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Best Practices in Sustainability Reporting in the Global Mining Industry

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23rd World Mining Congress

August 11-15, 2013
Montreal, Canada

Best Practices in Sustainability Reporting in the Global Mining Industry

Andrew Gillam, MBA, PhD, PGeo

AMEC

Organized by

The Canadian Institute of Mining, Metallurgy and Petroleum

In collaboration with

McGill

UBC

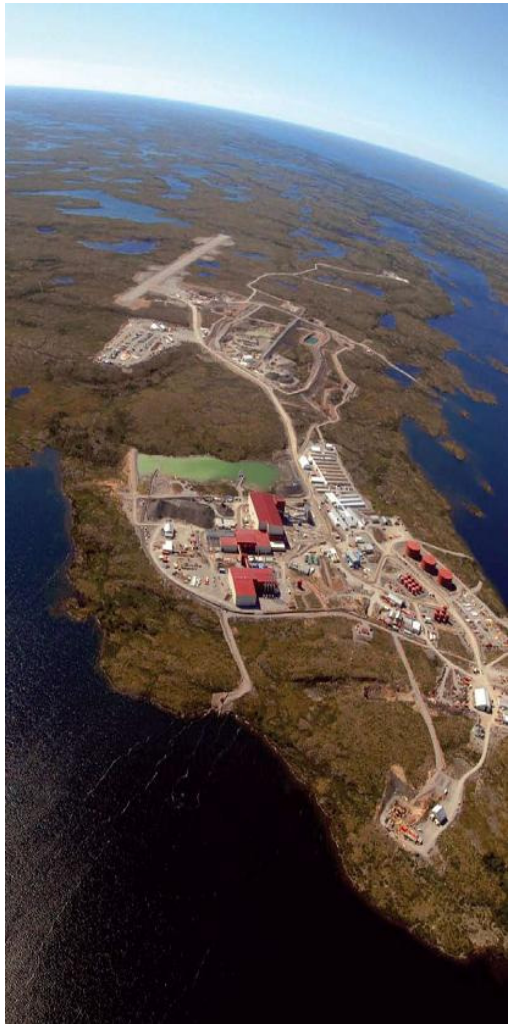
Lassonde Institute for Mining
UNIVERSITY OF TORONTO

Queen's University

UNIVERSITY OF ALBERTA

Outline of Presentation

- AMEC overview
- Benchmarked companies
- GRI 3.1 Guidelines
- Best practice examples
  - Report content and boundary
  - Strategy and profile
  - Environmental
  - Social



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AMEC plc – January 2013 (all CAD)

- FTSE 100 company (LSE: AMEC) **Market cap $6 B (15 Jan 2013)**
- Revenues (FY12) **$6.6 B**
- Net cash (31 Dec 2012) **$160 M**
- Order book (31 Dec 2012) **$5.8 B**
- Employees (2012, average) **28,500**
- Network **350 offices in 40 countries**

From concept to closure

THE GLOBAL COMPACT

Dow Jones Sustainability Indexes
Member 2012/13

CARBON DISCLOSURE PROJECT

Canada's Top 100 Employers 2012

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Corporate Profiles for Benchmarks

Company	Revenue	Major Products (by profit)	Corporate Headquarters
AngloAmerican	$36.5 B (FY11; 31 Dec)	Iron ore and manganese, copper, coal	London, GBR
bhpbilliton	$72.2 B (FY 12; 30 Jun)	Iron ore, oil and gas, base metals	Melbourne, AUS
RioTinto	$60.5 B (FY11; 31 Dec)	Iron ore, copper, coal	London, GBR
VALE	$60.4 B (FY11; 31 Dec)	Iron ore, aluminium, ferroalloys	Rio de Janeiro, BRA

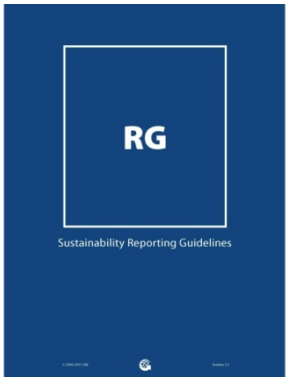
GRI – Gold Standard for Reporting

- GRI – Global Reporting Initiative
- 1997 outgrowth of Coalition for Environmentally Responsible Economies (CERES) and UN Development Program (UNDP)
- Mission: develop and disseminate globally-applicable Sustainability Reporting Guidelines
- Now *de facto* CSR reporting standard; appeal lies, in part, with supported flexibility in reporting approach and scope
- G3.1 Guidelines (March 2011); includes expanded guidance for reporting on human rights, local community impacts and gender
- G4 Guidelines released in May 2013

Global Reporting Initiative™

Ceres
Mobilizing Business Leadership for a Sustainable World

UNDP



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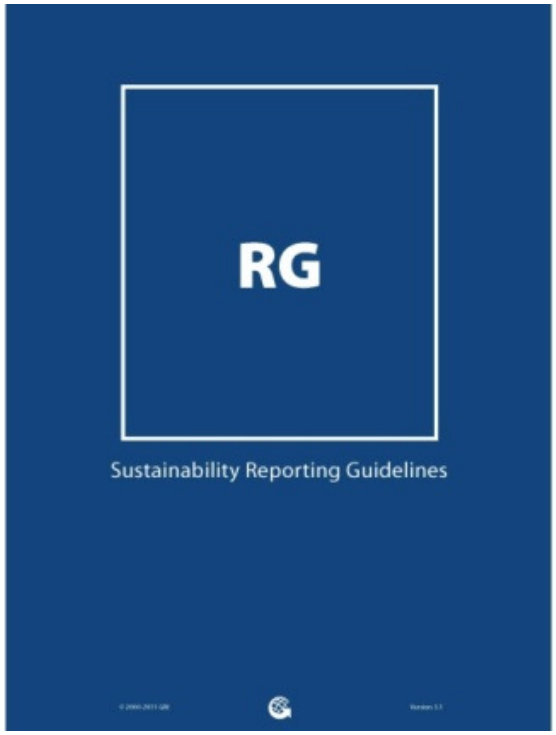
GRI G3.1 - Application Levels

