



Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure

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Abstract

In recent years, concerns about the sustainability and social responsibility (CSR) of businesses have become an increasingly high profile issue in many countries and industries, none more so than the mining industry. For mining, one outcome of the CSR agenda is the increasing need for individual companies to justify their existence and document their performance through the disclosure of social and environmental information. This paper explores recent trends in the reporting of such impacts and issues in the global mining industry. It offers a detailed review of the development of the media of social and environmental disclosure in the mining industry, and of the factors that drive the development of such disclosure. A temporal analysis of the recent trends in disclosure using a case study of the world's 10 largest mining companies is presented. Whilst there is evidence of increasing sophistication in the development of social and environmental disclosure, there is considerable variation in the maturity of reporting content and styles of these companies. The paper offers a simple classification of reporting companies, from 'leaders' to 'laggards'. Stronger leadership and co-operation from the top reporting companies is necessary to support the laggards of the industry.

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1. Introduction

"Corporate social responsibility" (CSR) and "sustainability" are two of many terms used to describe the social and environmental contributions and consequences of business activity. The notion of sustainable development lies in progress within three dimensions: economic development, environmental protection and social cohesion. Its principles are described as social progress that recognises the needs of everyone; effective protection of the environment; prudent use of natural resources; and maintenance of high and stable levels of economic growth and employment. The depletion of natural mineral resources is a major concern in the

debate about sustainable development [1,2]. Several viewpoints defend the possibility for mineral extraction to be sustainable:

- Depletion of mineral resources should be compensated by "generation of new wealth, which, in the form of useful lasting capital, can benefit present and future generations" [3].
- Mineral depletion is not an issue for the foreseeable future due to the possibility of recycling many non-fuel metals and minerals [4].
- Discovery of new mineral deposits, and the advancement of technology for improved recovery of minerals from previously unprofitable deposits.

In the mining industry, progress within the three dimensions of sustainable development could be achieved through: economic development – investment

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of generated revenues to ensure the future development and long-term livelihood of the communities [5]; environmental protection – the environmental impact of natural resource exploitation should be minimised and land rehabilitated to allow successive use [3]; and social cohesion – minimisation of social and cultural disruption to the communities, maintenance of stakeholder dialogue and transparency of operation [3]. Sustainable development in the corporate mining context requires a commitment to continuous environmental and socioeconomic improvement, from mineral exploration, through operation, to closure [6].

CSR relates to the activities of businesses, particularly in terms of their contribution to achieving economic, social and environmental sustainability. The evolving CSR agenda is driven by a global shift in the way that business is perceived [7]. In recent years, concerns about the sustainability and social responsibility of industry have become an increasingly high profile issue in many countries and industries, none more so than the mining industry. The discovery, extraction and processing of mineral resources is widely regarded as one of the most environmentally and socially disruptive activities undertaken by business [8]. Indeed, Warhurst [9] notes that many of the environmental disasters or human rights incidents that have contributed to the growing public concern about CSR over the last 40 years took place in the mining or petroleum industries; thus, the mining industry is a key topic in debates about social and environmental responsibility [1].

Walker and Howard [10] outline several reasons why CSR and other such voluntary initiatives are important for mining companies. These include the following:

- Public opinion of the sector as a whole is poor; opinion of natural resource extraction industries is influenced more by concerns over environmental and social performance than by performance in areas such as product pricing, quality, and safety [11].
- Pressure groups have consistently targeted the sector at local and international levels, challenging the industry's legitimacy. An example of this is the numerous environmental, community and indigenous groups who oppose the development of a uranium mine at Jabiluka in the Kakadu National Park in Australia.¹ Many large NGOs have campaigns specifically targeted at the mining industry, such as Oxfam's Mining Campaign² and

Friends of the Earth International's Mining Campaign (resisting economic globalisation).³

- The financial sector is increasingly focusing on the sector from both risk management and social responsibility perspectives. It is not unusual for mining companies to be screened out of Socially Responsible Investing (SRI) funds altogether [12].
- Maintaining 'a licence to operate' is a constant challenge. For example, resistance by numerous social organisations to the expansion of gold mining at Mount Quilish Peru has led Newmont to suspend its activities.⁴ Opposition to the mine is based on accusations of bribery for concessions, lack of community engagement, impacts on the mainly-agricultural local land-use, pollution and related health impacts, and the influx of work-seeking migrants.⁵

CSR is a helpful conceptual framework for exploring the corporate attitude of companies towards stakeholders [13]. For the mining industry, CSR is about balancing the diverse demands of communities, and the imperative to protect the environment, with the ever-present need to make a profit [14]. CSR calls for a company to respond not only to its shareholders, but also to other stakeholders, including employees, customers, affected communities and the general public, on issues such as human rights, employee welfare and climate change [7]. For the mining industry, one outcome of the CSR agenda is the increasing need for individual companies to justify their existence and document their performance through the disclosure of social and environmental information [8]. The finite nature of non-renewables, the diverse environmental impacts associated with their extraction and use, the economic importance of primary extraction industries in some countries, and the social impacts of extraction activities in local communities have led the mining industry to be amongst the most prolific disclosers of social and environmental information [15]. Most large mining companies now disclose information covering dimensions of CSR such as social and environmental performance, health and safety issues and ethics.

