
Mining's Impact on Tourism

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Summary

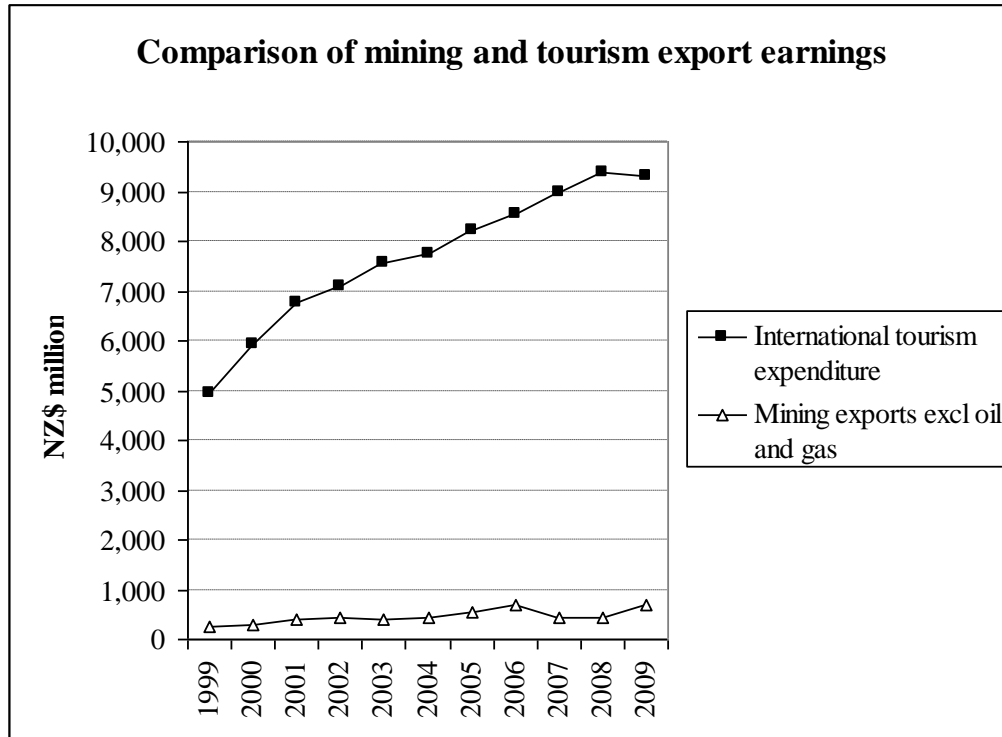
- The sector most threatened by allowing mining to encroach into Schedule 4 lands is tourism, which is enormously more important to the New Zealand economy than mining, and will remain so. The risks to tourism arise both from degradation of key landscapes and from damage to the nation's "clean green" and "100% pure" branding in overseas markets.
- Studies carried out by the Ministry for the Environment found an important segment of the international tourism market that would simply switch to alternative destinations in the event that policies were adopted which downgraded the brand image. The resulting projected damage to GDP was of the order of 1% of GDP (similar to the total current contribution of all mining and quarrying).
- Even if expansion of mining activity in protected areas did not impact monetarily on tourism, it would not represent an economic net gain for the nation unless it could compensate also for non-monetised losses of existence, option, bequest and recreational values.

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The sector of the market economy most directly at risk if mining is allowed access to Schedule 4 lands is tourism. The mechanism through which mining in Schedule 4 could most obviously lead to a reduction in tourism revenues is the brand image of New Zealand as a destination.

Figure 1



It is possible that in certain particular cases a mine might directly eliminate an existing or potential tourism opportunity by eliminating a valued landscape feature or blocking access to a high-value area, but such micro-level impacts are not further considered in this report.¹

Far more important is the impact on overseas perceptions of New Zealand of allowing mining to encroach onto supposedly sacrosanct protected sites.

The relationship between New Zealand's international brand image and the performance of key export sectors including tourism has been the subject of economic

¹ An example of economic analysis applied in a comparable case – the conflict between indigenous timber logging and tourism in the Punakaiki area which subsequently became the Paparoa National Park – is the 1983 paper by Stephens which estimated that logging could sustain only 25 jobs compared with 60 jobs that would be created through creation of the National Park.¹ As the two uses were mutually incompatible, the economic analysis favoured conservation plus tourism development. Robert J. Stephens, "Forestry or a National Park: a New Zealand Case Study", *International Journal of Social Economics* 11(3/4): 29-45, 1984. See also R.J. Stephens and C. Wells, *The Regional Economic and Social Impact of a Punakaiki National Park*, mimeo, Victoria University of Wellington, 1983. Stephens' estimate of tourism development potential has subsequently proved to have been much too conservative.

analysis in two studies commissioned by the Ministry for the Environment in the early 2000s.² In the first of these, PA Consulting evaluated three issues³:

- the relationship between the value obtained in emerging markets for New Zealand's added value dairy products and the impacts poor farm management might have on the rural environment;
- the relationship between environmental quality generally and the inbound tourism sector; and
- the relationship between various policy positions with respect to the release of genetically modified organisms and the value obtained from the exports of organic produce.