- GRI reporters declare the level to which they have applied reporting framework via application levels
- Three levels (A>B>C) to meet needs of all levels of reporters
- The reporting criteria at each level reflect the extent of application of coverage of GRI Reporting Framework
- Reports can be submitted to GRI for verification/checking (GRI CHECKED)
- A plus sign (+) is available at each level, eg, A+ if external assurance is utilized for the report



Changes in G3.1 Guidelines (March 2011)

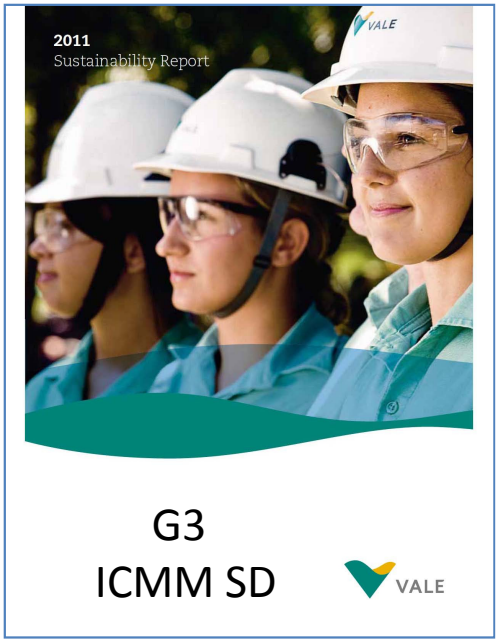
- New social indicators added
- Revisions to the Disclosures on Management Approach (DMA)
- Adjusted data requirements for several DMAs and indicators, mostly social
- Revised content of G3.1 Guidelines



Reports Reviewed









Report Navigator - BHP



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THE GLOBAL COMPACT

10 PRINCIPLES REPORTING ASSURANCE

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GRI G3/Supplement Declaration – Rio

Global Reporting Initiative™

Statement
GRI Application Level Check

GRI hereby states that **Rio Tinto** has presented its report "Rio Tinto 2010 Annual Report" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A+.

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

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

Amsterdam, 26 July 2011

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative

A+ GRI REPORT GRI CHECKED

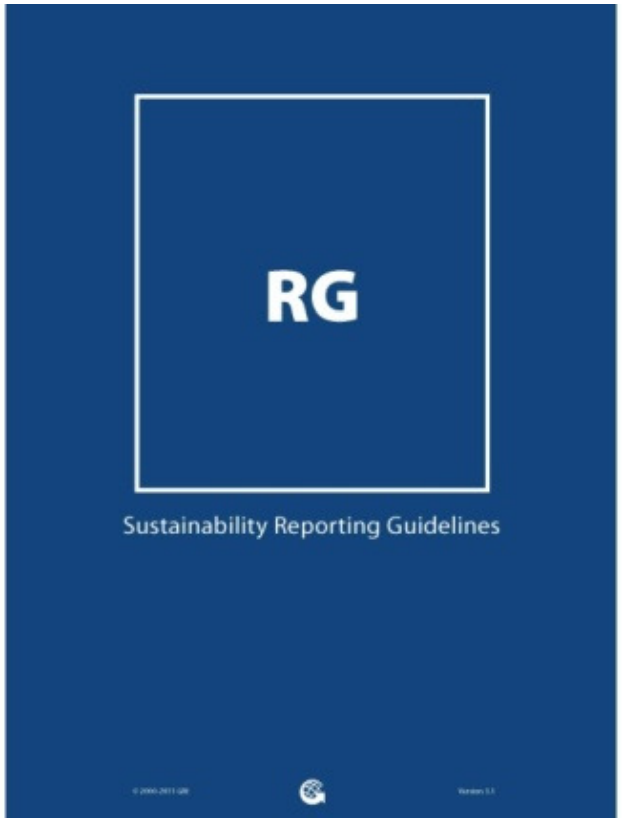
The "+" has been added to this Application Level because Rio Tinto has submitted this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

