



Ministry for the
Environment
Manatū Mō Te Taiao

Valuing New Zealand's Clean Green Image

The Ministry for the Environment commissioned PA Consultants to carry out this study (funded by the Contestable Research Fund of the Ministry of Research, Science and Technology) to provide an estimate of the value for New Zealand's export trade of our clean green image.

There is considerable discussion about New Zealand's clean green image, but relatively little solid information about its value. This was clear from an earlier study which the Ministry commissioned through the Sustainable Management Fund, *Green Market Signals*, published in 1999. The current study is, in part, a response to the suggestions received from industry groups and others at that time.

The aim of this current study is to quantify the extent to which particular New Zealand exports benefit from positive perceptions about our environment. The project focuses on three export sectors: dairy, inbound tourism, and organic produce. It assesses the potential consumer reaction to an illustrative decline in New Zealand's cleanness and greenness.

The empirical work done in this study reinforces the qualitative evidence that our clean green image is valuable, and provides some useful insights into the size and nature of that value. The results are of course not definitive – no contingent valuation study can ever be so – but they do strongly indicate a significant vulnerability of export value (through reduction in product quantities likely to be purchased by consumers) in the event of a (hypothetical) degradation of New Zealand's environment.

While the research's approach and findings have been robustly peer reviewed, like all empirical economic estimates, the conclusions rest on assumptions and a specific methodology. That said, the study certainly provides food for thought. Main findings are as follows:

- New Zealand's clean green image does have a value. Environmental image is a substantial driver of the value New Zealand can derive for goods and services in the international market place.
- The study suggests this image is worth at least hundreds of millions, possibly billions, of dollars – aggregating value elements from dairy, tourism, and organic produce, and extrapolating to other sectors such as meat.
- New Zealand is relatively clean and green. This is mainly attributable to our low population density resulting in relatively benign environmental pressures.
- However, there are environmental problems that are sufficient to raise questions about the sustainability of the value of New Zealand's exports attributable to its environmental image. There is a risk that New Zealand will lose value that is created by the current environmental image if we are not vigilant in dealing with the problems that could threaten the image.

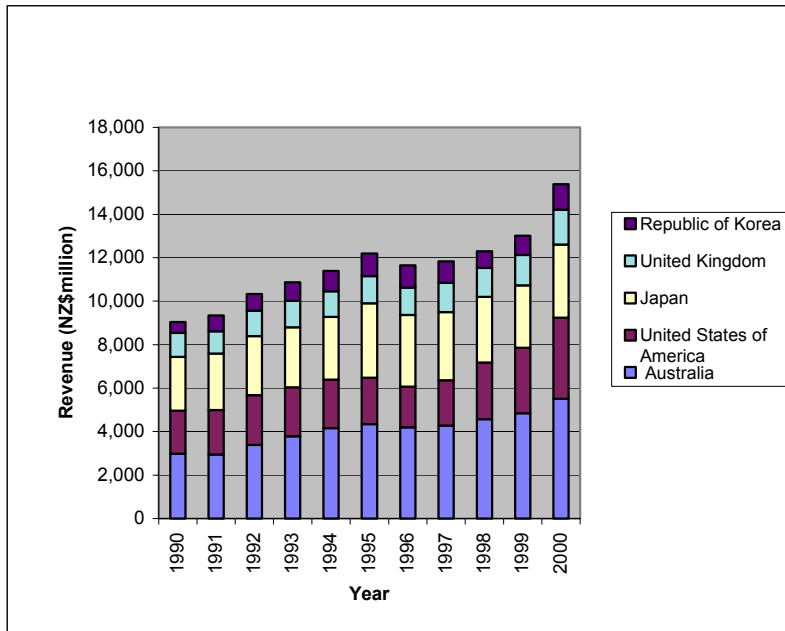
If you would like to discuss this report further, please contact Dr Ralph Chapman, Manager of the Strategic Policy Group, Ministry for the Environment, at (04) 917 7444 or email him at ralph.chapman@mfe.govt.nz.

APPENDIX B: EXPORT SECTOR DATA

B.1 SELECTED EXPORT SECTOR DATA

This appendix contains selected data on New Zealand's exports.

Figure 1: Export earnings from New Zealand's top five export destinations for the years 1990 to 2000



Figures for the year 2000 are provisional.