The purpose of this paper is to explore recent trends in the reporting of such social and environmental impacts and issues. It offers a detailed review of the development of the media of social and environmental disclosure in the mining industry, and of the factors that drive the development of such disclosure. A temporal

¹ See, for example, The Gundjeihmi Aboriginal Corporation, <http://www.mirrar.net/> [accessed 8th October, 2004], The Environment Centre Northern Territory, <http://www.ecnt.org/uranium/> [accessed 8th October, 2004], Mines and Communities, <http://www.minesandcommunities.org/index.htm> [accessed 8th October, 2004].

² <http://www.oxfam.org.au/campaigns/mining/index.html> [accessed 8th October, 2004].

³ <http://www.foei.org/mining/index.html> [accessed 8th October, 2004].

⁴ See <http://www.minesandcommunities.org/Action/press437.htm> [accessed 8th October, 2004].

⁵ See http://www.nodirtygold.org/cajamarca_peru.cfm [accessed 8th October, 2004].

analysis of the recent trends in disclosure using a case study of the top 10 mining companies in the World is presented to demonstrate how the nature and content of such disclosure has changed, and to compare and contrast companies' progress towards comprehensive reporting on the sustainability of their operations. The paper offers a simple classification of reporting companies, from 'leaders' to 'laggards'.

As well as a detailed review of the media of social and environmental disclosure and the driving factors for increased disclosure of such issues in the global mining industry, this paper explores recent trends in mining company reports.

2. The development of media for social and environmental disclosure

2.1. Social and environmental disclosure

Corporate social and environmental disclosure has grown considerably over the last 20 years. It encompasses both the voluntary and mandatory disclosure made by companies regarding issues that are important to a wide range of stakeholders, covering more than solely economic concerns [16,17]; environmental disclosure is part of wider corporate social disclosure [18,19]. Environmental disclosure refers to disclosure relating to the natural environment, environmental protection and resource use, and social disclosure usually refers to disclosure about the interactions of a company with the community, employees, and society at large. Corporate social and environmental disclosure has several roles [16]:

- Assessing the social and environmental impacts of corporate activities;
- Measuring the effectiveness of corporate social and environmental programmes;
- Reporting on corporate social and environmental responsibilities; and
- External and internal information systems allowing the comprehensive assessment of all corporate resources and sustainability impacts.

There are several theories that explain a company's motivation to disclose social and environmental information; while it is not within the scope of this paper to offer a detailed explanation of such theories, they include: regulations and standards [20]; legitimacy theory [21]; political economy theory [22]; stakeholder theory [23]; the role of public and external pressure [24,25], which will be considered further when examining the factors driving greater social and environmental disclosure in the mining industry; and information costs and benefits [22].

2.2. Media

There are also a variety of media for social and environmental disclosure [26–30], which include:

- Advertisements or articles published detailing companies' activities;
- Annual Reports;
- Booklets or leaflets produced to address the social and environmental activities of the company;
- CD reports;
- Community Reports;
- Environmental Reports;
- Labelling of products to promote environmental and other concerns;
- Press releases;
- Supplements to the Annual Reports or produced at interim dates;
- Video tapes; and
- Websites.

Annual Reports are the most publicised and visible documents produced by companies [25,27,31]; they are considered to be an important source of social and environmental information, as they are produced regularly, are required by legislation and produced by all major companies [25,26,32]. Although the level of social and environmental disclosure has increased over the years, companies still provide relatively little detailed social and environmental information in their Annual Reports, and it is often qualitative and not quantitative [32–34].

An increasing number of companies publish stand-alone Environmental Reports [35]. Environmental Reports represent a tool that companies use to explain and illustrate their environmental policy, their principal problems, their performance and information on the environmental consequences of the companies' activities [36]. Environmental Reports have moved from simply demonstrating a company's commitment to the environment, to communicating environmental performance data. In addition, Environmental Reports demonstrate a company's openness towards stakeholders and the importance of strategic environmental management [36].

The first companies to release stand-alone Environmental Reports were those in the petrochemical sector, starting in the 1980s and early-90s (for example, Shell Canada produced its 'Progress Toward Sustainable Development' report in 1991) while the mining sector started producing Environmental Reports more slowly in the 1990s and gradually gathered momentum [37]. It has been noted that companies operating in so-called environmentally-sensitive industries such as mineral extraction, oil and gas, chemicals and forestry are more likely to provide social and environmental disclosure [21,25,38]. For example, a study of 70 Annual Reports

from five industries, including mining, showed that companies in the extractive industries generally disclose more social and environmental information than other companies [15]. A recent survey by KPMG suggests that the mining industry is now moving towards a leadership position in the disclosure of social and environmental information [39].

Many companies started including other issues in their stand-alone Environmental Reports such as health and safety, which gave rise to Health, Safety and Environmental Reports. The trend for integration of various sustainability issues into one report continued. In the 1990s, new Environmental and Social Reports (see, for example, Rio Tinto) appeared on the scene, which incorporate environmental, health and safety and community issues. Some companies opted to attach long, complex titles to their reports, such as 'Health, Safety, Environment and Community Reports'. In the late-1990s, companies started producing Sustainability Reports (see, for example, Placer Dome) or 'Reports to Society' (see, for example, Anglo American).

Companies are increasingly using the World Wide Web to disseminate environmental and social information [40]. In 2000, about 65% of companies from Fortune Magazine's Global 500 list used the internet to report on environmental and social issues [29]. Companies not only post their Environmental and Community Reports on the Web, but also place their site-specific reports and updated news relating to environmental, social, employee and community matters. Websites are an attractive mechanism for disseminating information but there are also drawbacks related to the use of such disclosure media (see Table 1).

