

Health and Safety Reporting in FTSE-100 Mining Companies

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Christelle Dossa, Giles Slinger

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Executive Summary:

The worst 12 months in mining's health & safety? Not so bad when you look behind the headlines, but investors could make things improve faster...

33 people stuck in a mine for 4 months. A gripping human interest story – but from a business point of view, is it just an example of bad practices in a locally owned and locally run Chilean mine? In fact the story comes right back home - to where and how UK pensioners choose to invest their funds.

Despite the fact that most mining is done outside the UK, mining has more companies (12) than any other sector in the top 100 companies listed on the London Stock Exchange. Large pension funds almost always invest in some of these companies. Many mining companies are improving their Health & Safety performance, but there are big differences between companies in their health and safety records and a few actually seem to be getting worse. London -listed Vedanta, for example, has seen its number of fatalities rise every single year from 2004-05.

From the outside, investors who could be encouraging mining companies to improve are not yet having the impact they might. As a consequence, injury and fatality rates remain higher than they might be.

Investors can do something about this. They can and should demand consistent definitions of health and safety, and use company performance to guide investment choices. No-one else will enforce this change, because mining operations are regulated differently in each country. Investors in the London market can drive it – and by reducing the chances of those 'rare unexpected incidents that impact profitability', they can achieve better financial performance.

Further information on employee reporting, including detailed case studies and benchmarks of companies' environmental, social and people results sector by sector are available from Transparent Consulting. For more information, write to us at:

contact@transparent-consulting.com



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Health and Safety reporting 2006-2010

The 2006 Companies Act required quoted companies to report on a range of key performance indicators, including information relating to social impact, the environment and employees.

In the mining industry the highest priority metrics for employee relations are health and safety statistics. Our research shows that from 2006 to 2010 UK-listed mining companies greatly increased the amount and detail of information they provided on accidents and fatalities. At the same time as reporting has improved, many companies have described changes in their behaviour, and in most cases the results in terms of health and safety also appear to have improved. However inconsistencies in definitions and reporting, and some serious differences in outcomes indicate that there is still a large opportunity to improve.

Key findings:

1. The aggregate number of fatalities fell in FTSE-100 mining companies 2006-2009,
2. However, Vedanta's fatality performance causes concern
3. Where data was available, the reported rate of fatalities fell in FTSE-100 mining companies 2006-2009
4. Reported injury rates fell across the industry 2007-2009
5. However, reported injury rates differ widely between companies
6. Coverage of health and safety in reporting greatly increased 2006-2009
7. However, there remain major inconsistencies in reporting

Methodology:

Twelve mining companies were listed in the FTSE-100 as of 9th June 2010. We looked in detail at Health and Safety statistics reported in Annual Reports and Corporate Responsibility reports for each year ending in 2004 to 2009. Some companies' accounting periods overlap, so in each year, we used each company's year-end report – for example, year ended 31 March, 30 June, 30 September or 31 December. Some newer companies did not have data going back to 2004. Where information was missing, we followed up with companies in order to confirm and discuss some points. 7 out of 12 companies responded to verify their data.¹

As some statistics are interpreted differently by each company, where possible we translated the data into common terms to show change over time and to compare all twelve FTSE 100 mining companies.

¹ Anglo American, BHP Billiton, Kazakhmys, Lonmin, Randgold, Rio Tinto, and Xstrata



1. The number of fatalities fell in FTSE-100 mining companies 2006-2009

Eleven companies existed throughout the period 2006-2009 and could provide data.² In these 11 companies, the total number of fatalities reported decreased from 123 (2006) to 103 (2009) – although the decline happened only in 2009.

Table 1: Aggregate number of fatalities in 11 FTSE-100 mining companies

Year	Total number of fatalities
2009	103
2008	128
2007	124
2006	123

2. The case of Vedanta: fatalities steadily increasing

While most other mining companies are improving their performance, Vedanta's number of fatalities has risen every year from 2004-05.

The FTSE-100 mining companies had 103 fatalities in 2009. In its (subsequent) year-ended 31 March 2010, Vedanta *on its own* had between 27 and 68, depending on whether you count the 41 contractors killed when a chimney collapsed on one of its sites in India in September 2009. Vedanta accounted for at most 10% of the FTSE-100 mining workforce in 2009 and at least 21% of the deaths.