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

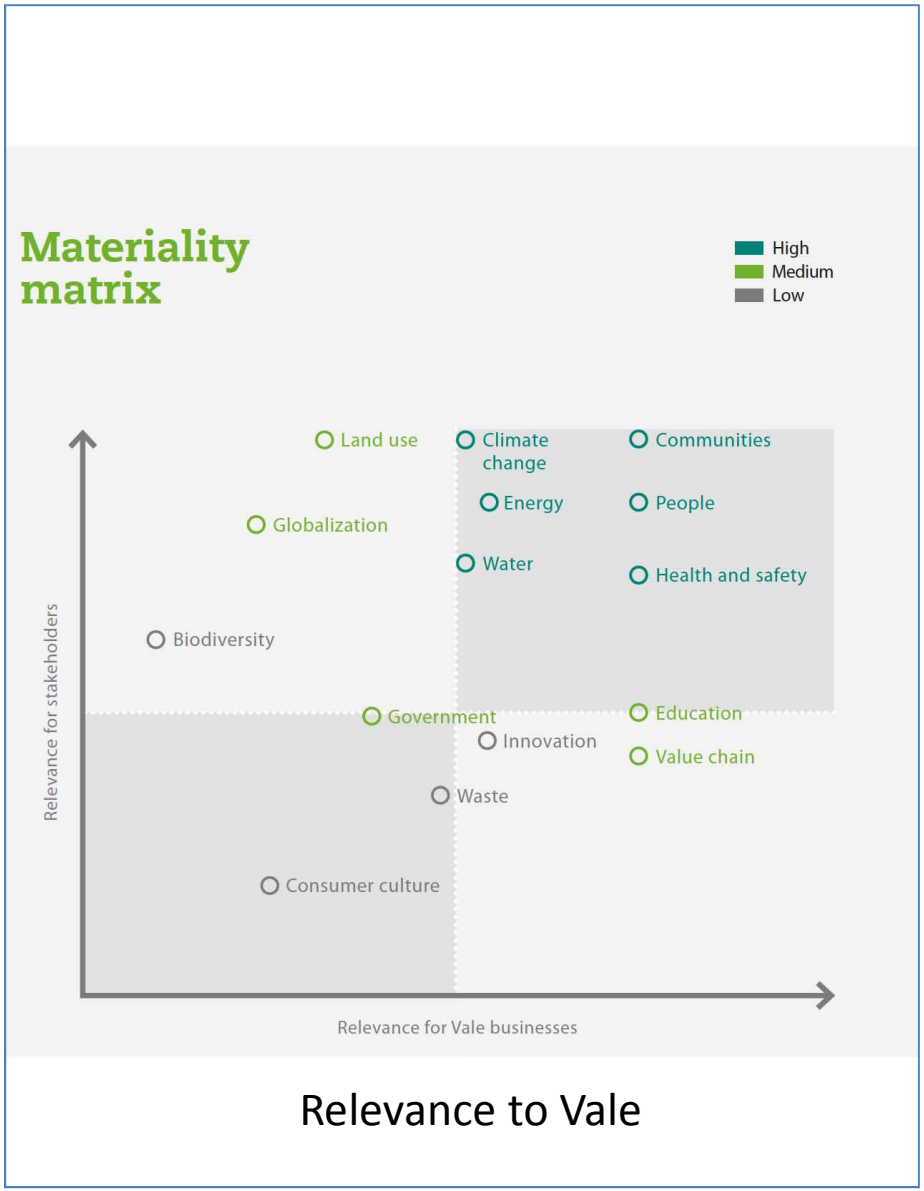
***Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 17 March 2011. GRI explicitly excludes the statement being applied to any later changes to such material.*

GRI G3.1 Report Structure

- **Part 1 – Defining Report Content and Boundary**
  - **Report Content**
  - Report Quality
  - **Report Boundary** Setting
- Part 2 – Standard Disclosures
  - Strategy and Profile
  - Management Approach
  - Performance Indicators
    - Economic
    - Environmental
    - Social



Materiality – Vale



Relevance to Stakeholders

Relevance to Vale

<u>Definition of Materiality (GRI)</u>

The information in a report should cover topics and indicators that:

- Reflect the organization's significant economic, environmental and social impacts, or
- Would substantively influence the assessments and decisions of stakeholders

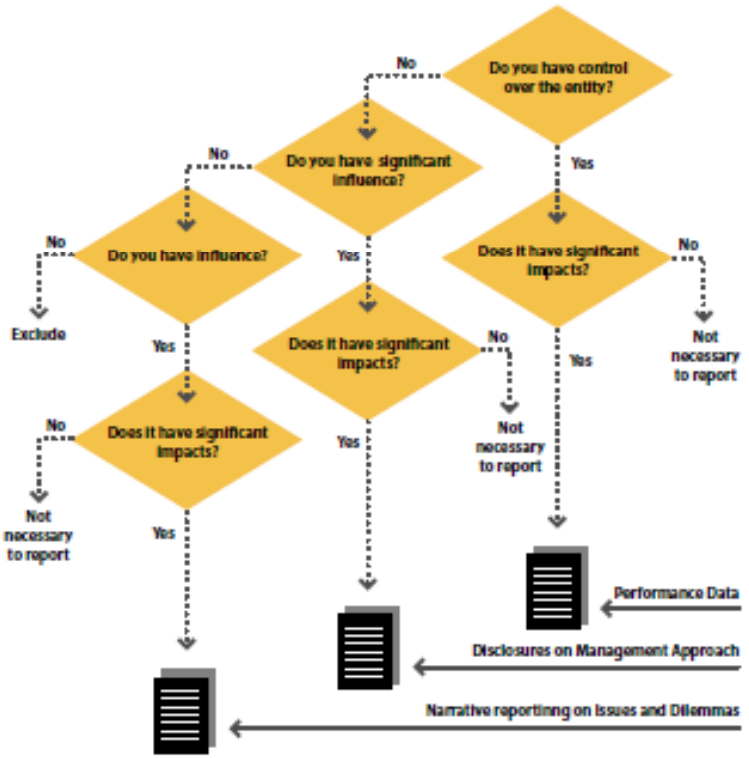
Report Boundary and Scope - BHP



About this Report

In this Report

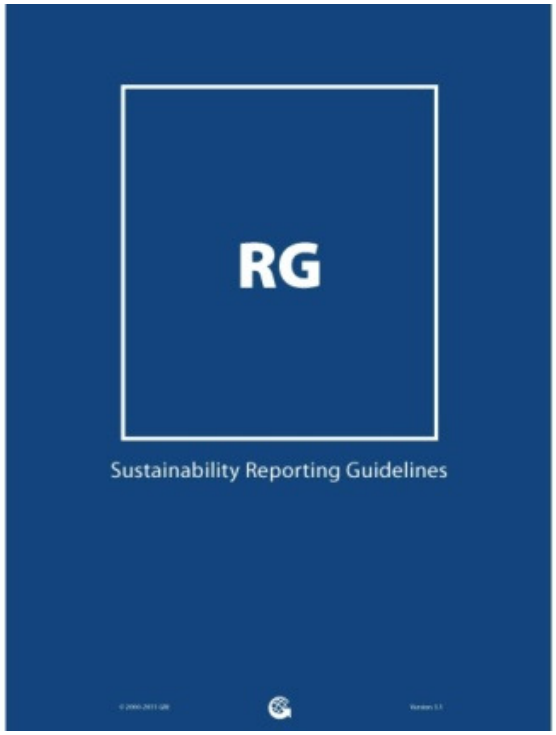
Degree of Control?
Nature of Impacts?
Degree of Influence?



