



# **WAIKATO REGIONAL COMMUNITY OUTCOMES PROGRESS REPORT**

## **DATA ANALYSIS REPORT UPDATE 2010**

**Choosing Futures Waikato and MARCO  
(Monitoring and Reporting Community Outcomes)**

**June 2010**

**Choosing Futures**  
Whiriwhiria Te Waa Heke



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## ACKNOWLEDGEMENTS

Background acknowledgements are contained in an earlier 2007 report. MARCO's motivation for updating the report annually is to ensure the most recent data is available to territorial authorities and the regional council. Much of the contents of the 2007, 2008 and 2009 reports have been retained, with changes resulting only from more recent data. Since the 2009 update, the regional and local data has become increasingly accessible to planners through MARCO's web-based data discovery tool (refer [www.choosingfutures.co.nz/MARCO-indicators](http://www.choosingfutures.co.nz/MARCO-indicators)). Feedback on this Progress Report Update was provided by team members of MARCO and staff from Environment Waikato. Funding for this report came from Environment Waikato's MARCO programme, supporting the multi-agency Choosing Futures Waikato partnership.

## DISCLAIMER

Care has been taken in the production of this report to ensure its contents are as accurate as possible. However, APR Consultants takes no responsibility for any incorrect information or decisions by any persons based on the information herein.

## FURTHER INFORMATION

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## EXECUTIVE SUMMARY

### *Introduction*

The purpose of this Community Outcomes Progress Report is to help inform and guide the setting of priorities by key decision-makers in the Waikato Region, to promote better co-ordination and application of community resources. The report identifies current states and historical trends for a carefully selected set of regional indicators. Plans are under way to fill remaining data gaps. The report updates information from previous annual update reports. Differences between the 2010 and 2009 reports are summarised in Appendix One. Of the 75 indicators in the monitoring set, 22 were updated as part of this 2010 report.

Local and iwi community outcomes were also identified during 2004/05 by councils and iwi authorities throughout the Waikato Region. Monitoring progress toward local community outcomes is not addressed by this report however specific sections such as the Appendices and supplementary online data should assist monitoring at the local level. Iwi/Māori indicators are being developed by Environment Waikato in collaboration with iwi groups throughout the Region.

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### *Key results*

Highlights identified from the 2010 data update include:

- Until recently, most economic indicators were improving steadily over the long-term. However, unemployment has risen since late 2006 and there has been a decline in the rate of building consents issued since mid 2007. The number of visitor nights for the Region also dropped during 2008 but appears to have subsequently recovered. As at December 2009, annual average economic growth was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level.
- A 2008 survey by Environment Waikato using the 'New Environmental Paradigm Scale' (NEP) showed that 16% of people in the Region had pro-ecological values. This was lower than the 2004 survey results when 19% had pro-ecological values and significantly lower than 2000 when 36% had pro-ecological values.
- According to results from the national Youth'07 Survey, 57% of secondary school students in New Zealand reported that they get enough time with at least one parent most of the time. This was a smaller proportion than in 2001 (62%). Similarly, results for the Waikato Region were approximately 56% in 2007 compared to 62% in 2001. The decline has been particularly notable from the perspective of female young people.
- On a positive note, there were 484 buildings and places listed on the Historic Places Trust Register in Waikato Region territorial authority areas as at April 2010, compared with 474 in April 2009 (excluding wāhi tapu sites). The main difference is an increase in Category II historic places, including Lake House in Hamilton and the Water Tower in Cambridge.

## 1. Sustainable Environment

The Waikato Region generally has a clean and green natural environment, and people are doing more today than they were ten years ago to protect the environment for the future. However there is still room for improvement in terms of energy conservation to help address climate change, urban air quality to improve people's health, and river water quality for both ecological health and recreational purposes (particularly in the Hauraki area and lower Waikato River catchment). Farming has continued to intensify over the past few decades, resulting in increased levels of phosphorus and nitrogen flowing into the Waikato River and other rivers and streams. Of some concern, a 2008 survey by Environment Waikato using the 'New Environmental Paradigm Scale' (NEP) showed that 16% of people in the Region had pro-ecological values. This was lower than in 2004 when 19% had pro-ecological values, and significantly lower than in 2000 when 36% had pro-ecological values.

## 2. Quality of Life

Waikato regional communities have an increasing life expectancy, growth in early childhood education rates and reducing levels of household crowding. The Region is also making advances in areas where it is behind the national average, including the number of school leavers with formal qualifications and educational attainment of the adult population. The proportion of school leavers in the Waikato Region with no formal qualification has apparently fallen dramatically over the past few years at both the regional and national level. According to Ministry of Education statistics, in 2008 only 6.7% of school leavers had little or no formal attainment under the NCEA framework compared to 19% in 2002. However, aspects of quality of life that require attention include declining levels of home ownership between 1991 and 2006, increasing rental costs as a proportion of household income over a similar period, and a recent decline in the perception of Waikato young people (girls in particular) that they get enough time with at least one parent most of the time.

## 3. Sustainable Economy

Over the long term, economic growth has been generally improving in the Waikato Region. Until recently, most economic indicators were improving steadily. However, unemployment has risen since late 2006 and there has been a decline in the rate of building consents issued since mid 2007. The number of visitor nights for the Region also dropped during 2008 but appears to have subsequently recovered. Prospects for the Region's research and innovation sector have been mixed. Tertiary student enrolment numbers declined between 2005 and 2008. Research income for the University of Waikato increased by around more than 25% in real terms over the period 2002 to 2007 but subsequently fell in 2008.

## 4. Culture and Identity

There is relatively little information available for monitoring cultural wellbeing and strength of identity in the Region, but future data collection should help fill this gap. There are some positive indicators: for example the number of Māori language speakers has been steadily increasing, there are signs that more people are employed in the cultural sector, councils are spending more on cultural activities and events, and an increasing number of buildings and places in the Waikato Region are listed on the Historic Places Trust Register. The recently passed Waikato River Settlement Act 2010 should strengthen the monitoring and reporting of cultural data and indicators.

## 5. Participation and Equity

There is also relatively little information available for monitoring participation and equity in the Region. A positive sign is that the Waikato Region has a relatively high level of representation by Māori and women in local authorities. Of possible concern is that the voter turnout rate has been declining in the Region, as it has been throughout New Zealand over much of the past two decades. For almost all local authorities in New Zealand and the Waikato Region, voter turnout in the 2007 local authority elections was the lowest since 1989.

## States and trends

### Highlights:

Overall the Waikato Region is progressing well on a number of fronts (in no particular order):

- Strong long-term growth across a range of economic indicators including increased weekly incomes and relatively low unemployment (despite a recession).
- Increasing contribution of agricultural production including dairying to the regional economy.
- Increased recycling of waste and other environmental actions.
- Sustained increases in life expectancy.
- Increased numbers of Māori language speakers.
- Relatively high levels of representation of Māori and women on local authorities.
- Apparent improvements in educational participation and attainment.
- Increasing numbers of local buildings and places listed on the Historic Places Trust Register.

Areas we could improve as a Region include (in no particular order):

- Continue to investigate ways to reduce the levels of phosphorus and nitrogen flowing into the Region's rivers and streams.
- Foster improved attitudes and actions towards the natural environment, including more energy conservation and further promotion of waste minimisation.
- Reduce the Region's rate of road crashes and casualties.
- Address housing issues such as rising rents and falling home ownership rates.
- Tackle poor urban air quality by promoting cleaner home heating.
- Better understand and investigate ways to promote cultural well-being in the Region.
- Continue to improve education rates, from early childhood education to post-compulsory learning.
- Consider ways to improve voter turnout at local authority and general elections.
- Consider ways to foster the relationships between young people and their parents.

The states and trends in relation to each of the Waikato regional community outcomes indicators are summarised on the following pages. There are still substantial data gaps which, when filled, may highlight additional issues to be addressed. The indicators below have been sorted from favourable to adverse under each theme in terms of their state and long-term trend (previous 5+ years). A high proportion of states are shown as mixed or uncertain (☹), reflecting an absence of comparative data for many of these indicators. Gaps in historical trend information have been highlighted with question marks.

### Key:

Unique identifier (Code)	State	Trend
Eg, 1.1.1	☺ Good/satisfactory	↑ Improving/favourable
	☹ Mixed/uncertain	↓ Declining/unfavourable
	☹ Unsatisfactory	⇒ No significant trend
		? Uncertain, ie, no trend data available

For example:

Indicator	State	Trend
1.1.1 River water quality for ecological health	☹	↓

This means that the indicator 'river water quality for ecological health' (assessed using water quality guidelines and standards) is showing mixed or uncertain results throughout the Region, and the long-term trend shows a deterioration in water quality (specifically for the period 1989 to 2008 in relation to phosphorus and nitrate levels).

**Results:**

Code	Indicator	State	Trend
<b>1.</b>	<b>Sustainable Environment</b>		
1.6.2	Proportion of recycling	☺	↑
1.2.2	People's personal environmental actions	☹	↑
1.4.1	Rural subdivision	☹	⇒
1.6.1	Waste to landfills	☹	⇒
1.1.3	Lakes water quality for ecological health	☹	⇒
1.3.1	Coastal water quality for recreation	☹	⇒
1.1.4	Lakes water quality for contact recreation	☹	⇒
1.4.2	Stock density	☹	⇒
1.1.11	Protected native vegetation areas	☹	⇒
1.1.5	Land use	☹	?
1.1.7	Groundwater availability and use	☹	?
1.1.8	Surface water availability and use	☹	?
1.1.9	Protection of natural heritage and landscapes	☹	?
1.1.10	Extent of native vegetation	☹	?
1.3.2	Public access to coast (coastline ownership)	☹	?
1.5.1	Total energy consumption	☹	?
1.5.3	Energy efficiency	☹	?
1.2.1	People's environmental attitudes	☹	↓
1.1.1	River water quality for ecological health	☹	↓
1.1.2	River water quality for recreation	☹	⇒
1.1.6	Urban air quality	☹	⇒
1.5.2	Greenhouse gas emissions	☹	?
<b>2.</b>	<b>Quality of Life</b>		
2.1.1	Life expectancy at birth	☺	↑
2.2.3	Participation in early childhood education	☹	↑
2.3.4	Household crowding (Canadian Crowding Index)	☹	↑
2.2.1	School leavers with no formal qualification	☹	↑
2.1.2	Social deprivation index	☹	⇒
2.1.3	Avoidable mortality and hospitalisation rates	☹	⇒
2.4.1	Criminal victimisation rates	☹	⇒
2.4.3	Road traffic crashes and casualties	☹	⇒
2.6.1	Participation in sport and active leisure	☹	⇒
2.7.1	Participation in social networks and groups	☹	⇒
2.5.1	Unpaid work	☹	⇒
2.3.1	Rent to income ratio	☹	↓
2.3.3	Home ownership rate	☹	↓
2.7.2	Contact between young people and their parents	☹	↓
2.1.4	Overall quality of life	☹	?
2.1.5	Barriers to accessing General Practitioners (GPs)	☹	?
2.2.4	Adult and community education	☹	?
2.2.5	Work opportunities matching skills	☹	?
2.3.2	Housing affordability	☹	?
2.3.5	Proximity to work, study and recreation	☹	?
2.8.1	Youth and older people's engagement in decision-making	☹	?
2.4.2	Perceptions of safety	☹	?
2.2.2	Educational attainment of the adult population	☹	↑

Code	Indicator	State	Trend
<b>3.</b>	<b>Sustainable Economy</b>		
3.2.2	Unemployment rate	☺	⇒
3.2.3	Median weekly income	☺	↑
3.2.4	Number of businesses and employees by industry	☺	↑
3.6.2	International visitors	☺	↑
3.7.1	Total research funding	☺	↑
3.6.4	Employment in the tourism industry	☺	↑
3.5.1	Regional GDP contributed by primary industries	☺	↑
3.2.1	Regional Gross Domestic Product (GDP)	☺	⇒
3.7.2	Enrolments at tertiary education institutes	☺	⇒
3.6.1	Visitor nights in commercial accommodation	☺	⇒
3.6.3	Income from tourism (international and domestic)	☺	⇒
3.3.1	Drinking water quality	☺	?
3.4.1	Residents' confidence in councils' decision-making	☺	?
3.4.2	Residents' satisfaction with councils' approach to planning and providing services	☺	?
3.2.5	Building consents	☺	↓
3.1.1	Genuine Progress Indicator (or Ecological footprint)	☹	⇒
<b>4.</b>	<b>Culture and Identity</b>		
4.1.1	Residents' rating of their sense of pride in the way their city/town looks and feels	☺	?
4.4.1	People employed in the cultural sector	☺	↑
4.3.3	Proportion of council's spending on cultural activities and events	☺	↑
4.2.1	Number of buildings and places listed on the Historic Places Trust register	☺	↑
4.1.2	Number of Māori speakers (in Māori and total population)	☺	⇒
4.2.2	Number and proportion of heritage buildings demolished or removed from heritage records	☺	⇒
4.2.3	Design of new developments	☺	?
4.3.1	Residents' satisfaction with cultural facilities provided	☺	?
4.3.2	Participation in cultural and arts activities	☺	?
4.1.3	Proportion of population that speak the 'first language' of their ethnic group	☹	?
<b>5.</b>	<b>Participation and Equity</b>		
5.1.2	Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	☺	⇒
5.1.1	Percentage of voter turnout at local and general elections	☺	↓
5.1.3	Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	☺	?
5.2.1	Percentage of residents perceiving that cultural diversity makes their region/city/town a better place to live	☺	?

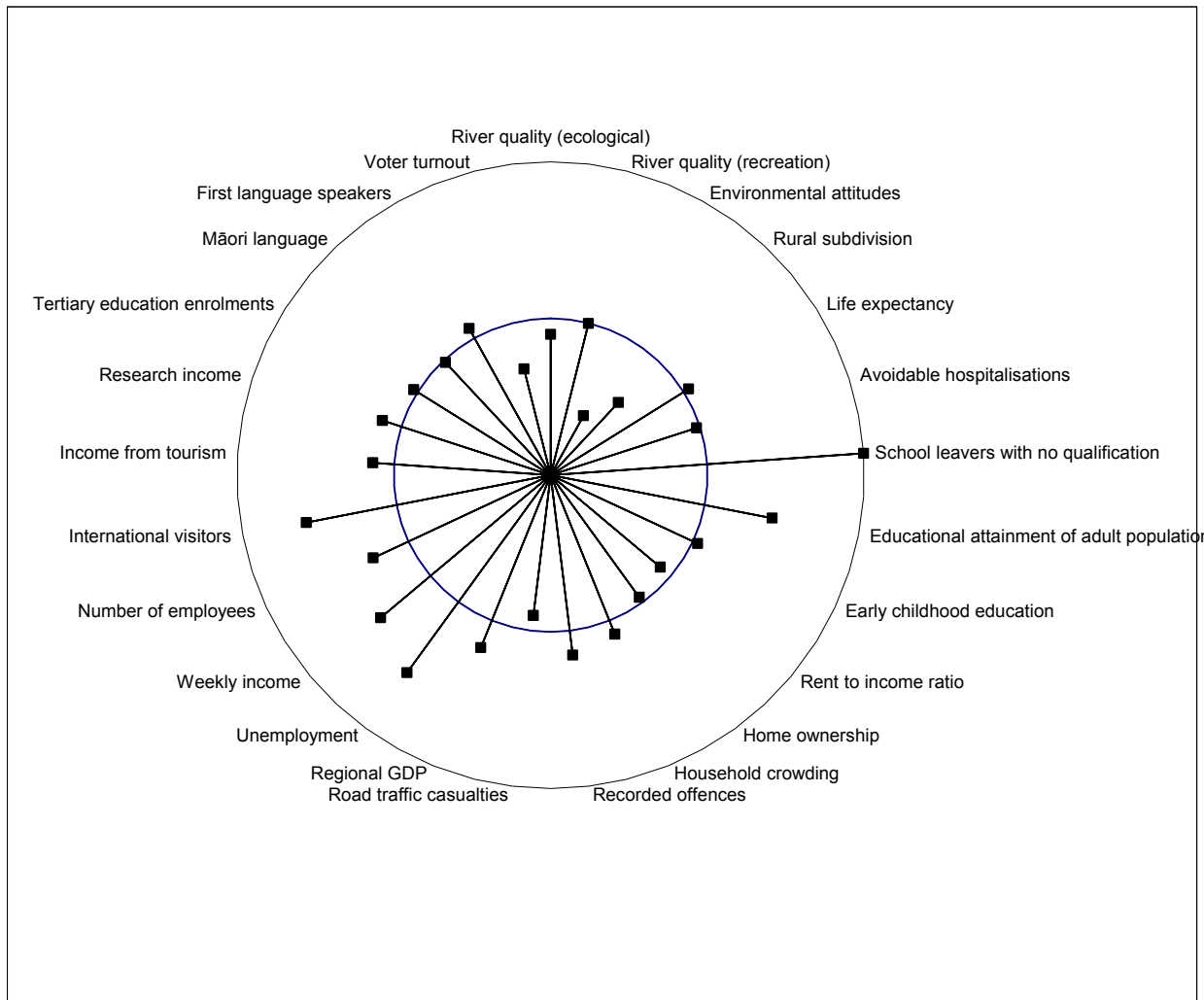
**Circles of well-being:**

Key trends for the Region over the past ten year period are summarised in Figure 1. This shows only indicators for which suitable time series data is available.

The central circle represents community wellbeing in the Waikato Region in the mid-late 1990s and the spokes show progress to the mid to late 2000s. Where a spoke extends outside the circle it means community wellbeing has improved. Where a spoke falls within the circle, community wellbeing has declined.