Figure 2: New Zealand's major export sectors for the year ended June 2000 (excluding tourism)

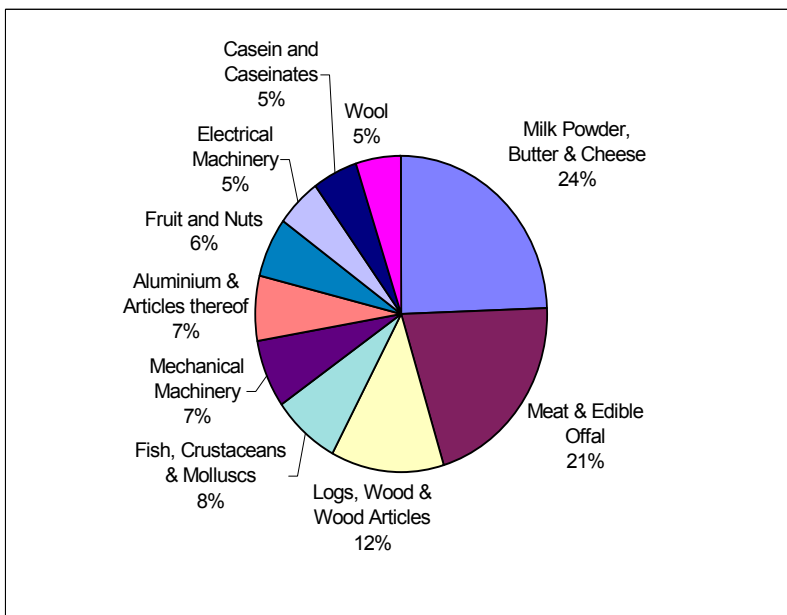


Figure 3: New Zealand organic exports from June 1996 to 2000

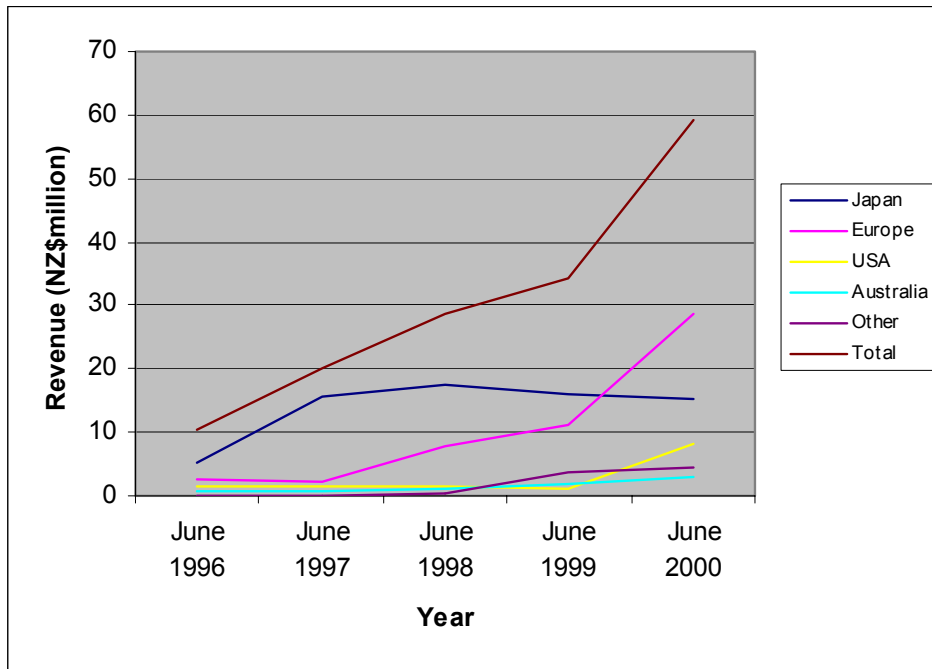