The second of these is the relevant scenario for our purposes. The consultants used a contingent valuation methodology (based on interview surveys of market participants) to assess what change in tourism earnings would follow from a significant degradation of New Zealand's environmental image in the eyes of overseas tourism customers. The elements of environmental quality considered were land, freshwater, coastal marine and waste. Particularly relevant to tourism were erosion, contaminated sites, drinking water quality, non-biodegradable litter, waste volumes, landfill quality, and management of the hazardous waste stream.⁴ Mining activities clearly fall into several of these categories.

The report's value-chain analysis of tourism concluded that⁵

In the case of inbound tourism, environmental value appears to be largely driven by the end user. While travel agencies can influence a potential tourist's decision to travel to New Zealand to a certain extent, the final decision on whether or not to undertake the journey depends on the tourist. Thus, in the case of inbound tourism, the role of the gatekeeper (in this case the travel agent) is less significant than in, for example, the European markets for farm produce.

Thus, to gain an understanding of the value of New Zealand's clean green image in the tourism sector, it is necessary to target the end user (i.e. the tourist) for survey purposes. It was decided to target tourists from all of our major tourism markets, namely; Australia, USA, Japan, UK and Korea.

Contingent valuation surveys were carried out for a sample of 50 departing tourists from each of these major markets as they passed through Auckland International Airport. Respondents were shown two sets of images: one set of "images that are typically used to promote New Zealand in our key overseas markets" and one

² PA Consulting Group, *Valuing New Zealand's Clean Green Image*, report to Ministry for the Environment, August 2001, <http://www.mfe.govt.nz/publications/sus-dev/clean-green-image-value-aug01/index.html>; Kel Sanderson, Carolyn Saunders, Ganesh Nana, Adolf Stroombergen, Hugh Campbell, John Fairweather and Andy Heinemann, *Report to Ministry for the Environment and Treasury on Economic Risks and Opportunities from the Release of Genetically Modified Organisms in New Zealand*, April 2003, <http://www.mfe.govt.nz/publications/organisms/economic-impact-apr03/>.

³ PA Consultants, *Valuing New Zealand's Clean Green Image*, report to Ministry for the Environment, August 2001, <http://www.mfe.govt.nz/publications/sus-dev/clean-green-image-value-aug01/index.html> p.1-2.

⁴ PA Consultants 2001, p.3-10.

⁵ PA Consultants 2000 p.4-16.

“depicting an alternative environmental scenario, in which New Zealand’s environment has been degraded”⁶.

The responses turned out to be bi-modal, in that the tourists interviewed fell into two strongly contrasting groups. One group were unaffected by the hypothetical change in environmental quality; the other group would not select New Zealand at all as a destination in the environmental-degradation case. Except for Australians, the dominant group in each market were the environmentally-sensitive, with the result that when converted to average “percentage decrease in length of stay” by adding up the number of tourism-days lost, the falls in tourism volume were between 63% and 78% for all surveyed markets other than Australia; for Australia the fall was 48%.⁷

The overall reduction in inbound tourism spending, calculated as the fall in tourist days multiplied by average expenditure per tourist day, was \$2.1 billion out of estimated 2001 total expenditure of \$3.2 billion. The consultants then used the Tourism Satellite Account to estimate the corresponding loss in the sector’s contribution to GDP; the result was a reduction of between \$530 million and \$938 million depending on the treatment of GST and induced spending by labour employed in the tourism sector.⁸ As GDP in 2001 was \$117 billion, this represented a loss of between 0.5% and 1% of annual GDP.

Scaling the figures up to 2009 international tourism expenditure of \$9.3 billion, the comparable loss of tourism export earnings would be \$6.1 billion, with a loss of value-added of between \$1.7 billion and \$2.7 billion, or between 0.9% and 1.5% of 2009 GDP (\$185 billion).

The second study, by a consortium of consultants headed by BERL, focused on the question of whether release of genetically modified organisms would have a positive or negative impact on the economy as a result of the offsetting effects of possibly diminished perceptions of New Zealand’s environmental quality, versus possible gains in agricultural productivity. Questionnaire surveys were administered to 444 individuals in Australia, the USA and the UK, and to 93 inbound tourists in Christchurch. Respondents were asked to describe their response, in terms of decisions to purchase New Zealand fruit, dairy products, and tourist holidays, under two scenarios: one in which New Zealand released GMOs and one in which it publicly refrained from using them.

A majority of respondents stated that their purchasing decisions would be unaffected, but one-third of the overseas respondents and one-quarter to one-third of the inbound tourist sample stated that their demand for New Zealand goods and services would fall in the first scenario, and rise in the second. The estimated impact on international tourism demand from release of GMOs was a drop in tourism by 5.7% if prices

⁶ PA Consultants 2001 p.5-19.