2.3. Credibility issues

Only Annual Reports possess a certain degree of credibility in comparison with other types of corporate media because they go through the same auditing process as a company's financial information [25]. Even though Social and Environmental Reports do not yet have definite rules concerning their form, structure and content, they show a tendency towards standardisation and are becoming increasingly similar in structure to Financial Reports. However, fewer similarities are found in the typology and metrics of indicators used for measuring and reporting social and environmental performance [20]. A specific challenge for Social and Environmental reporting is the development of generally accepted and recognised reporting standards. For example, the US-based Coalition for Environmentally Responsible Economies established the Global Reporting Initiative (GRI), which aims "to bring together the numerous initiatives on corporate environmental reporting that have developed independently around the

Table 1

The pros and cons of electronic information provision (adapted from Elvins [41] and Scott and Jackson [42])

Pros	Cons
<ul style="list-style-type: none"> • Greater reach – ability to communicate with a larger and more diverse group of stakeholders • Timelines of data – updating can be yearly monthly or daily as required • Amount of information – can increase the quantity, nature and breadth of the information available • Easy to use – interactive, fun, multi-lingual • Tailoring – people can tailor the report to their needs, engage in feedback and companies can track information about respondents more easily • Environmental impacts – reduce resource use (and costs) 	<ul style="list-style-type: none"> • Exclusion – internet access still restricted • Websites can be invisible offline without good promotion • Difficulties in proving that web pages and data verification are up to date • People can easily get lost in mountains of information • Technical difficulties – problems with downloading and updating information • Anonymity and privacy – demands careful and dedicated approach to stakeholder engagement, and tracking could clash with legitimate privacy concerns • Just transferring resource use and costs to the user, who will print out the information?

world, and to help them to shape them into one set of coherent, consistent global standards" [43].

In most countries, Environmental and Social reporting is voluntary, and there are no definite rules concerning form and content [20]. Niskanen and Nieminen [38] argue that because of the absence of regulation, companies manage themselves in relation to the objectivity of environmental and social information released. One way to increase the credibility of information is via third party verification [29,37]. In addition, companies are expected not only to disclose their own activities with respect to environmental and social issues, but also those of their subsidiaries [26], due to the assumption that global economic actors have a global environmental and social impact, and that they have a responsibility to disclose those impacts to stakeholders [22]. Global environmental reporting is increasing among global companies, as they recognise that their national Environmental Reports cannot demonstrate the entire picture of their environmental management [44].

A number of concerns have been expressed about corporate environmental reporting: firstly, that published data may be unreliable; secondly, many companies are selective about the material they include in their reports; and thirdly, data are not comparable either within a report, between reports of different years, or between reports from different companies even within the same sector [45]. Therefore, many argue that the solution to these discrepancies in Environmental reporting practice may be found in the standardisation of

reporting formats and performance measures in order to achieve an effective environmental performance measurement and evaluation [45], and inclusion of a third party statement [37].

Corporate social and environmental disclosure varies from country to country due to differences in accounting regulations, governmental actions, national culture, economy, the existence of pressure groups, and the severity of social and environmental problems [28,32,46]. In addition, large companies disclose more social and environmental information than small companies [18,46,47]. Frost [48] conducted a study of the environmental disclosure practices of 60 Australian extractive companies based on a content analysis of Annual Reports. The study revealed that some companies are not disclosing any information on their environmental impacts and that in general, it is the larger companies who have the higher level of environmental disclosure. Moreover, companies that report higher profits disclose environmental information to a greater extent than less profitable companies, and companies that receive greater media coverage disclose more environmental information.

Several studies have been undertaken to analyse the nature of Social and Environmental reporting in the mining sector. Warhurst [49], for example, identified the specific reporting strategies of the top 50 mining companies within the areas of environment, health and safety, and community relations in their corporate disclosure documents. Using a workshop technique, Dibley and Newson [50] tried to identify criteria that would be essential for a good Environmental Report for a mining company. The results of the study suggested that the most important criteria included: independent environmental audit results, environmental compliance with legislation and codes, environmental incidents and emergency response, quantification of environmental impacts, environmental objectives and targets aimed at improvement, and organisational policy on the environment. Scott [37] analysed the Environmental and Community Reports of 14 companies and identified elements that contribute to “good reports”, such as company overview, overview of environmental impacts, corporate policies, management systems and targets, demonstration of policy implementation, performance data and feedback information.

3. Factors that drive social and environmental disclosure in the mining industry

The shift towards CSR and tackling the challenges posed by sustainable development in the mining industry is characterised by numerous developments both within the industry and more widely in the role of business.

Mining operations often exist side-by-side with indigenous people.⁶ Though traditionally seen as a potential impediment to development, with the globalisation of opposition to mining developments and the emancipation of indigenous rights, engagement with aboriginal groups has become a reputational and political imperative for mining companies. This is compounded by the globalisation of opposition to transnational companies, and the increased organisational capacity and co-operation of NGOs, social movements and indigenous peoples [51]. Structural changes in the mining industry over the last decade have led to unprecedented access to new regions for mineral exploration [52], eased by the liberalisation of mining policies and regulations in developing countries [53], which have led to unprecedented access to new regions for mineral exploration but may also increase the potential for conflict with a wide range of stakeholders.

