

Green and Gold: Sustaining Mineral Wealth, Australians and Their Environment

Peter Hancock

Centre for Resource and Environmental Studies, The Australian National University, 1994, 277 pp

Blessed indeed are the peacemakers, although they are usually reviled for their pains. Let us hope that Peter Hancock does not suffer that fate. His broad study on the Australian mineral industry attempts to discover how the industry

fell from public favour during the 1970s and 1980s while it was achieving the aspirations it once shared with so many in the community, namely, for Australia to be a major player in the supply of mineral products to the world and to enjoy the resulting export income.

He analyses the 'situation of the mineral industry in Australian society from the perspective of sustainable development'. In that regard he attempts to steer a narrow course between strongly opposing viewpoints about the industry, and to make some sound recommendations for the future. The Australian public has become suspicious of the industry although it depends heavily on its income.

As a consequence Australian society has allowed government measures for Aboriginal land rights and protection of environments to be applied in a way that has created such increased restriction and uncertainty for the industry that the maintenance of this income is threatened.

Hancock aims to record and examine the attitudes and perceptions of representative and influential stakeholders in the industry and the environmental movement, as well as in the general community, and then to identify ways for the industry to realize its potential in accordance with the principles of sustainable development. That is defined, in line with the Brundtland Commission, as development which meets the needs of the present without compromising the ability of future generations to meet their own needs. These basic aims are admirably met.

Four main themes are explored over the past 30 years; the community perception of the mineral industry, community concern for the environment, the performance of the mineral industry and its rise to become a major economic, social, political and environmental influence in

Australia, and the national interest or perspective, and the role of government. Useful parallels are made, where relevant, with the experiences of other countries, most notably Canada and the USA. An important component of the study consists of reports on extended interviews carried out in 1992 with leaders, both of the mining industry and of the environmental movement.

Most of those interviewed have allowed themselves to be identified, although comments are not usually ascribed to individuals. The book contains a wealth of illustration of mining practices, and of the industry's relationship with the environment.

The book starts off by examining the industry's significance, self-image and perceptions. Exports of mineral products account for over half of Australia's exports of merchandise, and some 9% of its GDP, but for only 2% of direct employment. It is widely scattered throughout Australia, but mainly away from the centres of population. The industry believes that it does a good job for Australia, while caring for its environment, and is consequently frustrated with public attitudes towards it. Going beyond the bald statistics to ascertain the true significance and place of mining in Australia, Hancock explores the issue in depth. He also gives an historical perspective on the industry's changing role and importance, and on its relationship with society. The industry is at present suffering from the pendulum-like swing

in the beliefs and attitudes of society between admiration of technology, rationalism and economic development on the one hand, and on the other, admiration of nature and indigenous people, together with negative attitudes towards economic development.

In that regard, the Western world has seen several such swings over the past 300 years.

The precise impact of Australian mining on the environment is outlined. Clear distinctions are drawn between historical impacts and the effects of modern mining. On balance, the net adverse effects are relatively limited and localized. The industry's attitudes and policies have changed markedly for the better in recent years. Four ecologists from Australian universities, interviewed for the study, all found that 'on balance the mineral industry has only very localized environmental

impacts compared with that of urban development, and the clearing of forests and woodland for farming or plantation forestry'. Mining is a temporary use of land, which can be rehabilitated to other uses, provided that is planned with the mining operation and carried out progressively during the life of the mine. The ecologists emphasized that the public perceptions of mining, dictated largely by the news media, are unduly simplistic and often plain wrong. The polarizing role of environmental organizations is also noted.

Having set the scene Hancock draws on his interviews to list the mineral industry's main concerns, to outline the community's perceptions and the changes in public opinion, and to describe the reaction of the environmental organizations to the mineral industry. As regards public opinion, the role and narrow focus of school teachers are emphasized. The changing relationship between governments, both federal and state, and the mining industry is described in a separate chapter. How the industry has responded to changing environmental concerns, to public opinion, and to governmental policy is then discussed. The response is seen in a variety of ways. Hancock recognizes the progress from acute defensiveness to active concern for the environment but believes that more is required. The mineral industry is not fully facing up to the public's concerns. Unless attitudes change on both sides of the debate, however, Australia will not realize its full economic potential from its sizeable mineral resources. The nature of resources, and widespread misconceptions about their size and measurement are summarized in a separate chapter.

Finally, Hancock sets out his own prescriptions. He concludes that

as long as the debate is clouded by polarised rhetoric and restrained by mind-sets, there can be no agreement on how sustainable development can be achieved. However, given an atmosphere of goodwill, the mind-sets and ambivalence can be recognised and discarded by all the major players.