In summary, Figure 1 illustrates that there have been substantial improvements in educational participation and attainment, and long-term improvements across a range of economic indicators including increased real median weekly incomes and reduced rates of unemployment. Indicators that have deteriorated include a reduction in surveyed environmental attitudes, increase in rural subdivisions, decrease in voter turnout, and an increase in road traffic casualties since 2000/01.

*Figure 1: Waikato Region well-being trends 1990s to 2000s*



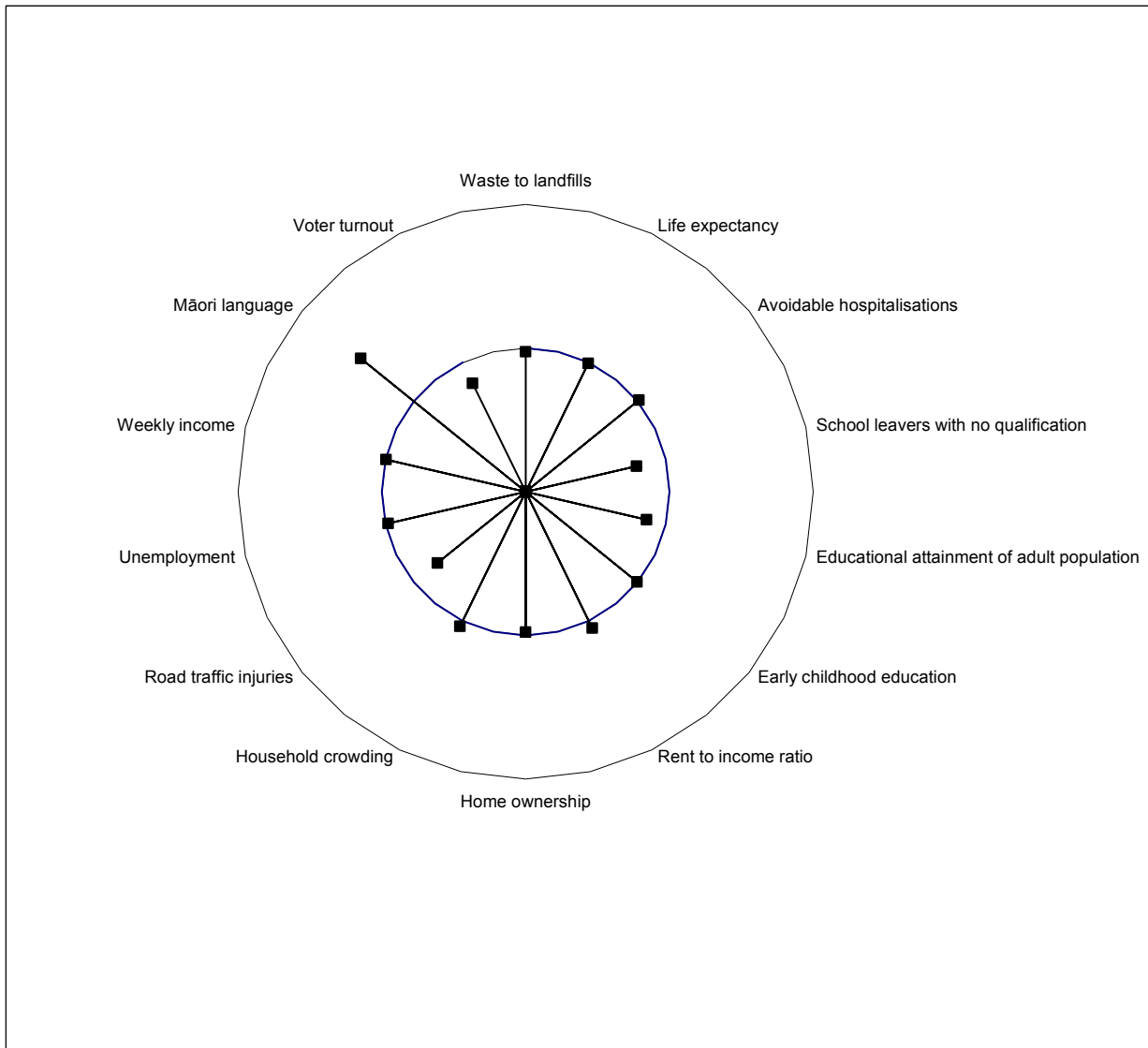
*Source: Waikato regional community outcomes data*

*Note: Indicator selection was based on the availability of reliable Waikato Region time series data from approximately the mid-late 1990s to approximately the mid-late 2000s, and availability of comparative data at the national level.*

Comparisons of the Waikato Region to New Zealand average figures for specific key indicators in the mid 2000s are shown in Figure 2. In this case the circle in the middle represents national average wellbeing in the mid to late 2000s. Where a spoke extends outside the circle it means regional/local community wellbeing is better than the national average, and where it falls within the circle, community wellbeing is worse than the national average.

In summary, Figure 2 illustrates that the Waikato Region is similar to the national average on many of the available indicators, with the exception of an above average rate of Māori language speakers within the regional population. Results for school leavers without qualifications, educational attainment of the adult population, road traffic injuries and voter turnout are all slightly worse when compared with national data.

Figure 2: Waikato Region compared to New Zealand, mid-late 2000s



Source: Waikato regional community outcomes data

Note: Indicator selection was based on the availability of comparative data at the national level.

## 1. Sustainable Environment – summary

### Why is this important?

Quality air, land and water, native flora and fauna, natural landscapes and resources are an important part of the regional identity and sustain both ecological and human health.

### How are we doing?

The Waikato Region generally has a clean and green natural environment. However there is room for improvement in terms of energy conservation, urban air quality (particulates) and river water quality for recreation (particularly in the Hauraki area and lower Waikato River catchment). Farming has continued to intensify over the past few decades, resulting in increased levels of phosphorus and nitrogen flowing into the Waikato River. Also of some concern is an apparent decline in pro-ecological values throughout the Region, according to results from Environment Waikato surveys. At present there is little historical information available on which to gauge the Region's overall progress towards environmental well-being. It is also difficult to compare many environmental indicators for the Waikato Region with equivalent data at the national level.

### *Air, land, water quality and biodiversity*

River and stream water quality for ecological health is better in some parts of the Region (eg, the Upper Waikato River) than in others (eg, Hauraki and the lowland tributaries of the Waikato River), mainly because of agricultural runoff and rural land use. Monitoring of regional rivers over the past 20 years shows mixed results, with slight improvements in the Coromandel and Lowland Waikato monitoring areas but a deterioration in some other regional rivers (eg, upland Waikato). Overall, 25% of water quality measures improved at individual sites and 22% deteriorated. Biochemical oxygen demand has improved along the entire length of the river, probably at least partly due to changes in the management of sewage and industrial wastewaters. At the same time, levels of both total phosphorus and nitrate increased at several sites along the river, probably as a result of land use changes over recent decades. Pressures from wastewaters have generally decreased over the past 20 years, but farming has continued to intensify. The recent increases in levels of phosphorus and nitrogen are of concern. As the region continues to grow and develop, putting pressure on the river's catchment, careful management is needed to maintain and improve the quality of the Waikato River.

River and stream water quality for contact recreation is poorer in the Hauraki area and lower Waikato River catchment. This largely reflects the greater intensity of land use in lowland parts of the Region, particularly in lowland Waikato, with higher levels of faecal bacteria and fine silts from sources such as agricultural and urban runoff. Recent data shows a marked decline which may signal an underlying adverse trend. Future monitoring will help clarify the extent of the trend.

All nine monitored shallow lakes in the Region are nutrient enriched as assessed by Environment Waikato, resulting in a relatively high trophic state and low oxygen levels. The trophic state of most lakes remained unchanged or deteriorated between 1993 and 2001. Water quality for ecology in Lake Taupo remains largely satisfactory to excellent. Water clarity has improved in Lake Taupo in recent years and nitrogen levels have improved (subject to annual fluctuations), but levels of chlorophyll remain relatively high and oxygen depletion is only 'satisfactory' relative to Environment Waikato's standards.

Water quality for contact recreation such as swimming is satisfactory to excellent in Lake Taupo, although bacterial levels are sometimes high near urban areas (eg, Taupo foreshore, Te Moenga Bay and Acacia Bay).

An indicator of regional land use is currently under development at the national level. According to 2007 regional data from the Statistics New Zealand Agricultural Production Census, the main types of land use in the Waikato Region are grassland (71%), plantations of exotic trees intended for harvest (18%), mature native bush (4%) and native scrub and regenerating native bush (3%).

Levels of fine particulate matter in the air, mostly from wood burners, exceed the regional guideline for a few days each year in the urban areas currently monitored. Communities are required to comply with the new National Environmental Standard for air quality by 2013. Of the urban areas monitored, Tokoroa and Taupo exhibit the largest number of exceedances per annum.

Groundwater levels in most parts of the Waikato Region are under low stress, with less than 10% of available groundwater being used. Thirteen areas which have been investigated in the Region are under high stress, with more than 30% of available groundwater being used. These include the far north of the Region near Pukekohe, plus Tokoroa and the Waihi Basin.

An indicator of surface water availability and use is currently under development by Environment Waikato.

No data source has yet been identified at a regional or territorial authority level in relation to protection of natural heritage and landscapes.

Around 69% of the Waikato Region is planted in non-native vegetation. This is primarily due to the prevalence of pastoral farming and plantation forestry. The highest proportion of land in indigenous forest in the Region is in the Thames-Coromandel District (65%) and the lowest is in Hamilton City (3%).

As at July 2009, 401,300 ha of land in the Waikato Region (17.0%) was legally protected for the primary purpose of conserving biodiversity. Between 2006 and 2009, legally protected conservation land in the Waikato Region increased by 1,400 ha or 0.4%.

### ***Environmental attitudes and behaviours***

A 2008 survey by Environment Waikato using the 'New Environmental Paradigm Scale' (NEP) showed that 16% of people in the Region had pro-ecological values. This was lower than in 2004 when 19% had pro-ecological values, and significantly lower than in 2000 when 36% had pro-ecological values.

According to survey results, the main actions that Waikato people undertake to protect the environment are recycling, planting trees and composting. A smaller number of people said they also reduced plant and animal pests and saved electricity.

### ***Coastal environment***

Coastal water quality for contact recreation such as swimming is usually satisfactory or better. Occasionally some beaches have high bacteria levels.

Overall, 35.6% of the Region's harbours and open coast are in public ownership. A further 9.0% of the coastline is used for roads. Of the total length of coastline in the Waikato Region (1,175 km), 19% along the West coast is in public ownership, 22% on the west Coromandel and 65% along the east Coromandel. Coastline with road frontage makes up 5% of the total coastline along the West Coast, 26% along the west Coromandel and 6% of east Coromandel.

### **Rural environment**

Between 2001 and 2006, 2,936 hectares of land changed from a low-density rural land use to a more intensive use. Two-thirds of the land affected by subdivision has a 'high productive capability for pastoral use' (Classes I-IV). The greatest amount of subdivision is occurring on the land with the higher productive capabilities (Classes II, III and IV). Rural subdivision is occurring most rapidly in the Waikato District, Hamilton City, Thames-Coromandel District, Franklin District, Taupo District, Hauraki District and Waipa District. Lower rates of rural subdivision are also occurring within South Waikato District and Matamata-Piako District.

Highest stock densities are in the Lower Waikato, Hauraki, Waipa River and Upper Waikato water catchment zones. Lowest stock densities are in the Taupo, West Coast and Coromandel water catchment zones. Between 2001 and 2008 there appears to have been an increased proportion of farms adopting lower stock density, however some farms have also been adopting increased stock density.

### **Energy**

Waikato regional communities consumed an estimated 109,043 terajoules (TJ) of energy during 2003, of which 73% was for industry purposes. Over half of the energy came from non-renewable energy sources. The main sources of energy in the Region were gas (39%) and coal (24%).

Greenhouse gas emissions in the Waikato Region are highest in the Taupo, Waikato, South Waikato and Franklin districts. Overall the 12 territorial authority areas in the Region produce approximately 21% of New Zealand's total greenhouse gas emissions. The main sources of greenhouse gas emissions in the Region are natural (eg, geothermal activity), agricultural and industrial. Agricultural emissions contribute CH<sub>4</sub> from the digestion process of farm stock, especially cattle.

The Region's ratio of energy use to GDP is approximately 12.1 megajoules (MJ) per dollar. Almost 30% of the energy used in the Region is for transport and domestic purposes.

### **Solid waste**

There is a wide variation in the volume of waste to landfill throughout the Region, with households in the Taupo District disposing of an estimated average of 3,562kg of waste to landfill during 2005 compared to 1,274kg in the Hauraki District. Note that there may be differences in methodology which partly explain this difference, for example due to the impact of seasonal visitor patterns. There is also considerable variation in terms of waste disposal trends, with volumes per capita falling in the South Waikato District, rising in the Taupo District, and remaining relatively unchanged in Hamilton City and the Matamata-Piako District over the period 2002 to 2004.

There is also a wide variation in the proportion of waste diverted from landfill (recycled) throughout the Region, with Taupo diverting approximately 29% of its waste stream compared with approximately 9% in Hamilton City and South Waikato District. There may be differences in methodology which partly explain this difference. Volumes per capita of recycling are generally increasing throughout the Region. According to recent survey results from the Ministry for the Environment, recycling per capita is higher in the Waikato Region than it is in other regions throughout New Zealand.

## 2. Quality of Life – summary

### Why is this important?

Waikato communities want a region that is a great place to live, providing services and opportunities to live well. Health, education, housing, safety and many other factors contribute to overall quality of life.

### How are we doing?

Waikato regional communities have an increasing life expectancy, recent growth in early childhood education rates and reducing levels of household crowding. The Region is also making advances in areas where it has fallen behind the national average, including the number of school leavers with formal qualifications and educational attainment of the adult population. The proportion of school leavers in the Waikato Region with no formal qualification has apparently fallen dramatically over the past few years at both the regional and national level. According to Ministry of Education statistics, in 2008 only 6.7% of school leavers had little or no formal attainment under the NCEA framework.

However, aspects of quality of life that require attention include declining levels of home ownership between 1991 and 2006, and increasing rental costs as a proportion of household income over a similar period. Also, according to results from a national youth survey a decreasing proportion of secondary school students feel they are getting enough time with their parents. Future monitoring of Waikato Region quality of life indicators will help reveal additional positive and negative trends.

### *Health*

Life expectancy in the Region is similar to the national average of 78 years for males and 82 years for females. Gains in life expectancy since the mid-1980s can be attributed to better living standards and improved health care. However there remain marked differences in life expectancy between different ethnic groups, with the life expectancy for Māori at around 8.5 years less than non-Māori.

Much of the Waikato Region scores relatively well on the NZDep socio-economic deprivation index, however throughout the Region there are pockets of deprived meshblocks. Based on population-weighted average, the overall NZDep2006 score for the Waikato Region is approximately 6 (ie, slightly more deprived than the national median), with territorial authorities scores ranging from approximately 4 (Franklin and Waipa) to 8 (South Waikato).

The overall number of avoidable hospitalisations has been decreasing in the Waikato Region since the late 1990s while the level of avoidable mortality has been increasing over the same period. Part of this increase may be due to population growth and ageing.

According to baseline results from the 2007 Waikato Community Outcomes Survey, the majority of regional residents (90%) are happy with their quality of life. The 'Happiness Index' (a weighted score across the quality of life scale) was 82.6 points for the Waikato Region overall, with some variation between territorial authority areas.

Respondents to the 2007 Waikato Community Outcomes Survey were asked 'Has there been any time in the last 12 months when you or a member of your household wanted to go to a GP, but didn't'. Almost a quarter of the sample (22.5%) said there was a time in the last 12 months when they or a member of their household wanted to go to a GP, but didn't. Respondents most likely to report having barriers to health care were under 35 years of age, renting or boarding, on lower incomes, living in town rather than in the country, and of Māori descent. The main reported barriers were cost (9%) and availability (4%).

## **Education**

The proportion of school leavers in the Waikato Region with no formal qualification has apparently fallen dramatically over the past few years at both the regional and national level. In total there were 5,026 school leavers in the Waikato Region in 2008, of whom 336 (6.7%) left school with little or no formal attainment. The official comparative figure for 2002 was 19%. There is considerable variation between territorial authority areas throughout the Region which likely reflects differences in underlying socio-economic status. There are also persistent levels of poor formal academic attainment by Māori and Pacific Islands school leavers, although the disparity has reduced over the past decade.

Over the period 1996 to 2006 there was a general increase in the proportion of the adult population in the Waikato Region with post-compulsory academic qualifications, including vocational qualifications (up from 20.7% to 24.8% of adults), Bachelor degrees (up from 4.8% to 8.8%) and higher degrees (up from 2.4% to 3.5%). However, the Waikato Region still has a slightly below average proportion of adults with either a secondary school qualification or degree qualification. There is considerable variation throughout the Region, with more people having higher qualifications in Hamilton City compared to surrounding rural and provincial areas.

There has been an increasing rate of participation by Waikato children in Early Childhood Education (ECE) services, however the ECE participation rate of Māori children remains relatively low compared to other ethnic groups.

There is no administrative data currently available for monitoring Adult and Community Education (ACE). At the national level, Government funding for ACE was cut in 2009 from \$16 million to \$3 million. Respondents to the 2007 Waikato Community Outcomes Survey were asked about their level of satisfaction with the 'availability of community or tertiary education in your area'. Results were highest for Hamilton and lower for more remote areas such as Thames-Coromandel.

Most respondents to the 2007 Waikato Community Outcomes Survey were satisfied that their jobs are making good use of their skills, training and experience.

