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MMSD

By e-mail: mmsddraftreport@iied.org

Dear Sir/Madam

Comments on Draft Report

In connection with the above, attached please find comments on the report. If any of them are unclear please don't hesitate to contact me. In general the report is extremely thorough and balanced, a difficult task considering the significant number of contradictory opinions you have had to synthesise. Two specific comments on the conclusions:

- Decision making is referred to throughout the document and yet no attempt is made to engage with the significant amount of research that exists in the area. Considering the emphasis placed on decision making and decision making processes in the document there must be a recommendation offered which suggests that this research be investigated
- Technology advancement is referred to as a potential panacea for a number of the ills of the industry, and is offered as one of the only ways that the industry can start to approach mineralogical limits inherent in the systems in which it operates. However, no attention is paid to the decreasing amount of funding being made available to research, either within the industry (through company research laboratories) or in industrial and/or government funding to academia. If technology is to advance to the point necessary to support the sustainable development of the industry then attention will need to be paid to the funding of research which supports the advance of technology. This too should be included in the recommendations. As a note, this research needs to be conducted in an integrated manner, bringing on-board the environmental and socio-political arguments required in all decision making (all research involves a significant number of decision steps) for sustainable development.

Please do not hesitate to contact me if the meaning of my comments is unclear, or if you require further information on any of the issues raised.

Good luck with the synthesis of the final report.

Yours sincerely

Dr Mary Stewart
Research Fellow

General Comments

- The short chapters are good, makes the document manageable. The division of the document into discrete sections is also a good idea. Together they make a large document far more digestable.
- No attempt has been made to track typos etc (though there are extremely few), also it has been assumed that more attention will be paid to page numbers in indexing in the final version.
- I would be more comfortable with a document which has number sections and sub-sections within the chapters, this is obviously a style thing which you have probably discussed in detail; sub-section numbering clarifies the document structure
- Recommendations are made throughout Section III, in places responsibility for taking recommendations forward is allocated to ICMM, in other places responsibility is not allocated, is it possible to allocate responsibility for more of the recommendations?

Chapter 2

It would be nice, to demonstrate the complexity of the sector, to include a table which details the totality of minerals and metals traded. This table should be broken down into the three types of selling mechanisms presented in the report. It could be included as an Appendix.

Processing and Fabrication

Have stated that there is a significant energy draw by these earlier stages of a metal's life cycle. However, no indication of the energy intensity of these processes is given, nor is any indication of the total energy consumption of the industry.

Recycling and Reuse

There is value in highlighting that fact that metals – unlike other commodities such as plastic, paper, wood etc – have the potential to be recycled ad infinitum (limited only by considerations of energy consumed in recycling), this is because they are elements and not compounds, they do not degrade in use, rather they are dissipated in use. Efforts should be made to ensure that the dissipative use of metals be limited.

Also it would be more elegant to differentiate between "old" and "new" scrap – it would clarify the statements made.

Employment

The section in whic h numbers of employees are presented is unclear. Rewriting a couple of sentences to clarify meaning would help. I think that the problem is that there are too many ideas being presented in single sentences.

Location of Mineral Markets by end-use

Substitution of copper by aluminium in electricity transmission should mention that copper is more that 30% more efficient in transmitting electricity, and substituting copper with aluminium in this application would lead to an increase in any global warming effects associated with the provision of electricity as a result of this reduced efficiency of electricity transmission.

Chapter 4

The 'Need' for Minerals

Perhaps have a statement at the beginning of this section that need and demand are not necessarily interchangeable terms. They seem to be being used interchangeably before arguments to the contrary are offered in "Need versus Demand". The argument(s) offered in this section would be strengthened but an upfront acknowledgement that the two terms are different.

Chapter 5

Is it possible to give reasons for selecting the materials that have been selected for case studies? Are they sufficiently representative of the sector? Or merely the commodities for which the most information is available.