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GRI 3.1 Report Structure

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    - Environmental
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CEO Strategy Statement - Anglo

- Relevance of SD
- Strategic priorities and key topics for short/medium term
- Broader economic and political trends
- Successes and failures
- Performance to targets
- Targets and challenges for coming year
- Goals for next 3-5 years



OVERVIEW **INTERVIEW WITH THE CHIEF EXECUTIVE**

Cynthia Carroll
Chief Executive

IT TAKES CARE AND RESPECT

Anglo American chief executive Cynthia Carroll talks about how we are addressing the main sustainable development issues facing the Group and shares her thoughts about why building and maintaining trust with stakeholders must always remain core to our approach to sustainable development.

Q. As a CEO, how do you balance the needs and demands of such a wide range of stakeholders – investors, governments, communities, NGOs, suppliers – that are affected by your business?

A. Our stakeholders are very diverse groups of people and we need to be listening to all of them on a continual basis. This is not always easy, but our stakeholders matter to us and are integral to our success. What we do find, when we get down to it, is that their interests do coincide. They are concerned with the same kinds of things: whether that's more jobs, better education and healthcare, or having their voice heard.

We are increasingly focused on activities that help meet these shared objectives. We provide jobs and pay taxes, but we're also helping to develop entrepreneurs, and investing in communities in other ways.

Governments and communities expect this of us as a leading, modern mining company and, in order to meet and exceed these growing expectations, we have to do it better and better.

For more on our values turn to page 01

Q. What role does sustainable development play in delivering value for stakeholders?

A. It plays a crucial role and this is widely accepted now. The days where sustainable development was simply seen as a cost with no value have gone.

Value means different things to different people. Creating financial value for our shareholders is a given, but we believe this is not incompatible with environmental protection, and delivering broader benefits to our host governments and communities.

We are committed to creating long term benefits and, in doing this, considering the social, environmental and economic implications of all our decisions and actions.

This requires us to understand the issues that are going to have an impact on our business, such as access to water, energy or retaining talented people, and ensuring we can manage those risks. It also means actively looking for opportunities, the ways that we can really deliver value over and above the traditional benefits we provide to communities where we operate.

Q. What would you single out as Anglo American's most material sustainability challenges?

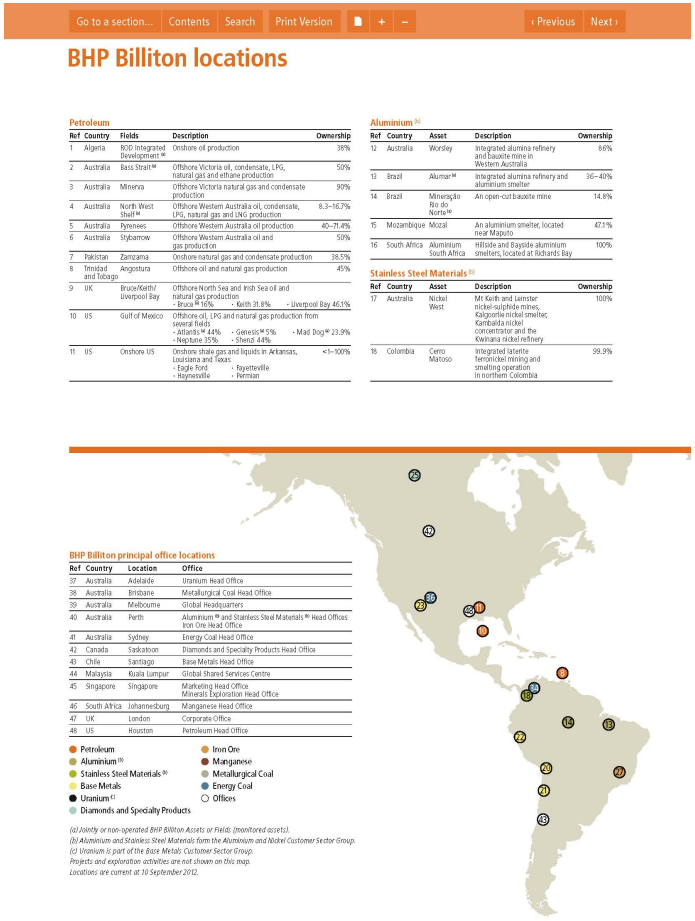
A. You can argue that, by its very nature, mining is not sustainable as we are working with a finite resource; but modern society is dependent on the resources we mine and it is vital that we meet this demand in the most responsible way possible.

As a major global mining company, we certainly have no shortage of challenges. For me, personally, the main priorities that stand out are: improving our safety performance; managing our relationships with communities; and responding to the challenge of climate change, which includes securing access to water.

I believe that the way we manage these will have a profound influence on the future of our business, which is why we have embedded the principles of sustainable development in everything we do, starting at

Organisational profile - BHP

- Clear scope of operations
- Primary products
- Locations of operations clearly shown
- Nature of operations (JVs)
- Markets served
- Scale of organization
- Significant changes
- Awards received



Go to a section... Contents Search Print Version ‹ Previous Next ›

BHP Billiton locations

Petroleum

Ref	Country	Fields	Description	Ownership
1	Algeria	ROD Integrated Development [a]	Onshore oil production	38%
2	Australia	Bass Strait [a]	Offshore Victoria oil, condensate, LPG, natural gas and ethane production	50%
3	Australia	Minerva	Offshore Victoria natural gas and condensate production	90%
4	Australia	North West Shelf [a]	Offshore Western Australia oil, condensate, LPG, natural gas and LNG production	8.3–16.7%
5	Australia	Pyrenees	Offshore Western Australia oil production	40–71.4%
6	Australia	Stybarrow	Offshore Western Australia oil and gas production	50%
7	Pakistan	Zamzama	Onshore natural gas and condensate production	38.5%
8	Trinidad and Tobago	Angostura	Offshore oil and natural gas production	45%
9	UK	Bruce/Keith/ Liverpool Bay	Offshore North Sea and Irish Sea oil and natural gas production - Bruce [a] 16% - Keith 31.8% - Liverpool Bay 46.1%	
10	US	Gulf of Mexico	Offshore oil, LPG and natural gas production from several fields - Atlantis [a] 44% - Genesis [a] 5% - Mad Dog [a] 23.9% - Neptune 35% - Shenzi 44%	
11	US	Onshore US	Onshore shale gas and liquids in Arkansas, Louisiana and Texas - Eagle Ford - Fayetteville - Haynesville - Permian	<1–100%

