than 5% of the volume of a water resource, or uses water from a RAMSAR site, or other significant water body recognised by a professional, then it is said by this survey to significantly affect the water resource. Rio Tinto does not agree with this definition of "significantly affected" as it does not take into account the 'impact' of withdrawals on the water body in a risk based approach, including understanding the sustainable yield of the catchment or aquifer, ecological impact, potential benefits and tradeoffs that may be required to achieve a beneficial outcome. However, we do recommend that a clearer method to understanding impact is developed. Although it is still early days in the development of a methodology, we are working with a number of groups to research and develop improved methods.

Rio Tinto sites withdraw water from a range of water sources including surface and groundwater. Rio Tinto has a comprehensive data collection system in place that collects water information from more than 110 sites around the world. While individual sites understand their extraction volumes and the potential impact of their withdrawals on the surrounding environment, we do not currently collect Group-wide data on the volume of the water resource from which we extract water.

All Rio Tinto sites are required to understand and manage key risks that their operations face including environmental and social impact of withdrawals from the water resource. These risks are incorporated into site risk registers and reviewed annually. In addition Rio Tinto has a mandated water standard that is applied wherever we operate (from project level to closure) and which is audited every 2 years. This standard requires sites to:

- Develop and maintain an appropriate understanding of the cumulative demands and impacts being placed on water resources and ecosystems in the catchments in which the operation works. This must include understanding the current and future water requirements of key upstream and downstream users and stakeholders, and the flow regime and quality

required to maintain ecosystem integrity.

- Develop and implement criteria on water abstraction, dewatering, effluent/discharge or water quality when government regulations are absent, insufficiently protective or ambiguous to ensure protection of surface water and ground water resources. The criteria must have formal approval from the operation's managing director and be consistent with internationally accepted limits, thresholds, guidelines and methodologies.

Page: 2011-Water-8-Discharges

8.1

Are you able to identify discharges of water from your operations by destination, by treatment method and by quality using standard effluent parameters?

Yes

8.1a

Please explain why you are not able to identify discharges from your operations by destination, treatment method and quality and whether you have any plans to put in place systems that would enable you to do so

8.2

Did your company pay any penalties or fines for significant breaches of discharge agreements or regulations in the reporting period?

Yes

8.2a

Please describe the quality, quantity and destination of the water that was the subject of the significant breach(es), the associated fines and any actions taken to minimise the risk of future non-compliance

Country or geographical reach	Quantity (ML)	Quality	Fines and penalties	Company action and outcomes
Other: Global		Seven penalties for exceedance of permitted concentrations in discharge or unplanned discharge of materials to water bodies	US\$507,546	All operations are required to identify the key cause(s) of incidents and develop action plans to prevent reoccurrence within the specified timeframes agreed with appropriate government agencies and Rio Tinto.

8.3

Are any water bodies and related habitats significantly affected by discharges of water or runoff from your operations?

Don't know

8.3a

Please list any water bodies and related habitats which are significantly affected by discharge of water or runoff from your operations

Country	Water body	Impact	Company action and outcomes
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8.3b

You may explain here why your company's discharge of water does not significantly affect any water bodies or related habitats

8.3c

Please explain why you do not know if any water bodies and related habitats are significantly affected by discharge of water or runoff from your operations

Our response of 'don't know' is based on the definition of 'significantly affected' used by this survey. In summary, this means that if an operation discharges an average of 5% or more of the annual average volume of the water body, or discharges that are highly likely to have significant impacts on the water body and associated habitats, or discharges to a RAMSAR-listed wetland or other significant water body recognised by a professional, then it is said by this survey to significantly affect the water resource. While Rio Tinto monitors its impacts at the site level, we do not use the same definition as provided in this survey, and we also do not have a Group wide system that aggregates this information at the Corporate level. We recognise that there is a need to develop a more consistent methodology to determine impact that takes into account a risk based approach, including understanding the sustainable yield of the catchment or aquifer, ecological impact, cumulative impacts, potential benefits and tradeoffs that may be required to achieve a beneficial outcome. Although it is still early days in the development of such a methodology, we are working with a number of groups to research and develop improved methods.

