

workingpaper

Statistics: A selection of available data associated with shared Māori goals

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1. Purpose

The purpose of this working paper is to explore a selection of data associated with shared Māori goals, to gain an understanding of what role social statistics might play in achieving these goals. Preliminary research on what these shared goals might be has been published in Working Paper 2009/03, *Identifying the Shared Goals of Six Māori Organisations* (SFI, 2009a). The broader purpose of the working paper is to assist the Sustainable Future Institute in progressing *Project 2058*.

The strategic aim of *Project 2058* is to promote integrated long-term thinking, leadership and capacity-building so that New Zealand can effectively seek and create opportunities, and explore and manage risks, over the next 50 years. In order to achieve this aim, the *Project 2058* team will work to:

1. Develop a detailed understanding of the current national planning landscape, and in particular the government's ability to deliver long-term strategic thinking;
2. Develop a good working relationship with all parties that are working for and thinking about the 'long-term view';
3. Recognise the goals of iwi and hapū, and acknowledge te Tiriti o Waitangi;
4. Assess key aspects of New Zealand's society, asset base and economy in order to understand how they may shape the country's long-term future, such as government-funded science, natural and human-generated resources, the state sector and infrastructure;
5. Develop a set of four scenarios to explore and map possible futures;
6. Identify and analyse both New Zealand's future strengths and weaknesses, and potential international opportunities and threats;
7. Develop and describe a desirable sustainable future in detail, and
8. Prepare a *Project 2058* National Sustainable Development Strategy. (SFI, 2009b: 3)

This working paper is designed to help progress the third point above: Recognise the goals of iwi and hapū, and acknowledge te Tiriti o Waitangi. The data selected below supports *Project 2058's* Report 7, *Exploring the Shared Goals of Māori: Working towards a National Sustainable Development Strategy* in that it aims to achieve Objective 3: 'To explore the extent to which existing measures align with any shared Māori goals' (SFI, in press [a]).

When scoping Report 7, *Exploring the Shared Goals of Māori: Working towards a National Sustainable Development Strategy*, it became clear that identifying shared goals was only the first step in the process, in that once agreed, shared goals also needed indicators of sufficient quality and breadth to enable stakeholders to evaluate performance. To do this, indicators therefore needed to be relevant, meaningful, timely and accessible. For the purposes of this working paper and to help link these findings to the shared goals discussed in other papers, the data contained below is grouped under three broad headings: environment, social and economic statistics.

Finally, although the purpose of this working paper is clear, there remain a number of limitations that may mislead the reader; these are discussed below.

2. Limitations and Boundaries

This working paper has been produced to complement Report 7, *Exploring the Shared Goals of Māori: Working towards a National Sustainable Development Strategy*. It is not a comprehensive analysis of data associated with shared Māori goals, but simply deals with a selection of data. In addition to the following statistics, Report 7 and other related reports and papers also contain a range of relevant and interesting data.

A comprehensive analysis of data associated with shared Māori goals would require the authors to take a view on the accuracy and usefulness of all data, the linkages between the data, and the extent to which relevant data was missing, in other words what relevant data was either not collected or was collected but not published. This challenge is recognised by Merata Kawharu, who has commented:

The importance of understanding the effects of particular events and processes for cultural and economic sustainability cannot be overstated, hence the maxim 'walking into the future facing the past'. It may be that some 'gaps', such as limited educational achievement, low employment and limited housing conditions are symptomatic of deeper causes. Perhaps these causes should be seen as the 'gaps', rather than the sorts of outcomes upon which policy analysts and planners tend to focus. (Kawharu, 2001: 7)

Statistics alone never tell the full story, hence all data needs to be understood within the context of who collected the data, from whom, and for what purpose, in order to make decisions that in turn tend to affect the very people, flora or fauna that generated the data in the first place. For all these reasons, the following statistics remain a selection of published data, collected and published here to support the discussion that occurs in Report 7.

Although complex linkages between the data clearly exist, it is grouped under three broad headings: environment, social, and economic statistics. Furthermore, the data is selected from published documents and websites to highlight areas of promise or draw attention to areas of concern. As such, it was selected because it was interesting, in that it was either unexpected, or it was expected but supported a well-recognised viewpoint or stance. In other words, uninteresting data was not included.

3. Environmental Statistics

When looking at Māori goals and statistics, it is important to consider that the health of Māori people is closely interrelated with the health of the environment around them. This relationship is described by Tainui iwi elder Pumi Taituha in terms of the relationship between the Waikato River and Tainui:

To us, Waikato River is a living ancestor. It is a part of us. Our river symbolises a tupuna, it is the name from which our tribe derives its identity and the issues that affect our river ultimately affect our tribe and its people. (Taituha, 2007)

This suggests that the collection and publishing of local environmental statistics is very important when assessing Māori goals. Huhana Smith stresses the impacts that fragmented ecosystems can have on the human condition, and observes that 'the restoration of fragmented ecological systems is interdependently related to the healing of a community and reconnection with their natural and cultural landscape' (Smith, 2007: vi). Smith goes on to say that it has been

‘well noted in scholarly text, that Māori tribal identity and the well-being of iwi, hapū and whānau was inextricably linked with the natural environment’ (ibid.: 6).

The following statistics provide a national perspective, which does not reflect the regional aspect of the goals of iwi, hapū and whānau. For this reason, a further sub-report was undertaken in order to understand the types of goals being progressed in local communities; see Report 7a, *Environmental Goals of Iwi and Hapū: Six case studies* (SFI, 2009c). What follows is a brief discussion on water quality, fish stocks, land use and biodiversity. A far more detailed analysis of all four resources takes place in Report 9, *The State of New Zealand’s Resources* (SFI, in press [b]).

3.1 Water Quality

According to the Ministry for the Environment, ‘evidence is building that [water] quality is declining in many water bodies’ in New Zealand (MfE, 2007: 263). The main source of pollution of rivers and lakes is nutrient run-off from multiple sources, including agricultural activities. Nutrients such as nitrogen and phosphorus, derived from fertilisers applied to farms, as well as faecal matter from farm animals, enter waterways and cause eutrophication. The effects can be seen in Figure 1, which shows increasing trophic levels from highland to lowland freshwater lakes. Urban non-point source run-off from, for example, urban developments also causes decreased freshwater quality. An overall median increase in nitrogen levels from 0.5% in 1989 to 1% in 2003, in monitored waterways in New Zealand, represents ‘a long-term trend towards nutrient enriched conditions that are likely to trigger undesirable changes to river ecosystems’ (MfE, 2007: 271).