## **Housing**

The rent to income ratio in the Waikato Region increased from 19.9% in 1991 to 26.6% in 2001, but remains approximately 1.5 percentage points below the national average. For comparison, the rent to income ratio for the Auckland Region in 2001 was 30.8%. The rent to income ratio throughout the Waikato Region ranged from a low of 17.7% in the Waitomo District to a high of 33.0% in Hamilton City as at March 2001. Comparable figures for 2006 at the sub-national level have not yet been sourced.

According to 2001 survey data, approximately 23% of households in the Waikato Region paid one-third or more of their income towards housing costs compared to the national average of 25% and Auckland Region average of 32%. According to more recent 2008 survey data, households in the Auckland/upper North Island region spent on average 17% of their income on housing costs.

Home ownership in the Waikato Region fell by 6.0 percentage points in the Waikato Region between 1991 and 2006, reflecting a wider national trend towards lower rates of home ownership. The trend away from home ownership has occurred to a greater or lesser extent in all territorial authority areas throughout the Waikato Region. In Hamilton City, the home ownership rate fell from 70.7% in 1991 to 60.7% in 2006. Districts that have been least affected are Otorohanga, Franklin and the Waikato District.

The level of household crowding in the Waikato Region has declined over the past two decades and is marginally below the national average rate of crowding. Average crowding levels vary throughout the region but all districts have experienced some decline in crowding over the past twenty year period. Note that part of the reason for 'household crowding' in New Zealand may be due to cultural preferences for extended households by a proportion of Māori and Pacific Islands families relative to other ethnic groups.

Results from the 2007 Waikato Community Outcomes Survey showed that the majority of respondents (78%) were satisfied with 'proximity to schools' but this dropped to only 49% for 'proximity to other educational facilities'. Thames-Coromandel respondents were the least satisfied with 'proximity to other educational facilities'. Those who live in towns were more satisfied than those who are living in the country with all the proximity factors except 'proximity to where you work'.

### **Community safety**

At the present time there is no criminal victimisation data available at the Waikato regional level. At the national level, approximately 39% of New Zealand adults aged 15 and over experienced some form of victimisation in 2005. Comparisons with data from earlier surveys are difficult owing to changes in the survey design. A conservative conclusion is that the risk of victimisation did not change much between 1995 and 2005 for personal offences (eg, theft of personal property) but increased slightly for household offences (eg, burglaries and vehicle theft). A rough proxy for victimisation rates, the number of recorded offences in the Waikato Police District, fell relative to the national trend over the period 1996 to 2001 and has since remained fairly stable, although latest figures suggest a possible upward underlying trend. Of concern, the number of reported violence offences per annum in the Waikato area increased by 79% over the period 1996 to 2009.

In 2005 approximately 40% of New Zealanders said that fear of crime had a moderate or high impact on their quality of life. Respondents to the 2007 Waikato Community Outcomes Survey were asked: 'Thinking now about issues of crime and safety, please tell me how safe or unsafe you would feel in the following situations'. The majority of respondents felt safe in their community during the daytime but relatively less safe at night, particularly women. The results vary by location but it seems that Thames-Coromandel and Otorohanga are perceived as the safest places by residents. Generally speaking, those who live in the country feel safer in their community compared to those who live in town.

According to the 2009 Social Report, 365 New Zealanders died as a result of motor vehicle crashes during 2008, a rate of 8.6 deaths per 100,000 population. The Waikato regional death rate per annum from motor vehicle crashes was 18.6 per 100,000 population during 2008. Deaths and injuries from motor vehicle crashes have declined substantially since 1986. However, over the shorter-term, the number of motor vehicle injuries on Waikato Region roads has risen slightly since 2001, reflecting a national trend. Sustained increases in injury crashes have been recorded in particular in Thames-Coromandel, Otorohanga and other rural areas. In contrast, the number of motor vehicle deaths has been generally declining. Casualty rates remain relatively higher in rural areas (particularly those with state highway corridors) compared to urban areas such as Hamilton City.

### **Community participation**

The most frequent form of unpaid activity in New Zealand is household work, cooking, repairs, gardening, etc, for own household, followed by looking after a child who is a member of own household. As at the 2006 Census, rates of unpaid activity in the Waikato Region were similar to the national average. There was no significant change in the pattern of unpaid activities in the Waikato Region over the period 2001 to 2006.

### ***Sport and leisure***

Waikato young people's overall levels of physical activity showed little change between 1997 and 2001. Boys tend to be more active, although not significantly so. The overall proportion of Waikato adults who were active also remained fairly constant between 1997 and 2001. More recent baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. An average 88% of respondents throughout the Region reported having undertaken brisk walking, running, gardening or other physical activities at least once per week.

### ***Family and community cohesion***

Data on the groups or social networks that matter most to people is available for Hamilton City residents but not for other parts of the Waikato Region. Of the total number of Hamilton respondents during 2006, 24% said they relate mostly to people with same interests, culture or beliefs, 18% said they relate mostly to people living in the same area, and 52% said it was a mixture. According to 2008 survey results, the most common social networks to which New Zealand residents belong are family (81.6%), work or school (59.8%) and hobby or interest groups (38.3%). The profile for Hamilton City is similar to the national average.

According to results from the national Youth'07 Survey, 57% of secondary school students in New Zealand reported that they get enough time with at least one parent most of the time. This was a smaller proportion than in 2001 (62%). Similarly, results for the Waikato Region were approximately 56% in 2007 compared to 62% in 2001. The decline has been particularly notable from the perspective of female young people.

### ***Youth and older people***

Strong family relationships can help enhance personal development including education and sense of belonging. No data source has yet been identified for this indicator.

## **3. Sustainable Economy – summary**

### **Why is this important?**

Economic development underpins prosperity and quality of life. Strong businesses and industry create employment opportunities, profits and wages for the Region.

### **How are we doing?**

Over the long term, economic growth has been generally improving in the Waikato Region relative to national economic development. Until recently, most economic indicators were improving steadily over the long-term. However, unemployment has risen since late 2006 and there has been a decline in the rate of building consents issued since mid 2007. The number of visitor nights for the Region also dropped during 2008 but appears to have subsequently recovered. As at December 2009, annual average economic growth was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level. Agricultural production, including dairying, has increased its contribution to the regional economy over the past decade. Prospects for the Region's research and innovation sector have been mixed. Tertiary student enrolment numbers declined between 2005 and 2008. Research income for the University of Waikato increased by around more than 25% in real terms over the period 2002 to 2007 but subsequently fell in 2008. On the downside, the average Waikato resident's ecological footprint is five to ten times larger than people living in India or China, and larger than Japan and many European nations.

### ***Sustainable development***

A Genuine Progress Indicator (GPI) for New Zealand has not yet been completed. In the interim, results are shown for the proxy indicator “Ecological footprint.” This measures how much productive land it takes to support the lifestyle of an individual, a city, region or country in today’s economy. This is calculated as the land use required for production and consumption of goods and services. Based on data from 2003-2004, the ecological footprint of an average Waikato Region resident is 5.8 ha, which is slightly smaller than the national average. However compared to most other countries, New Zealanders have a large ecological footprint – five to ten times larger than people living in India or China, and larger than Japan and many European nations.

### ***Economic prosperity***

Based on recent estimates by Statistics New Zealand, the Waikato Region contributed approximately \$10.6 billion or 8.1% of national GDP in 2003. Based on the National Bank’s Regional Economic Activity Index, the Waikato Region has tended to outperform national average economic growth over much the period since the late 1980s. The rate of economic growth recently slowed following a relatively lengthy period of sustained growth, and entered a recessionary period during 2008-2009. As at December 2009, annual average percent growth in economic activity was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level.

Estimates from the quarterly Household Labour Force Survey indicate that the Waikato regional unemployment rate reached a long-term low of 2.6% in December 2006 but rebounded up to 5.8% in the December 2009 quarter. By comparison, the national unemployment rate estimate as at December 2009 was 6.8%. These latest figures reflect a general economic slow-down during 2008-2009. There remains considerable variation between different territorial authority areas in the Region, as well as disparities between Māori and non-Māori unemployment rates throughout the Region.

Real median weekly income in the Waikato Region is similar to the national average, with a value of \$537 as at June 2009. After adjusting for inflation, median weekly income in the Waikato Region has increased by more than 40% since 1998. The median weekly income for males in the Region as at June 2009 was \$662 and for females \$425. The disparity between male and female median weekly incomes increased significantly over the period 1998 to 2005 and has subsequently been generally declining. There are also disparities between ethnic groups, with Māori and other ethnic groups earning a lower median weekly income than the European/Pākehā ethnic group.

The number of business units in the Waikato Region increased from 43,417 in 2000 to 52,447 in 2009. The number of employees in the Region increased from 132,380 in 2000 to 165,410 in 2009. For the Waikato Region, the employee count grew slightly more quickly than the number of businesses over this period. The Waikato Region employee profile is concentrated more heavily towards primary and secondary industries than in many other regions. Primary industries and manufacturing are strongly prevalent in provincial areas, while more service oriented industries are focused around Hamilton City.

Since June 2007 there has been a decline in the trend for the number of new housing units. The slump appears to have bottomed out during the first quarter of 2009. According to Statistics New Zealand figures, 2,271 building consents were issued in the year to January 2009 in the Waikato Region, slipping to 1,783 in the year to January 2010.

### ***Transport, infrastructure and services***

Many drinking water community supplies are listed as having a Public Health Grading of “U”, or Ungraded. There is a push for grading to happen annually (driven by the Ministry of Health) but this has not yet occurred.

The number of motor vehicle crashes and injuries on Waikato Region roads has risen slightly since 2001, reflecting a national trend.

### ***Regional planning***

Survey data shows that Waikato regional communities have a reasonably high level of confidence in their councils’ decision-making. This indicator varies between territorial authority areas.

No data source has yet been identified for monitoring residents’ satisfaction with councils’ approach to planning and providing services.

### ***Land-based industries***

In the year ended March 2007, the Waikato Region contributed approximately 9.1% of national GDP. Of this, approximately 14% (\$2.2 billion) is agricultural production. The proportion contributed by agriculture has increased since 2001, when it was 12.7%. The dairy industry, including dairy farming and manufacturing, grew from 10.8% of GDP in 2001 to 12.7% in 2007.

### ***Tourism***

An estimated 4.5 million guest nights were recorded in commercial accommodation in the Waikato Region in the year to February 2010, including guest nights in Rotorua. The Waikato Region contributes approximately 8-9% of New Zealand’s overall guest nights in commercial accommodation (excluding the Rotorua area).

For the year ended February 2010 there were 2.5 million international visitor arrivals to New Zealand, up 2.4% on the previous year. For the Waikato Region, international visitor numbers and nights steadily increased between 1998 and 2006 but dipped slightly in 2007. The average length of stay for international visitors has increased substantially since the 1990s.

An estimated \$1.52 billion was spent by international and domestic visitors in the Waikato Region during 2006, down from \$1.58 billion in 2002. Despite recent declines in regional visitor expenditure, the Ministry of Tourism is projecting that by 2013 total visitor expenditure in the Region will rise to an estimated \$1.98 million. However, significant changes to the global economy over the past two years mean that the Ministry of Tourism’s forecasts need to be treated with caution.

At the national level, an estimated 4.9% of full-time equivalent employees were directly engaged in producing goods and services purchased by tourists in 2009. No known data is available at the regional level for this indicator.

### ***Research and innovation***

Total research and development expenditure in New Zealand for 2008 was estimated at \$2.14 billion. This compares with \$1.11 billion in 1998, an increase of 52% on an inflation-adjusted basis over a ten year period. R&D expenditure more than doubled as a percentage of overall national GDP over the period 1998 to 2008. R&D expenditure was 1.20 percent of GDP in the 2008 reference year compared with the OECD average of 2.26 percent in the 2006 reference year. Research income by the University of Waikato increased by around 25% in real terms

over the period 2002 to 2007 but subsequently fell in 2008. Research income contributed approximately 12% of total revenues for the University of Waikato in 2008.

The total number of Effective Full-Time Equivalent Students (EFTS) increased at both Waikato Institute of Technology (Wintec) and the University of Waikato over the period 2000 to 2005 but subsequently declined. In 2008 there were approximately 16,000 students enrolled at both institutes combined.

## **4. Culture and Identity – summary**

### **Why is this important?**

Cultural heritage, diversity and wellbeing have been identified as both strengths and issues for the Region. Increased cultural wellbeing and strength of identity is integral to improved overall community wellbeing.

### **How are we doing?**

There is relatively little information available for monitoring cultural wellbeing and strength of identity in the Region, but future data collection should help fill this gap. There are some positive indicators: for example the number of Māori language speakers has been steadily increasing, there are signs that more people are employed in the cultural sector, and councils are spending more on cultural activities and events. There is also an increasing number of buildings and places listed on the Historic Places Trust Register in the Waikato Region. The recently passed Waikato River Settlement Act 2010 should strengthen the monitoring and reporting of cultural data and indicators.

### ***Regional identity and pride***

Survey results show that most Waikato residents feel a sense of pride in their district or city.

The proportion of Waikato Region residents who spoke te reo Māori at the time of the 2006 Census was above the national average (6.2% compared to 4.2%). This is at least partly due to the above average proportion of Māori residents in the Waikato regional population. Within a number of territorial authority areas in the Region, the proportion of Māori language speakers increased between 1996 and 2001 but then fell again between 2001 and 2006. The highest proportions of Māori language speakers in the Region are in the Rotorua District (12.6%), Waitomo District (12.1%) and Waikato District (9.3%). The Waikato Region has the fourth-highest proportion of Māori residents who speak te reo Māori (25.4%) out of all regions in New Zealand, behind Gisborne, Bay of Plenty and Northland. The proportion of Māori who speak te reo Māori is substantially higher for older age groups, however the proportion of Māori aged 50 and over who speak te reo decreased over the period 1996 to 2006.

The proportion of people who can hold everyday conversations in the first language of their ethnic groups varies widely between ethnic groups, from 16% of Cook Islands Māori to 84% of Koreans. The Waikato Region average was 51.7% in 2006, up slightly from 48.3% in 2001. Within the Region, the proportion of first language speakers ranges from around 30% in the Waitomo and South Waikato districts to a high of 60% in Hamilton City. These differences may be for a range of factors, including the length of time families from specific ethnic groups have been established in New Zealand.

### ***Historic buildings and places***

There were 484 buildings and places listed on the Historic Places Trust Register in Waikato Region territorial authority areas as at April 2010, compared with 474 in April 2009 (excluding wāhi tapu sites). The main difference is an increase in Category II historic places, including Lake House in Hamilton and the Water Tower in Cambridge.



As at April 2010, approximately 60 Category 2 buildings and/or sites had been removed from the Historic Places Trust Register. Category 2 places are "of historical or cultural heritage significance or value". Detail on buildings removed as opposed to sites is not available. There is also no readily available information on why a record is removed, for example due to demolition or another reason.

According to survey results, more than half of the Region's residents agree that new developments and subdivisions are sustainably designed, but a substantial proportion of other residents are in disagreement with this statement.

### **Culture and recreation**

Survey results from 2007 show that an estimated 41% of regional residents were satisfied with the cultural facilities and opportunities provided in their area. This reflects in a Satisfaction Index (weighted average score) of 61.5 points for 'cultural facilities and opportunities provided in your area'. The scores vary only a small amount by location within the Region.

At present there is only national-level data available on people's participation in cultural and arts activities. However there are plans at the local and regional level to collect similar survey data. At the national level the most frequently cited cultural activities in the four weeks prior to the survey were purchasing books, visiting public libraries and purchasing music. The most frequently cited cultural activities in the 12 months prior to the survey were art galleries/museums, popular live music and purchasing handmade craft.

Indicative national data compiled from territorial authority annual reports show that council spending on cultural activities has generally increased in recent years, particularly in relation to the provision of library services. Robust local and regional data is not currently available.

### **Creativity**

Indicative data at the national level shows that more than 100,000 people in New Zealand are engaged in cultural employment. Cultural employment appears to be growing faster than overall employment. Local and regional data sets are not currently available but are likely to reflect the national trend.

## **5. Participation and Equity – summary**

### **Why is this important?**

Waikato regional communities aspire towards a culture that encourages people and communities to play their part. Civic engagement and equity make an important contribution to overall quality of life.

### **How are we doing?**

There is relatively little information available for monitoring participation and equity in the Region, but future data collection should help fill this gap. A positive sign is that the Waikato Region has a relatively high level of representation by Māori and women in local authorities. Of possible concern is that the voter turnout rate has been declining in the Region, as it has throughout New Zealand over much of the past two decades. For almost all local authorities in New Zealand and the Waikato Region, voter turnout in the 2007 local authority elections was the lowest since 1989.

### ***Civic participation***

For almost all local authorities in New Zealand and the Waikato Region, voter turnout in the 2007 local authority elections was the lowest since 1989. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. In the Waikato Region in 2007, the highest voter turnouts were in the Thames-Coromandel, Taupo and Hauraki districts (49%-53%). Compared to the 2004 election results, voter turnout dropped considerably for the Waitomo and Otorohanga districts in 2007 (approximately 15 percentage points each). Voter turnout for national general elections has also been declining in the long-term, reaching a low of 73% in 2002 for New Zealand overall.

The percentage of Māori elected members in local government across New Zealand increased substantially from 2.5% in 1992 to 6.0% in 1998 but subsequently declined to approximately 4.8% in 2007. In the 2007 elections, the Waikato Region continued to have a relatively high proportion of female elected members in local government, with 42% of regional council elected members being female. The proportion of female elected members of city and district councils ranged from a high of 70% in the South Waikato District to a low of 0% in the Thames-Coromandel District, reflecting a similar pattern to the 2004 local body elections.

Survey results show that a substantial number of residents throughout the Region would like more of a say in what their Council does.

