MMSD REPORT ON MINING; COMMENTS ON PART ll.

(Note: Comments may not exactly correspond to page numbers of draft as they are sometimes based on pdf page numbers)

Chapter 2.

The chapter lacks any indication of the growth or decline of the different sectors of the minerals industry over time. The analysis is unduly static.

Page 3. The subdivision of the mining industry into seven principal categories is insufficient and inaccurate. Neither the fertiliser minerals nor many industrial minerals is covered by any of the headings. Most industrial minerals are not construction materials, although fluorspar is incorrectly described as such later in the chapter.

That some minerals are sold in global markets does not mean that they are not also sold regionally or domestically. Domestic output to satisfy domestic demand accounts for a substantial share of global mining (eg. China, India, Brazil, USA and even Europe). That is true for metallic minerals as well as construction materials and industrial minerals.

It is a facile generalisation to state that more minerals are produced in countries with a large surface area. Ireland and Chile are clear examples to the contrary.

The emphasis on changes in regional patterns of production is all wrong. By far the most important influence, transcending all others, has been ore depletion. That has an infinitely longer pedigree than the other more recent influences which are given precedence in the text. The extent of the migration also varies widely with different minerals. It has gone further for many metals than for industrial minerals and construction materials. Many industrial minerals serve global rather than regional markets.

It is overlooked that mines extract ore rather than metals. Many so-called rare metals come as by-products of more common elements. The costs of extraction can therefore be relatively low no matter what the prices are. The role of by- and co-products is not mentioned.

The distinction between minerals and metals is not clearly drawn. Finished steel is some way along the production chain, analogous to semi-fabricated aluminium or copper. Crude steel would be a better comparison, although over one third comes from scrap sources.

Table 2-4 mentions fluorspar, phosphates and titanium minerals, none of which is embraced in the earlier seven categories.

The exploration data from Metals Economics Group, although very widely quoted, are not complete, even for countries like Australia and Canada.

Comparison with the national statistics for the last two countries shows differences in both levels and trends. Exploration spending is cyclical and it is misleading to compare the last peak in 1997 with the trough of 2000-01. The decline is typical of previous cycles. The historical data for both Canada and Australia show that the latest cycle is not atypical. Giving data for just 1997 and 2001 gives a very misleading and inaccurate picture. The Canadian data can be referenced from the Canadian Minerals Yearbooks on the website; www.nrcan.gc.ca. The Australian data can be obtained from the Australian Bureau of Statistics.

The list of copper mining countries without refineries is correct but not too informative. It is pushing it to include Saudi Arabia (2001 output 0.8kt), or Morocco (9.2kt). Neither Botswana nor Namibia produces over 20kt. Japan does have a very small mine output.

Europe does produce bauxite but mainly of non-metallurgical grades. Also around one-tenth of global alumina output is non-metallurgical.

The section on processing and fabrication is over-simplified. Iron is a metallic mineral but does not usually need concentrating. Over one-fifth of copper mine output is produced by SX-EW processes which do not require prior concentration of the ore. Not all copper fabrication is carried out by large technically sophisticated companies - it depends on the product involved and the end-use.

Page 2.11. According to ILZSG statistics (March 2002) secondary lead accounted for nearly 62% of western world production of refined lead in 2001. It is statistically invalid to compare western production of secondary lead with consumption because there is no data on the proportion of imported lead produced from secondary sources. The 55% is on the low side.

Page 2.18. The section on FDI is completely irrelevant unless data specific to the mining industry can be included. Certainly there is FDI in mining but how much and where?

Page 2.19. The data on consumption need interpreting with some care because they only show the countries of first use, not the ultimate consuming regions. There is considerable trade in semi-manufactured and mineral containing products.

Table 2.5 This needs an indication of the relative volumes and values of each product included. Some are of considerable importance (eg copper) whereas others are negligible (eg rhodium or antimony).

Page 2.25 To state that prices of copper have been relatively stable glosses over not just shorter-term cyclical fluctuations but also much longer period trends. That prices ended a period near where they started does not indicate relative stability. A broader selection of prices would give a more rounded description of mineral price movements. The industry covers far more than metals.

Chapter 3.

This chapter is somewhat blinkered, both historically, and in its coverage. It is heavily biased towards the metals producing sector, and that rather distorts the discussion of the mining industry.

Each generation tends to re-write history and this report is no exception. The introductory paragraph is breathtakingly sweeping, and portrays plain ignorance. Consumers, financing institutions and intergovernmental organisations of all types have long been involved in and focussed on the minerals sector. That is by no means a recent development. For example, the UN Revolving Fund was established in the 1970s, UCTAD in 1964, and other UN Agencies in the 1960s and 1970s, all with close involvement in aspects of the minerals industry. The UN Declaration of the New International Economic Order of 1974 was concerned with many of the issues that are now gathered under the rubric of Sustainable Development. The OECD has been concerned with minerals issues since its inception. Consumers were heavily pre-occupied with issues of mineral supply in the 1940s to 1960s, when concerns about security of supply were paramount. Financing institutions of all types have long been involved. Even the concerns of NGOs are nothing that new - they were vocal in the late 1960s and 1970s about many aspects of the minerals industry.

Page 3-4. By concentrating so heavily on metals the section on companies is distorted towards international companies. The mining industry has not in fact become more international in recent years. Rather it has reverted to an older pattern after several decades of resources nationalism. From the late nineteenth century the industry was strongly international. It was also in the 1950s before many mines and companies were nationalised.