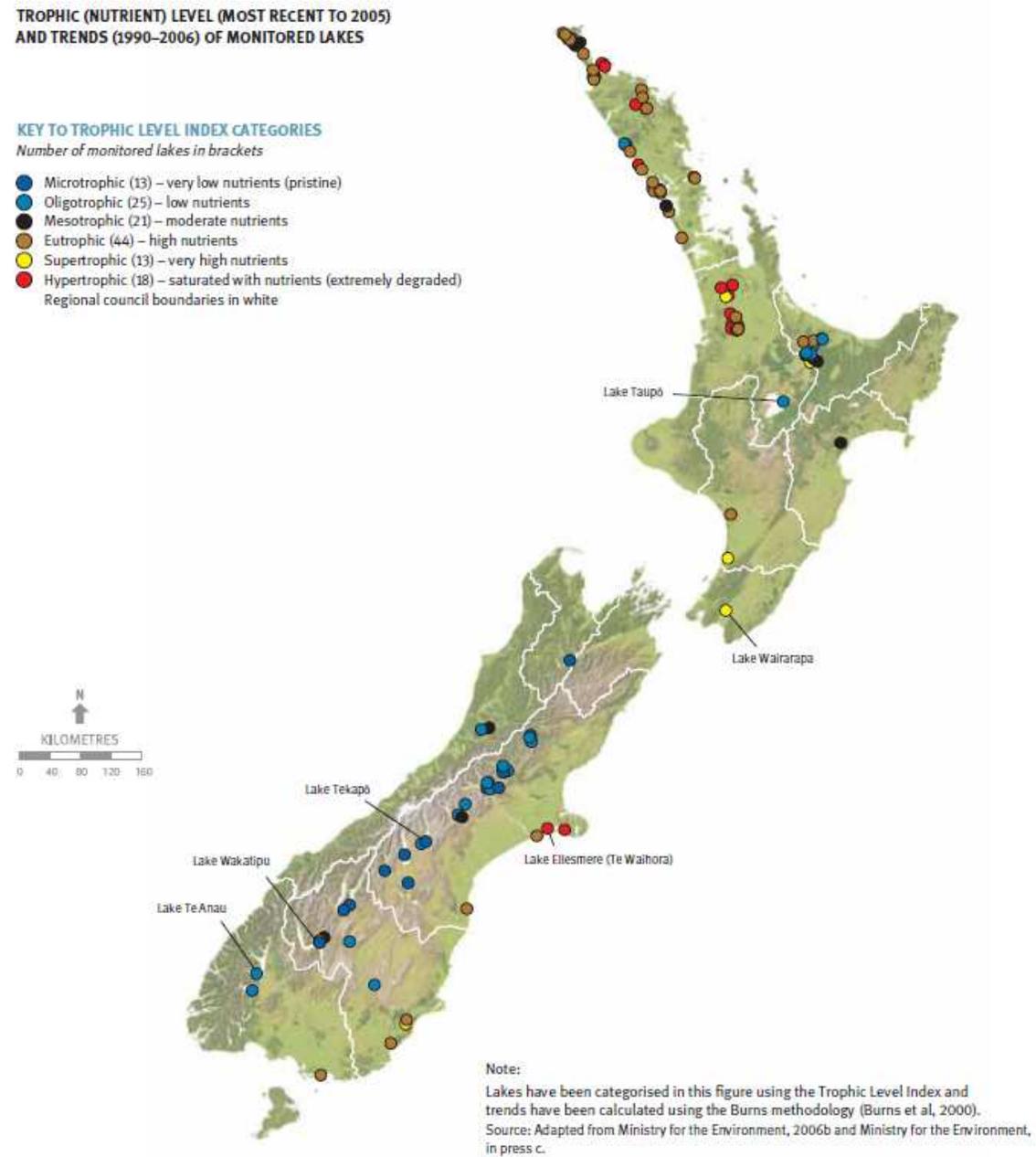
3.2 Fish Stocks

Many of New Zealand’s fish stocks are depleted or severely depleted due to overfishing, resulting in significant damage to the wider ecosystems. The New Zealand fishing industry is large scale and industrial, exporting 321,502 tonnes of a total catch of 441,000 tonnes in the 2007/08 fishing year (despite a total allowable commercial catch level set at 573,000 tonnes), and contributing \$3.8 billion to the country’s GDP (Ministry of Fisheries, 2008). This industrial scale is not without its costs. The UN estimates that 70% of the world’s fisheries are now exploited to their limits, overexploited or depleted (Forest & Bird, 2009: 1). While a recent Forest and Bird study of New Zealand’s 75 commercial fisheries found that this country’s approach is one of comprehensive management and is considered to be among the best internationally, ‘comparing ourselves to countries with no management or very poor fisheries management does not mean that we should be proud of our situation’ (ibid.: 2). The study found that of New Zealand’s fisheries:

- 29 (39%) are over-fished or there has been a substantial decline in stocks
- 49 (65%) cause habitat damage
- 45 (60%) kill significant numbers of seabirds
- 47 (63%) kill a significant number of marine mammals
- 55 (73%) catch too much non-target fish
- 51 (68%) cause adverse ecological effects ...
- 75 (100%) have no management plan. (ibid.: 6)

3. Environmental Statistics

Figure 1 Trophic Levels of New Zealand Lakes
Source: MfE, 2007: 280

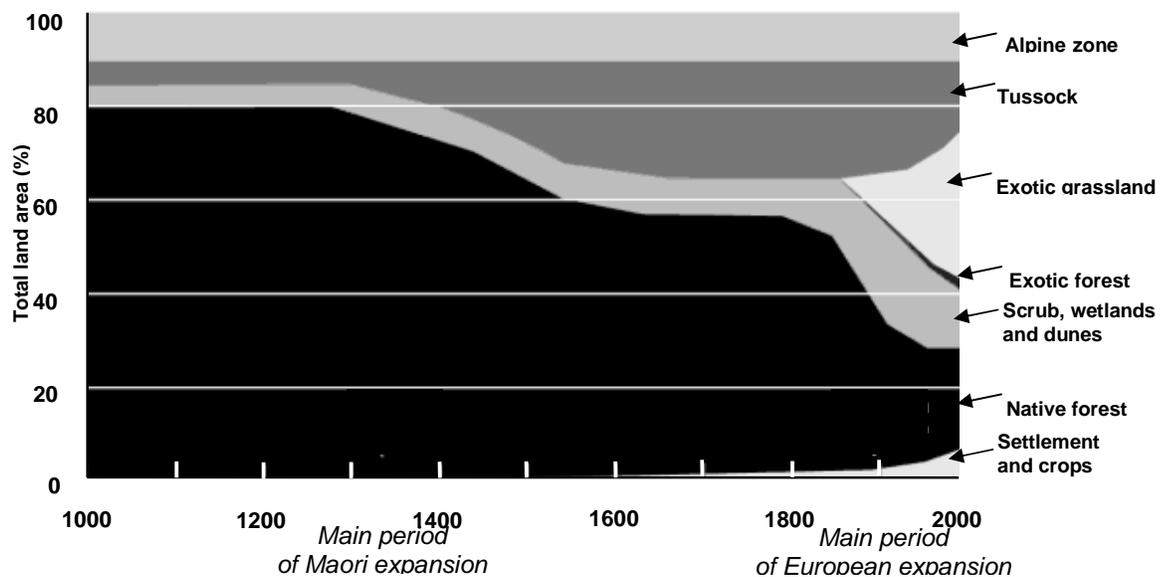


3.3 Land Use

Land-cover changes since the arrival of Māori have significantly altered the New Zealand landscape. Figure 2 shows that approximately 80% of New Zealand was covered in native forest prior to human settlement. Following deforestation by Māori, and subsequent accelerated deforestation following the arrival of European settlers, the remaining amount of native forest land cover in New Zealand is now closer to 24% (MfE, 2007: 216). Pasture covers just over 37%, making it New Zealand's largest human land use (ibid.: 213). The growth in exotic grassland land cover since the arrival of European settlers has replaced native forest cover and tussock, as have settlements/crops and exotic forests to a lesser extent.

Figure 2 The Recent History of New Zealand's Land Cover

Source: MfE, 1997: 28.



3.4 Biodiversity

New Zealand holds a significant stock of biodiversity, with over 80,000 species of plants, animals and fungi. However, since the arrival of humans, biodiversity has declined as a result of one of the highest species extinction rates in the world (MfE, 2007: 349). Primarily, this is due to loss of habitat through land clearance, fires and intensive use of natural resources, combined with the introduction of exotic pest species. Around 2500 land-based species are now classed as endangered (ibid.), a number that could grow as the impacts of climate change increase in the future.

4. Social Statistics

Understanding that disparities exist is often critical for actively gaining public support and often resolution. To quote Te Puni Kōkiri:

While Māori have realised gains across many indicators of social and economic wellbeing, achievement levels continue to be measured against, and lag behind, those of the wider New Zealand population, a clear signal that Māori social and economic potential has yet to be fully realised. (TPK, 2009a: 19)

4. Social Statistics

Te Puni Kōkiri goes on to state that to achieve enhanced levels of economic and social prosperity would require:

a state in which Māori realise an equitable quality of citizenship in accordance with their own aspirations, preferences and norms. (ibid.)