The mindsets and the stereotyped perceptions of both sides of the debate are exposed. The author believes that sustainable development is possible. Both sides should build on common ground and the various players, the industry, the community, including politicized envi-

ronmental groups, and federal and state governments, each need to recognize a range of factors. Given that recognition, the first step for the mineral industry is to understand and expose the public perception, then to advance cultural change and the industry's image. In that regard, one simple step is to refer to the *mineral* rather than the *mining* industry. The industry needs to foster an equity partnership with the public, and create an awareness of what it really means to Australians. Going on from there, the author sets out a range of practical suggestions. Whether or not these are utopian (and most seem eminently practicable), this book does a great service in setting the framework and the ground rule for a rational and objective debate about the proper place of the mineral industry in the Australia of the 21st century.

One final minor quibble is that it is unfortunate that Hancock gives renewed currency to J.E. Young's gross quotation out of context of Georgius Agricola's *De Re Metallica* (p 226). Agricola was setting up a cockshy which he then proceeded thoroughly to demolish. Young quotes the cockshy as Agricola's view. In reality, Agricola was strongly in favour of mining, as anyone who has properly studied his text would know.

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Energy and Economic Reform in the Former Soviet Union

Leslie Dienes, Istvan Dobozi and Marian Radetzki

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This book, conceived at a conference organized by SNS Energy, Stockholm, in late 1990, was written between mid-1991 and the end of 1992. Its ambitious aim is to explore the likely paths of the former USSR's (FSU) production, consumption and exports of hydrocarbons over the next decade under different political and economic assumptions. To this end four separate scenarios are used, ranging from shock therapy, through gradual reform, and a reform impasse, to internal war. The effects of this last scenario are not worked out in detail.

While the three authors share joint responsibility for the text, the whole has

been edited by Marian Radetzki who is also primarily responsible for a chapter on the relationship between energy exports from the FSU and international markets, particularly in Eastern Europe. Leslie Dienes wrote the extended chapter which lies at the heart of the book, on production constraints and prospects. Finally, Istvan Dobozi fleshed out the assumptions and implications of the four scenarios, and produced an analysis of the prospects for FSU energy consumption. The four main chapters are preceded by a useful summary of the major conclusions.

So much for the structure and content of the book, but what of its conclusions? The speed of change within the FSU is such that parts of the book had already been outdated before the book was published. For example, most of the former members of the FSU have now introduced their own currencies, and the region is ceasing to function as a common currency zone. The analysis of energy consumption clearly brings out the FSU's 'systemic energy waste', whereby it used 60% more energy than it would have done if it had behaved like typical market economies. That is because of the underpricing of energy and the resource oriented biases of the central planning system. The rational and well argued assumption is made that there will be a large contraction in energy consumption in the first half of the 1990s caused by the sharp economic slump. In practice, energy consumption has not fallen to anything like the same extent as total activity. Istvan Dobozi has, himself, elsewhere explained that this seemingly perverse result springs from the structural biases of the economy. These are only hinted at in this book. The book emphasizes that 'rational energy pricing is of overriding importance for economically efficient production and for minimising wasteful consumption practices'. The path whereby low state controlled prices rise to world market levels is, therefore, of crucial importance. That path is inevitably greatly affected by the exchange rate. The commercial rouble rate has fallen to unrealistically low levels, and the authors base their comparisons of prices on estimated purchasing power parities. World market price levels are expected to be reached only by 1995 under the 'shock therapy' scenario and

much later under the other, more realistic assumptions. Even if prices of traded fuels reach world levels there is no reason why domestic costs should similarly equate to those elsewhere. The analysis of production constraints and prospects, which contains a wealth of data on the location and nature of the FSU's production and reserves of hydrocarbons also includes some forecasts of costs. These are assumed to rise because of 'worsening' geological and technical conditions and shifting geographic location (p 71). It is admitted that the projections are 'heroic', yet no satisfactory reasons are advanced for the projected rise in wage costs. National differences in real wage rates have long persisted in market economies.

The analysis concentrates on oil and gas. Coal is dismissed relatively briefly because the FSU no longer appears coal rich, once location, geology and quality are taken into account.

A substantial expansion of coal capacity in a relatively short time-frame is physically possible only in East Siberia, and to a lesser extent in the Kuzbass. Only giant coal processing complexes could make East Siberian coal available to the whole Russian (and FSU) economy. The long lead times on the necessary investment for production, conversion and transport rule out this option for the time period examined in this study (p 60).

It is argued that the coal industry requires substantial mine consolidation and that productivity is very low largely for geological reasons. Exports are not expected to change much under any scenario (pp 193-195). It is recognized that the supply elasticity of internationally traded coal is quite high, once a given threshold is reached, and that any short-fall of exports from the FSU would soon be made up from elsewhere. In that regard the projections probably greatly exaggerate likely price responses, as is fully acknowledged in the text.

By contrast, the effects of changing the basic assumptions on oil and gas are substantial. The FSU's output of oil fell by 17% between 1989 and 1991, and it has since fallen much further. In that respect some of the book's conclusions have been overtaken by events. It recognizes that FSU output will remain below its 1989 peak until beyond 2005. That