Figure 4: Number of tourist arrivals by market for the period 1996–2000

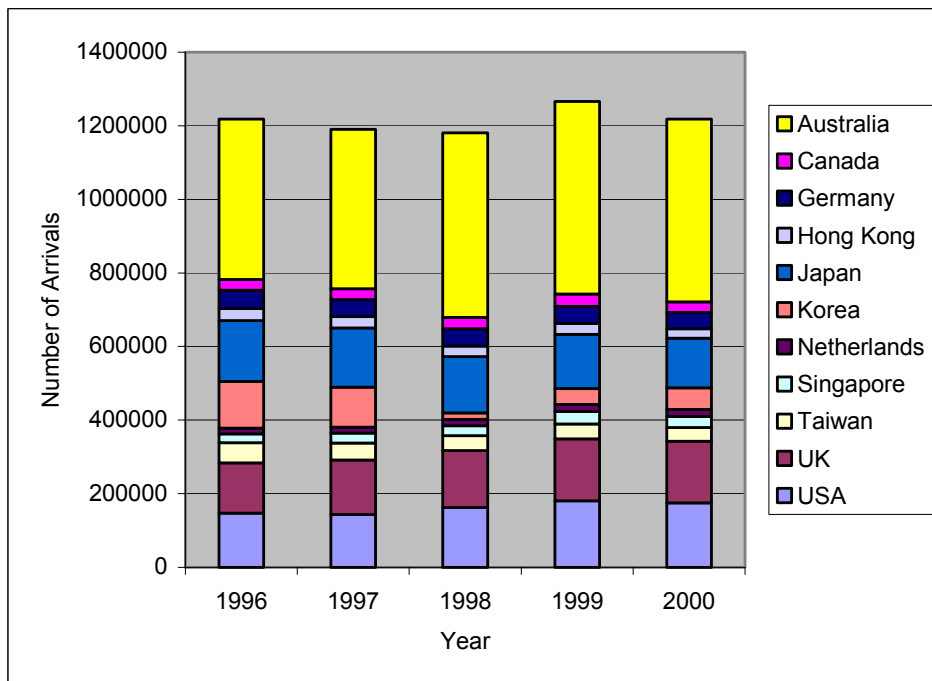


Figure 5: Arrivals from New Zealand's top five tourism markets

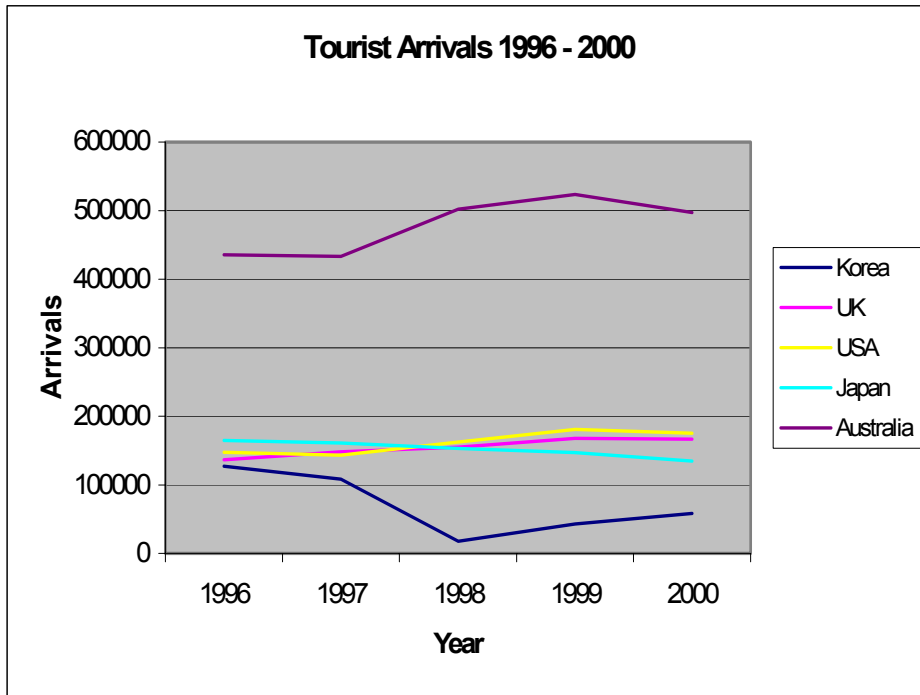