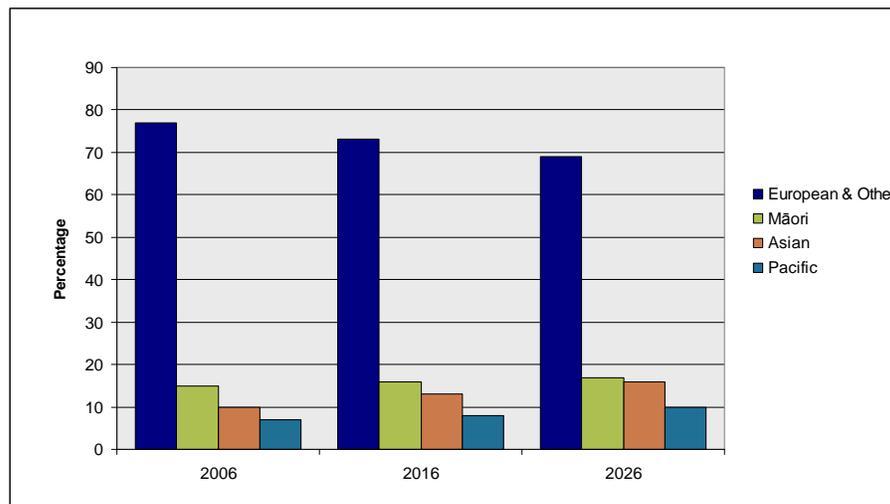
However, such a method can also be problematic. Comparing Māori social statistics with those of the rest of the New Zealand population implies that Māori should aspire to the cultural and social goals set by non-Māori, or further, that the goals of Māori should only be seen in terms of the goals of non-Māori New Zealanders. Social statistics is clearly a complex area, and one that is likely to continue to challenge New Zealanders in the future. What follows is a brief discussion on population, culture, education, employment, health, crime and discrimination.

4.1 Population

In the future, projections suggest that, although 'European and other' will continue to make up a significant majority of the population, New Zealand will have an increasingly culturally diverse society (see Figure 3). Looking back, in 1976 the Māori population was 356,574, which was 11.4% of the total New Zealand population (Statistics NZ, 2008a; Figure 4). In 2007 the Māori population was 632,900 (15.0% of the New Zealand population), and it is projected to reach 818,000 by 2026, an increase of 193,000 (1.4% per year) over the 2006 estimate of 624,000 (Statistics NZ, 2008b).¹ Extrapolated out, this means that from 2006 to 2058 we could see a reduction in the proportion of the population that is 'European and other' by 20%, with this decrease being taken up by Asian, Pacific people and Māori, in that order.

Figure 3 Ethnic Share of New Zealand Population (%)²

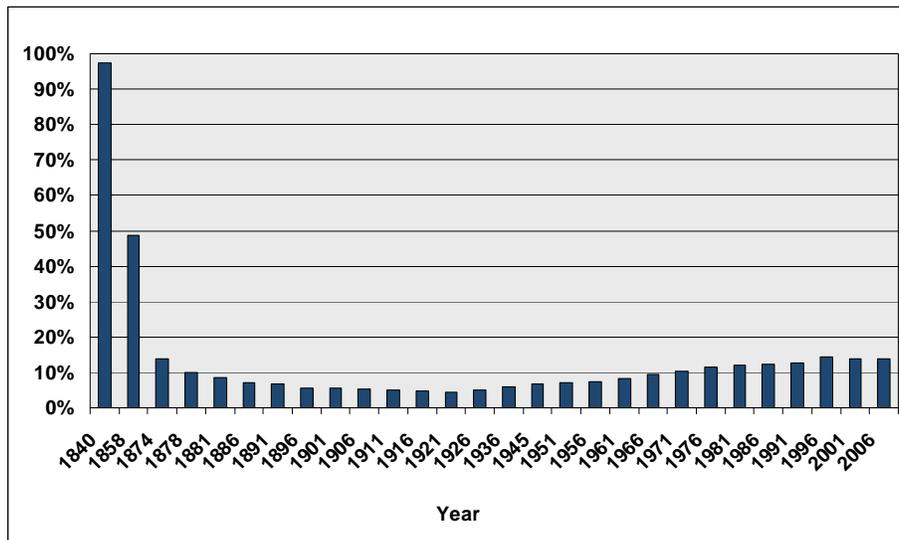
Source: Adapted from Statistics New Zealand, 2008b; projections from Series 6 of this dataset



¹ This is based on Series 6 data which assumes medium levels of fertility, migration, mortality and inter ethnic mobility (Statistics NZ, 2008b). All population projections used in this report are based on Series 6.

² The percentages of the four bars do not add up to 100%, as for these datasets it is possible for a New Zealander to identify with one or more ethnicity, and these figures do not take into account other ethnicities or New Zealanders who did not state an ethnicity.

Figure 4 Māori Population as a Percentage of Total Population 1840–2006
 Source: Belich, 1996: 178; Statistics NZ, 2008a: 16³



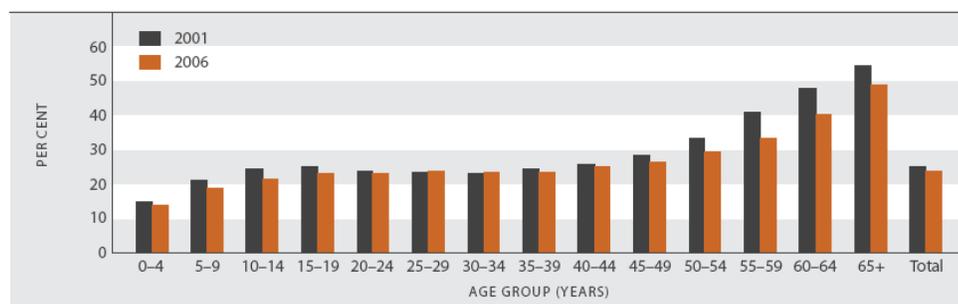
4.2 Culture

The expression of Māori culture through arts and other cultural activities is a unique aspect of New Zealand society, and as such is a significant feature of our national identity. The 2002 Statistics New Zealand Cultural Experiences Survey (CES) asked questions about New Zealanders’ experience of taonga tuku iho (Statistics NZ, 2003).

The survey found that overall 37% of New Zealand’s adult population had experienced one or more Māori cultural activities; this included 77% of all Māori adults, 34% of Pacific people, and just under one-third of Pākehā (ibid.: 11). The most popular activity was visiting a marae, with one in five adults having done this (ibid.: 12). In addition, adults under 45 were more likely than older people to have experienced at least one Māori cultural activity (ibid.: 11).

Māori language is important to Māori culture in that it contributes to cultural unification and identity. The percentage of Māori who indicated a level of proficiency in te reo to the point where they could hold a conversation about everyday affairs was very similar in 2006 (24%) and 2001 (25%) (Figure 5). Of the New Zealand population as a whole, 4% indicated proficiency in te reo in 2006, and of these, 84% were Māori (MSD, 2009: 84).

Figure 5 Proportion of Māori Speakers in the Māori Population, by Age, in 2001 and 2006.
 Source: MSD, 2009: 84



³ The graph has been adjusted to take into consideration the population estimates in 1840 (Belich, 1996: 178).

4.3 Education

In 2007, for student performance in OECD countries, New Zealand ranked 4th for reading and science and 7th for mathematics (OECD, 2009: 52). However, despite this successful overall performance, as can be seen in Figure 6, in 2002 New Zealand ranked 23rd in terms of educational inequality (UNCF, 2002: 9). This indicates that the issue is not with New Zealand’s overall achievement as a country; rather it is with the significant disparities that exist in our educational system.

Figure 6 Educational Inequality Rankings for OECD Countries 2002

Source: Adapted from UNCF, 2002: 9

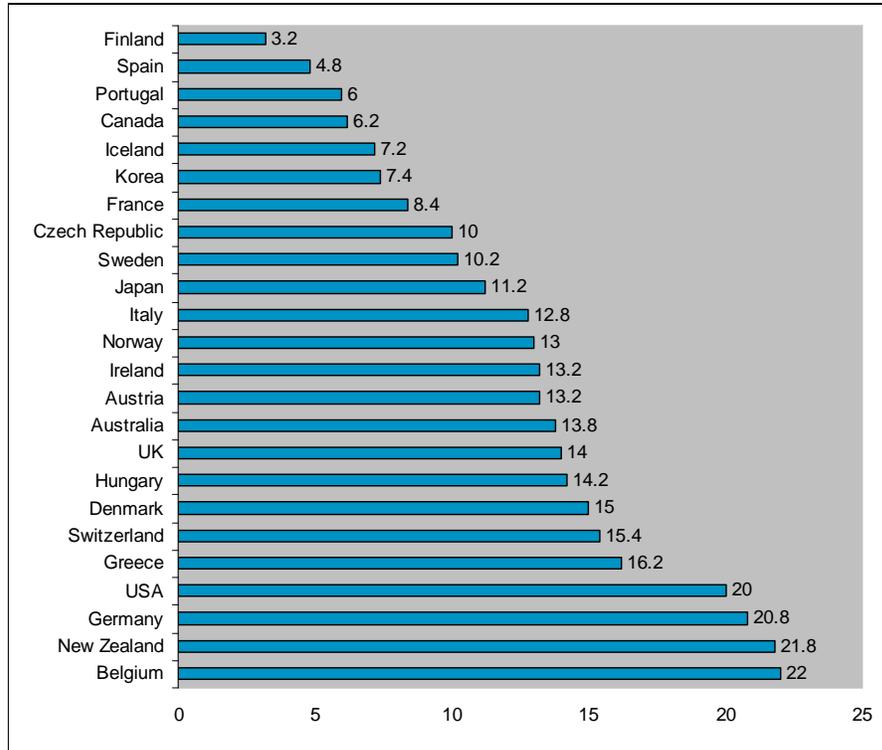


Figure 7 Percentage of Participating Year 11 Students Gaining NCEA Level 1 in 2008 by Ethnicity