### ***Cultural well-being***

Most people in the Waikato Region agree with the statement 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here'. A slightly smaller proportion agree that 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here'. Many survey respondents said that they there feel are no cultural problems and people are accepted as part of the community. However a relatively small proportion of respondents felt that different cultures were not welcomed by the community, while a few had issues with other races or chose not to mix.

## INTRODUCTION

The purpose of this Community Outcomes Progress Report Update is to help:

- Inform and guide the setting of priorities in relation to the activities of community stakeholders.
- Promote better co-ordination and application of community resources.

This report identifies states and trends in the Waikato regional community outcomes indicators at the regional level. It also highlights current data gaps and identifies opportunities for gathering further data. The audience is strategic planners and decision makers at the regional and sub-regional level. Information sources include:

- MARCO group (Monitoring and Reporting Community Outcomes) – Waikato Regional Community Outcomes Progress Report 2009; Waikato Regional Community Outcomes Progress Report 2008; Waikato Regional Community Outcomes Data Analysis Report 2007; Benchmark Data Report 2006; Trends Report 2006; Resource Kit for Integrated Monitoring and Reporting 2005.
- Environment Waikato – Long Term Council Community Plan (LTCCP) 2009-2019.
- Choosing Futures Waikato – Regional Community Outcomes, December 2009 (draft).

Plans are under way to fill the remaining data gaps through collection of additional information.

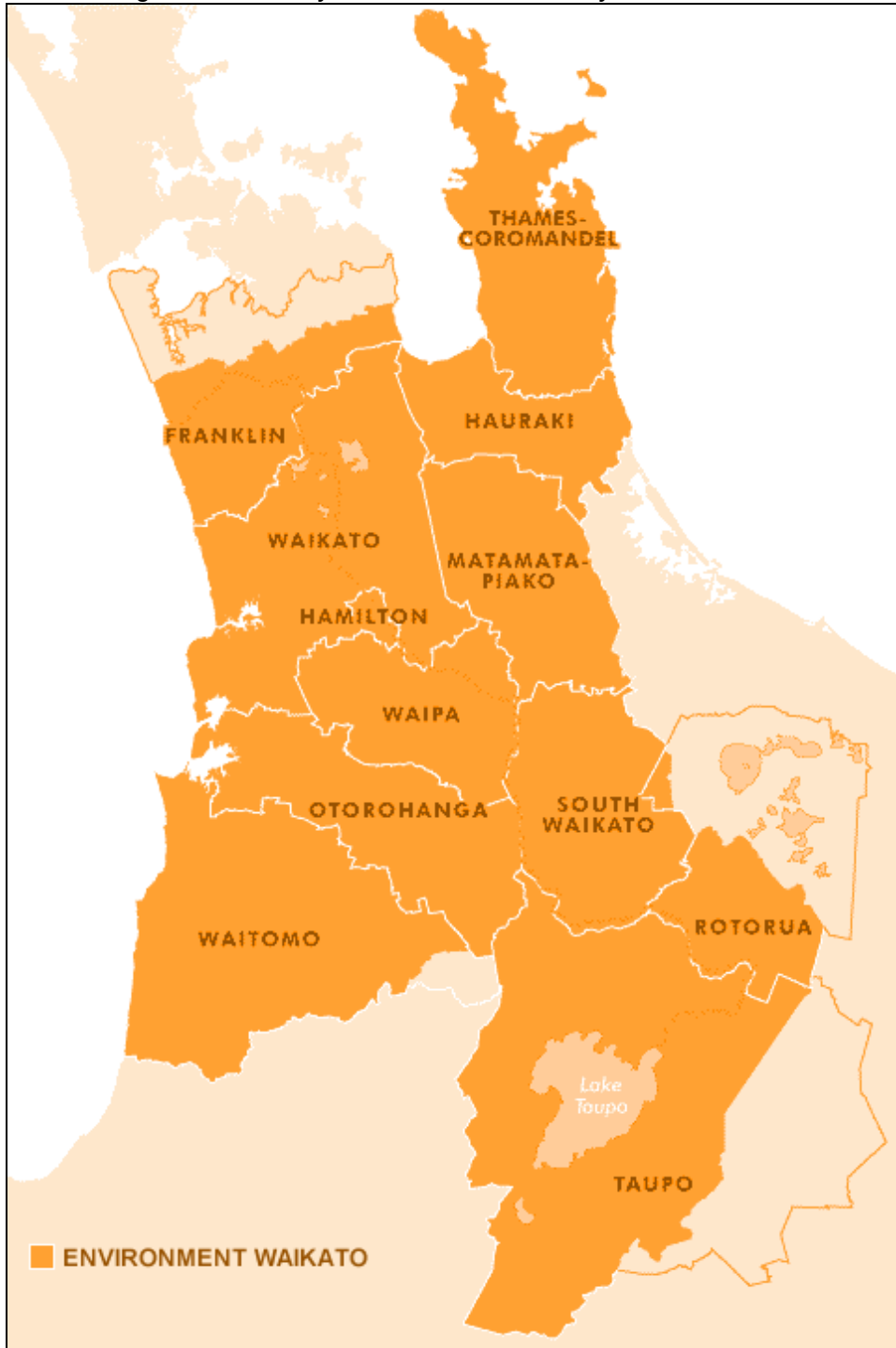
Summary notes on differences between this 2010 update report and the 2009 report are contained in Appendix One (“2010 update notes”).



## WAIKATO REGIONAL COMMUNITY OUTCOMES

In 2005 the 12 territorial authorities of the Waikato Region, together with Environment Waikato, jointly coordinated a process to identify regional-level community outcomes. The regional community outcomes process is called Choosing Futures Waikato. Choosing Futures Waikato is a joint initiative of the district councils of Franklin, Hauraki, Matamata-Piako, Otorohanga, Rotorua, South Waikato, Taupo, Thames-Coromandel, Waikato, Waipa and Waitomo, Environment Waikato and Hamilton City Council.

*Waikato regional boundary and territorial authority areas*



Source: <http://www.choosingfutures.co.nz/Our-region/>

A draft set of Waikato regional community outcomes was identified during 2004/05 through a series of nine regional visioning workshops followed by meetings of a broadly representative community outcomes working group. The process included consultation with iwi throughout the Region, information collected by local councils through consultation with their local communities, and information from key organisations including central and local government, businesses, industry groups and community organisations. A draft set of Waikato regional community outcomes was reviewed by key stakeholders and promoted for community feedback before being signed off in November 2005.

The Waikato regional community outcomes are grouped under five themes:

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### **1. Sustainable environment**

*The Waikato region values and protects its diverse, interconnected natural environments.*

A The iconic landscapes and natural features of our environment define and sustain us. We respect and celebrate them as taonga.

B Our natural environment is protected and respected. Its ecological balance is restored, its air, soil and water quality is improved and its native biodiversity is enhanced.

C We are aware of what we need to do to look after our environment. Our region is renowned for linking environmental awareness with community action.

D The traditional role of iwi and hapū as kaitiaki is acknowledged, respected and enabled.

E Our coastal and waterway environments are restored and preserved and access to them is maintained.

F Our region's waterways have consistently high water quality.

G We use land management practices that protect and sustain our soil and land.

H We reduce our reliance on non-renewable energy.

I Waste reduction, recycling, energy conservation and energy efficiency are promoted and are part of how we all live.

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### **2. Quality of life**

*The Waikato region is a great place to live, providing the services and opportunities we need to live well.*

A We are healthy, with active lifestyles and enjoy a total sense of well-being. Everyone has access to affordable quality health services throughout the Waikato region.

B Education provides opportunities so we can reach our full potential as individuals and contribute to the well-being of the whole region.

C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.

D We have a choice of healthy and affordable housing that we are happy to live in and that is close to places for work, study and recreation.

E Māori have the ability to live on ancestral land in quality, affordable housing.

F Our communities and government work together so that we are safe, feel safe and crime is reduced.

G We can work and participate in the communities where we live, and there are quality work opportunities for people of all ages and skill levels.

H We can participate in recreation and leisure activities that meet our diverse needs and we have opportunities to enjoy the Waikato region's natural places and open spaces in responsible ways.

I Families are strong and our communities are supportive of them.

J Older people are valued and children are valued and protected. Young people have work, education and leisure opportunities and are included in making decisions that will affect their future.

### 3. Sustainable economy

*The Waikato region balances a thriving economy with looking after its people, places and environment.*

A Our region has economic growth and development that is well-planned and balanced with environmental, cultural and social needs and values.

B Our regional and local economies are robust and diverse, providing opportunities throughout the Waikato region.

C We have reliable, efficient and well-planned infrastructure and services, including transport that is safe, interconnected, and easy to get to and use.

D We take a practical and coordinated approach to planning and providing services, which works effectively across boundaries and sectors and responds to our communities' needs.

E The growth, wealth and uniqueness of the Māori economy is acknowledged and supported.

F Our economy is built on land-based industries, and we encourage planning and practices that protect and sustain our productive resources.

G We have a tourism industry that recognises the region's cultural and environmental heritage and values, and supports economic growth.

H Our region has a reputation for entrepreneurship, innovation, research and education, attracting investment and people to work, study and visit.

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### 4. Culture and identity

*The Waikato region identifies with – and values – its land, air, rivers and waterways, mountains, flora, fauna and its people.*

A We are proud of our region's distinctive identity, its strong Māoritanga, and its rich and diverse natural and cultural heritage.

B Heritage sites and landscapes of significance to whanau, hapū and iwi are preserved and valued.

C Our historic buildings and places are retained and cared for. New developments are designed to be sensitive to people, places and the environment.

D All our communities have cultural and recreational events and facilities. We identify with and take part in our communities, building good community spirit.

E Art, culture and creativity can be a part of everyone's life. We all have opportunities for creative expression and our creative industries are supported and promoted.

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### 5. Participation and equity

*The Waikato region builds strong informed communities and has a culture that encourages people and communities to play their part.*

A All our people and communities can participate in decision-making. We are educated, informed and have the resources we need to take responsibility for our own futures.

B Iwi, hapū and Māori work together with central government, local government and community organisations in mutually beneficial partnerships.

C Our communities understand partnerships under the Treaty of Waitangi and representation and processes for these partnerships have integrity.

D The unique status of tangata whenua is respected and reflected in community processes.

E Māori have the opportunity to participate in community development and decision-making at marae, hapū and iwi levels.

F We are knowledgeable about and show respect for the many and diverse cultures of the people who live here.

## MONITORING AND REPORTING COMMUNITY OUTCOMES

Locally and nationally, there are a number of processes under way to identify indicators. Statistics New Zealand has been working on a 'Linked Indicators Project', making national indicators available at the local and regional level where relevant. The Ministry of Social Development and other agencies have also undertaken substantial work to compile indicator information and make it more accessible. These national initiatives were taken into account during the identification of a core set of Waikato regional community outcomes indicators.

The 13 local authorities in the Waikato Region (including Environment Waikato) along with Waikato District Health Board and other key stakeholders are working in partnership to develop joint approaches to identify and monitor regional community outcomes. A working group of council officers called 'Monitoring and Reporting Community Outcomes' (MARCO) has been developing co-ordinated procedures for monitoring progress towards achievement of the regional community outcomes.

### Identifying the Waikato regional indicators

From a list of over 200 initial indicators the MARCO group identified a set of 75 indicators based on:

- (a) Technical assessment (measurability, cost effectiveness and understandability).
- (b) Relevance for local community outcomes (survey of all territorial authorities).
- (c) Relevance to the regional community outcomes (community stakeholders workshop).

The indicator set is grouped into the five major theme areas and 38 community outcomes, which comprises the framework for this report.

### Review of the Waikato regional indicators

At a meeting on 23 March 2010 the MARCO team discussed a process for undertaking a review of the regional indicators set. The advantage of being selected as a MARCO indicator is that it will be regularly up-dated, results analysed and summarised on-line at the district/city level where data are available (refer [www.choosingfutures.co.nz/MARCO-indicators](http://www.choosingfutures.co.nz/MARCO-indicators)). As a starting point, an earlier exercise was undertaken during 2008 to 'map' the regional indicators set in relation to indicators commonly used by territorial authorities throughout the Waikato Region. The Mapping Report and subsequent Waikato Indicator Inventory recommended that a small number of existing indicators be dropped from the set, and that up to 40 additional indicators be considered for inclusion in an expanded indicator set.

At the time of compiling this 2010 update, the local government sector was awaiting finalisation of proposals from the Local Government Minister to rationalise the LGA, including omission of sections 91 (identifying community outcomes) and 92 (monitoring and reporting community outcomes). These are known as the 'Improving Local Government Transparency, Accountability and Fiscal Management' (TAFM) proposals. Good quality and relevant information will always be required to track progress towards community goals and to support policy and decision-making. While the TAFM proposals will have an impact on community outcomes and associated monitoring, it was felt at the 23 March meeting that MARCO should proceed with a review and evaluation process, and that this should consider:

- (a) Identifying and grouping relevant themes that are consistent across region (and nationally)
- (b) Identifying information requirements and suitable indicators for these themes.
- (c) Comparing with existing MARCO indicators (as well as other indicators used by Waikato councils) and identifying any gaps.
- (d) Developing criteria for prioritising and selecting additional MARCO indicators.
- (e) Considering the recommendations for changes from the MARCO Mapping Report.

The above will be progressed during 2010/11 by a MARCO working group.

## **Local and iwi community outcomes**

Local and iwi community outcomes processes were also undertaken during 2004/05 by councils and iwi authorities throughout the Waikato Region. While each community describes its future well-being in a unique way, some common region-wide themes have emerged including People (safety, health, a community spirit, affordable lifestyles) and Places (good infrastructural services such as clean water and transportation networks, a balance between economic development and environmental protection).

Monitoring progress towards local community outcomes is the responsibility of local councils and is not addressed fully by this report. However specific sections of this report including the Appendices and supplementary online data should assist monitoring at the local level in a manner consistent with the regional monitoring programme. Further information about the relationship of Waikato regional, local and iwi community outcomes monitoring is contained in the MARCO Resource Kit for Integrated Monitoring and Reporting (refer to the 'indicators' section of the [www.choosingfutures.co.nz](http://www.choosingfutures.co.nz) website).

## HOW TO READ THIS REPORT

The remainder of this report is structured as follows:

Section	Description
1. Sustainable Environment	Indicators relating to environmental well-being
2. Quality of Life	Indicators relating to overall quality of life
3. Sustainable Economy	Indicators relating to economic well-being
4. Culture and Identity	Indicators relating to cultural well-being
5. Participation and equity	Indicators relating to civic participation and social equity
Where to from here	General description of next steps for Choosing Futures Waikato process
Further information	Contact details
Appendices	Additional data at the territorial authority level, including: <ul style="list-style-type: none"> <li>• Self-reported environmental actions</li> <li>• Greenhouse gas emissions</li> <li>• NZDep deprivation index scores</li> <li>• Avoidable mortality and avoidable hospitalisations</li> <li>• Early childhood education</li> <li>• Number of business enterprises and employees</li> </ul>

Information on each of the high-level regional community outcomes is presented as follows:

Sub-heading	Description	Example
Theme	Brief phrase encompassing one or more community outcome statements	1.1 Air, land, water quality and biodiversity
Community outcome(s)	Community outcome statements	1A The iconic landscapes and natural features of our environment define and sustain us. We respect and celebrate them as taonga. 1B Our natural environment is protected and respected. Its ecological balance is restored, its air, soil and water quality is improved and its native biodiversity is enhanced. 1F Our region's waterways have consistently high water quality.
Why is this important?	Concise description of why these community outcomes are relevant to the Waikato Region, and their relationship to other aspects of community well-being	Quality air, land and water, native flora and fauna, natural landscapes and resources are an important part of the regional identity and sustain both ecological and human health.
What are the indicators?	Indicators selected for measuring progress towards these community outcomes	1.1.1 River water quality for ecological health 1.1.2 River water quality for recreation 1.1.3 Lakes water quality for ecological health 1.1.4 Lakes water quality for contact recreation 1.1.5 Land use 1.1.6 Urban air quality 1.1.7 Groundwater availability and use 1.1.8 Surface water availability and use 1.1.9 Protection of natural heritage and landscapes 1.1.10 Extent of native vegetation 1.1.11 Protected native vegetation areas
How are we doing?	Summary of key information for each indicator	River and stream water quality for ecological health is better in some parts of the Region (eg, the Upper Waikato River) than in others (eg, Hauraki and the lowland tributaries of the Waikato River), mainly because of agricultural runoff and rural land use.

At the foundation level within this report is the indicator information itself. The focus of analysis is on national and regional comparisons and trends over time. On-line information also includes local data summaries, searchable by district/city council (refer [www.choosingfutures.co.nz/MARCO-indicators](http://www.choosingfutures.co.nz/MARCO-indicators)). This is summarised using text, tables and graphs as appropriate to the data. For each indicator there is also a summary of the current state and past trend (where available). For example:

Indicator	State	Trend
1.1.1 River water quality for ecological health	☺	↓

This means that the indicator ‘river water quality for ecological health’ (assessed using water quality guidelines and standards) is showing mixed or uncertain results throughout the Region, and the long-term trend shows a deterioration in water quality (specifically for the period 1989 to 2008 in relation to phosphorus and nitrate levels).

The state and trend are summarised using symbols as follows.

**State:**

- ☺ Good/Satisfactory (relative to national average)
- ☹ Mixed/Uncertain
- ☹ Unsatisfactory

**Trend:**

- ↑ Improving/favourable (eg, decrease in unemployment rate or increase in life expectancy)
- ↓ Declining/unfavourable (eg, decrease in unemployment rate or increase in life expectancy)
- ⇒ No significant trend
- ? Uncertain, ie, no trend data available

A full set of data and metadata is maintained by the MARCO group for each indicator.