Chapter 6

The business case of SD

The question is asked, which came first, good environmental performance, or the financial performance to support improvement in environmental performance. Another interesting take on this was the subject of a paper presented by a PwC representative at the Minerals Council of Australia Environmental Workshop in Adelaide, 2001 where the thinking was to use environmental indicators as proxies for financial performance, if a company has its environmental and social reporting in place, then it has innovative and far thinking management – that sort of thing. (Note: this has nothing to do with the PwC Sustainability Survey which was run as part of the MMSD).

The Role of Technology

While the statement is made that there are a significant number of different technologies in development within the industry at present, two issues remain to be highlighted:

- Industrial funding into research has been decreasing rapidly, in addition the number of industrial research laboratories has been decreasing as companies close them; in order to meet the research requirements of technological development to meet sustainable development in the industry the industry will need to start investing in research again
- As has been noted under a number of the sections in the report, what we really need is integration, with respect to technology development this means that we need the integration of skills, not only across technologies (from mine to mill to metal), but incorporating consideration of environmental and social effects as well; we need multi-skilled teams to be brought to bear on technological development (this would require even more research funding, see above)

Chapter 11

In this context life-cycle refers to product life cycle, which is well defined. However, in previous chapters of the document life-cycle has been used to refer to different stages in the development of a project. There is another life-cycle which could be introduced, the process life cycle, but that has little meaning here. There is value in clarifying the difference between these two life-cycles, though I am not sure where in the document this clarification should be placed.

There is also a difference between supply chain and value chain. In the context used in the introduction to this section supply chain may not have been used completely accurately, the value chain should be referred to as well.

Supply chain issues – Management of the value chain upstream of the process under consideration is supply chain management; management of the value chain downstream of the process under consideration is extended producer responsibility. These might just be terms, but they might also clarify what is being said.

The Way Forward – Life Cycle Assessment

These conclusions should include the conclusion from the workshop report that information and data to inform inventories for the industry (with a focus on mining, and minerals processing – which include the refining element) needs to be collected. In other words the Life Cycle Inventory element of the UNEP/SETAC LCA initiative has a role not only of collating information, it needs to be involved in ensuring that the data is generated in the first place. Industry has a significant role to play in this respect.

Chapter 16

What can be done now?

I am concerned by the manner in which actions have been prioritised, relative to known existing strengths. There are a number of, what could be considered, high priority issues which have been highlighted because of the integrated nature of this report, but have not been addressed directly anywhere. This may not have been the intention of the selection, and it is the manner in which this section that has been worded that is a problem. If the wording is to be retained I would require

assurance that issues have not been prioritised just because we know that they will be successful in the short-term – which will make the project seem extremely successful. We need to know what should be addressed, then you can introduce what can be addressed. This is similar to placing too much emphasis on what can be quantified, to the detriment of what can not be quantified, and is relatively unsatisfactory. We can't just put stuff in the "too hard" basket.

The company-specific suggestions are good but do not really have teeth. One of the larger companies in the mining industry (that was part of almost all elements of the MMSD that required industry input), has a sustainability directorate, all the necessary policies as well as a director of sustainable development. However, this director has no budget and is unable to instigate any programs of projects within the group. This section requires far stronger wording, if not a company can say that it has followed all the elements of the plan, and yet all it is in greenwash.

In order for mining and minerals processing (including hydro- and pyrometallurgy) technology to meet the requirements of sustainable development referred to in the document a significant amount of research will need to be undertaken. This requires the support of industry, government, academia etc. An integrated research agenda should be one of the priority issues for industry as they are the one who should be guiding this research. At the same time, we need a sustainability framework within which this research is conducted. If research is not included as one of the priority issues then the potential for the industry to contribute to the sustainable development of society in the medium to long term will always be in question.

Decision-making has been referred to throughout the document. There is a significant amount of research into multi-criteria decision making available at present. This material should be made accessible to the various stakeholders in the process.