Source: NZQA, 2009

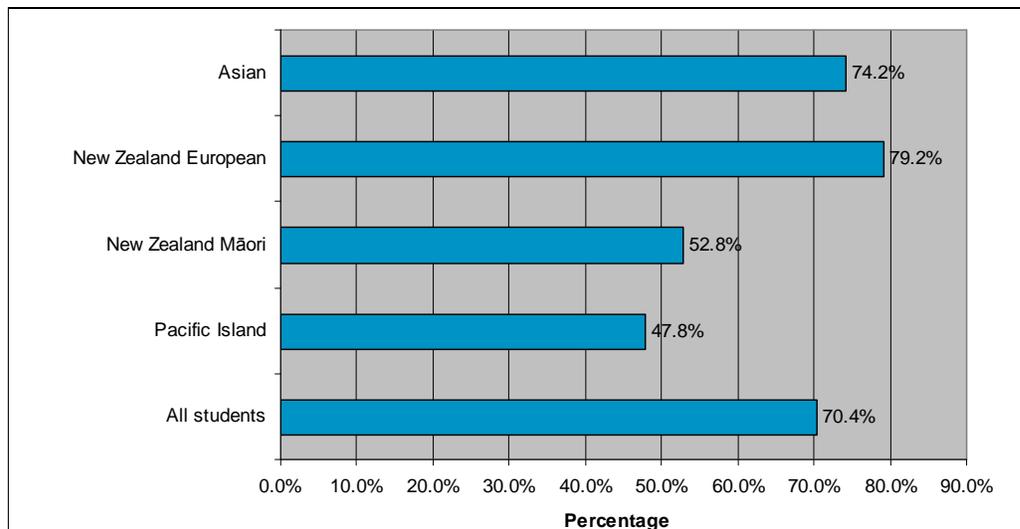


Figure 7 shows a snapshot of the current achievement across ethnicities for NCEA Level 1 in 2008. This shows that of Māori students who participated, 53% achieved the qualification, compared with 74% for Asian students, 79% for European students, and 48% Pacific students (NZQA, 2009). This is particularly topical when considered in conjunction with projections that suggest that 29% of children will be Māori and 18% Pacific people by 2050 (Statistics NZ, 2008c: 12).⁴ Taking a broader view of the issue, clear disparities are also evident when one compares all Māori educated to tertiary and upper secondary level with the total New Zealand population. Table 1 shows that the percentage of Māori educated to tertiary level in 2008 was 9.5%, compared with 21.2% for the total New Zealand population. In the same year, the percentage of Māori holding upper secondary qualifications was 63.7%, compared to 75.2% for the total New Zealand population (MSD, 2009: 41).

However, Table 1 shows that the situation is improving, with increases in the proportion of Māori with tertiary and upper secondary qualifications between 1996 and 2007. In 1996, 48.1% of Māori aged 25–64 held an upper secondary qualification; this had grown to 63.7% by 2008. During the same period, the proportion of Māori adults holding tertiary qualifications increased from 2.5% to 9.5%.

Table 1 Proportion (%) of the Population Aged 25–64 with Higher Qualifications by Ethnic Group, Selected Years, 1996–2008⁵

Source: MSD, 2009: 41

	European	Māori	Pacific	Other	Total
At least Upper Secondary					
1996	75.2	48.1	45.3	79.3	71.2
2001	78.7	59.3	65.8	85.1	76.2
2007	80.0	62.6	49.9	72.7	75.7
2008	79.5	63.7	49.2	72.5	75.2
Tertiary					
1996	10.8	2.4	1.9	27.4	10.3
2001	13.1	4.8	5.6	31.9	13.1
2007	21.5	9.2	8.4	39.3	21.4
2008	21.6	9.5	7.2	37.4	21.2

Figure 8 is a snapshot of the current enrolments in study for a Bachelor's degree. When compared with the percentages of the ethnic population, the levels of participation in tertiary education are not equal. Māori, who comprise 15% of the population, make up just 11.6% of those enrolled. Europeans, at 75.9% of the population, make up 69.2% of those enrolled, while Pacific people form 7.5% of the population but 6.3% of those enrolled. In contrast, Asian people, who comprise only 10.3% of the total New Zealand population, form 17.4% of those enrolled in a Bachelor's degree. The Asian group is the only one where the percentage of those in tertiary study is higher than the proportion of the population, which acts to reduce the percentages of the other groups. It should be noted, however, that ethnicity is a very complex variable and

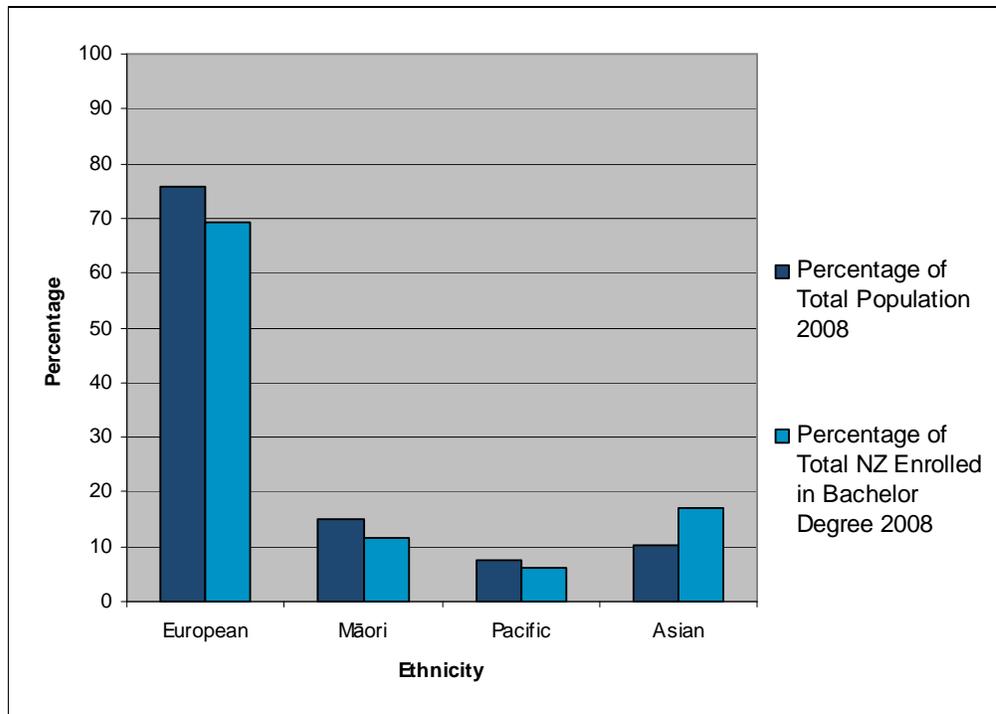
⁴ As it is possible to identify more than one ethnicity, these figures will include those who identify with both Māori and Pacific island ethnicity and therefore cannot be combined (Statistics NZ, 2008c: 2).

⁵ This table presents prioritised ethnicity data where multiple responses are allocated to one ethnicity. Where a person identifies with both Māori and Pacific island they are allocated to the Māori ethnic group (Personal communication, D. Brown, Statistics NZ, December 8, 2009).

4. Social Statistics

there are difficulties with comparing data between different datasets. This graph is thus provided for general observational purposes only.

