

British Geological Survey,
Keyworth,
Nottingham,
NG12 5GG.

MMSD Project,
1A Doughty Street,
London WC1N2PH.

15th April 2002.

Dear Sir/Madam

Re: Mining, Minerals and Sustainable Development (MMSD) Project Draft Report

Below are a series of general comments on the subject matter covered by the document, followed by some more specific comments on the text itself.

In broad terms this is an impressive document. It represents a learned and mature approach to the sustainable mineral development debate. The document is particularly impressive in the manner in which it has addressed a whole spectrum of key issues. The authorship are to be congratulated in putting together a well-written and clear document. There is much food-for-thought here.

Nonetheless, it is the BGS view that the document fails to bridge the credibility gap between *corporate aspiration* and *corporate reality*. As the document states in a number of places the mining industry's first responsibility is to business, shareholders and profit. It is very difficult to balance these business principles with sustainable development practice, which costs money in many ways. E.g. Table 1 on page 5. This is an excellent table, summarising best-practice sustainable development principles. It is, however, difficult to believe that the mining industry is genuinely interested in, and gives a high priority to issues such as "maximising human well-being"; "ensuring a fair distribution of costs and benefits for all those alive today"; "respect for human rights"; "protection of minority rights"; support for representative democracy"; etc. These are all noble aspirations, but it cannot be denied that, historically, the mining industry has worked in countries with highly questionable governance regimes and little respect for human rights. Perhaps the modern mining industry wants to shed the image of negativity which its legacy has left it with. Nevertheless, the industry **must** demonstrate that it is **genuinely** committed to sustainable development principles and not merely engage in intellect-driven rhetoric because this makes "good business sense". The MMSD initiative is a great start but in this area it remains only a start.

The document appears to give a reasonably balanced and realistic appraisal of the current situation re sustainable development and the minerals industry. The document notes many of the worries expressed in note (2) above. It also includes a number of useful methodologies. In particular BGS would reinforce the idea that sustainable development is not only about the **physical** environment, but also includes society, economics, culture, politics and industry. We must seek integrated analytical tools which can be used to critically assess, weight, prioritise, and quantify all these factors and issues in a transparent and scientific fashion. BGS believes that stakeholder involvement is a key element.

The Mining Industry must make more effort to communicate the wider benefits of minerals to the general public. Most people do not understand the intimate relationship between quality of life and minerals. People live in houses, work in offices, drive cars on roads etc., in blissful ignorance of the fact that minerals contribute to this lifestyle. They should also be reminded of the sustainable development principle of a) not exporting environmental problems and b) accepting the responsibility

that minerals can only be mined where they occur – even if it is in their back yard. This communication process also applies to government at all levels (national to local to international).

We are seriously concerned by the thesis that many companies do not engage in cradle-to-grave full life-cycle analysis for a) minerals; b) mineral-bearing land; c) communities; d) the local and regional economy; e) employees; f) other stakeholders. If this is the case it is **highly irresponsible**.

In our experience, few people are convinced that mining companies are as rigorous in their practices and planning in the Third World compared to the First World. The document should include some suggestion of how to counteract these perceptions.

It is critical that Mining companies **must** become community focused. There is no other way, unless they want a string of Panguna/Bougainville scenarios. This means that local communities must be involved at all levels of the **holistic** life-cycle process. Dialogue must be two way.

The document states that “good governance” is essential to sustainable development and good business. It also notes that many governments and related administrations require institutional strengthening and capacity building. BGS has been involved in numerous institutional strengthening projects but have yet to see evidence of the mining industry actively supporting any of these projects. This is something the industry must change as a matter of priority.

The aspiration to engage with a wide range of stakeholders is admirable and noteworthy. That said, there is little evidence of any attempt to engage the weaker communities who own the least capital but are critical to mines. How many of these will be represented at the May 2002 Toronto summit?

Trade barriers are a main barrier to mining improving the economies of the Third World. The First World arguably should not apply trade tariffs on processed mineral products from the Third World. Yet we fail to see any evidence of the Mining Industry making any attempt to change this.

The Mining industry should aim to become responsible “corporate citizens” assisting sustainable development at every level, not least by strengthening arms of government such as Geological Surveys or Mines Departments. These arms of government can promote sustainable development without the fear of being accused of “vested interest”.

There are many statements in the paper which whilst they represent laudable aims, at the present time have little chance of being realised and do little to raise the document’s standing. For example, the statement that mineral economic benefits will only be fairly and evenly spread if “better ways are found to manage wealth” (page 13). BGS would obviously agree that without some sort of transparent system which demonstrate tangible benefits of mining, then resentment will occur at a range of levels. To mitigate against this mechanisms should be set in place to reward stakeholders appropriately at all levels.

One of the biggest concerns for ordinary people about the mining industry is the same as for all global companies. Because of the global scale of a multi-national business, there is a widely held perception that these businesses have no allegiance to any one community, country or region. This perception makes it very difficult for a company to build up the trust of any one community – on **any** issue. There are too many examples of “global” companies closing down plants in a specific area which are profitable, but no longer meet with the global agenda. How can global companies deal with these perceptions?