**Data gaps**

Substantial data gaps have been identified which will be filled through future work by MARCO in collaboration with other groups. These limitations should be borne in mind when reading the results. In many cases only baseline data is available, and in other cases only descriptive information is available. Plans are under way to fill the remaining data gaps through collection of additional information.

Themes have not been specifically included for Iwi/Māori community outcomes, although work is ongoing to identify indicators for these outcomes. This is being facilitated by Environment Waikato in collaboration with iwi groups throughout the Region.

# 1. SUSTAINABLE ENVIRONMENT

Waikato regional communities aspire towards the following environmental outcome:

*“The Waikato region values and protects its diverse, interconnected natural environments”.*

For the purpose of this report, environmental indicators have been clustered into seven themes as follows:

Code	Theme	Community outcomes
1.1	Air, land, water quality and biodiversity	1A The iconic landscapes and natural features of our environment define and sustain us. We respect and celebrate them as taonga. 1B Our natural environment is protected and respected. Its ecological balance is restored, its air, soil and water quality is improved and its native biodiversity is enhanced. 1D The traditional role of iwi and hapū as kaitiaki is acknowledged, respected and enabled. 1F Our region’s waterways have consistently high water quality.
1.2	Environmental attitudes and behaviours	1C We are aware of what we need to do to look after our environment. Our region is renowned for linking environmental awareness with community action.
1.3	Coastal environment	1E Our coastal and waterway environments are restored and preserved and access to them is maintained.
1.4	Rural environment	1G We use land management practices that protect and sustain our soil and land.
1.5	Energy	1H We reduce our reliance on non-renewable energy.
1.6	Solid waste	1I Waste reduction, recycling, energy conservation and energy efficiency are promoted and are part of how we all live.

## 1.1 Air, land, water quality and biodiversity

### Community outcome(s):

1A The iconic landscapes and natural features of our environment define and sustain us. We respect and celebrate them as taonga.

1B Our natural environment is protected and respected. Its ecological balance is restored, its air, soil and water quality is improved and its native biodiversity is enhanced.

1D The traditional role of iwi and hapū as kaitiaki is acknowledged, respected and enabled.

1F Our region's waterways have consistently high water quality.

### Why is this important?

Quality air, land and water, native flora and fauna, natural landscapes and resources are an important part of the regional identity and sustain both ecological and human health.

### What are the indicators?

- 1.1.1 River water quality for ecological health
- 1.1.2 River water quality for recreation
- 1.1.3 Lakes water quality for ecological health
- 1.1.4 Lakes water quality for contact recreation
- 1.1.5 Land use
- 1.1.6 Urban air quality
- 1.1.7 Groundwater availability and use
- 1.1.8 Surface water availability and use
- 1.1.9 Protection of natural heritage and landscapes
- 1.1.10 Extent of native vegetation
- 1.1.11 Protected native vegetation areas

### How are we doing?

- River and stream water quality for ecological health is better in some parts of the Region (eg, the Upper Waikato River) than in others (eg, Hauraki and the lowland tributaries of the Waikato River), mainly because of agricultural runoff and rural land use. Monitoring of regional rivers over the past 20 years shows mixed results, with slight improvements in the Coromandel and Lowland Waikato monitoring areas but a deterioration in some other regional rivers (eg, upland Waikato). Overall, 25% of water quality measures improved at individual sites and 22% deteriorated. Biochemical oxygen demand has improved along the entire length of the river, probably at least partly due to changes in the management of sewage and industrial wastewaters. At the same time, levels of both total phosphorus and nitrate increased at several sites along the river, probably as a result of land use changes over recent decades. Pressures from wastewaters have generally decreased over the past 20 years, but farming has continued to intensify. The recent increases in levels of phosphorus and nitrogen are of concern. As the region continues to grow and develop, putting pressure on the river's catchment, careful management is needed to maintain and improve the quality of the Waikato River.
- River and stream water quality for contact recreation is poorer in the Hauraki area and lower Waikato River catchment. This largely reflects the greater intensity of land use in lowland parts of the Region, particularly in lowland Waikato, with higher levels of faecal bacteria and fine silts from sources such as agricultural and urban runoff. Recent data shows a marked decline which may signal an underlying adverse trend. Future monitoring will help clarify the extent of the trend.

- All nine monitored shallow lakes in the Region are nutrient enriched as assessed by Environment Waikato, resulting in a relatively high trophic state and low oxygen levels. The trophic state of most lakes remained unchanged or deteriorated between 1993 and 2001. Water quality for ecology in Lake Taupo remains largely satisfactory to excellent. Water clarity has improved in Lake Taupo in recent years and nitrogen levels have improved (subject to annual fluctuations), but levels of chlorophyll remain relatively high and oxygen depletion is only 'satisfactory' relative to Environment Waikato's standards.
- Water quality for contact recreation such as swimming is satisfactory to excellent in Lake Taupo, although bacterial levels are sometimes high near urban areas (eg, Taupo foreshore, Te Moenga Bay and Acacia Bay).
- An indicator of regional land use is currently under development at the national level. According to 2007 regional data from the Statistics New Zealand Agricultural Production Census, the main types of land use in the Waikato Region are grassland (71%), plantations of exotic trees intended for harvest (18%), mature native bush (4%) and native scrub and regenerating native bush (3%).
- Levels of fine particulate matter in the air, mostly from wood burners, exceed the regional guideline for a few days each year in the urban areas currently monitored. Communities are required to comply with the new National Environmental Standard for air quality by 2013. Of the urban areas monitored, Tokoroa and Taupo exhibit the largest number of exceedances per annum.
- Groundwater levels in most parts of the Waikato Region are under low stress, with less than 10% of available groundwater being used. Thirteen areas which have been investigated in the Region are under high stress, with more than 30% of available groundwater being used. These include the far north of the Region near Pukekohe, plus Tokoroa and the Waihi Basin.
- An indicator of surface water availability and use is currently under development by Environment Waikato.
- No data source has yet been identified at a regional or territorial authority level in relation to protection of natural heritage and landscapes.
- Around 69% of the Waikato Region is planted in non-native vegetation. This is primarily due to the prevalence of pastoral farming and plantation forestry. The highest proportion of land in indigenous forest in the Region is in the Thames-Coromandel District (65%) and the lowest is in Hamilton City (3%).
- As at July 2009, 401,300 ha of land in the Waikato Region (17.0%) was legally protected for the primary purpose of conserving biodiversity. Between 2006 and 2009, legally protected conservation land in the Waikato Region increased by 1,400 ha or 0.4%.

Indicator	State	Trend
1.1.1 River water quality for ecological health	☹	↓

This indicator shows how suitable our water quality is for aquatic plants and animals to live there. Environment Waikato describes the average 'pass rate' for seven water quality measures: dissolved oxygen; pH; turbidity; ammonia; temperature; nitrogen; and phosphorus.

Environment Waikato monitors a representative cross-section of rivers and streams across the Region to assess the suitability of water quality for native water plants and animals. What happens in one area of the catchment can directly affect what happens in another. For example, soil erosion issues in the Waipa catchment can contribute to sedimentation in the Waikato River and flooding in the Lower Waikato.

Figure 1.1.1a: Water quality monitoring map



At each river water quality monitoring site, the proportion of all samples collected during a five year period for a given variable (eg, dissolved oxygen) which met the standard for excellent water quality were determined. Similarly, the proportions which met the standard for satisfactory and unsatisfactory water quality were determined. This process was undertaken for all seven variables. At each site, the average value of the proportions found to be 'excellent' for each of the seven variables was calculated. Average proportions for the 'satisfactory' and 'unsatisfactory' categories were also calculated. The results for the individual sites were then aggregated according to site location. Results from the five Waikato River sites upstream of Lake Karapiro were aggregated into an 'Upper River' result, while the other sites were aggregated into a 'Lower River' result. The results for the other 100 sites were aggregated into seven 'water zones'.

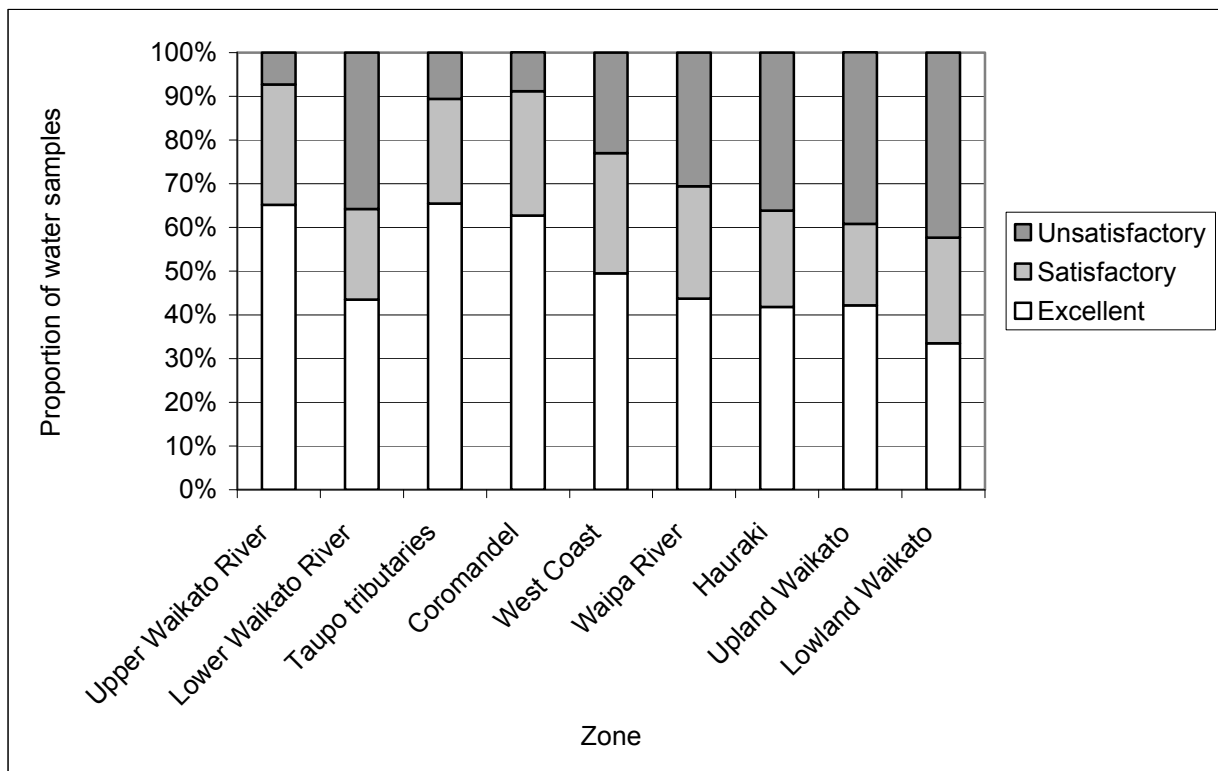
Source: Environment Waikato  
<http://www.ew.govt.nz/Environmental-information/Rivers-lakes-and-wetlands/healthyrivers/Waikato-River/map/>

Figure 1.1.1b shows that river water quality for ecological health is generally good across the region. However in areas where land use is more intensive, water quality for ecological health is poorer (for example, Hauraki and the lowland tributaries of the Waikato River). According to Environment Waikato’s website this is mainly because of the greater intensity of land use in the lowland parts of the Region. Rivers and streams have changed dramatically since European settlement. They’ve been dammed, had water pumped out or diverted, waste discharged into them, and exotic plants and animals introduced. The land draining into these rivers (their catchment area) has been cleared for agriculture, forestry and urban development. These activities all increase the amount of runoff entering rivers and streams.

Figure 1.1.1c shows the historical trend in water quality for regional rivers. Overall this shows mixed results, with slight improvements in the Coromandel and Lowland Waikato monitoring areas but a deterioration in some other regional rivers (eg, upland Waikato).

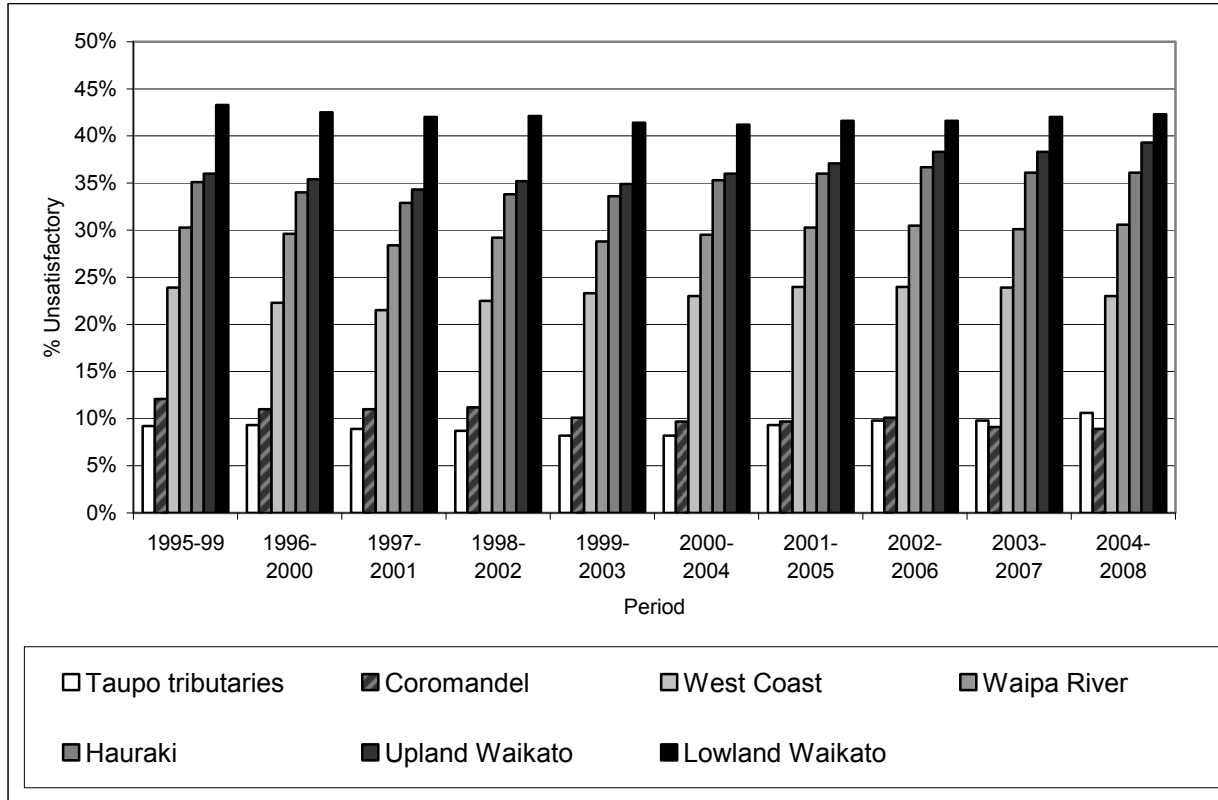
Figure 1.1.1d shows trends for monitoring sites on the Waikato River over the period 1989 to 2008. Overall, 25% of water quality measures improved at individual sites and 22% deteriorated. Biochemical oxygen demand – a measure of pollutants that consume oxygen in the water as they break down – improved along the entire length of the river. These improvements are probably at least partly due to changes in the management of sewage and industrial wastewaters. At the same time, levels of both total phosphorus and nitrate increased at several sites along the river, probably as a result of land use changes over recent decades. Pressures from wastewaters have generally decreased over the past 20 years, but farming has continued to intensify. The recent increases in levels of phosphorus and nitrogen are of concern. As the region continues to grow and develop, putting pressure on the river’s catchment, careful management is needed to maintain and improve the quality of the Waikato River.