Figure 8 Percentage of New Zealanders Enrolled in a Bachelor Degree by Ethnicity
Source: Education Counts, 2008; Statistics NZ, 2008b, 2008d



Note: The percentages in each of the two sets of bars do not add up to 100%, as for both datasets it is possible for a New Zealander to identify with one or more ethnicities, and these figures do not take into account other ethnicities or New Zealanders who did not state an ethnicity.⁶

4.4 Employment

Table 2 shows that the Māori unemployment rate reduced significantly between 1999 and 2008, from 14.8% to 7.9% (TPK, 2009b: 1). However, the 2008 figure of 7.9% was still significantly higher than the 4% for New Zealand's total population.

⁶ 'The overwhelming majority of New Zealand's population reports a single ethnicity (90 percent at the 2006 Census). About 9 percent report two ethnicities and 1 percent three or more. However, significant numbers of Māori, Pacific peoples and others who have historical and continuing high intermarriage rates provide multiple responses. For example, one half of the Māori population report two or more ethnic identities as do one third of Pacific peoples.' (Statistics NZ, 2009b: 15)

Table 2 Māori Labour Market Trends, September 1999–2008

Source: TPK, 2009b: 1.

September Quarter	Labour Force Participation Rate	Employment Rate	Unemployment Rate	Youth Unemployment Rate	Long-Term Unemployment Rate
1999	62.0	52.8	14.8	24.3	5.9
2000	62.8	53.9	14.1	31.4	4.6
2001	63.5	55.7	12.3	27.7	4.2
2002	65.9	58.1	11.9	22.5	3.6
2003	65.7	59.3	9.7	20.7	2.9
2004	63.7	58.4	8.3	20.9	1.6
2005	67.1	60.8	9.4	28.3	2.3
2006	66.4	61.3	7.6	22.4	1.5
2007	67.4	62.0	8.0	23.7	1.3
2008	67.4	62.1	7.9	19.7	1.3

4.5 Health

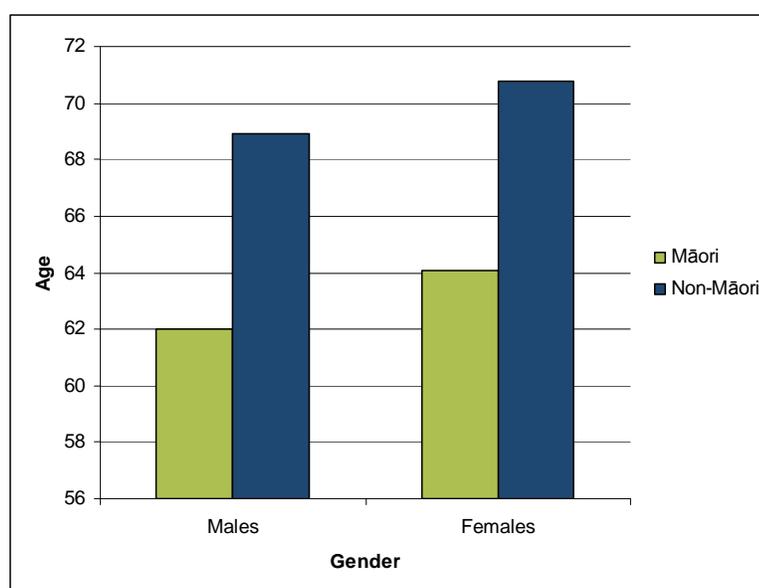
What follows is a collection of data on life expectancy, obesity and diabetes.

Life Expectancy

In 2006, Māori males had an independent life expectancy of 62.0 years, while the life expectancy of Māori females was 64.1 years.⁷ Despite a very rapid improvement in the figures for Māori in recent years, there are still large ethnic inequalities in health and life expectancy. In 2006, the gap in independent life expectancy at birth between Māori and non-Māori was 6.9 years for males and 6.7 years for females (Statistics NZ, 2008e: 19).

Figure 9 Independent Life Expectancy at Birth, Māori and non-Māori Population, by Sex, 2006

Source: Adapted from Statistics NZ, 2008e: 19.



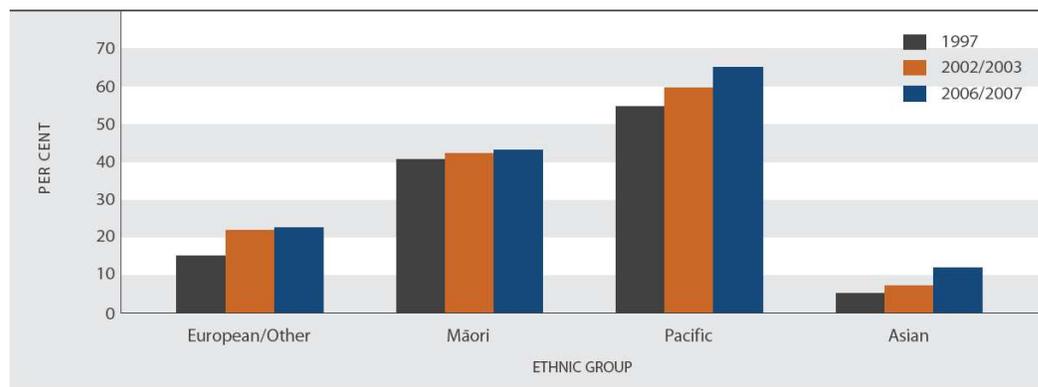
⁷ Independent life expectancy at birth is the number of years expected to be lived without functional limitation requiring assistance (MoH, 2009: 97).

Obesity and Diabetes

Obesity is a serious issue as it can lead to greater problems such as high blood pressure, strokes, various types of cancer, type 2 diabetes, kidney disease, and increased personal, social and employment difficulties (TPK, 2009c). In 2006–2007 43% of Māori over 15 years of age were obese, compared with 65% of Pacific people, 23% of European/other and 12% of Asian, meaning Māori men and women were 1.7 times more likely to be obese than the total population (MSD, 2009: 28). It is of concern that these ratios are also reflected in the statistics for children. Māori obesity statistics have shown no significant improvement between 1997 and 2007, indicating that there is still work to be done in this area (MSD, 2009: 29).

Figure 10 Age-standardised Prevalence of Obesity, Population Aged Over 15, by Ethnicity, 1997, 2002/03, 2006/07

Source: MSD, 2009: 28.



Source: Ministry of Health

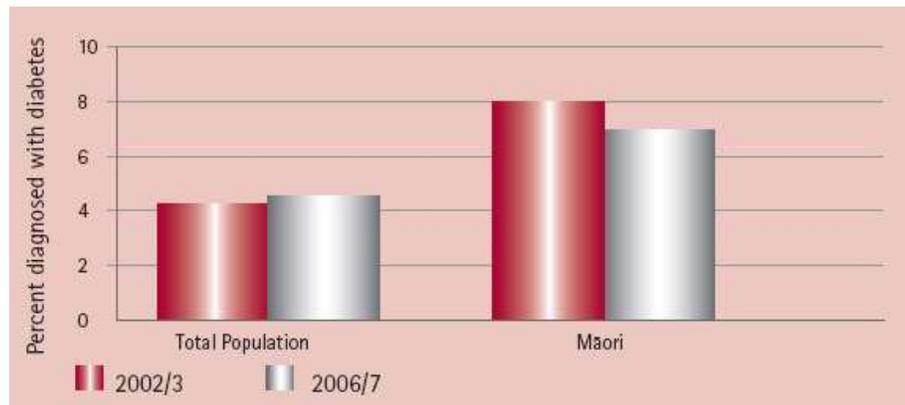
Note: People who reported more than one ethnic group are counted once in each group reported

As at 2007, 7% of the Māori population had been diagnosed with diabetes. This compares to 10% for Pacific people, 6.5% for Asian and 4.3% for European/other (MoH, 2008: 138). The Ministry of Health describes diabetes as an ‘important cause of morbidity and mortality in New Zealand’, which can lead to numerous other health issues such as ‘cardiovascular disease, blindness, kidney disease and vascular insufficiency’ (ibid.: 137). The 2007 figures show a slight decrease in the overall number of Māori adults who have ever been diagnosed with diabetes, from 8% in 2003 (TPK, 2009d). While the number of Māori females with diabetes had declined from 8.9% in 1996 to 5.9% in 2007, the Ministry of Health suggests this change was not statistically significant (MoH, 2008: 142).