Aluminium [b]

Ref	Country	Asset	Description	Ownership
12	Australia	Worsley	Integrated alumina refinery and bauxite mine in Western Australia	86%
13	Brazil	Alumar [a]	Integrated alumina refinery and aluminium smelter	36–40%
14	Brazil	Mineração Rio do Norte [a]	An open-cut bauxite mine	14.8%
15	Mozambique	Mozal	An aluminium smelter, located near Maputo	47.1%
16	South Africa	Aluminium South Africa	Hillside and Bayside aluminium smelters, located at Richards Bay	100%

Stainless Steel Materials [b]

Ref	Country	Asset	Description	Ownership
17	Australia	Nickel West	Mt Keith and Leinster nickel-sulphide mines, Kalgoorlie nickel smelter, Kambalda nickel concentrator and the Kwinana nickel refinery	100%
18	Colombia	Cerro Matoso	Integrated laterite ferronickel mining and smelting operation in northern Colombia	99.9%

BHP Billiton principal office locations

Ref	Country	Location	Office
37	Australia	Adelaide	Uranium Head Office
38	Australia	Brisbane	Metallurgical Coal Head Office
39	Australia	Melbourne	Global Headquarters
40	Australia	Perth	Aluminium [b] and Stainless Steel Materials [b] Head Offices Iron Ore Head Office
41	Australia	Sydney	Energy Coal Head Office
42	Canada	Saskatoon	Diamonds and Specialty Products Head Office
43	Chile	Santiago	Base Metals Head Office
44	Malaysia	Kuala Lumpur	Global Shared Services Centre
45	Singapore	Singapore	Marketing Head Office Minerals Exploration Head Office
46	South Africa	Johannesburg	Manganese Head Office
47	UK	London	Corporate Office
48	US	Houston	Petroleum Head Office

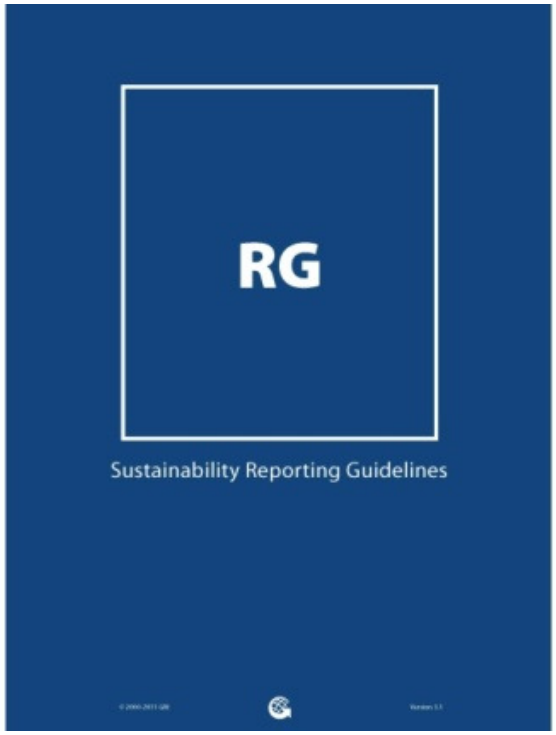
- Petroleum
- Aluminium [b]
- Stainless Steel Materials [b]
- Base Metals
- Uranium [c]
- Iron Ore
- Manganese
- Metallurgical Coal
- Energy Coal
- Offices
- Diamonds and Specialty Products

(a) Jointly or non-operated BHP Billiton Assets or Fields (monitored assets).
(b) Aluminium and Stainless Steel Materials form the Aluminium and Nickel Customer Sector Group.
(c) Uranium is part of the Base Metals Customer Sector Group.
Projects and exploration activities are not shown on this map.
Locations are current at 10 September 2012.

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GRI 3.1 Report Structure

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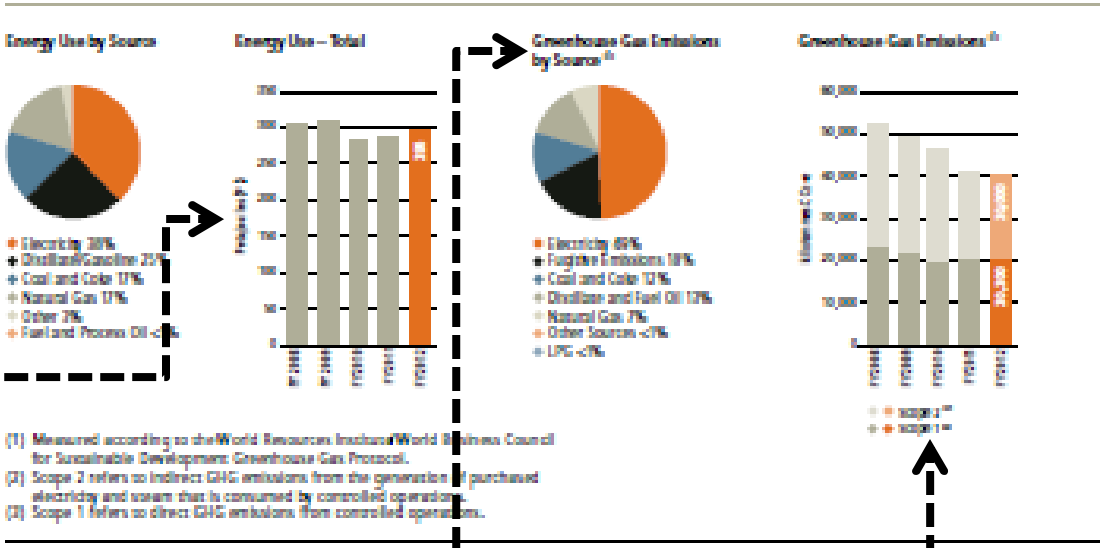
GRI 3.1 Environmental Indicators