Figure 6: Expenditure by tourists from New Zealand's top five markets

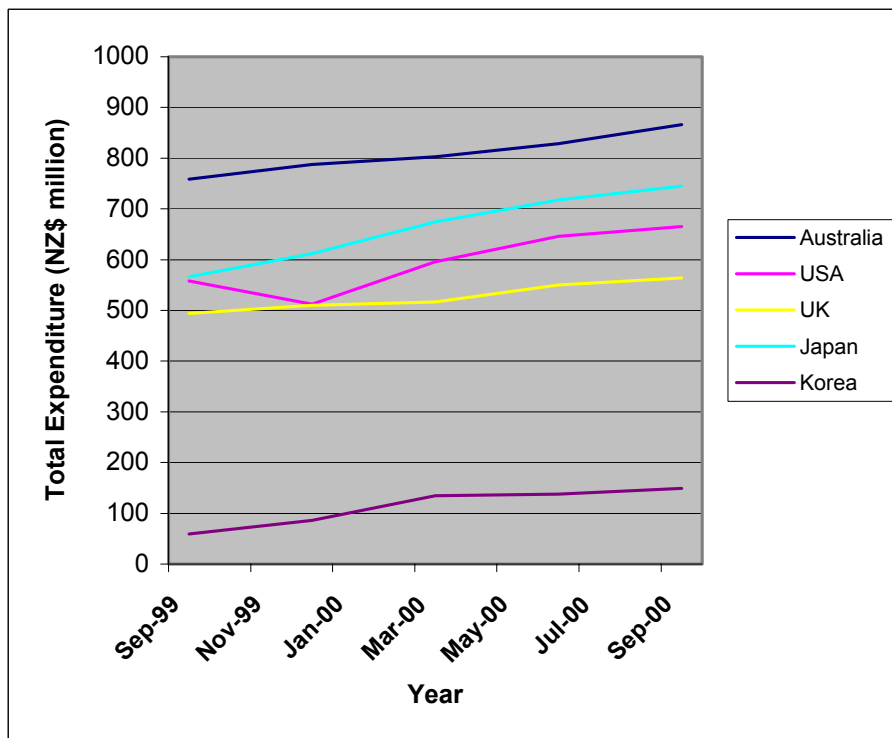


Figure 7: New Zealand dairy exports by product type from 1993 to 1999

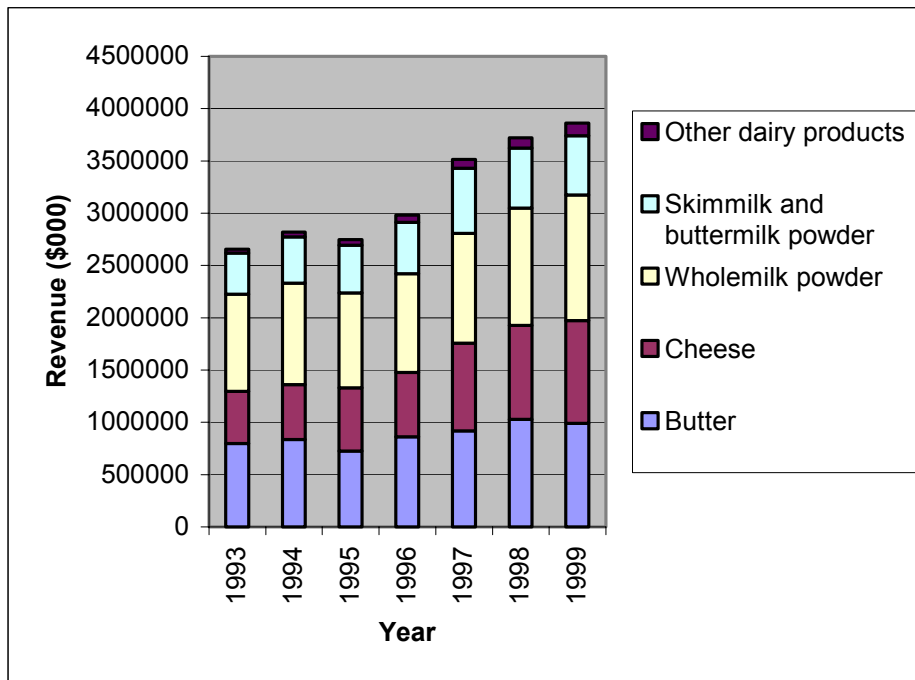
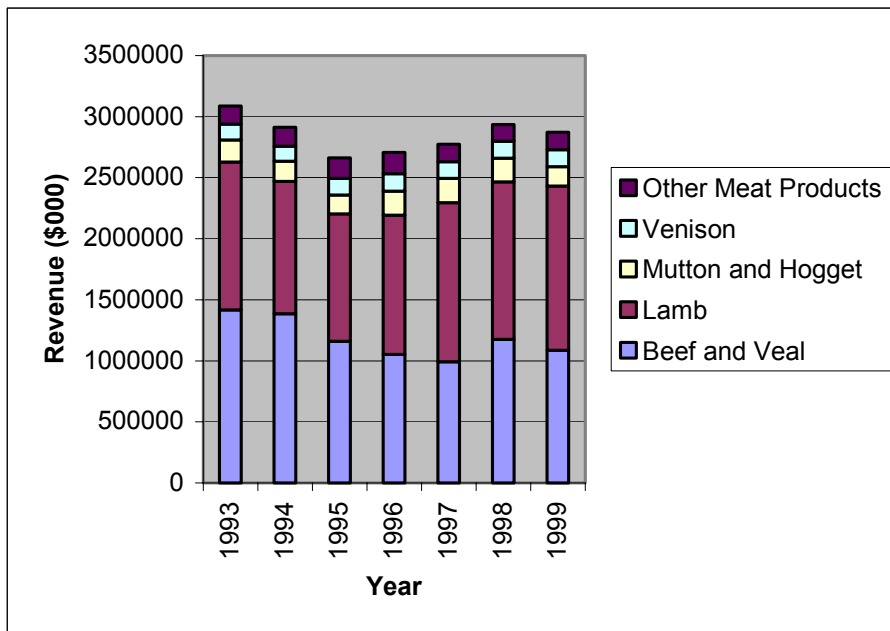