‘Te Wai o Rona: Diabetes Prevention Strategy’ was a randomised trial of lifestyle change among Māori communities, which was intended to serve as a model for the rest of New Zealand under the National Diabetes Research Strategy. From 2004–2006 the Health Research Council and Ministry of Health funded Te Wai o Rona, however the strategy has now been put on hold due to lack of funding (Auckland University of Technology, 2008). This was an initiative by a partnership of iwi, researchers, Māori health providers and other health services, which tested 4269 Māori aged 28 and older from the central North Island and found that one in five had either diabetes or problems with processing glucose, indicating early-stage diabetes. Elaine Rush, a co-author of the study, said the findings showed that ‘community-wide prevention programmes are feasible among Māori and likely to result in significant reductions in the incidence of diabetes’ (ibid.).

Figure 11 Prevalence of Diabetes 2002/03 – 2006/07

Source: TPK, 2009d



In August 2007, the Government's Health Committee completed an inquiry into obesity and type 2 diabetes in New Zealand (House of Representatives, 2007). The findings indicated that 'these "epidemics" have the potential to overwhelm the health system if left unchecked' (ibid: 3). The report recommended a policy of 'comprehensive prevention' and made detailed recommendations to the Government in order to achieve the following objectives:

1. To create an environment in New Zealand that encourages and maintains healthy eating and physical activity patterns, especially among children
2. To develop and implement a coordinated national cross-sectoral response to the prevention and management of obesity and type 2 diabetes. (ibid.)

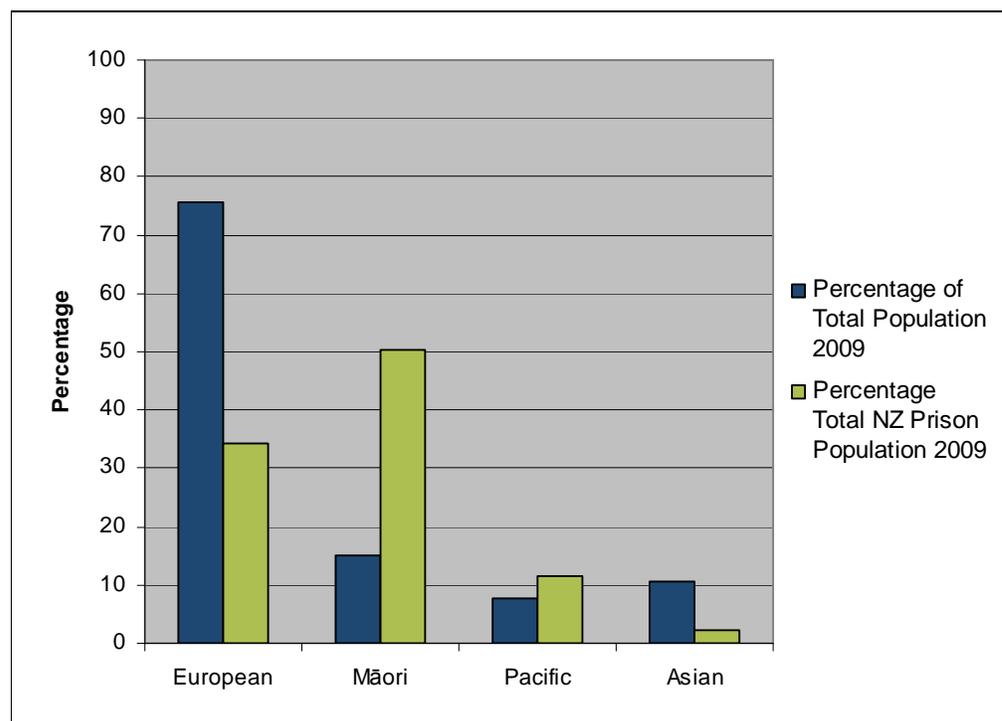
4.6 Crime

Māori are significantly over-represented in the criminal justice system relative to their numbers in the general population (Department of Corrections, 2007: 6). In 2007 Māori made up 42% of criminal apprehensions and 50% of all persons in prison, while Māori women made up 60% of all females in prison (ibid.).⁸ The Department of Corrections (2007: 9) acknowledge that, as most people in the criminal justice system are young, the youthfulness of the Māori population would account in part for their over representation. In 2004 Statistics New Zealand figures indicated that around 25% of all Māori were aged between 15-29 years, compared to just 20% of the non-Māori population. Figure 12 compares the Māori prison population (50%) with the total Māori population (15% of the total New Zealand population). The Māori prison population can be seen to be significantly high when compared to the situation for European (34% of the prison population compared to 76% of the total population) and Asian (2% of the prison population compared to 11% of the total population); in the latter cases the prison populations are proportionately much lower than their percentage of the total New Zealand population.

⁸ These figures refer to people identifying as Māori.

Figure 12 Percentage of New Zealand Prison Population by Ethnicity

Source: Statistics NZ, 2008b, 2009c; personal communication between Scott Gilmour and Candice Johanson (Department of Corrections), 20 September 2009



Note: The percentages in each of the two sets of bars do not add up to 100% as for both datasets it is possible for a New Zealander to identify with one or more ethnicities, and the figures do not take into account the 104 people who identified as 'other', or 'unknown' (personal communication between Scott Gilmour and Candice Johanson (Department of Corrections), 20 September 2009).⁹

As a footnote to these figures, it is instructive to compare the cost of keeping a person in prison for a year with funding education for a year at secondary school or university. Gilmour (2009) has estimated the relative operating costs per participant at approximately \$90,000 per annum for prison, \$13,000 for university and \$6000 for secondary school.

4.7 Discrimination

Evidence suggests that ethnic discrimination against Māori may exacerbate many of the social indicators mentioned above. In their analysis of a 2002/03 health survey of 12,500 New Zealanders, Harris et al. (2006) found that Māori were approximately ten times more likely to have experienced multiple types of racial discrimination than European/other (4.5% and 0.5% respectively), either physical or verbal, by a health professional, in work or when gaining housing. More recently, the 2008 *New Zealand General Social Survey* found that 16% of Māori has experienced any form of discrimination in the last 12 months. This compares to 7.9% of European, 14.1% of Pacific people and 23.2% of Asian (Statistics NZ, 2009e). A significant association between experience of discrimination and poor or fair self-rated health, lower physical functioning, lower mental health, smoking, and cardiovascular disease was found in the study.

⁹ See footnote 2.

Similarly, crime statistics may also be affected by discrimination towards Māori. A report by the Department of Corrections (2007) attempted to shed light on the reasons for the notably high representation of Māori in the criminal justice system. During a literature review, it was found that Māori were more likely to be apprehended, and more likely to be severely punished, than non-Māori. Reasons for this were chiefly put down to social and economic disadvantage, but the report also notes that apprehension rates do not simply reflect actual offending behaviour. Instead, some support was found:

for the notion that the interactions between police and Māori on the 'front-line', as well as social interactions within families or communities, led to an increased probability of Māori offenders being subject to criminal apprehension, independently of rates of actual offending. (ibid.: 28)

Despite an acknowledgement of this apparent bias in the system, the report concluded that the magnitude of this effect was unclear (ibid.).

5. Economic Statistics

As Working Paper 2009/03, *Identifying the Shared Goals of Six Māori Organisations*, indicates, economic development is often stated as an important goal among iwi and hapū (SFI, 2009a: 14). The effective management of a growing commercial asset base will be vital in allowing iwi and hapū to achieve their goals, and for this reason such Māori assets are explored in Tables 3 and 4 below.

As Table 3 shows, between 2001 and 2006 total Māori commercial assets increased 83% to \$16.45 billion. Of particular significance is the increase in Māori trustee land assets, which grew 310%, an increase of \$548 million.

Table 4 shows that the investment base is skewed to primary and tertiary investment. It will therefore be interesting to watch how innovation may lead to investment in the secondary sector in the future. With 1341 Treaty claims still pending registration,¹⁰ the size of the asset base is likely to increase significantly. While many iwi have effective management boards, if the growth of commercial assets to date is anything to go by, additional managerial capability will be necessary.

¹⁰ As at September 2009, 2125 claims were registered with the Waitangi Tribunal, with an additional 1341 Treaty claims pending registration (Waitangi Tribunal, 2009).