⁷ PA Consultants 2001 Appendix F, and p.5-20 Table 30. Note that the surveys did not ask whether the decision to stay away would change if the price of New Zealand holidays were reduced to reflect the fall in perceived environmental quality. This issue was, however, addressed in the survey methodology of Sanderson et al 2003.

⁸ PA Consultants 2001 p.5-24.

remained unchanged⁹. A fairly high price elasticity of demand of 4 was estimated, implying that to sustain tourism volumes unchanged in the face of GMO release, the average price charged to visitors to New Zealand would have to fall by about 1.4%.

If these results are translated to current tourism earnings (in the vicinity of \$9 billion per year), the resulting drop in annual total tourism exports would be between \$125 million (if all the adjustment came through price) and \$513 million (if all adjustment were in volume).

The economy-wide modeling undertaken for the 2003 study unfortunately did not include any experiment in which tourism receipts were reduced without simultaneous larger falls in agricultural export earnings. The BERL general-equilibrium model estimated a 2.4% drop in GDP and a 2.6% drop in economy-wide employment following release of plant GMOs¹⁰, but the economy-wide effect of an equivalent loss of brand image affecting tourism alone would have been less than this.

In summary, the two most serious efforts at estimating the tourism impacts of a negative shock to New Zealand's clean green image seem to converge towards finding that the damage would be of the order of a 1% fall in GDP, sustained for as long as the negative image persists.

It should be noted that both these studies occurred prior to the phenomenal success of the Lord of the Rings movies and during the early stages of what is now the decade long "100% Pure New Zealand" branding and advertising campaign by Tourism New Zealand. Since the studies were completed, several other sectors of the economy have also been aggressive in promoting their products internationally using "clean – green – pure" branding. This suggests that were the studies to be repeated, the level of potential negative economic impact from perceptions of a degradation of New Zealand's environmental image would be greater.

The authors of the 2001 PA Consulting report clearly identified the distinction that has to be made between the actual and the perceived quality of the environment (and of environmental protection). In their risk assessment section they noted that¹¹

the relationship between environmental quality and export value is somewhat indirect in nature. In particular, it is the environmental image that creates the value, not environmental quality per se.

... {E}nvironmental image and environmental quality may move independently of one another. For example, it is quite possible that the efforts of marketers could maintain an image of environmental quality in spite of a deterioration in environmental quality – particularly in the dairy sector where the consumer has no direct experience of environmental quality. Similarly, it is possible that New Zealand's environmental image could deteriorate without any change in environmental quality – the concern over the misreporting of the incidence of scrapie in New Zealand in Germany in early 2001 is a good example.

⁹ Sanderson et al 2003 pp.17-18. Release of human-health-related GMOs produced a smaller shift of 2.9%.

¹⁰ Sanderson et al 2003 Table 5.1 p.35.

¹¹ PA Consultants 2001 p.6-5.

Thus it is quite possible that, in the short term at least, New Zealand may be able to maintain at least some of the contribution to environmental value in the face of declining environmental quality. However, it seems unlikely that this could be sustained over the long term. In the long term, one can expect environmental image and environmental quality to track one another.

In the context of mining, what will matter for the tourism market is whether the clean green brand image can be sustained by marketing effort in the context of a bruising domestic political debate over allowing access to supposedly protected land, and later the potential reality of mining projects on Schedule 4 land. It is the very high political visibility of Schedule 4 land that makes tourism earnings vulnerable to any perceived willingness by policymakers to allow protected areas to be degraded, and this perception is likely to be driven more by perceptions of policy, and policymakers' attitudes, than by actual physical impacts of mining - at least in the short run.

To bring mining up to comparability with tourism as an export earner would require a lot of new, very large mines. Gold exports under high-price conditions are \$400-500 million annually. (Total exports for the 2008 calendar year were \$541.6 million.) To bring mining up to tourism's \$9.3 billion of overseas earnings would require adding 30 new mines on the scale of Martha Hill.

The point of this comparison is not to deny that expanded mining activity could have a role to play in lifting New Zealand's export earnings, but rather to put the sector's role into perspective. Where mining can be expanded at no cost to the tourist industry or any other sector exposed to spillover effects, it will result in a net gain in the balance of payments; but wherever mining expansion comes at a cost to tourism or other sectors, a cost-benefit assessment must take full account of that spillover.

Suppose that a 20% expansion of mining exports caused tourism earnings to drop by 1%, then the net outcome would be negative for total exports and GDP. The sheer weight of tourism in the balance of payments and the national accounts means that even apparently small negative spillovers to tourism earnings from expansion of smaller sectors can have major macroeconomic consequences.

Further, even if a very large expansion of mining activity in protected areas were to eventuate that did not impact monetarily on tourism (or at least not to an extent that outweighed the financial gains from the mining), it would not represent an economic net gain for the nation unless it could compensate also for negative externalities that are not currently monetised. For example, any diminution in the local population's enjoyment of places that they would gain less enjoyment from visiting (recreation benefits), and any fall in subjective well-being amongst the wider population whether or not they visit the areas themselves (existence values), and foregone future tourism earning potentials from modes not currently exploited (option value) would need to be taken account of.