- Materials
- **Energy ***
- **Water ***
- **Biodiversity***
- Emissions, Effluents and Waste
- Products and Services
- Compliance
- Transport
- Overall (environmental protection expenditures)

*** Identified as primary material issues by benchmarks**

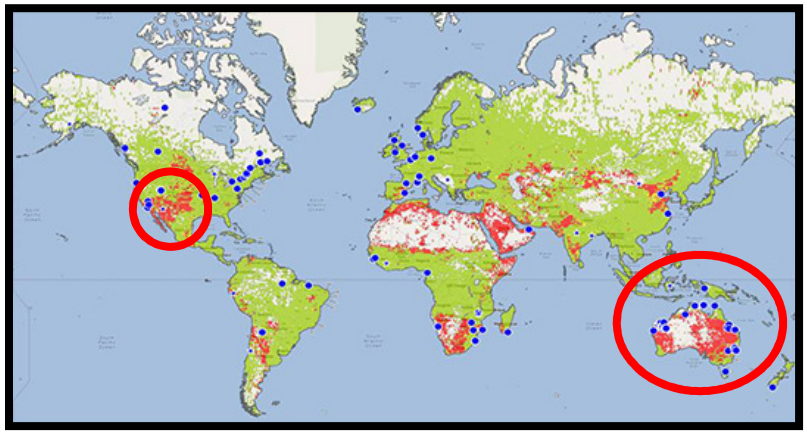
Energy and Climate Change - BHP

- Energy
  - Source
  - Use

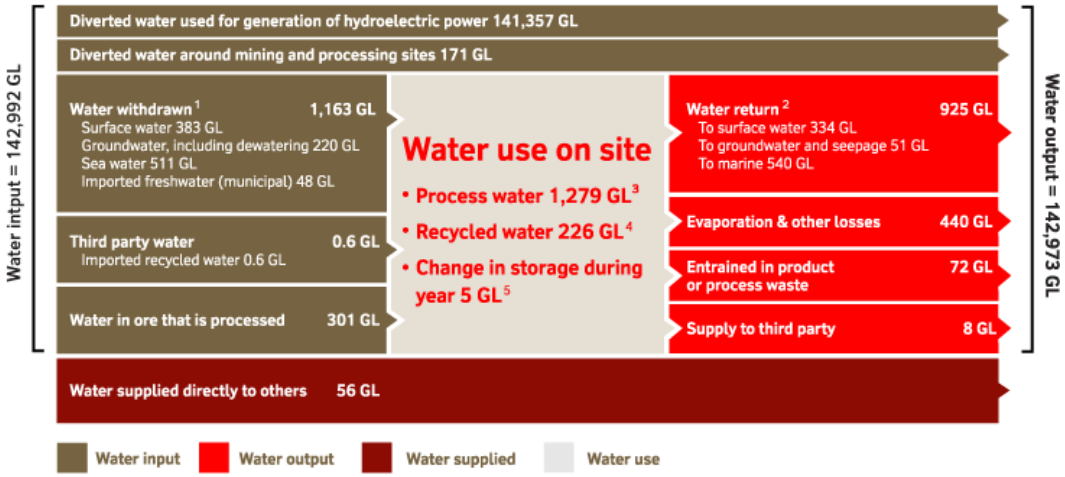


  - GHG Emissions
    - Source
    - Scope 1 and 2; 40.2 Mt CO_2-e; **part of external assurance**
    - Reduction of approx. 16% from FY06 baseline; switch to hydro at large smelter in Mozambique

Water – Rio Tinto



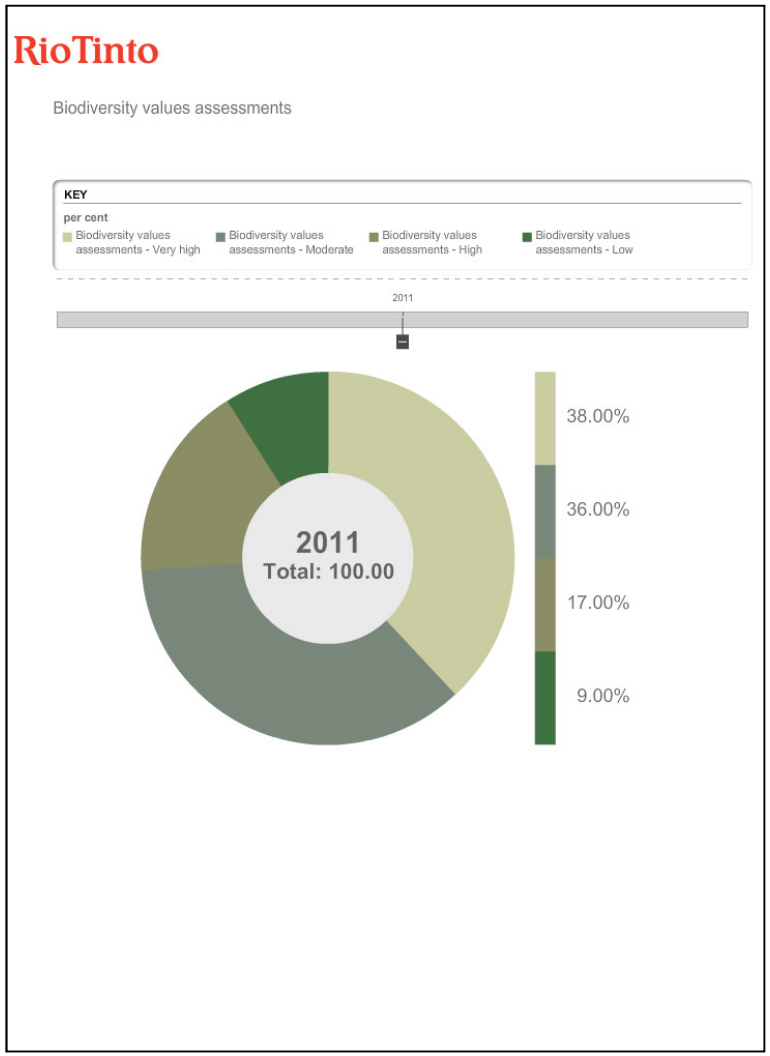
- Use of WBCSD Global Water Tool
  - Australia and US Southwest high risk
- Corporate water balance approach
  - Water use for hydropower
  - Diverted water around operations
  - Abstracted water
  - Imported water
  - Water in ore