Table 2: Number of fatalities at Vedanta plc

Year ended	Vedanta fatalities
31 March 2010	27*
31 March 2009	22
31 March 2008	19
31 March 2007	16
31 March 2006	15
31 March 2005	2

* In addition, in September 2009, 41 local contractors working on a Vedanta smelter site were killed by a collapsing chimney. Vedanta's 2010 fatality figures do not include these people because they were employed by a company contracting to Vedanta.

² African Barrick Gold, which had 4 fatalities in 2009, is not included in Table 1 because there are no public records of its fatality numbers before 2009. Rio Tinto had investments in operations that it did not manage (a 40% investment in one case, a 17% investment in another). The three fatalities for those operations were not counted as being attributable to Rio Tinto. Kazakhmys mentions 15 deaths of employees, and two of contractors. All are included in the 17 people counted here; but because data is not given for all its divisions, this number may be an underestimate.



3. Where reported, fatality rates in FTSE-100 mining companies fell 2006-2009

Table 3: Fatality rates at 6 FTSE-100 mining companies with data in 2006 and 2009

Fatality rate*	Anglo American	Kazakhmys	Lonmin	Randgold Resources	Rio Tinto Group	Xstrata	Group average
2009	0.07	0.14	0.05	0.26	0.02	0.08	0.07
2006	0.09	0.25	0.10	-	0.04	0.02	0.10

*Fatality rate per million hours worked including employees and contractors, hours calculated based on 2000 hours per head/ per year.

Data source: Annual reports and company interviews.

The six companies listed above represent 58% of the workforce in FTSE-100 mining companies in 2009. The aggregate workforce of these companies decreased from 436,578 in 2006 to 410,250 in 2009, while their number of fatalities fell from 87 to 57, meaning that the fatality rate of the whole group improved from an average of 0.10 in 2006 to 0.07 in 2009.^{3 4}

4. Reported injury rates fell across the industry from 2007 to 2009

Table 4: LTIFR at FTSE-100 mining companies 2007-2009

Lost Time Injury Frequency Rate:	African Barrick Gold	Anglo American	Antofagasta	BHP Billiton	Eurasian Natural Resources Corporation	Fresnillo	Kazakhmys	Lonmin	Randgold Resources	Rio Tinto Group	Vedanta Resources	Xstrata
Definition - time off and Injury/Incident/Accident	N/A	Any Injury	Any Accident	Any	Any Injury	3 days Accident	N/A	1 day Incident	Any Injury	Any Injury	1 day Injury	Any Injury
2009	N/A	3.8	2.8	1.5	0.63	15.5	N/A	6.21	1.0	2.15	1.67	2.1
2008	N/A	5.2	4.4	1.7	0.68	18.15	N/A	6.27	1.7	2.5	1.91	2.7
2007	N/A	5.75	5.6	1.8	0.58	20.1	N/A	10.8	1.5	3.05	2.51	3

The table above shows a decrease in reported Lost Time Injury Frequency Rates from 2007 to 2009 in nine of the ten mining companies in the FTSE100 for which we have data

³ Data for all companies except Anglo American were obtained from annual reports and direct checks with the companies. In the Anglo American case, no exact head count for contractors for 2006 could be obtained and the figure for 2006 contractors was calculated from the Fatal Injury Frequency Rate and employee numbers given by Anglo American in their 2006 annual report.

⁴ Vedanta's 2006 total workforce figures could not be confirmed, so they are not included in Table 3. Their fatality rate per million hours worked in 2009 was 0.16



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(accounting for 76% of the 2009 FTSE-100 mining head count). One company out of the ten for which we have data showed an increase in LTIFR although this was relatively small (a 9% increase for ENRC). Some companies have decreased more consistently and rapidly than others.

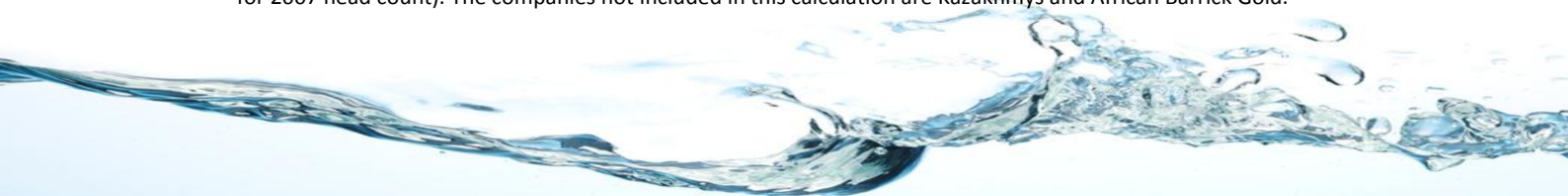
The companies show some consistency over time on their lost time injuries. BHP Billiton, for example maintained a relatively low LTIFR of approximately 1.7 per million hours worked since 2007. By comparison Fresnillo's LTIFRs have improved but remain high with their 2009 LTIFR of 15.5 being six times the industry average of 2.5.⁵

There have been some impressive individual company improvements (for example, Antofagasta has improved by 50 % from 2007 to 2009) but probably the most important thing is that the industry average LTIFR, weighted by reported workforce, has improved from 3.6 to 2.5.