We are also particularly concerned by the document’s treatment of artisanal and small-scale mining (ASM). The whole debate appears to advocate “the big boys driving out the small guys”. This is perhaps that most unbalanced part.

Finally, the document appears biased towards the metal mining industry, and effort should be made to re-dress this.

We would also like to make some rather more specific comments on the text of the document itself. Firstly, it appears to have been written primarily by persons with backgrounds in mining engineering. We would suggest that a glossary of technical terms should be included to help those outside this narrow area to fully understand what the document refers to. It also includes factual errors, and it is obvious that editing remains to be done.

p 1-18: Paragraph 'The Flow of Information' emphasises 'authoritative independent sources [of information]' We could point out that Geological Surveys are prime examples of such sources.

p 2-3 It is not generally agreed that minerals are divided into the seven classes given here. The fact that four of the seven classes are metals betrays the bias of the whole report. A more usual classification, used by both BGS and USGS, is:

energy (or fuel) minerals

metalliferous minerals

industrial and construction minerals

'Industrial minerals' (non-construction) are of course very important and many are internationally traded. I think that the term 'industrial minerals' is not used anywhere in the text of the report.

No justification is given for the concentration of the MMSD report on high-value minerals. The concepts and concerns relating to sustainable development apply equally to low-value minerals, as we know only too well in Europe.

p 2-5 Having said that different reserve/resource classifications are used in different parts of the world, the report then quotes the definitions that are now generally agreed by most capitalist institutions. They could usefully have said so.

p 2-10 The section on recycling is very misleading. It fails to clarify the fundamental distinction between 'new' ('process' or 'run-around') scrap and 'old' ('post-consumer' or 'obsolete') scrap. The only genuine recycling is the recovery of materials after they have been used in manufactures - this is 'old scrap'. The recovery of 'new scrap' is no more than a way of minimising waste in manufacturing processes. It is not recycling in the sense that most people would understand that term. Because of this confusion a lot of so-called recycling statistics are misunderstood and mis-used.

p 2-11 Following on from p 2-10, the observation that secondary lead amounts to 79% of US production is pointless. In some small industrialised countries the equivalent figure is 100% - simply because they have secondary lead plants but no primary refineries. The useful figure is secondary lead as a proportion of consumption : in the US this is 66% (USGS *Mineral Commodity Summaries 2001*), or 59% if old scrap only is considered, which is comparable to the rest of the major industrial countries.

P 2-12 Zinc does not need to be 'separated and recycled as pure zinc'. It is easily and extensively recycled in the form of brass (copper-zinc alloy).

These comments on recycling are not trivial or gratuitous. Recycling is normally seen as a fundamental part of sustainable development. It heads the 'materials efficiency hierarchy' in table 11-2. It is vital to understand it.

Tbl. 2-5 This fails to list the chief uses of aggregates (concrete), clay (bricks) and titanium (pigments)

p 4-8 The lack of scientific input to the paper is shown by the first sentence on this page which seems to be making a distinction between elements and metals. It should have said simply 'Eleven common elements, of which three are widely-used metals (iron, aluminium and magnesium), make up 99% of the earth's crust.'

The impression given throughout chapter 4 is that the chief problem is how technology can be improved so that 'low-grade' resources, already known, can be exploited. There is no mention at all of the fact that new deposits of most metals, **at grades comparable to those already being worked**, are constantly being searched for and discovered and that reserves of most metals have been steadily increasing for the last fifty years. (Exploration geologists must have been firmly excluded from the drafting). The sentence (p 4-10) that starts 'The lesson seems to be that etc.' at least admits that 'mineral availability has increased in the past' but does not explain why or how. This is not a 'lesson' - it is just a vague surmise. If there is a 'lesson' its conclusion is the complete opposite of that stated.

p. 4-11 There is a particularly confused and inaccurate sentence here regarding manganese nodules and 'geothermal' (i.e. hydrothermal) vents. The grades in nodules are not 'far

greater than currently exploited from terrestrial sources'. In fact they are hardly greater at all. Better wording would be: 'For instances, manganese nodules on the ocean floor contain nickel, copper and cobalt at grades comparable to those in terrestrial deposits, and sulphide deposits around hydrothermal vents on mid-ocean ridges contain zinc, copper and precious metals.'

p. 4-12 The first paragraph of the conclusion is sensible. The second is fatuous.

p.5-3 The statement that 'the future of recycling certainly looks promising, particularly with the growth of packaging expected etc.' is almost beyond belief. The argument presented is clearly: 'more aluminium is going to be used, so there will be more recycling, so this must be good.' This is a gross insult to most people's intelligence.

It is unclear what 'Recycling rate' refers to, the use of this term should be clearly explained.

Tbl. 5-1 Most of the recycling percentages are wrong. The commonest error is to include new scrap (see comment above).

In conclusion, although BGS would appear very critical specific areas of the document itself, we remain fully behind the MMSD initiative. Nonetheless, it obviously has a long way to go to achieve credibility and win "hearts and minds". The concept of "Corporate Citizenship" must be strongly encouraged and **real** and **genuine** dialogue with all stakeholders **including** those who are often disenfranchised because of poverty, powerlessness, gender etc.

Yours faithfully,

Dr D A Falvey,
Executive Director.