There is a growing emphasis amongst government organisations on the need for partnerships with business, in order to address such common sustainable development issues and achieve the same objectives [7] (e.g., the UN's Global Compact – see <http://www.unglobalcompact.org>). In the mining industry, the Global Mining Initiative⁷ (GMI) brought together many of the world's largest mining, metals and minerals companies; its central aims were the creation of an industry association that could focus on sustainable development in the industry and an independent analysis of the key issues facing these industries.⁸ Alongside this, a plethora of CSR principles, codes of conduct and reporting guidelines have been developed, and more companies are signing up to such codes as a commitment to meet certain standards and principles for their behaviour in the marketplace. Several examples of such codes exist in the mining industry, from global multi-stakeholder codes to country level or single-issue codes:

- International Council on Mining & Metals (ICMM) Sustainable Development principles – members of the ICMM have developed a sustainable development framework and set of principles that seek

⁶ Indigenous people refers to aboriginal or native groups sometimes defined as ‘Fourth World Nations’, i.e. nations forcefully incorporated into states which maintain a distinct political culture (Griggs, R. 1992. “The meaning of ‘Nation’ and ‘State’ in the Fourth World”, *Centre for World Indigenous Studies Occasional Paper #18*).

⁷ Global Mining Initiative, participating mining companies included Anglo American, BHP Billiton, Newmont, Rio Tinto; see <http://www.icmm.com/gmi.php> (11th August, 2004).

⁸ Analysis was carried out by the Mining, Minerals and Sustainable Development (MMSD) research project seeking to understand how to maximise the contribution of the mining and minerals sector to sustainable development at the global, national, regional and local levels; see <http://www.iied.org/mmsd/index.html> (11th August, 2004).

- ‘continual improvement in our performance and contribution to sustainable development’.⁹
- The Extractive Industries Transparency Initiative – the campaign aims to help citizens of resource-rich developing countries hold their governments accountable for the management of revenues from the oil, gas and mining industries.¹⁰ Companies that have signed up to this principle include Anglo American, Newmont and Rio Tinto.
 - Australian Mineral Industry Code for Environmental Management – developed in 1996, this voluntary code signalled the commitment of the Australian mining industry to address its environmental performance and public accountability.¹¹

As the pressure for the need to strengthen confidence in the data and sincerity of reporting organisations and increase reporting transparency has grown, reporting guidelines and assurance standards have been developed [54]. Such initiatives include the AA1000 Assurance Standard¹² and the Global Reporting Initiative (GRI).¹³

Investors are increasingly more interested in investigating the social, environmental and ethical dimensions of a company before investing in it. A process of screening out companies that perform badly in these areas is known as Socially Responsible Investing. Disclosing social and environmental information is crucial for the mining industry to shake off a *hitherto* negative image among such investors.

There have been a number of recent developments in regulation that will have an impact on reporting and corporate governance. Corporate governance helps business leaders maintain sustainable, accountable organisations, and strong corporate governance is essential to preserving areas such as marketplace trust, reputation, investor confidence, access to capital, and employee satisfaction [55]. According to a recent KPMG Report [55], 100% of mining companies from Australia, Canada, South Africa, US and the UK reported information on their company’s corporate governance practices compared to 50% of companies from ‘other’ countries; this is explained by varying requirements for corporate governance disclosure in each country. For example, in the UK, the *Modernising Company Law Review* sets out proposed changes to the *UK Companies*

Act, to be expected around 2007. The changes have been seen as treading a ‘neat political line’ between recognising the supremacy of the shareholder whilst balancing the interests of stakeholders [56]. Under new requirements, company directors will be required to disclose factors affecting future business performance; such material factors could include a company’s employment policies, policies on environmental issues, policies on social and community issues or any matters which affect the company’s reputation. Furthermore, public and private companies (of a certain size and turnover) will be required to produce an Operating and Financial Review (OFR). This should provide qualitative and forward-looking reporting which takes into account the growing importance of softer business issues, such as intangible assets, know-how, brands and business relationships [56]. Salterbaxter [57] notes a trend amongst reporters leaving out ‘social’ from their reports and calling them ‘corporate responsibility’ reports, reflecting the increasing convergence of social responsibilities and corporate governance.

4. Recent trends in social and environmental disclosure – a case study of the top 10 mining companies

4.1. Methodology

While it has been noted that data are not comparable either within a report, between reports of different years, or between reports from different companies even within the same sector [45], given that mining companies have been disclosing non-financial information for some years (for example Rio Tinto for 7 years, [57]), temporal explorations of the *trends* in such disclosure are possible. Mining companies are now developing their own perceptible styles of reporting [8]; this section seeks to explore the nature of social and environmental disclosure in mining companies during the period 1999–2003.

By looking at the Social and Environmental disclosure of mining companies over time, the paper aims to illustrate how the nature, content and style of reports has developed, whether any development is consistent across all companies in this study, and the implications of this for future reporting. The examination of mining company reports looks at two key factors:

- The changing nature and style of Social and Environmental reporting; and
- The development of social, environmental and ethical policies – towards integrated CSR policies.

This research is based on a case study approach [58]; a case study may be a collection of several case studies [59,60], and in this instance is based on the study of 10 selected companies. The companies chosen for this study

⁹ See http://www.icmm.com/icmm_principles.php (11th August, 2004).

¹⁰ See <http://www.publishwhatyoupay.org/eiti/> (11th August, 2004).

¹¹ See http://www.mpi.org.au/rr/docs/mca_code.pdf (11th August, 2004).

¹² See <http://www.accountability.org.uk/aa1000/default.asp> (11th August, 2004).