6. New Developments

Table 3 Māori Commercial Information for 2001 and 2005/06

Source: TPK, 2008: 1

	Total Assets (\$ m)		Increase in Assets 2001–2005/06	
	2001	2005/06	\$ m	%
Māori Trusts	1,552	3,177	1,625	105
Māori Trustee Land Assets	177	725	548	310
Iwi Treaty Settlements	86*	188*	102	119
Māori Trust Boards	145	355	210	145
Māori Businesses	5,708	10,460	4,752	83
Other	1,354	1,545	191	14
Total Assets	8,992	16,450	7,458	83

Note: Excludes \$170 million each for Waikato-Tainui Raupatu settled in 1994/95, Ngāi Tahu settled in 1996/97, and Māori Fisheries Settlement settled in 1992/93. These are incorporated in the net assets under Other.

Table 4 Māori Assets and Capital Investments 2005/06

Source: TPK, 2008: 2

	Primary \$ m	Secondary \$ m	Tertiary \$ m	Total Assets \$ m
Māori Trusts	3,177			3,177
Māori Trustee Land Assets	725			725
Iwi Treaty Settlements			188	188
Māori Trust Boards	355			355
Māori Businesses	3,688	1,271	5,501	10,460
Other	568		977	1,545
Total Assets	8,513	1,271	6,666	16,450
<i>Māori Proportions 2005/06</i>	52%	8%	40%	100%
<i>Total New Zealand Proportions 2005/06</i>	10%	9%	81%	100%

6. New Developments

It is critical to have indicators that are not only accurate, timely, meaningful and accessible, but those that are comprehensive. For this reason we strongly support the need for a comprehensive set of indicators to be developed by Māori, for Māori.

A report covering such indicators could be prepared alongside or even included as a subset of Statistics New Zealand's recent publication, *Measuring New Zealand's Progress Using a Sustainable Development Approach*. This report uses selected indicators to ascertain whether current needs are being met, and how the current use and distribution of New Zealand's resources will allow our future needs to be met (Statistics NZ, 2009e).

Interestingly, Statistics New Zealand is currently developing an initiative which seeks to address this issue – a survey of the Māori population. This initiative is scheduled to take place in 2011, shortly after the 2011 population census, with the first results being released in 2012. The focus of the survey will be on measuring the well-being of the Māori population, and groups within it, with a view to addressing a number of key social and cultural information needs (Statistics NZ, 2009f: 4). There will be two key themes: ‘Māori culture and well-being outcomes’ and ‘General social outcomes and well-being’ (ibid.). These two themes will cover many of the social issues that we have addressed in this working paper (Statistics NZ, 2009f: 9–20). One of the key objectives of the Māori Social Survey is:

to enable the analysis of the interrelationship of outcomes across domains, including the exploration of well-being within the Māori population, and how Māori well-being may or may not relate to cultural identity. (Statistics NZ, 2009f: 21)

Rather than attempting to define Māori-specific well-being or direct Māori social policy, Statistics New Zealand aims to make information available that will feed into research on Māori development and enable informed decisions to be made (Statistics NZ, 2009f: 21).

7. Conclusion

The data selected for this report was chosen because it either highlighted areas of promise or drew attention to areas of concern. The areas that show promise include the economic data and some aspects of social data, such as employment and health. In contrast, areas of concern centre on the environmental statistics (such as water quality) and the social statistics (such as education and crime).

The statistics discussed above indicate that although New Zealanders have been working hard together to make positive change, the length of the time lag between an injection of economic wealth and improvements to environmental and social well-being remains unclear. Furthermore, although the economic gains may initially appear significant, the net effect may actually be undermined by the sheer size and nature of the environmental and social issues over time.

Deciding whether the data above is of sufficient quality to shape decisions in the future not only requires a deep understanding of the goals held by Māori but also confidence that linkages between these goals and the data do exist, and assurance that the final data is relevant, meaningful, timely and accessible. This is a worthy challenge for those interested in optimising New Zealand’s long-term future, in that an informed public is another step closer to a sustainable New Zealand.

This challenge is further discussed in Report 7, *Exploring the Shared Goals of Māori: Working towards a National Sustainable Development Strategy* (SFI, in press [a]).

Glossary

Note: We have primarily used the online version of the *Te Aka Māori-English, English-Māori Dictionary and Index* to source these definitions (Moorfield, 2009). Where this was not possible we have used alternative sources, which are referenced within the glossary.

Glossary	
hapū	kinship group, clan, tribe, subtribe – section of a large kinship group
iwi	extended kinship group, tribe, nation, people, race – often refers to a large group of people descended from a common ancestor
kaupapa	topic, basis; guiding principles (MAI Review, n.d.)
Māori	aboriginal inhabitant of New Zealand
marae	courtyard – the open area in front of the wharenuī, where formal greetings and discussions take place. Often also used to include the complex of buildings around the marae itself
mauri	life force (Kawharu, 2002: 399)
tangata whenua	local people, hosts, indigenous people of the land – people born of the whenua, i.e. of the placenta and of the land where the people's ancestors have lived and where their placenta are buried
taonga tuku iho	gift of the ancestors, precious heritage (Mead, 2003: 367)
Te Puni Kōkiri	Ministry of Māori Development
te reo Māori	the Māori language
te Tiriti o Waitangi	the Māori version of the Treaty of Waitangi

References

- Auckland University of Technology (2008). *Findings shed new light on ways preventing diabetes in Māori*. Retrieved November 17, 2009 from <http://www.aut.ac.nz/corp/newsrelease/?628>
- Belich, J. (1996). *Making peoples: A history of New Zealanders*. Auckland: Penguin.
- Department of Corrections (2007). *Over-representation of Māori in the criminal justice system: An exploratory report*. Wellington: Department of Corrections. Retrieved June 24, 2009 from <http://www.corrections.govt.nz/research/over-representation-of-maori-in-the-criminal-justice-system.html>
- Education Counts (2008). *Provider based enrolments: Domestic students enrolled by ethnic group, age group, gender and qualification level 2008*. Ministry of Education: Wellington. Retrieved November 20, 2009 from http://www.educationcounts.govt.nz/statistics/tertiary_education/participation
- Forest & Bird (2009). *Best fish guide 2009–2010: How sustainable is New Zealand seafood? (Ecological assessments)*. Wellington: Royal Forest and Bird Protection Society of New Zealand. Retrieved November 26, 2009 from [http://www.forestandbird.org.nz/files/file/BFG%202009-2010_Ecological%20Assessments\(1\).pdf](http://www.forestandbird.org.nz/files/file/BFG%202009-2010_Ecological%20Assessments(1).pdf)
- Gilmour, S. (2009). Presentation at TEDx , Auckland, 1 October 2009.
- Harris, R., Tobias, M., Jeffreys, M., Waldegrave, K., Karlsen, S., & Nazroo, J. (2006). Racism and health: The relationship between experience of racial discrimination and health in New Zealand. *Social Science & Medicine*, 63(6), 1428–1441.
- House of Representatives (2007). *Inquiry into obesity and type 2 diabetes in New Zealand: Report of the Health Committee*. Retrieved November 17, 2009 from http://www.parliament.nz/en-NZ/PB/SC/Documents/Reports/d/8/c/48DBSCH_SCR3868_1-Inquiry-into-Obesity-and-Type-Two-Diabetes-in-New.htm
- Kawharu, M. (2001). Local Māori development and government policies. *Social Policy Journal of New Zealand*, 16, 7. Retrieved July 14, 2009 from <http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj16/16-pages1-16.pdf>
- Kawharu, M. (2002). *Whenua: Managing our resources*. Auckland: Reed.
- MAI Review (n.d.). Glossary of Māori words and terms. Retrieved July 13, 2009 from <http://www.review.mai.ac.nz/info/glossary.php>
- Mead, H. M. (2003). *Tikanga Māori: Living by Māori values*. Wellington: Huia.
- Ministry for the Environment (MfE) (1997). *The state of New Zealand's environment 1997*. Wellington: Ministry for the Environment. Retrieved April 6, 2009 from <http://www.mfe.govt.nz/publications/ser/ser1997/html/figures/figure8.3.html>
- Ministry for the Environment (MfE) (2007). *Environment New Zealand*. Wellington: Ministry for the Environment. Retrieved June 25, 2009 from <http://www.mfe.govt.nz/publications/ser/enz07-dec07/environment-nz07-dec07.pdf>
- Ministry of Fisheries (2008). *New Zealand fisheries at a glance*. Wellington: Ministry of Fisheries. Retrieved November 26, 2009 from <http://www.fish.govt.nz/en-nz/Fisheries+at+a+glance/default.htm>
- Ministry of Health (MoH) (2008). *A portrait of health: Key results of the 2006/07 New Zealand Health Survey*. Wellington: Ministry of Health. Retrieved November 17, 2009 from <http://www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health>