Rio Tinto has a comprehensive data collection system in place that collects information from more than 110 sites on water discharges. At the site level, all sites are required to understand and manage key risks that their operations face. These risks are incorporated into site risk registers and reviewed annually.

Rio Tinto's sites are required to maintain compliance with government water quality limits. This ensures protection of the downstream water quality. Where government regulations are absent, insufficiently protective or ambiguous to ensure protection of surface water and ground water resources, sites are required to develop and implement their own criteria on effluent/discharge or water quality. The criteria must have formal approval from the operation's managing director and be consistent with internationally accepted limits, thresholds, guidelines and methodologies.

Rio Tinto operations are also required to develop a water-related ecological target. The aim of this target is to protect the environment from our activities related to sourcing, using and discharging water. Each operation has selected a target based on their site specific risks.

We also have a focus on minimising the impacts of our business and contributing to biodiversity conservation to ensure a region ultimately benefits from our presence. Our goal is to

have a "net positive impact" (NPI) on biodiversity. To achieve NPI, we first seek to understand the biodiversity elements of the regions where we operate, as well as the "values" placed upon those elements. We then prioritise our actions, focusing on the biodiversity elements that have the highest conservation significance. The biodiversity issues for each of our projects or operations can vary greatly, as do the opportunities for minimising negative impacts and creating positive outcomes.

Further Information

Note (question 8.2a): As reported in our Annual Report 2010, during 2010 13 operations incurred fines amounting to US\$540,328 (US\$80,150 in 2009). Of these, fines amounting to US\$507,546 were related to breaches of discharge agreements or regulations. Fines and penalties are reported according to the year in which they are incurred, which may be several years after the incident occurred. Several fines paid in 2010 relate to incidents that occurred in 2008 and 2009. An amount of US\$262,046 relates to an incident that occurred in September 2008 at a plant in Saguenay, Canada. An amount of US\$174,697 relates to an incident that occurred in April 2009 at a port facility in Saguenay, Canada. An amount of US\$48,527 relates to an incident that occurred in August 2008 at a plant in Saguenay, Canada. All operations are required to identify the key cause(s) of the incident and develop action plans to prevent reoccurrence within the specified timeframes agreed with appropriate government agencies and Rio Tinto.

Attachments

<https://www.cdproject.net/Sites/2011/29/15829/CDP Water Disclosure 2011/Shared Documents/Attachments/CDPWaterDisclosure2011/Discharges/Rio Tinto Directors' report 2010.pdf>

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9.1

Please provide any available financial intensity values for your company's water use across its operations

Country or geographical region	Financial metric	Water use type	Financial intensity (US\$/ML)	Please provide any contextual details that you consider relevant to understand the units or figures you have provided.
Other: Entire company	EBITDA	Withdrawals	22070	The total water withdrawal is for managed operations only, is not adjusted for equity share, and does not include data for operations divested during the reporting period. EBITDA is based on equity share of both managed and non-managed operations and includes earnings from operations divested during the reporting period.

9.2

Please provide any available water intensity values for your company's products across its operations

Country or geographical reach	Product	Product unit	Water use type	Water unit	Water intensity (Water unit/product unit)	Please provide any contextual details that you consider relevant to understand the units or figures you have provided.
						<p>Rio Tinto has set a five year target for reducing freshwater use which ends and will be evaluated in 2013. We measure and report progress towards this target on an annual basis. However, aggregating performance data based on production for use as a normaliser is inappropriate for a company with businesses as diverse as those in Rio Tinto. Freshwater use efficiencies also vary significantly across some product groups. For example, the difference between water efficiencies for two diamond operations is more than an order of magnitude; therefore; the product group average would be inappropriate to represent performance.</p>