Figure 1.1.1b: Proportion of all samples collected during 2004-2008 which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for ecological water quality in Waikato rivers and streams



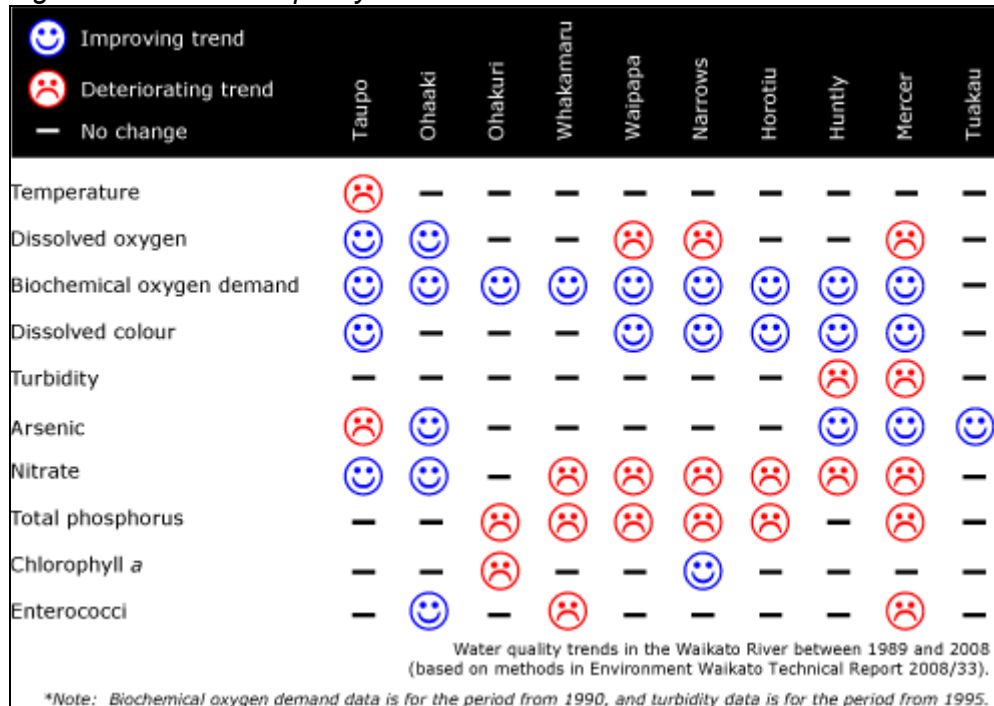
Source: Environment Waikato

Figure 1.1.1c: Proportion of all regional rivers samples collected between 1995 and 2008 (shown as 5 year moving average) which met the 'unsatisfactory' standard for ecological health



Source: Environment Waikato Healthy Rivers Indicator Data Spreadsheets

Figure 1.1.1d: Water quality trends in the Waikato River between 1989 and 2008



Source: Environment Waikato

Indicator	State	Trend
1.1.2 River water quality for recreation	☹	⇒

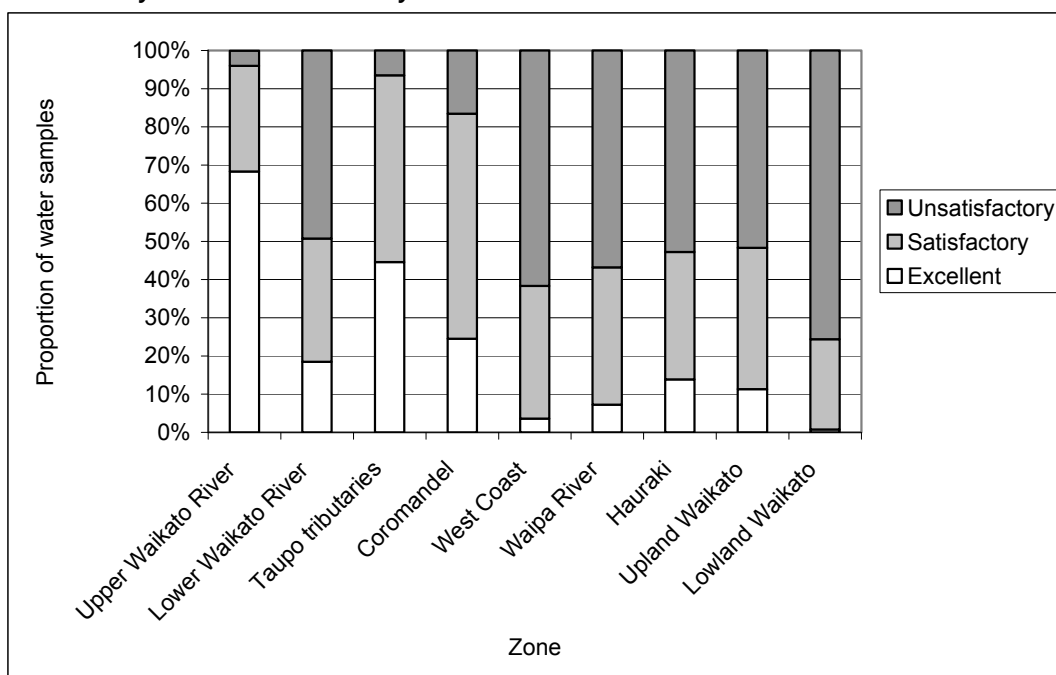
This indicator measures the faecal bacteria and water clarity in our rivers and streams. It is measured as an average 'pass rate' for two water quality measures: water clarity at baseflow; and *Escherichia Coli* (*E.coli*) – single sample.

Environment Waikato monitors a representative sample of rivers and streams across the Region to determine how good the water quality is for contact recreation (such as swimming and water skiing). At each monitoring site, Environment Waikato considers the proportions of all samples collected during a five year period for a given water quality variable which met the standard for excellent, satisfactory and unsatisfactory water quality. This process was undertaken for both variables. Results were aggregated for individual sites according to site location. Results from the five Waikato River sites upstream of Lake Karapiro into an upper River result, and the other sites into a lower River result. The results for the other 104 sites were aggregated into seven water zones.

Figure 1.1.2a shows that river water quality for contact recreation is good in some parts of the Region (for example, the upper Waikato River, tributaries of Lake Taupo and in the Coromandel). However in the lowland areas river water quality is not satisfactory (for example, Hauraki and the lowland tributaries of the Waikato River). This largely reflects the greater intensity of land use in the lowland parts of the Region, with higher levels of faecal bacteria and fine silts, and highlights the impact of non-point sources of contamination such as runoff from agricultural land and urban areas. Environment Waikato has begun to assess the relative importance of various point and non-point sources of contamination using this information together with its resource consents database.

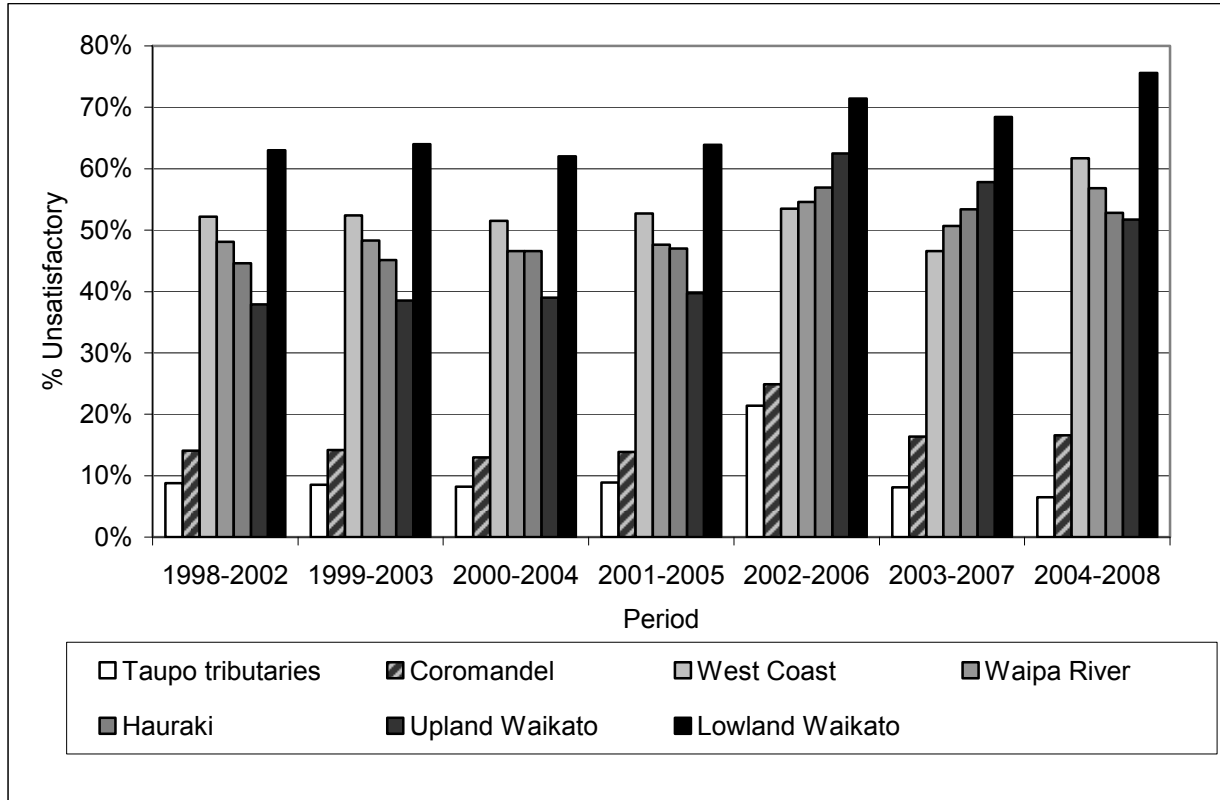
Figure 1.1.2b shows historical results of recreational water quality monitoring for regional rivers. Overall this showed no significant change during the mid-1990s to mid-2000s, however more recent data has shown a marked decline in some areas, particularly in lowland Waikato. This may signal an underlying adverse trend. Future monitoring will help clarify the extent of the trend.

Figure 1.1.2a: Proportion of all samples collected during 2004-2008 which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for recreation in Waikato rivers and streams



Source: Environment Waikato

Figure 1.1.2b: Proportion of all regional rivers samples collected between 1998 and 2008 (shown as 5 year moving average) which met 'unsatisfactory' standard for swimming



Source: Environment Waikato Healthy Rivers Indicator Data Spreadsheets

Note: Due to a change in methodology, data from prior to 1998 cannot be compared with more recent data for this indicator.

Indicator	State	Trend
1.1.3 Lakes water quality for ecological health	☹	⇒

Lakes water quality is monitored to determine a lake’s trophic state – the ability to support freshwater plants and animals. Monitoring over time will tell us if a shallow lakes trophic level has improved, deteriorated or remained unchanged.

Lakes are valued for their unique genetic diversity, cultural and spiritual importance, scientific interest, recreational use and intrinsic values. Many of the shallow lakes in the Waikato Region are valuable refuges for unique plant and animal species. Lake Taupo is nationally recognised as a symbol of near-pristine environmental conditions.

Scientific equations were used to determine the average trophic level index (TLI) for each lake from monitoring samples. Thresholds for acceptable trophic state were derived from standards, guidelines and expert opinion.

Tables 1.1.3a and 1.1.3b show that all nine monitored shallow lakes in the Region are nutrient enriched as assessed by Environment Waikato, resulting in a relatively high trophic state and low oxygen levels. The trophic state of most lakes remained unchanged or deteriorated between 1993 and 2001.

*Table 1.1.3a: Nutrient enrichment of nine shallow lakes in the Waikato Region (1993-2001)*

	high	very high	extremely high
nutrient enrichment (n=9)	2	2	5
	improving	no change	worsening
trend in nutrient enrichment(n=9)	2	3	4

Source: Environment Waikato

*Table 1.1.3b: Trophic Level Index (TLI avg) of shallow lakes in the Waikato Region (1988-2001)*

	Lake Mangahia	Lake Ngaroto	Lake Rotokauri	Lake Rotomanuka North	Lake Rotomanuka South	Lake Rotoroa	Lake Waahi	Lake Waikare	Lake Whangape
1988	6.21								
1989	6.72								
1990	6.37								
1991	6.35								
1992	7.07					5.50			6.04
1993	6.63		4.90			5.18		6.38	6.05
1994	6.66		4.78			4.97		6.49	5.46
1995		6.55		4.52	6.31	4.92	5.19	6.16	5.20
1996		6.30		4.80	6.93	4.96	5.28	6.62	
1997		5.86	5.81	4.73	7.03	4.80	5.18	6.58	
1998		6.18	6.24	5.20	6.39	4.91	5.68	6.90	
1999		6.43	6.28	5.00	6.37	4.91	5.63	6.94	
2000		6.87	6.42	5.15	6.65	4.87	5.27	7.07	
2001		6.19	6.64	5.03	6.81	4.83	5.33	6.35	
2002						4.66			

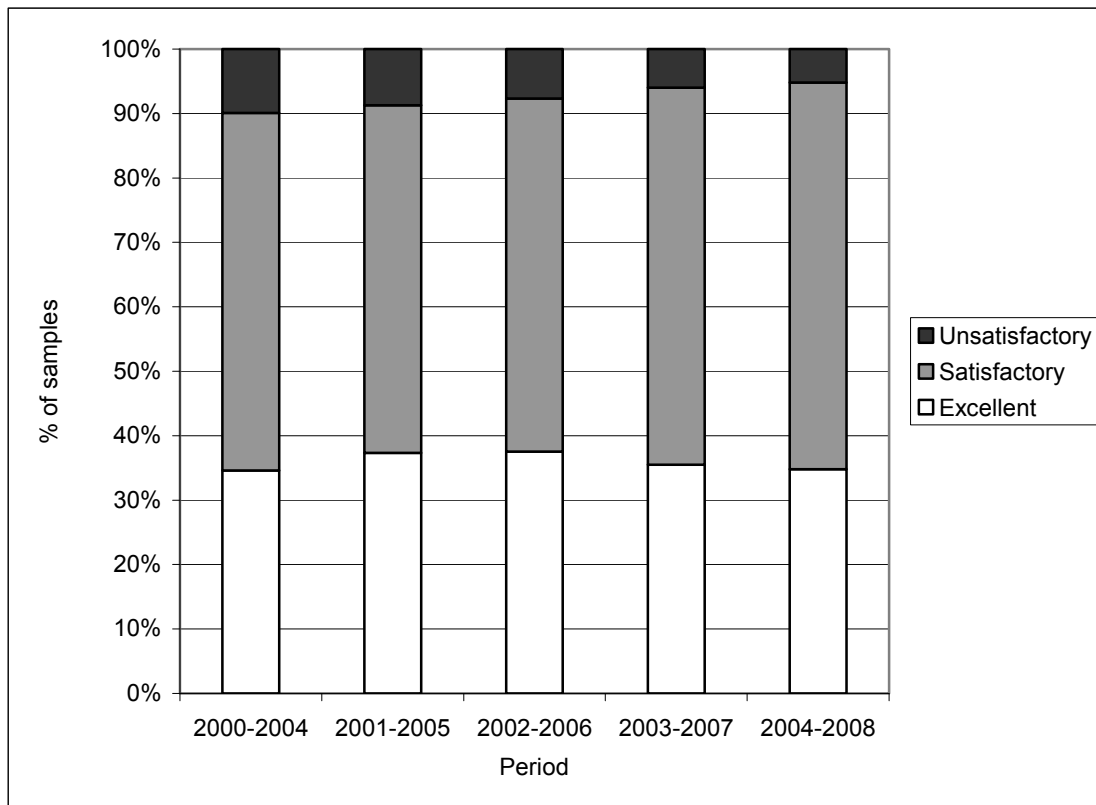
Source: Environment Waikato

Note: Increased TLI score typically indicates deteriorating water quality.

Figure 1.1.3c shows that water quality for ecology in Lake Taupo remains largely satisfactory to excellent, with a gradual improvement over time.

Tables 1.1.3c to 1.1.3f show that water clarity has generally improved in Lake Taupo in recent years and nitrogen levels have improved (subject to annual fluctuations), but levels of chlorophyll remain relatively high and oxygen depletion is only ‘satisfactory’ relative to Environment Waikato’s standards.

Figure 1.1.3c: Proportion of all samples collected during 2000-2004, 2001-2005, 2002-2006, 2003-2007 and 2004-2008 which met ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for ecological health in Lake Taupo



Source: Environment Waikato

Table 1.1.3c: Proportion of all samples collected between 1995 and 2008 (shown as 5 year moving average) which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for Secchi depth (water clarity) in Lake Taupo

	Standard	1995-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08
Excellent	>15	37.3%	29.6%	33.8%	38.0%	42.3%	48.8%	52.9%	58.1%	60.2%	60.9%
Satisfactory	12-to-15	52.0%	59.2%	54.4%	47.9%	47.4%	42.5%	38.4%	36.0%	35.2%	34.8%
Unsatisfactory	<12	10.7%	11.3%	11.8%	14.1%	10.3%	8.8%	8.8%	5.8%	4.5%	4.3%

Source: Environment Waikato timeseries data spreadsheet for Lake Taupo ecological health indicator

Table 1.1.3d: Proportion of all samples collected between 1995 and 2008 (shown as 5 year moving average) which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for chlorophyll in Lake Taupo

	Standard	1995-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08
Excellent	<0.7	46.1%	39.4%	30.4%	24.3%	22.4%	24.4%	29.4%	25.0%	30.7%	34.8%
Satisfactory	0.7-to-1.4	46.1%	46.5%	47.8%	50.0%	46.1%	46.2%	45.9%	51.2%	50.0%	48.9%
Unsatisfactory	>1.4	7.9%	14.1%	21.7%	25.7%	31.6%	29.5%	24.7%	23.8%	19.3%	16.3%

Source: Environment Waikato timeseries data spreadsheet for Lake Taupo ecological health indicator

**Table 1.1.3e: Proportion of all samples collected between 1995 and 2008 (shown as 5 year moving average) which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for total nitrogen in Lake Taupo**

	Standard	1995-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08
Excellent	<70	35.4%	38.3%	50.8%	58.6%	63.2%	65.4%	67.1%	66.7%	51.1%	43.5%
Satisfactory	70-to-140	63.1%	61.7%	49.2%	40.0%	35.5%	33.3%	31.8%	32.1%	48.9%	56.5%
Unsatisfactory	>140	1.5%	0.0%	0.0%	1.4%	1.3%	1.3%	1.2%	1.2%	0.0%	0.0%

Source: Environment Waikato timeseries data spreadsheet for Lake Taupo ecological health indicator

**Table 1.1.3f: Proportion of all samples collected between 1995 and 2008 (shown as 5 year moving average) which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for oxygen depletion in Lake Taupo**

	Standard	1995-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08
Excellent	<5	40%	40%	40%	40%	20%	0%	0%	0.0%	0.0%	0.0%
Satisfactory	5-to-15	60%	60%	60%	60%	80%	100%	100%	100.0%	100.0%	100.0%
Unsatisfactory	>15	0%	0%	0%	0%	0%	0%	0%	0.0%	0.0%	0.0%

Source: Environment Waikato timeseries data spreadsheet for Lake Taupo ecological health indicator

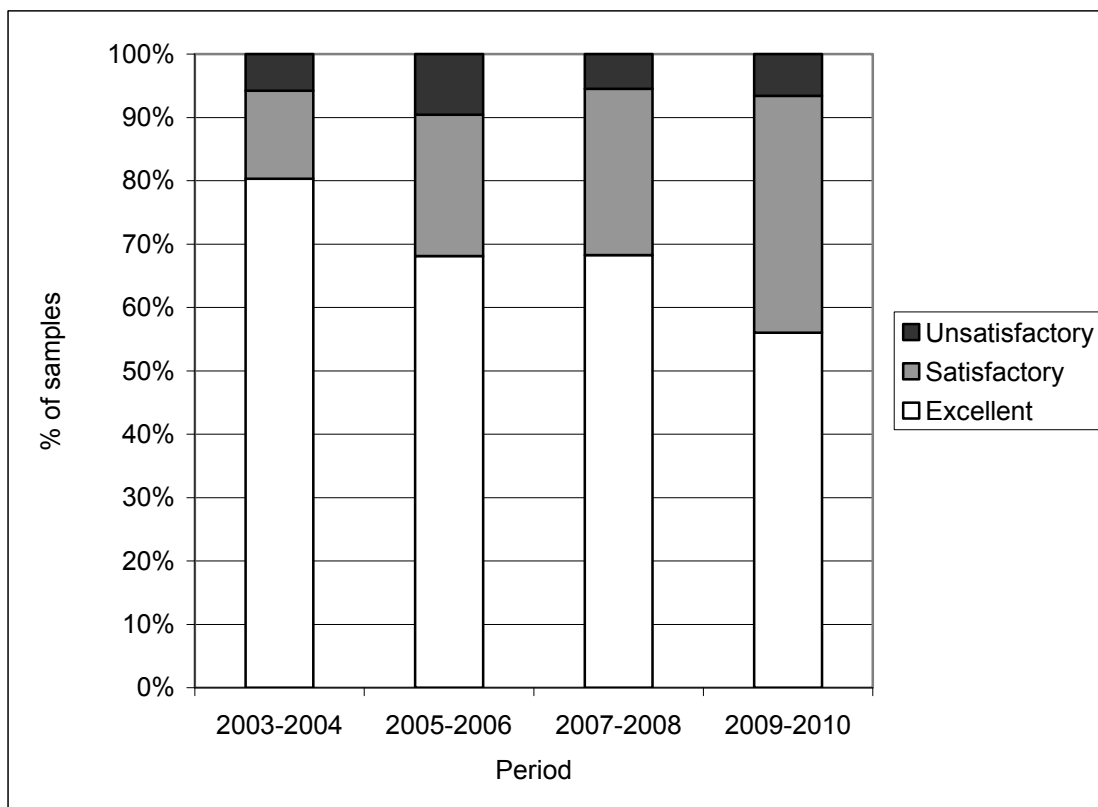
Indicator	State	Trend
1.1.4 Lakes water quality for contact recreation	☹	⇒

This indicator measures the numbers faecal bacteria and water clarity in Lake Taupo. There are no specific measurements taken to monitor shallow lakes (peat lakes) water quality for recreation.