¹³ A multi-stakeholder process and independent institution whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines; see <http://www.globalreporting.org/> (11th August, 2004).

were selected on the basis of the following criterion: the 10 largest mining companies around the World as of March 2004¹⁴ as defined by market capitalisation, which is a commonly used selection criteria [15,49]. The structure of the modern mining industry is represented by large multinational companies, such as the top 10, which are mainly registered under the legislation of developed countries such as the US, Canada, UK and Australia, while they conduct mining and explorations operations in developing regions such as Africa, Asia and Latin America – where local communities often bear the brunt of the social and environmental costs of mining, without necessarily gaining economic benefits [61]. The financial impact of the top 10 mining companies is substantial; the total global market capitalisation of the mining industry as at March 2004 was valued at US\$390 billion; the total market capitalisation of the top 10 mining companies as at March 2004 was valued at US\$250 billion [62].

This research utilises a secondary data collection method – namely a simple content analysis of Annual Reports and stand-alone Social and Environmental Reports. Content analysis is a ‘research technique for making replicable and valid inferences from data to their context’ [63, p. 21]. A basic content analysis, see Frost [48], was used to explore and compare the disclosure of social, environmental and ethical policy statements in the reports of the top 10 mining companies; the paper looks at trends in such policy statements, rather than attempting to assess whether these policies are actually applied in any meaningful way. The analysis also looks for adherence to the Global Reporting Initiative 2002 guidelines and levels of external assurance of the data contained in reports. Content analysis was also used to look for the use of CSR and sustainable development terminology in the disclosure of companies, in order to investigate the predominant vocabulary of motive used by companies.

4.2. Methods of reporting

In 2003, all the top 10 mining companies produced Annual Reports, seven of whom produced a stand-alone Social and Environmental Report. Anglo Platinum produced a separate volume, which covers social and environmental issues as a part of their Annual Report. All companies maintain corporate websites, which contain information on their social and environmental operations and downloadable PDF versions of their Annual Reports and Social and Environmental Reports, though the volume and level of detail of information varies.

During 1999–2003, the titles of the Environmental and Social Reports of the companies evolved from

simple titles such as ‘Social and Environment Review 1999’ (Rio Tinto) to slightly long titles that reflect the reports’ increasingly integrated content, such as ‘Health Safety Environment and Community Report 2003’ (Xstrata), to somewhat vague titles such as ‘Now and Beyond 2003’ (Newmont), indicating the continuous nature of the development of such reports. The industry has not yet settled on one definitive title for the media of social and environmental disclosure.

The majority of companies produce a single Environmental and Social Report every year, which covers all their global operations. However, Rio Tinto has opted to produce an umbrella Environmental and Social Report every year, which highlights the information about their global operations, but also provides site-specific Environmental and Social Reports.

Table 2 shows the temporal development of social and environmental disclosure in the top 10 listed mining companies by market capitalisation from 1999 to 2003. In 1999, only BHP and Rio Tinto were producing stand-alone Social and Environmental Reports; the rest only disclosed such information over a few pages in financial Annual Reports. During the period 1999–2001 only one company (Xstrata) disclosed no social or environmental data. Over the next few years, the amount of social and environmental information contained within Annual Reports rose. For example, Barrick Gold had two pages in 2000, and four in 2001 and more companies began to produce stand-alone reports. By 2002, such reporting was becoming more sophisticated, and all but two of the top 10 (CVRD and MMC Norilsk) were producing stand-alone Social and Environmental Reports under various headings.

Table 2 shows the variability in the types of reports produced and in the development of more sophisticated forms of reporting (i.e. combined sustainability or CSR Reports). A timeline of the development of AngloGold’s social and environmental disclosure illustrates this increasing sophistication (see Fig. 1). A further trend amongst these companies is the disclosure of very detailed information with a decrease in the actual size of printed reports (see for example AngloGold, Anglo Platinum, BHP Billiton and Rio Tinto).

In 2002, only two of the companies stated that they were reporting in accordance with the GRI guidelines; in 2003 this figure had risen to six. However, companies often qualified their accordance with statements such as:

“It should be recognised that, due to the size and complexity of our business, judgements have had to be made regarding the extent of the information that can be presented in relation to each GRI indicator”.¹⁵

¹⁴ Based on Bloomberg figures [62].

¹⁵ BHP Billiton HSEC Report, 2003, see <http://www.bhpbilliton.com/hsecReport/2003/home/home.html> [accessed 12th October, 2004].

Table 2

The temporal development of Social and Environmental reporting in the top 10 mining companies from 1999 to 2003^a

Company in order of top 10↓	Types of report →	Annual Report	Environmental & environment	Health, safety & environment	Environment and community	Health, safety, environment and community/society	Sustainability community/society	CSR	Externally audited	GRI ^b
<i>1. BHP Billiton</i>										
1999								✓ ^c		
2000								✓ ^c		
2001								✓		
2002								✓		
2003								✓		✓
<i>2. Anglo American</i>										
2000			✓					✓		
2001			✓					✓		
2002								✓		
2003								✓		✓
<i>3. Rio Tinto</i>										
1999								✓ ^d		
2000								✓		
2001								✓		
2002								✓		✗
2003								✓		✓
<i>4. CVRD</i>										
1999			✓						✗	
2002			✓						✗	
2003			✓						✗	
<i>5. Newmont</i>										
1999			✓						✗	
2000			✓						✗	
2001									✓	
2002									✗	
2003								✓		✗
<i>6. MMC Norilsk</i>										
1999			✓						✗	
2000			✓						✗	
2001			✓						✗	
2002			✓						✗	
2003			✓						✗	
<i>7. Barrick Gold</i>										
1999			✓						✗	
2000			✓						✗	
2001			✓						✗	
2002									✓	
2003								✓		✗
<i>8. Anglo Platinum</i>										
1999			✓						✗	
2000			✓						✗	
2001			✓						✗	
2002									✗	
2003								✓		✗ ^e
<i>9. AngloGold</i>										
1999			✓						✗	
2000			✓						✗	
2001									✓	
2002									✗	
2003								✓		✗
<i>10. Xstrata</i>										
2001		✓							✗	
2002									✓	
2003								✓		✗