Why have injury rates fallen? Several mining companies report new initiatives that they have undertaken to address health and safety issues. Randgold referenced its recent implementation of standards such as OHSAS 18001. New ratings have been created, including health and safety metrics for mining companies, for example by Bloomberg in 2010. There is increased general awareness of health and safety issues – as shown, for example, in the UK quarrying industry, where accident rates have fallen by 77% from 2000 to 2009. And the concept of the 'licence to operate' is a common reference point for the mining industry. Rio Tinto commented: "success is not success without safety. We have to have the licence to operate – in terms of moral & legal permissions from the local & national community, from non-governmental organisations, from regulators... Without strong positive local partnership you don't have anything, so we put a huge amount of effort."

Mining executives we spoke to did not identify any one particular change – such as new reporting requirements – as the driver for action, but most saw it as 'the way that the industry is going' and a change that they at least wanted to keep up with.

⁵ The industry average for 2009 and 2007 are approximate calculations based on available LTIFR data for 10 companies weighted in both cases by the 2009 head counts (full data was not available across all 10 companies for 2007 head count). The companies not included in this calculation are Kazakhmys and African Barrick Gold.



5. Reported injury rates differ widely between companies

Company Name:	LTIFR/average from 2007-2009
Eurasian Natural Resources Corporation	0.6
Randgold	1.4
BHP Billiton	1.7
Vedanta Resources	2.0
Rio Tinto Group	2.6
Xstrata	2.6
Antofagasta	4.3
Anglo American	4.9
Lonmin	7.8
Fresnillo	17.9
Kazakhmys	N/A
African Barrick Gold	N/A

The table above shows large differences in performance between the mining companies. The Lost Time Injury Frequency Rate [LTIFR] per million hours varies from a low of 0.6 to a high of 17.9.

- The leading group ranged from 0.6 to 2.6 and includes Eurasian Natural Resources Corporation, Randgold, BHP Billiton, Vedanta Resources, Rio Tinto and Xstrata
- A 'mid-group' was composed of Antofagasta at 4.3 and Anglo American at 4.9
- A 'high' group was composed of Lonmin at 7.8 and Fresnillo at 17.9

Definitions are a real problem, as one industry executive highlighted: "We think we're being really diligent in how we record any kind of lost time incident - we include 'restricted duty incidents' which not all companies do."⁶ The definition of a lost time injury varied from as low as 'Any' lost time, to 'at least 3 days unable to work' (Fresnillo, which also had the worst record even on this definition).

Some industry interviewees have suggested that different injury rates may be explained by differences in the inherent dangers in open cast versus deep mining, in newly established mines versus ongoing operations, and in different geographical areas of the world in terms of geological conditions and education and experience of the workforce.

Other interviewees have contradicted this view, however – noting that all environments have their own dangers, and that appropriate safety measures should simply be put in place. Certainly, the improvements made in most companies between 2007 and 2009 suggest that no 'absolute' limits to safety have been found. Unusually high fatality and injury rates should therefore be investigated and understood, but then addressed rather than excused.

⁶ The companies making clear in their reporting that they include 'restricted duties' cases in LTIFR include: African Barrick Gold, Anglo-American and Rio Tinto Group; BHP Billiton include 'restricted duties' cases in their Total incident rate, but not in their Lost Time Injury Frequency Rate [AR, p. 262]. Other companies are much less clear.



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6. Information reported on health and safety increased from 2006 to 2009

The tables below show the amount of health and safety information given by companies in 2006 and 2009. There is a clear increase in the amount of data given by companies over this period, with some data being available on 82% of variables in 2009, versus 63% of variables in 2006.

Year	2006	2009
Annual Reports available	9	11
Data available	Fatalities-7/9 LTIFR-6/9 AIFR-4/9	Fatalities-11/11 LTIFR-9/11* AIFR-7/11**
Percentage of data available	63%	82%

In 2006 reports were unavailable for African Barrick Gold , ENRC, Fresnillo.