References

- Ministry of Health (MoH) (2009). *Annual report for the year ended 30 June 2009*. Wellington: Ministry of Health. Retrieved November 17, 2009 from [http://www.moh.govt.nz/moh.nsf/pagesmh/9640/\\$File/annual-report08-09-oct15-v2.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/9640/$File/annual-report08-09-oct15-v2.pdf)
- Ministry of Social Development (MSD) (2009). *The social report: Te purongo oranga tangata 2009*. Wellington: Ministry of Social Development. Retrieved November 24, 2009 from <http://www.socialreport.msd.govt.nz/index.html>
- Moorfield, J. C. (2009). *Te Aka Māori-English, English-Māori dictionary and index*. Retrieved November 10, 2009 from <http://www.Māoridictionary.co.nz/>
- New Zealand Qualifications Authority (NZQA) (2009). *NCEA and other NQF qualifications: Participation based (by ethnicity)*. Retrieved November 20, 2009 from <http://www.nzqa.govt.nz/qualifications/ssq/statistics/provider-selected-crystalreport.do>
- Organisation for Economic Co-operation and Development (OECD) (2009). *OECD in figures 2009*. OECD Observer 2009/Supplement 1. Retrieved November 20, 2009 from http://www.oecd.org/document/47/0,3343,en_2649_34489_43896303_1_1_1_1,00.html
- Salmond, A. (2003). *Presentation to Knowledge Wave 2003 – the Leadership Forum*. Retrieved November 20, 2009 from <http://www.knowledgewave.org.nz/index.php?pg=speeches>
- Smith, S. M. (2007). *Hei whenua ora*. Doctoral thesis, Massey University, Palmerston North, New Zealand.
- Statistics NZ (2003). *A measure of culture: Cultural experiences and cultural spending in New Zealand*. Wellington: Statistics New Zealand. Retrieved June 30, 2009 from <http://www.stats.govt.nz/~media/Statistics/Publications/Analytical-reports/measure-of-culture/measure-of-culture.ashx>
- Statistics NZ (2008a). *Demographic trends report 2007*. Wellington: Statistics New Zealand. Retrieved June 30, 2009 from <http://www.stats.govt.nz/~media/Statistics/Publications/population/demographic-trends-2007/excel-tables/dt-07-Amended-table1.ashx>
- Statistics NZ (2008b). *National ethnic population projections: 2006 (base)–2026 (excel)*. Wellington: Statistics New Zealand. Retrieved November 18, 2009 from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/nationalethnicpopulationprojections_hotp06-26.aspx
- Statistics NZ (2008c). *National ethnic population projections: 2006 (base)–2026 (pdf)*. Wellington: Statistics New Zealand. Retrieved November 18, 2009 from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/nationalethnicpopulationprojections_hotp06-26.aspx
- Statistics NZ (2008d). *Māori population estimates*. Retrieved September 5, 2009 from http://www.stats.govt.nz/methods_and_services/access-data/tables/maori-population-estimates.aspx
- Statistics NZ (2008e). *Health expectancy: Toward Tier 1 official statistic status*. Wellington: Statistics New Zealand. Retrieved November 11, 2009 from <http://www.stats.govt.nz/reports/people/health-expectancy-nov08.aspx>
- Statistics NZ (2009a). *The differences within, diversity in age structure between and within ethnic groups*. Wellington: Statistics New Zealand. Retrieved December 8, 2009 from <http://www.stats.govt.nz/reports/analytical-reports/review-measurement-of-ethnicity/papers.aspx>
- Statistics NZ (2009b). *Final report of a review of the Official Ethnicity Statistical Standard 2009*. Wellington: Statistics New Zealand. Retrieved December 8, 2009 from <http://www.stats.govt.nz/reports/analytical-reports/review-measurement-of-ethnicity/papers.aspx>

- Statistics NZ (2009c). *National population projections: 2009 (base)–2061*. Wellington: Statistics New Zealand. Retrieved December 8, 2009 from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalPopulationProjections_HOTP09base-61.aspx
- Statistics NZ (2009d). *New Zealand General Social Survey: 2008*. Wellington: Statistics New Zealand. Retrieved December 11, 2009 from http://www.stats.govt.nz/browse_for_stats/people_and_communities/households/nzgss_hotp2008.aspx
- Statistics NZ (2009e). *Measuring progress using a sustainable development approach*. Wellington: Statistics New Zealand. Retrieved November 16, 2009 from <http://www.stats.govt.nz/~media/Statistics/Publications/National-accounts/sustainable-development/measuringnzprogress.ashx>
- Statistics NZ (2009f). *He Kohinga Whakaaro: Māori Social Survey discussion document*. Wellington: Statistics New Zealand. Retrieved December 12, 2009 from <http://www.statisphere.govt.nz/sitecore/content/statistics/Home/reports/Papers/Māori-social-survey-discussion-paper.aspx>
- Sustainable Future Institute (SFI) (2009a). *Identifying the shared goals of six Māori organisations*. Working paper 2009/03. Wellington: Sustainable Future Institute. Retrieved November 19, 2009 from <http://sustainablefuture.info>
- Sustainable Future Institute (SFI) (2009b). *Project 2058 methodology: Version 3*. Wellington: Sustainable Future Institute. Retrieved November 1, 2009 from <http://sustainablefuture.info>
- Sustainable Future Institute (SFI) (2009c). *Environmental goals of iwi and hapū: Six case studies*. Report 7a. Wellington: Sustainable Future Institute. Retrieved December 19, 2009 from <http://sustainablefuture.info>
- Sustainable Future Institute (SFI) (in press [a]). *Exploring the shared goals of Māori: Working towards a National Sustainable Development Strategy*. Report 7. Wellington: Sustainable Future Institute.
- Sustainable Future Institute (SFI) (in press [b]). *The state of New Zealand's resources*. Report 10. Wellington: Sustainable Future Institute.
- Taituha, P. (2007.). *Basis of the claim*. Retrieved June 25, 2009 from <http://www.tainui.co.nz/riverclaim/basisofclaim.htm>
- Te Puni Kōkiri (TPK) (2008). *Te Pūtaki Rawā a Ngāi Māori. The Māori asset base*. Wellington: Te Puni Kōkiri. Retrieved September 14, 2009 from <http://www.tpk.govt.nz/en/in-print/our-publications/fact-sheets/Māoriassetbase/download/tpk-Māoriassetbase-2008-en.pdf>
- Te Puni Kōkiri (TPK) (2009a). *Statement of intent 2009–2012*. Wellington: Te Puni Kōkiri. Retrieved June 26, 2009 from <http://huitaumata.Māori.nz/en/in-print/our-publications/corporate-documents/statement-of-intent-2009-12/download/tpk-soi-en-2009.pdf>
- Te Puni Kōkiri (TPK) (2009b). *Māori employment*. Wellington: Te Puni Kōkiri. Retrieved June 25, 2009 from <http://www.tpk.govt.nz/en/in-print/our-publications/fact-sheets/Māori-employment/download/tpk-Māoriemployment-2009-en.pdf>
- Te Puni Kōkiri (TPK) (2009c). *Māori health: Obesity*. Retrieved November 17, 2009 from <http://www.tpk.govt.nz/en/in-print/our-publications/fact-sheets/Māori-health/page/5/>
- Te Puni Kōkiri (TPK) (2009d). *Māori health: Diabetes*. Retrieved November 17, 2009 from <http://www.tpk.govt.nz/en/in-print/our-publications/fact-sheets/Māori-health/page/6/>
- United Nations Children's Fund (UNCF) (2002). *A league table of educational disadvantage in rich nations*. Innocenti report card, issue 4, November 2002. Retrieved November 20, 2009 from <http://www.unicef-irc.org/publications/pdf/repcard4e.pdf>
- Waitangi Tribunal (2009) *Waitangi Tribunal progresses historical claims*. Retrieved September 11, 2009 from <http://www.scoop.co.nz/stories/PO0909/S00082.htm>