^a Where years are missing from the table, data were unavailable for this year.^b Reporting in accordance with the Global Reporting Initiative Sustainability Reporting Guidelines.^c As BHP prior to merger with Billiton.^d Only a very small part of this report had been externally verified.^e Although had applied some of the GRI principles to the report.

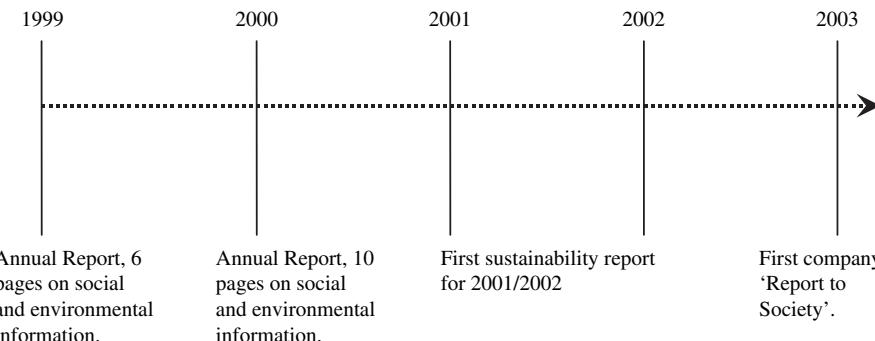


Fig. 1. Reporting timeline of AngloGold Ashanti.

Independent and external assurance of the data contained in reports is patchy; in 1999, only three companies had their social and environmental disclosure externally audited. There has been a gradual increase in levels of assurance, but even where assurance exists, it rarely comprehensively covers all aspects of a company's disclosure, usually auditing quantifiable environmental and health and safety indicators, and avoiding the more complex qualitative social measures.

4.3. Policy development

Warhurst and Mitchell [64] argue that as mining has become more technical and automated, thus using fewer employees and reducing direct benefits for local communities, it has less support from local stakeholders. Mining companies are increasingly aware of the need to engage with a wide range of stakeholders and obtain a social 'licence to operate' to mitigate potentially-sensitive issues such as exploration leases, indigenous rights and environmental protection. This study reveals the development of numerous policies designed to structure the companies' commitment to, and engagement with, a wide range of stakeholders and to negotiate such licences to operate.

Table 3 illustrates the types of policies that the top 10 mining companies have developed and disclosed in their Social and Environmental reporting. As with the methods of reporting, the passage of time has brought an increasing sophistication of company policies that address both the broad and specific social and environmental impacts of their operations. Policies on health and safety, employee well-being and the environment were developed first and were soon followed by community relations or social investment policies. The development of specific policies addressing the needs of indigenous people has been more sporadic and shows considerable variability. Although most mining companies recognise the imperative to consider indigenous groups in their operations, differences in exposure to such groups between companies may explain the variability in the development of specific indigenous

people policies. The most recent policy additions include the development of ethical policies or codes of conduct (eight companies in 2003) and integrated policies. These are enshrined in combined health, safety, environment and community policies or 'good citizenship' codes of business conduct.¹⁶ Several companies have moved a stage further and have begun to develop overarching sustainability and CSR policies; three companies (Anglo American, Newmont, Rio Tinto) had a sustainability policy in 2003, and one (Newmont) had a CSR policy:

'Newmont's future is dependent on its ability to develop, operate and close mines consistent with our commitment to sustainable development, protection of human life, health, the environment, and to adding value to the communities in which we operate... We understand the actions and conduct of every Newmont employee and contractor are the basis on which our stakeholders will evaluate our commitment to achieving the highest standards of social responsibility'.

[Newmont website,¹⁷ dated October 2003]

5. Discussion

5.1. Reporting types

An analysis of the Social and Environmental reporting of the top 10 mining companies reveals a general trend towards the increasing sophistication of media and content. However, considerable variability remains within the group that allows the companies to be broadly clustered into three simple reporting types, from the most sophisticated to the least: the mature reporters, the adolescents and the infants. These typologies are discussed below.

¹⁶ See for example Anglo American 'good citizenship' business principles <http://www.angloamerican.co.uk/social/busprinciples.asp> [16th August, 2004].

¹⁷ See <http://www.newmont.com/en/social/policy/social/index.asp> [5th August, 2004].