Environment Waikato monitors lake water quality to determine how good the water is for contact recreation (such as swimming and water skiing). High levels of bacteria can directly impact on the health and well-being of individuals, as they indicate the presence of pathogens (illness-causing bugs). A key factor in the quality of lakes water for contact recreation is the quality of an urban area’s stormwater and sewerage systems, and agricultural runoff.

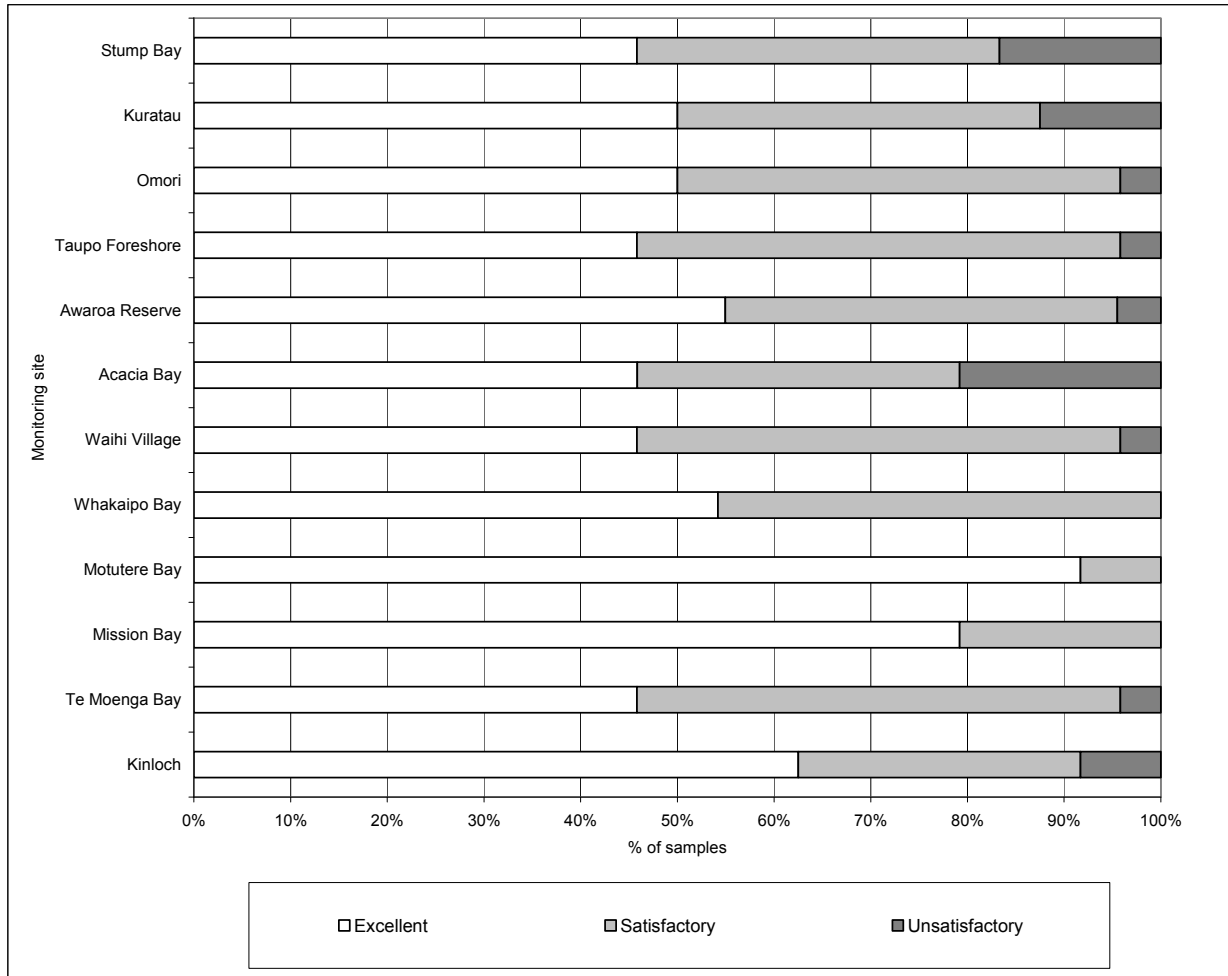
Figure 1.1.4a shows that water quality for contact recreation (such as swimming) remains generally satisfactory to excellent in Lake Taupo. However, as illustrated in Figure 1.1.4b, bacterial levels are sometimes high near urban areas (eg, Taupo foreshore, Te Moenga Bay and Acacia Bay).

Figure 1.1.4a: Proportion of all samples collected during summers of 2003-2004, 2005-2006, 2007-2008 and 2009-2010 which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for contact recreation in Lake Taupo



Source: Environment Waikato data spreadsheets for Lake Taupo swimming data

Figure 1.1.4b: Contact recreation site scores, Lake Taupo water quality 2009-2010



Source: Environment Waikato data spreadsheets for Lake Taupo swimming data

Note: The number of sampling sites was smaller in 2009-2010 than in previous periods.

Indicator	State	Trend
1.1.5 Land use	☹	?

This indicator measures the area of different types of land use.

Land use provides information on where development pressures are likely to be the greatest on soil, water and indigenous vegetation resources. Changing land use can be compared with indicators of water and air quality, and the changing extent of land cover as a contributor to these changes. Measuring land cover goes a long way to determining land use. However, land use is a more accurate indicator of the pressures being placed on soil, water and indigenous vegetation resources. Some land covers have singular corresponding land uses (eg, exotic forest land cover = plantation forest land use, indigenous land cover = low impact recreational/conservation land use). Other land covers have multiple land uses, for example, pastoral land cover could be dairy farming, sheep farming, deer farming or beef farming (or another type of farming). Each has different types of impact on soil.

Little data is currently available. This indicator is under development (Envirolink Tools Land Use Database Project 2010/11, led by Daniel Rutledge, LCR).

According to 2007 regional data from the Statistics New Zealand Agricultural Production Census, the main types of land use in the Waikato Region are grassland (71%), plantations of exotic trees intended for harvest (18%), mature native bush (4%) and native scrub and regenerating native bush (3%) (refer Table 1.1.5a). Land use types differ between the territorial authority areas within the Region (refer Table 1.1.5b).

According to 1994-1996 data on Environment Waikato’s website (accessed 8 April 2010), the main land use types in the Waikato Region are pastoral farming (58%), indigenous vegetation (28%), plantation forestry (12%), urban areas (1%) and horticulture and cropping (less than 1%). Refer to Indicator 1.1.10 (extent of native vegetation) for further information.

**Table 1.1.5a: Land use by regional council, 2007 (area in hectares at 30 June)**

Region	Grassland	Tussock and danthonia	Grain seed and fodder crop	Horticultural land	Plantations of exotic trees intended for harvest	Mature native bush	Native scrub and regenerating native bush	All other land	Total land
Northland	485,042	3,472	2,299	5,843	161,205	37,468	41,194	28,021	764,543
Auckland	163,969	979	1,825	9,728	35,698	11,556	11,345	9,880	244,981
Waikato	1,140,847	3,331	18,134	9,791	281,845	64,638	42,536	39,231	1,600,354
Bay of Plenty	203,614	555	7,303	16,120	261,060	14,903	16,004	11,901	531,459
Gisborne	362,152	C	C	9,390	146,986	34,785	42,300	10,905	614,524
Hawke's Bay	681,997	C	C	19,319	133,493	15,537	42,702	25,786	951,986
Taranaki	359,265	1,636	2,021	509	26,044	28,692	38,084	13,966	470,218
Manawatu-Wanganui	1,119,284	9,528	15,964	5,163	119,210	51,142	70,310	26,644	1,417,246
Wellington	331,516	9,142	4,681	2,081	63,731	19,018	47,837	12,628	490,634
North Island	4,847,686	55,788	66,240	77,944	1,229,272	277,739	352,312	178,962	7,085,945
Tasman	96,232	9,694	1,335	6,814	83,704	18,254	19,602	17,673	253,307
Nelson	2,841	C	C	C	9,362	C	1,807	1,585	17,528
Marlborough	133,905	216,024	5,693	23,365	60,902	14,804	28,172	24,255	507,119
West Coast	115,306	8,986	890	C	C	12,089	17,617	11,411	200,126
Canterbury	1,252,564	1,252,444	193,653	15,898	98,148	68,120	95,164	104,269	3,080,261
Otago	855,702	1,136,607	53,191	7,406	120,611	26,079	73,602	57,946	2,331,143
Southland	759,900	216,230	46,388	1,258	72,498	21,572	27,168	33,122	1,178,136
Area Outside	22,025	C	C	C	C	C	10,538	2,244	47,332
South Island	3,238,474	2,844,675	301,164	54,948	479,008	170,508	273,669	252,505	7,614,952
Total NZ	8,086,160	2,900,463	367,404	132,892	1,708,282	448,247	625,981	431,467	14,700,897

Source: Statistics New Zealand Agricultural Production Census

Table 1.1.5b: Land use by territorial authority, 2002 (area in hectares at 30 June)

Territorial Authority	Grassland	Tussock and danthonia used	Arable crop land, fodder crop	Land in horticulture	Planted production forest	Mature native bush	Native scrub and regenerating native bush	Other land	Total land
Franklin District	123,237	3,514	2,148	8,620	9,026	4,757	6,140	4,925	162,367
Thames-Coromandel District	44,239	753	..c	533	28,406	3,849	12,400	..c	97,512
Hauraki District	63,298	1,852	943	262	3,482	1,557	2,974	1,269	75,638
Waikato District	195,802	5,212	2,691	1,487	18,253	5,445	4,451	5,719	239,060
Matamata-Piako District	141,694	1,631	2,593	1,870	2,145	1,497	2,152	3,246	156,829
Hamilton City	2,848	98	..c	142	115	..c	111	89	3,425
Waipa District	118,556	2,927	2,391	1,311	2,031	1,474	1,552	3,368	133,611
Otorohanga District	114,499	2,857	2,499	109	4,577	6,379	4,583	1,787	137,289
South Waikato District	57,298	728	1,228	148	..c	871	2,577	..c	172,503
Waitomo District	194,184	2,878	1,003	72	32,872	22,637	14,358	2,347	270,351
Taupo District	113,753	2,244	2,827	193	196,171	7,089	35,250	11,904	369,431
Rotorua District	103,789	1,785	1,360	491	56,818	3,841	6,926	4,773	179,784

Source: Statistics New Zealand Agricultural Production Census

	Indicator	State	Trend
1.1.6	Urban air quality	☹	⇒

This indicator measures the levels of fine particles in the air in selected urban areas. These are referred to as PM<sub>10</sub> particles, which are particles smaller than 10 microns (there are 1000 microns in 1 millimetre).

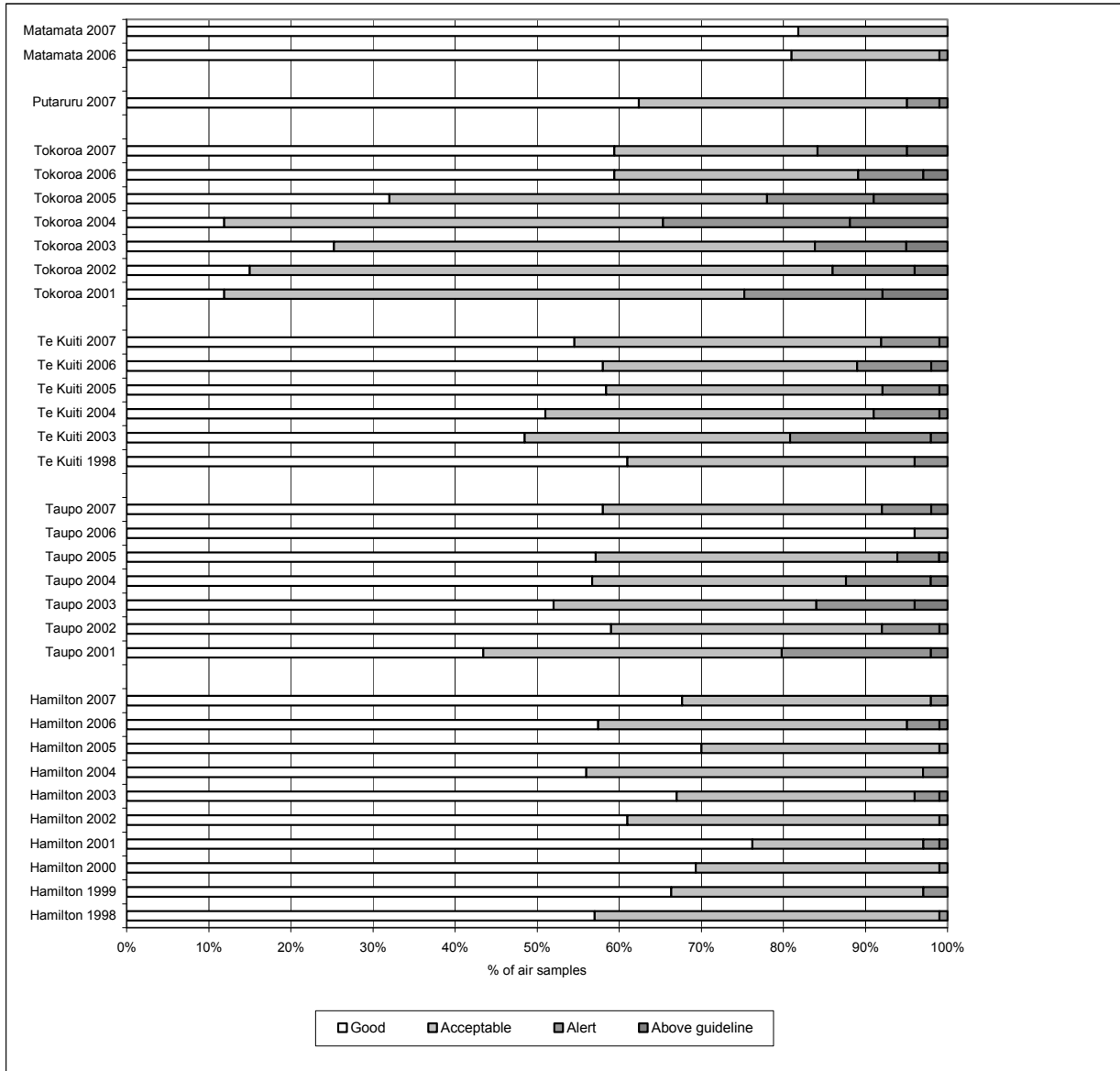
PM<sub>10</sub> can cause respiratory problems, especially for asthmatics, small children and the elderly and can result in hospital admissions and premature mortality in sensitive people. PM<sub>10</sub> also affects air by reducing visibility. Less visibility reduces safety, reduces views and could affect tourism.

Environment Waikato uses a scale of Good, Acceptable, Alert or Action to compare PM<sub>10</sub> 24 hour averages against regional guidelines. The regional guideline for PM<sub>10</sub> levels is 50 µg/m<sup>3</sup> for a 24 hour period. The ranges for the scale are: Good: value between 0 and 16.5 µg/m<sup>3</sup> for a 24 hour period; Acceptable: value between 16.5 and 33 µg/m<sup>3</sup> for a 24 hour period; Alert: value between 33 and 50 µg/m<sup>3</sup> for a 24 hour period; Action: value about 50 µg/m<sup>3</sup> for a 24 hour period. Results are summarised by year as percentage of time each site was within each of the ranges defined above.