Figure 8: New Zealand meat exports by product type 1993–1999



B.2 EXPORT SECTOR BASE DATA**Table 1: Export earnings (in millions of New Zealand dollars) from New Zealand's top five export destinations for the years 1990 to 2000**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Australia	2980	2937	3388	3786	4162	4342	4205	4276	4578	4841	5502
USA	1979	2047	2293	2257	2229	2142	1860	2085	2596	3005	3737
Japan	2486	2611	2715	2759	2887	3417	3302	3138	3030	2878	3370
United Kingdom	1094	1024	1165	1217	1182	1256	1256	1354	1327	1401	1609
Korea	502	719	767	857	929	1035	1028	978	762	883	1171

Figures for the year 2000 are provisional.

Table 2: New Zealand's major organic markets by value (NZ\$ million) from June 1996 to 2000

	June 1996	June 1997	June 1998	June 1999	June 2000
Japan	5.28	15.75	17.5	16.12	15.1
Europe	2.56	2.1	8	11.07	28.7
USA	1.63	1.5	1.4	1.3	8.02
Australia	0.89	0.62	1.3	1.79	2.82
Other	0.08	0.02	0.5	3.9	4.43

Table 3: Number of tourist arrivals by market for the period 1996 to 2000

	1996	1997	1998	1999	2000
USA	147,389	143,574	162,343	180,881	175,313
United Kingdom	136,485	148,182	155,290	168,271	166,964
Taiwan	55,090	45,857	40,375	40,228	37,618
Singapore	24,185	27,527	26,743	33,903	29,707
Netherlands	14,946	16,226	17,374	19,553	19,657
Korea	127,356	108,266	17,686	43,234	58,404
Japan	165,014	161,046	152,977	147,345	134,781
Hong Kong	33,308	30,392	28,913	29,694	25,947
Germany	49,921	46,698	46,481	46,243	44,668
Canada	28,937	29,682	31,016	33,296	28,262
Australia	435,862	433,010	501,892	523,428	497,090

Table 4: Total expenditure (NZ\$ million) by tourists from New Zealand's top five markets

	September 1999	December 1999	March 2000	June 2000	September 2000
Japan	566	612	674	718	745
Korea	59	86	135	138	149
UK	494	510	517	550	564
USA	558	512	596	646	665
Australia	759	788	803	829	866

Table 5: New Zealand's dairy exports by value (NZ\$ million) from 1993 to 2000

	1993	1994	1995	1996	1997	1998	1999	2000
Butter	796.51	834.04	725.94	860.38	917.51	1028.82	990.01	1003.72
Cheese	497.94	527.97	604.51	617.40	838.44	897.74	983.29	987.30
Wholemilk powder	930.26	971.01	905.12	942.46	1049.98	1123.75	1199.77	1269.55
Skim milk powder	393.17	439.47	459.14	491.59	623.17	571.79	569.07	590.76
Other dairy products	38.83	47.68	52.79	70.26	86.29	100.87	119.26	122.16
Caseins and caseinates	522.88	558.89	509.11	557.15	569.36	651.66	762.89	800.63

Table 11: New Zealand's meat exports by value (NZ\$ million) from 1993 to 2000

	1993	1994	1995	1996	1997	1998	1999	2000
Beef and veal	1418.66	1384.17	1160.82	1053.66	992.30	1174.61	1087.22	1400.39
Lamb	1208.87	1084.68	1043.85	1139.13	1302.11	1291.73	1343.19	1520.16
Mutton and hogget	180.12	166.02	152.81	197.86	200.78	194.67	160.54	169.79
Venison	129.78	123.53	138.13	143.24	136.78	136.94	138.04	156.93
Other meat products	150.09	156.59	167.11	174.27	142.63	137.46	144.84	173.06