In 2009 African Barrick Gold's report was unavailable.

*2 of the LTIFRs for previous years were shown on a graph with no exact numbers given.

**3 of which where AIFR was given in numbers rather than as a rate.

7. Major inconsistencies in health & safety reporting remain

Although the number of variables covered has increased, it is important to be aware that the quality and depth of the information has not consistently increased. Below we have highlighted the **amount** of fatality information given in both the 2006 and 2009 annual reports of the 9 FTSE 100 mining companies that had annual reports in both 2006 and 2009.

Company	Years of Fatalities information reported in 2006	Years of Fatalities information reported in 2009	Overall Change
Angloamerican	2	5	Increase
Antofagasta	2	4	Increase
BHP Billiton	2	1	Decrease
Kazakhmys	2	1	Decrease
Lonmin	0	5	Increase
Randgold Resources	0	2	Increase
Rio Tinto Group	1	1	Same
Vedanta Resources	2	3	Increase
Xstrata	1	5	Increase



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Though most of the 9 companies have increased the amount of information they give, there are a few exceptions. BHP Billiton and Kazakhmys both reported 1 year of fatality numbers in 2009 whereas in 2006 they reported 2 years of fatality numbers. Rio Tinto did not increase its reporting of 1 year of fatality numbers. These differences between companies in how much information they give on numbers of fatalities is an important factor in limiting the current usefulness of health and safety reporting.

In the case of fatalities, the situation is even more extreme for fatality *rates*, where the exact number of employees and contractors in each company is difficult to obtain.

Summary of Health and Safety reporting issues in the FTSE-100 mining sector

There are no consistent metrics reported throughout the FTSE-100 mining sector.

- The metrics used have different definitions and do not always include contractors.
- Sometimes the statistics companies reported were of little or no value
- Companies reported from only 1 year of data to as much as 5 years of data

These problems result in incomparability of the mining companies over time and within the industry.

Lost Time Injury Frequency Rate is one of the most popular indicators used to track injuries in the mining industry. That single metric was described in 8 different ways across the 12 FTSE-100 mining companies, and not all companies used that metric.

Not only are the metrics hard to compare but the amount of information given also differs – with information given ranging from 1 year’s worth of data to 5 years’ worth. The lack of consistent yearly data prevents observers – and industry insiders – from being able to compare the companies’ progress over the years.



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Recommendations:

Standardized Health & Safety metrics

We strongly recommend that FTSE-100 mining companies agree a plan for convergence in Health and Safety metrics for reporting, at all times including employees and contractors:

- The absolute numbers for full-time equivalent employees and contractors employed, listed separately.
- An aggregate Lost Time Injury Frequency Rate (LTIFR) calculation measured for any injury causing time off work, including restricted duties, per million hours worked for the whole company and for each site.
- A Fatal Injury Frequency Rate (FIFR) per million hours worked for the whole company and for each site.
- The All Injuries Frequency Rate (AIFR) per million hours worked for the whole company and for each site.⁷
- 5 years of statistics of fatalities, lost time injuries and all injuries, FIFR, LTIFR and AIFR

Reliability of Health & Safety metrics

Health and safety statistics can be at risk of inaccuracy, particularly where company managers are incentivized to reduce outcomes. An important factor in encouraging accuracy in reporting is the existence of effective whistle-blowing arrangements to help employees to alert the Board of Directors to malpractices. 8 out of the 12 FTSE-100 mining companies described whistle-blowing arrangements that they had in place.⁸ We recommend that all mining companies report on how they ensure that all employees know how to blow the whistle on health and safety issues and know that they would not suffer any penalties for doing so.

⁷ AIFR for each site is a recommended metric in the Global Reporting Initiative (GRI) guidelines. We recommend that this data *also* be presented in aggregate for the company.

⁸ The range of description ranges from brief to quite full.

Lonmin, for example, gave a brief reference to whistle-blowing in the context of risk mitigation: "Fraud awareness training and security reviews supported by a code of ethics and whistle blowing programme" Rio Tinto, on the other hand gave a more in depth description of a group-wide whistleblowing programme called Speak-Out: "Employees are encouraged to report any concerns, including any suspicion of a violation of the Group's financial reporting or environmental procedures, through an independent third party and without fear of recrimination. A process has been established for the investigation of any matters reported with clear lines of reporting and responsibility in each Group business."



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