Table 3

The policy content of social and environmental disclosure of the top 10 mining companies¹⁸

Company in order of top 10↓	Policies→	Health and safety	Employee well-being	Environment	Social/community relations	Ethics	Indigenous people	Sustainability	CSR
<i>1. BHP Billiton</i>									
2001	✓	✗	✓	✓	✓	✓	✓	✗	✗
2002	✓	✓	✓	✓	✓	✓	✓	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✗	✗
<i>2. Anglo American</i>									
2000	✓	✓	✓	✗	✗	✗	✗	✓	✗
2001	✓	✓	✓	✓	✓	✗	✗	✓	✗
2002	✓	✓	✓	✓	✓	✓	✓	✓	✗
2003	✓	✓	✓	✓	✓	✓	✓	✓	✗
<i>3. Rio Tinto</i>									
1999	✓	✓	✓	✓	✓	✗	✗	✗	✗
2000	✓	✓	✓	✓	✓	✓	✓	✗	✗
2001	✓	✓	✓	✓	✓	✓	✓	✗	✗
2002	✓	✓	✓	✓	✓	✓	✓	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✓	✗
<i>4. CVRD</i>									
1999	✓	✓	✓	✓	✓	✓	✗	✗	✗
2002	✓	✓	✓	✓	✓	✓	✗	✗	✗
2003	✓	✓	✓	✓	✓	✓	✗	✗	✗
<i>5. Newmont</i>									
1999	✗	✗	✗	✗	✗	✗	✗	✗	✗
2000	✗	✗	✗	✗	✗	✗	✗	✗	✗
2001	✓	✓	✓	✓	✓	✓	✓	✓	✓
2002	✓	✓	✓	✓	✓	✓	✓	✓	✓
2003	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>6. MMC Norilsk</i>									
1999	✗	✓	✗	✗	✓	✗	✗	✗	✗
2000	✗	✓	✓	✗	✓	✗	✗	✗	✗
2001	✓	✓	✓	✗	✓	✗	✗	✗	✗
2002	✓	✓	✓	✗	✓	✗	✗	✗	✗
2003	✓	✓	✓	✓	✓	✗	✗	✗	✗
<i>7. Barrick Gold</i>									
1999	✓	✓	✓	✓	✓	✗	✗	✗	✗
2000	✓	✓	✓	✓	✓	✗	✗	✗	✗
2001	✓	✓	✓	✓	✓	✗	✗	✗	✗
2002	✓	✓	✓	✓	✓	✓	✗	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✗	✗
<i>8. Anglo Platinum</i>									
1999	✓	✓	✓	✓	✗	✗	✓	✗	✗
2000	✓	✓	✓	✓	✗	✗	✓	✗	✗
2001	✓	✓	✓	✓	✗	✗	✓	✗	✗
2002	✓	✓	✓	✓	✓	✗	✓	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✗	✗
<i>9. AngloGold</i>									
1999	✓	✓	✓	✓	✓	✗	✓	✗	✗
2000	✓	✓	✓	✓	✓	✗	✓	✗	✗
2001	✓	✓	✓	✓	✓	✗	✓	✗	✗
2002	✓	✓	✓	✓	✓	✗	✓	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✗	✗
<i>10. Xstrata</i>									
2001	✗	✗	✗	✗	✗	✗	✗	✗	✗
2002	✓	✓	✓	✓	✓	✗	✓	✗	✗
2003	✓	✓	✓	✓	✓	✓	✓	✗	✗

¹⁸ Where years are missing from the table, data were unavailable for this year.

5.1.1. The mature reporters (Anglo American, BHP Billiton, Rio Tinto)

These are characterised by a long history of social and environmental disclosure, and an increasing sophistication in the nature and style of information disclosed. These companies have been publishing combined health, safety, environment and community reports for some time, and have developed combined social and environmental policies and codes of business conduct that are aligned with the principles of sustainable development. These companies state that they are reporting in accordance with the GRI guidelines, and have sought external assurance for their social and environmental disclosure for some time. The language of sustainable development, rather than CSR, is pervasive in these reports; both Anglo American and Rio Tinto have developed sustainability policies. The mature reporters began their social and environmental disclosure when sustainable development was the persistent vocabulary of motive for organisations. Thus, sustainability, rather than CSR, is embedded in their Social and Environmental Reports. CSR is certainly discussed, but often as an externality such as initiatives to sign up to, or a benchmarking tool, rather than at the core of business operations. Anglo American, BHP Billiton and Rio Tinto have been the top three mining companies for many years, though their asset holdings and market capitalisations have increased substantially [62]. This means that they have a wide financial and geographic impact, which both increases their potential for social and environmental impacts and provides them with the financial resources to perform well in the disclosure of such issues.

5.1.2. The adolescents (Anglo Platinum, AngloGold, Barrick Gold, Newmont, Xstrata)

These companies have been disclosing some social and environmental information since 1999, but the development of stand-alone reports has been slower. These companies show a gradual progression in the disclosure of social and environmental information, from a few pages in Annual Reports to Health, Safety, Environment and Community Reports, to Sustainability and CSR Reports, which suggests that they are ‘growing up’. Some of these companies stated that they were reporting in accordance with the GRI guidelines in 2003, but they have clearly been slower to externally verify their Social and Environmental data. CSR terminology is more frequently used by these reporters, perhaps because their reporting processes are evolving as CSR becomes an increasingly important aspect of business operations. This group contains the only company, Newmont, to have developed an over-arching CSR policy.

5.1.3. The infants (CVRD, MMC Norilsk)

These companies are latecomers to the disclosure of social and environmental information. They have yet to develop stand-alone reports, but are disclosing some social and environmental data in their Annual Reports, the amount of which has steadily grown over time. These companies are not yet using the GRI guidelines and have not sought to externally verify the social and environmental data they disclose. These companies also tend to make more reference to CSR than sustainable development, for similar reasons to the adolescent group. However, the development of more sophisticated policies to address a broad spectrum of social and environmental issues is behind the companies in the other groups, and neither company has a policy on indigenous people, sustainability or CSR.