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Biodiversity – Rio Tinto



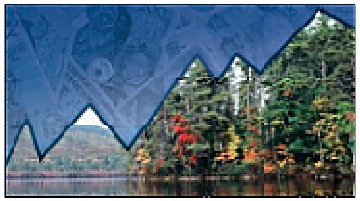


"Through our biodiversity strategy, our goal is to have a "net positive impact" (NPI) on biodiversity.

*This means minimising the impacts of our business and contributing to biodiversity conservation to ensure a region ultimately benefits from our presence."**

** Source: Rio Tinto Sustainability Report 2011*

Ecosystem Services – Rio Tinto



*"We are developing a Natural Capital project to investigate the business case and methodologies around designing and implementing ecosystem service offsets and investments in non-operational, land based assets. " **



*"Through our collaboration with the International Union for Conservation of Nature (IUCN) economics group, we have undertaken a preliminary assessment of the biodiversity value of forest conservation projects in Madagascar. This groundbreaking work has now been published as part of the IUCN/Rio Tinto technical series on biodiversity and ecosystem services. " **

*"As part of the Natural Capital project we are also engaging in external initiatives such as the WRI Corporate Ecosystem Service and the Natural Value Initiative, led by Fauna & Flora International." **

** Source: Rio Tinto Sustainability Report 2011*

thenaturalvalueinitiative
linking shareholder and natural value

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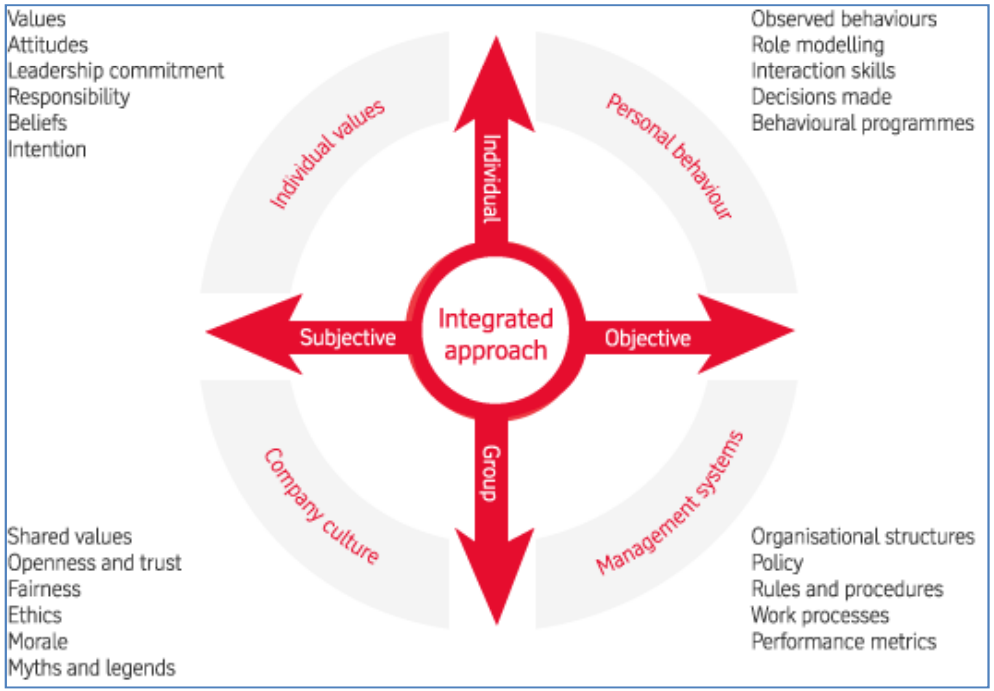
GRI G3.1 Social Indicators

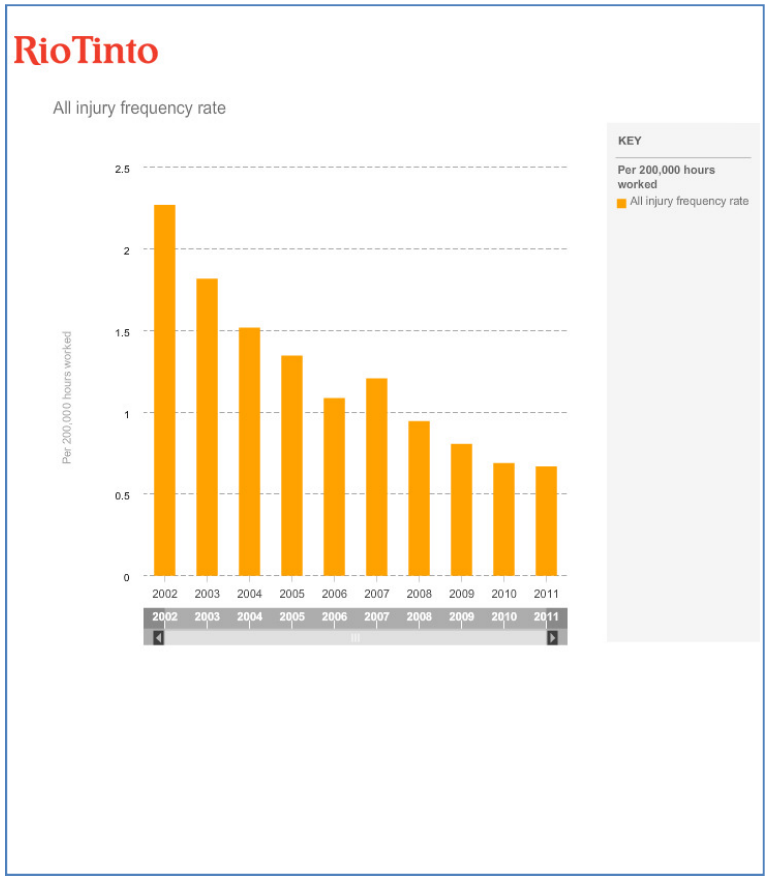
- **Labour Practices**
  - Employment
  - Labour/Management Relations
  - **OHS***
  - Training and Education
  - Diversity and Equal Opportunity
  - Equal Remuneration
- **Society**
  - **Local Communities***
  - Corruption
  - Public Policy
  - Anti-Competitive Behaviour
  - Compliance
- Human Rights
- Product Responsibility