The large multinational companies are not just involved in metal concentrates and metals, the impression given by the paper. This brings out the failure of the auto make up their minds whether they are covering the mining industry or metals. Most of the tables concentrate only on those.

Page 3-7. Noranda may own custom smelters but it is far more than a custom smelting company.

Medium-sized and national companies are more important than is acknowledged, especially when non-metallic minerals are taken into account. The cast list of participants is also much wider.

The section on junior companies betrays a strongly Anglo-Saxon view of the mining industry. It overlooks the important part played by small and medium sized companies in the mining industries of Latin America, Asia, and even parts of Europe, in metals as well as non-metallic minerals.

The comments on fabricators are totally metals- biased. What about the many primary processors of non-metallics?

Page 3-9. There is a rather odd choice of examples of privatisation (eg. Comibol, which is not yet completely privatised), and an understatement of the continuing role of governments (often through state holdings in partly floated companies). As PNG usually takes some 15-25% of the shares in mining companies it is odd to talk of 'a small stake'.

Workers and unions.

Mining is no different from very many other industries in the number of lay-offs and redundancies. Throughout the Report has great difficulty in distinguishing between the specific problems and concerns of the minerals sector and much broader trends that the mining industry shares with the rest of economic activity.

Page 3-10. Are the dates of the UK miners' strike correct? Was not the main one in 1984? You need to give chapter and verse for threats and attacks on union officials. The strike was ugly and divisive certainly, but beyond that?

Governments.

This section is really concerned with general issues of good governance rather than with specific minerals sector concerns.

Table 3-3 concentrates on international institutions with a sustainable development gloss rather than those that are involved in mining and metals.

Civil Society.

This term may be widely used, but it is a euphemism designed to convey respectability and gravitas to a widely disparate group of organisations. Companies, unions and governments are as much a part of civil society as NGOs. Elected governments at all levels embody the will of Civil Society. The NGOs lack democratic legitimacy. From the viewpoint of many countries involved in the mining sector, the phrase Civil Society is a synonym for a form of neo-colonialism. It is for governments and local populations to confer any 'licence to operate' not a group of NGOs located mainly in the affluent North. Moreover many local companies involved in the mining sector may have sufficient moral authority and public support in many regions of the world.

Communities

Again this section covers general rather than minerals-specific issues.

<u>Chapter 4.</u>

Page 4-3. Second paragraph - 'Increases in demand by population and income may in part be offset by increases in the intensity of use'. Surely you mean decreases in this context?

Again the chapter concentrates unduly on metals and rather overlooks the full range of substitutability of minerals.

The discussion of needs versus demand is both simplistic and rather woolly. There are certainly some real issues here but it isn't sufficient to quote what people say without attempting to validate their arguments and weigh them up. An example is the comment on stockpiling of gold. Incidentally this section is clearly written by an author with very different views from the writer of the case study on gold in chapter 5.

What is meant by 'more benign materials than gold or gems'? They are not malign per se. There is a value judgement in the phrase.

It is rather odd that there is no comment either in chapter 4 or chapter 5 on the oddity of industry organisations (e.g. International Copper Association, or its zinc equivalent) spending large sums on promoting and expanding the uses of metals. In Chapter 5 the activities of the World Gold Council are similarly not questioned. Hardly sustainable development!

Page 4-8. 'Since higher grades are normally exploited first'. That assumes perfect knowledge of all possible mineral deposits at the outset. It also assumes that grade is the only determinant of cost. In practice, and for a wide variety of reasons, there are many other influences on relative costs, and many higher grade deposits are discovered and exploited long after much lower grade deposits have been worked for many years. Uranium may be outside the report's coverage but compare the grades of Rossing Uranium (started 1976) with those of some of the latest developed mines in Saskatchewan.

There is an apparent lack of consistency between the comments on technological change and demand in Chapter 4 and some of the points in Chapter 5. Technological change can have significant and enduring impacts on demand not just through substitution between materials but much more broadly. Copper has been replaced in telephone wires by optical fibres and by radio waves. Frozen foods rather earlier wiped out large markets for tin cans and so on.

Page 4-10. By no means all mineral commodity prices fell over the last century. This is an overly broad generalisation.

Chapter 5.

The treatment of the different products in this chapter is uneven There is strong evidence of a 'scissors and paste' approach.

Table 5-2. and Table 5-5. The disparities in consumption rates partly reflect the nature of the data. The table is comparing levels of first 'consumption' without allowing for the effects of trade. The point is picked up later in the chapter but should be mentioned at the outset.

Page 5-9. Consensus forecasts are invariably wrong - look at those made in the mid-1980s, which proved far too low, or those of the early 1970s that were much too high. A strong case can be made that the latest set will be too high because they have been made against a backdrop of strong growth in the 1990s. This would not significantly alter the conclusions but a big pinch of salt is desirable.

Page 5-19. The comment on gold prices accompanying Figure 5-6 is somewhat odd. For a start its meaning is unclear, and the most obvious meaning is in any case not supported by the data in the figure. Prices have not been relatively stable, but have trended downwards after the adjustment to a free market with its inevitable over-shooting.

The section on gold appears to have been written by someone who has not studied the earlier chapters.

Page 5-25. The assessment about future sales policies of central banks implies that the present price of gold is somehow 'right' and that the development of new gold mines in developing countries should not be prejudiced. Is that really the view? To keep minerals of any type in above-ground stocks when there is no further use for them is perverse and certainly not sustainable. What if gold is at last becoming a 'barbarous relic'?

PCFC
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