5.2. Styles of reporting

Mining companies are also developing their own distinguishable styles and format of reporting. Satterbaxter [57] describes the three popular current formats as ‘deluxe, standard and economy’, demonstrating the increasingly flexible approach reporting companies are taking. Table 4 describes these formats and categorises the top 10 mining companies accordingly. Unsurprisingly, it is the largest companies, with the most diverse operations, operating in multiple geographical locations, and with the deepest pockets, which produce deluxe formats, and the companies newest to social and environmental disclosure who fall into the economy classification.

It is a widely adopted practice of mining companies to report on their global operations. This is particularly important as mining is undertaken by multinational companies, but some companies also release site-specific reports on social and environmental issues. Research shows that not only has the quantity of environmental and social disclosure changed, but the quality and complexity of disclosure has as well [16,19,32]. During

Table 4
Classification of top 10 mining companies according to reporting formats (adapted from Satterbaxter [57])

Format	Companies
Deluxe: full website, full printed report, summary printed report, brief Annual Report section.	BHP Billiton, Rio Tinto, Newmont
Standard: full website, summary printed report, brief Annual Report section.	Anglo American, AngloGold, Amplatz, Barrick Gold, Xstrata
Economy: comprehensive section in the Annual Report, the same information available as a download from the website.	CVRD, MMC Norilsk

the mid-1990s, some mining companies started to release joint reports that would cover health and safety, environmental and community issues. For example, Rio Tinto has been producing Health, Safety, Environment and Community Reports for 7 years. Another wave in the development of Social and Environmental reporting has been the creation of Sustainability Reports. For instance, Canadian-based Placer Dome released its first Sustainability Report in 1999.

Another factor that contributes towards the formation of Social and Environmental reporting within the mining industry is the merger of mining companies. A merger of two mining companies contributes to more sophisticated reporting systems and also results in the combination of expertise and previous practices in reporting. For example, BHP and Billiton merged in 2000; BHP previously produced Environment and Community Reports, but since the merger produced combined Health, Safety, Environment and Community Reports. Recently, in 2004 AngloGold merged with Ashanti Goldfields, forming AngloGold Ashanti. The new merged company's disclosure policy is likely to be heavily influenced by the stronger reporter, in this case AngloGold.

6. Conclusions

Whilst there remains considerable variability in the reporting practices and levels of social and environmental disclosure even amongst the top 10 mining corporations, the fact that some companies have been reporting on their social and environmental impacts for some time allows for a temporal exploration of the trends in disclosure on such issues. Such an investigation, as presented in this paper, shows that the media for social and environmental disclosure within the mining sector is still evolving both within companies and the sector as a whole.

It is evident that stand-alone Social and Environmental Reports are becoming more sophisticated and stylish. Elements of this increasing sophistication include:

- Reports covering a wider scope of issues;
- A trend towards producing Sustainable Development and CSR Reports;
- The development of integrated policy statements and codes of conduct;
- Accordance with the GRI guidelines;
- Increasing levels of external verification of data contained in reports; and
- Increasing take-up of reporting on the web.

Reports are covering more complex issues relating to sustainability and CSR, indicating the increasing

maturity of over-arching CSR strategies and policies within the mining companies studied. However, this maturation process is far from uniform, with some mining companies in the top 10 trailing far behind others in the development of social and environmental disclosure. This variability, both in terms of the sophistication of reporting and policy development, and the types of metrics used, means that the social and environmental performance of one company cannot be compared against another's. Thus, we have no real measure of the overall CSR performance and progress towards sustainability of the global mining industry. There is also no measure of whether policy statements are applied in practice in any meaningful way; further research is needed to develop such measures in order that performance against intention can be calculated.

The current trend for increased levels of Social and Environmental reporting is undermined by the lack of confidence in the data of the reporting organisations [54]. Whilst most of the companies in this study had some external verification of data, as there are no generally accepted auditing or accounting standards for the reporting or review of sustainability performance information, the auditor will select a number of indicators (commonly used indicators are fatal injuries; carbon dioxide emissions; water consumption for primary activities; total energy used; and the number and level of environmental incidents). Anything that falls outside the scope of the auditor is not verified, particularly social indicators, which are harder to quantify.

A factor that may contribute to a lack of uniformity is that there seems to be limited collaborative will between the companies in the industry to move reporting practices forward, with the exception of the Global Mining Initiative, in which only four of the top 10 companies participated. There is a need for greater homogeneity in the social and environmental disclosure of all mining companies in order that the progress towards greater CSR and sustainable goals can be measured, and that companies that are trailing can 'catch up' with the others. Stronger leadership and co-operation from the top reporting companies, who have both the resources and long-term expertise to develop strong reporting strategies, is necessary to support 'infant' and 'adolescent' reporters to develop into maturity. The recent concentration of ownership in the mining industry (an outcome of the extensive industry consolidation in recent years [62]) may result in the combining of reporting expertise and the development of stronger disclosure and social and environmental policies.

A further recent reporting trend within the top 10 mining companies is the incorporation of information on the economic impacts of mining operations in the stand-alone Social and Environmental Reports. This seems like a logical move towards the greater integration

of sustainability issues in corporate reporting, and corporate social and environmental strategies. In order to assess the progress towards sustainability and accordingly improve corporate strategies, a three dimensional, holistic perspective to all corporate operations is essential if all mining companies want to be truly engaged in the pursuit for greater CSR and sustainable outcomes.

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