*** Identified as primary material issues by benchmarks**

Health and Safety – Rio Tinto

- Report on All Injury Frequency Rate (AIFR) as well as LTIFR
- AIFR = 0.67; LTIFR =0.36*
- Interactive safety charts on-line



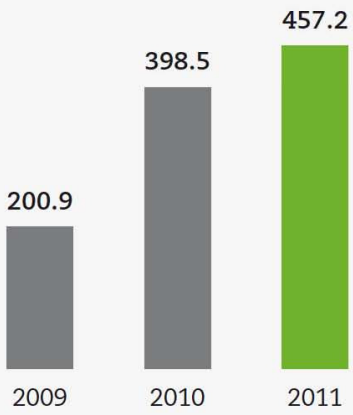


* *Source: Rio Tinto Sustainability Report 2011*

Local Communities - Vale

Total social spending

US$ Million



Vale's actions	2011
Human and Economic Development	90.0
Socioeconomic Diagnoses/PGIS	8.2
Donations for Vale Foundation	115.3
Impact Management	99.6
Public Sector Management	3.8
Infrastructure	41.2
Sponsorship	87.1
Corporate Institutional Relations	12.0
Total	**457.2**

Commitment

To respect and understand the neighboring communities of its operations and projects, including their cultural diversity, and to support their development and leave a positive legacy

+7,900

housing units began construction, as a result of municipal projects supported by the Vale Foundation

US$165 mn

was the total spent in controlling and **reducing air emissions**

21

the number of traditional communities that Vale interacted with in 2011



Children during a cultural exchange between the Xikrin do Cateté indigenous people and Vale employees and their families, Ourilândia do Norte (PA), Brazil

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Assurance – Anglo American and BHP

Organisation	Assurance Standard	Assurance Level	Assurance Statement
Anglo American 	ISAE 3000	Reasonable (subset)	Based on the results of our *reasonable* assurance procedures, in our opinion, the Identified Sustainability Information* selected for reasonable assurance for the year ended 31 December 2011, is stated, in all material respects in accordance with the Reporting Criteria*.
BHP Billiton 	ISAE 3000	Limited	Based on the procedures performed, as described below, nothing has come to our attention that would lead us to believe that the Assured Sustainability Information** for the year ended 30 June 2011, is not, in all material respects, prepared and presented in accordance with the GRI G3 Guidelines and ICMM Sustainable Development Framework (collectively the "Framework).

* Identified Sustainability Information (8 KPIs) is listed in Assurance Statement; Reporting Criteria included the GRI 3.1 Reporting Guidelines and the ICMM Sustainable Development Framework

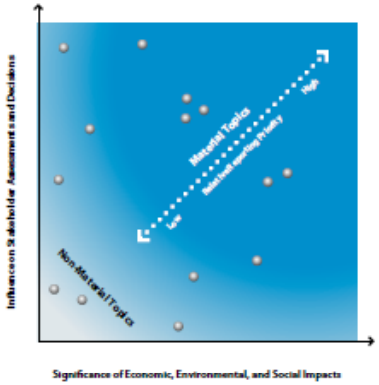
** Assured Sustainability Information is listed in Assurance Statement

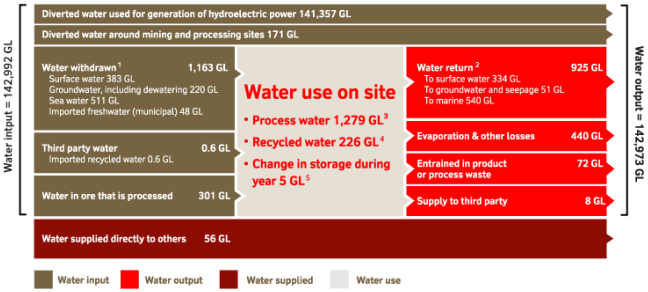
Summary

- Only one company (Anglo American) using GRI G3.1
- All four companies used external assurance
- Reasonable assurance appearing
- Detailed Navigator
- Clear discussion on materiality
- Water, energy and biodiversity
- Safety and local communities



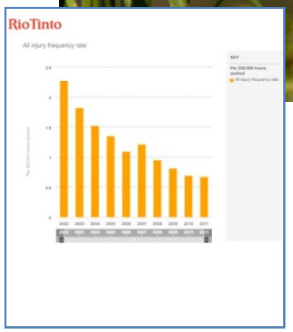


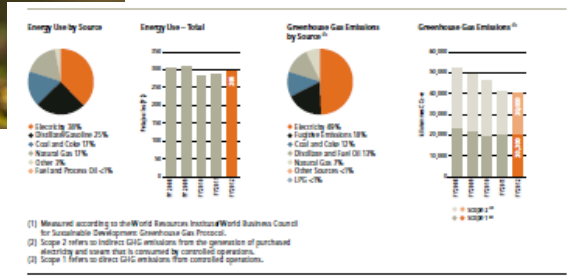












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