Figure 1.1.6a and Table 1.1.6b show that PM<sub>10</sub> levels are good or acceptable most of the time but for a few days each year levels approach or go beyond the regional guideline. This happens mostly in winter during calm periods. Of the urban areas monitored, Tokoroa and Taupo exhibit the largest number of exceedances per annum. According to Environment Waikato air scientists, the majority of PM<sub>10</sub> in urban areas comes from home fires, mainly from burning wood. Other sources include industry and emissions from motor vehicles. During 2004 the Ministry for the Environment introduced a National Environmental Standard for PM<sub>10</sub> of 50 µg/m<sup>3</sup> for a 24 hour period. The standard allows one breach of 50 µg/m<sup>3</sup> per year. In air sheds where the standard is not achieved, regional councils can only grant resource consents if they are confident that the net result of all activities in the air shed will result in an improvement in air quality. Councils are required to comply with the standard by 2013.

Note that Environment Waikato is expanding its PM<sub>10</sub> monitoring programme to include Ngaruawahia, Waihi and Turangi by 2011. The PM<sub>10</sub> monitoring network is increasing at a rate of one new location per year until adequate coverage is achieved for all non-complying airsheds. This programme may be subject to change following confirmation of Environment Waikato's annual budgets.

Figure 1.1.6a: Percentage of air samples meeting "good", "acceptable" or "alert" PM<sub>10</sub> levels relative to guidelines, Waikato urban areas 1998 to 2007



Source: Environment Waikato

Table 1.1.6b: Number of exceedances per year of the regional guideline for particulate matter

	Hamilton	Taupo	Te Kuiti	Tokoroa	Putaruru	Matamata
1998	0		0			
1999	0					
2000	0					
2001	3	7		24		
2002	0	6		15		
2003	4	12	4	18		
2004	1	6	5	41		
2005	0	3	2	33		
2006	2	0	7	9		0
2007	0	6	4	11	2	0

Source: Environment Waikato

Indicator	State	Trend
1.1.7 Groundwater availability and use	☹	?

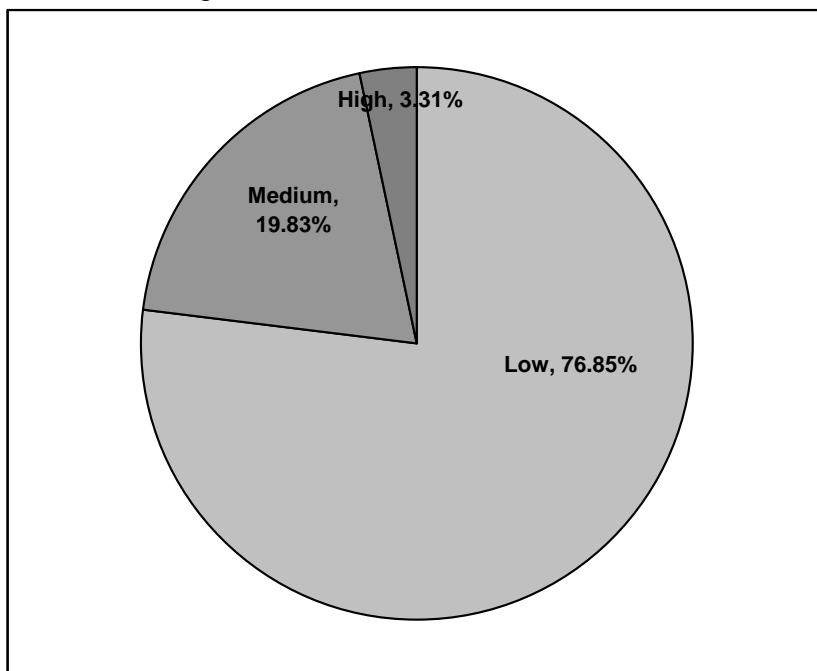
Groundwater makes up about 90% of the Waikato Region’s freshwater resource, and is used for drinking, industry, agriculture and horticulture. This indicator measures the amount of groundwater that’s available for use in the Region. It monitors the amount of ‘stress’ groundwater resources are under in different areas.

Environment Waikato monitors groundwater availability to help protect the Region’s groundwater supplies and ensure they are used sustainably. When too much groundwater is taken, groundwater levels are lowered; there may not be enough water for everyone to use, resulting in competition for water; less groundwater can flow into streams, reducing stream flow and affecting stream-life such as fish and invertebrates; land may subside; and in coastal areas salt water may flow into coastal aquifers and contaminate groundwater as the water table drops.

An aquifer’s volume of ‘available’ groundwater is compared with the amount used (consented and permitted takes). From this, the level of stress on groundwater resources is estimated into one of three categories: Low stress areas have less than 10% of available groundwater allocated for use; Medium stress areas have between 10% and 30% of available groundwater allocated for use; High stress areas have more than 30% of available groundwater allocated for use. This provides a guideline to identify potential problem areas which may need more intensive monitoring. Most of the monitored groundwater areas in the Waikato Region are under low to medium stress.

Figure 1.1.7a and Table 1.1.7b show that groundwater levels in most parts of the Waikato Region are under low stress, with less than 10% of available groundwater being used. Thirteen areas which have been investigated in the Region are under high stress, with more than 30% of available groundwater being used. These include the far north of the Region near Pukekohe, plus Tokoroa and the Waihi Basin.

Figure 1.1.7a: Percentage of investigated areas with low, medium or high ground water use in the Waikato Region



Source: Environment Waikato  
 Note: Data collected from 1988 to 2002

Table 1.1.7b: Percentage of investigated areas with low, medium or high groundwater use

Main areas investigated	Smaller sub-areas investigated	Low	Medium	High	Area km <sup>2</sup>
Western Region		15.1%			4302.6
Taupo		12.1%			3445.0
	Taupo Township			0.0%	12.6
	Northern Bays	0.4%			107.0
Waipa		10.6%			3030.0
	North Waipa	1.4%			400.0
Hauraki Plains		11.6%			3300.0
South Waikato			15.2%		4340.0
	Reporoa			0.1%	28.7
	Tokoroa			0.6%	157.5
	Putaruru			0.1%	21.0
Lower Waikato		10.6%			3015.0
	South of Taupiri		4.2%		1198.0
	North of Taupiri	6.4%			1816.0
Pukekohe/Pukekawa**				1.2%	348.1
	Pukekohe Basalt/Kaawa**			0.3%	85.8
	Waiuku**			0.5%	147.0
	Pukekawa		0.3%		73.2
	Onewhero		0.1%		41.1
Coromandel		8.8%			2520.0
	Waihi Basin			0.5%	136.0
	Whiritoa*			<0.01%	0.9
	Whangamata Moana Point*			0.0%	3.1
	Hahei*			0.0%	4.0
	Cooks Beach*			<0.01%	0.9
	Whangapoua*			<0.01%	0.4
	Kuaotunu West*			<0.01%	0.2
	Thames	<0.001%			2.5
	Whangamata Township		<0.001%		2.5
	Pauanui	<0.001%			2.3
	Matarangi		0.0%		3.4
	Whitianga		<0.001%		1.9
Total		76.9%	19.8%	3.3%	28546.7

\* accounts for seasonal aspect of holiday population

\*\*accounts for seasonal aspect of irrigation

Source: Environment Waikato

	Indicator	State	Trend
1.1.8	Surface water availability and use	☹	?

This indicator is currently under development by Environment Waikato but due to poor data availability it is unclear when it may be published in the future. For more information, contact the Hydrogeologist, Resource Information Group at Environment Waikato.

	Indicator	State	Trend
1.1.9	Protection of natural heritage and landscapes	☹	?

No data source has been identified for this indicator at a regional or territorial authority level.

Indicator	State	Trend
1.1.10 Extent of native vegetation	☹	?

This indicator measures the extent of different land cover in the Waikato region, including native (indigenous) vegetation. Five primary land cover types are measured. These are: native forest; scrublands; tussock grassland; other natural areas; and non-native vegetation (including urban areas).

The land cover of the Waikato Region is monitored using data from satellite photographs (Land Cover Database) to measure the extent of indigenous vegetation and areas of pressure on the environment, such as urban, pastoral and horticultural areas. This information can be used, over time, to monitor and report on the changes to the state of the environment and provide the basis for better resource management decisions, more efficient use of natural resources and improved environmental management.

Table 1.1.10a shows that around 69% of the Waikato Region is planted in non-native vegetation. This is primarily due to the prevalence of pastoral farming and plantation forestry. Different territorial authorities have different mixes of land use, with Hamilton City comprising 60% urban development, the Waipa, Matamata-Piako and Franklin districts comprising 80% or more pastoral farming, South Waikato and Taupo districts comprising 30% or more plantation forestry, and Thames-Coromandel District comprising 65% indigenous vegetation. The figures above were compiled in 2002 using satellite imagery from 2001 and 2002. The Ministry for the Environment intends to update its Land Cover Database every five years.

*Table 1.1.10a: Extent of native vegetation 1840 and mid 1990s*

	1840	Mid 1990s
Native Forest	52%	19%
Scrubland	21%	6%
Tussock grassland	19%	<1%
Other natural areas*	8%	6%
Non-native vegetation*	0%	69%
Total	100%	100%

Source: Historic data - Regional Indigenous Vegetation Inventory (1840); More recent data - Leathwick, J. Clarkson, B. and Whaley, P. 1995: *Vegetation of the Waikato Region: Current and Historic Perspectives*. Landcare Research Contract Report LC9596/022. Landcare Research, Hamilton.

Notes: 'Other natural areas' includes wetlands, dune, geothermal, bare rock, and open water. 'Non-native vegetation' includes pasture, plantation and horticulture, and also urban areas.

*Table 1.1.10b: Extent of native vegetation mid 1990s – Land cover class (sqkm)*

	Native forest	Scrubland	Tussock grassland	Total
Franklin*	126	64	0	190
Hamilton City	2	1	0	3
Hauraki	239	51	0	290
Matamata-Piako	191	9	0	200
Otorohanga	513	111	0	624
Rotorua*	58	46	0	105
South Waikato	173	10	<1	182
Taupo*	943	519	179	1,640
Thames-Coromandel	1,000	399	0	1,399
Waikato	360	93	0	453
Waipa	107	10	0	116
Waitomo*	1,059	179	0	1,239
Waikato Region	4,770	1,492	179	6,441

Source: Landcare Research

\* Note only part of Franklin, Rotorua, Taupo and Waitomo districts fall within the Waikato Region.

Indicator	State	Trend
1.1.11 Protected native vegetation areas	☹	⇒

This indicator refers to the extent and legal protection of indigenous vegetation cover.

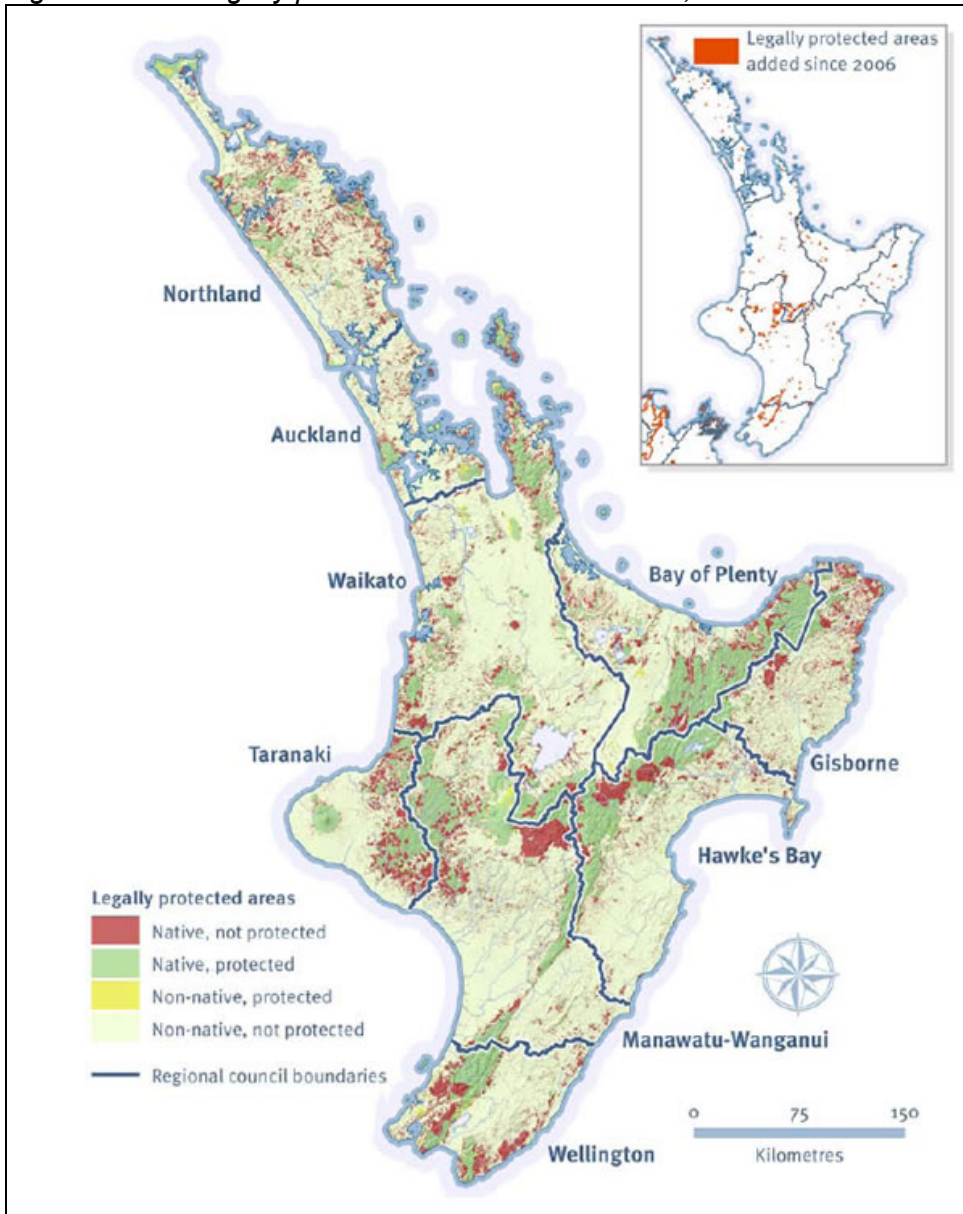
The native flora of New Zealand is unique, having evolved in isolation for millions of years. It is important to know how much of this native flora is protected in order to maintain it in a sustainable manner.

Most legally protected land is part of the public conservation lands that cover large tracts of native forest and alpine areas. DoC is responsible for preserving and protecting these areas, including managing threats from invasive pests and diseases. By October 2007, 8.43 million hectares of land were legally protected for conservation purposes throughout New Zealand. This includes public conservation lands managed by DoC and councils, and private land protected under covenants by the QEII National Trust and Ngā Whenua Rāhui. Ngā Whenua Rāhui is a contestable fund that was established in 1991 to promote the voluntary protection of native ecosystems on Māori-owned land. In 2006, about 146,800 hectares of native ecosystems had been protected through this fund.

As of July 2009, 8.76 million ha of New Zealand's land (33.4%) was legally protected for the primary purpose of conserving biodiversity. Legally protected public conservation land accounted for 8.53 million ha of this and private conservation land accounted for 238,300 ha. Between 2006 and 2009, legally protected conservation land in New Zealand increased by 408,800 ha or 4.9%. About three-quarters of this increase was from land acquired and protected through the High Country Tenure Review (ie, predominantly in the Canterbury and Otago regions). Between 2006 and 2009, the legally protected area of the most threatened environments (ie, National Priority 1 environments) increased by 3,300 ha or 3.4%. Out of all the OECD countries, New Zealand has the highest proportion of its land area protected for conservation purposes.

A regional breakdown of legally protected areas is available on the MfE website (refer [www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html](http://www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html)). This shows that, as of July 2009, 401,300 ha of land in the Waikato Region (17.0%) was legally protected for the primary purpose of conserving biodiversity. Between 2006 and 2009, legally protected conservation land in the Waikato Region increased by 1,400 ha or 0.4%.

Figure 1.1.11: Legally protected areas - North Island, 2009



Source: [www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html](http://www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html)

Table 1.1.11: Legally protected areas – New Zealand

Region	Area of region (ha)	2006 area protected (ha)	2009 area protected (ha)	Increase in protected land between 2006 and 2009 (ha)	Increase in protected land between 2006 and 2009 (%)	2009 percentage of region protected
Northland	1,239,800	169,500	172,500	3,000	1.8%	13.9%
Auckland	496,200	69,700	70,000	300	0.4%	14.1%
Waikato	2,364,200	399,900	401,300	1,400	0.4%	17.0%
Bay of Plenty	1,201,900	440,700	441,900	1,200	0.3%	36.8%
Gisborne	836,100	103,600	104,800	1,200	1.2%	12.5%
Hawke's Bay	1,406,600	297,700	298,800	1,100	0.4%	21.2%
Taranaki	722,100	145,600	145,900	300	0.2%	20.2%
Manawatu-Wanganui	2,212,200	418,500	429,400	10,900	2.6%	19.4%
Wellington	800,300	148,200	150,500	2,300	1.6%	18.8%
<b>North Island - Total</b>	<b>11,279,400</b>	<b>2,193,400</b>	<b>2,215,100</b>	<b>21,700</b>	<b>1.0%</b>	<b>19.6%</b>
Tasman	955,700	604,600	619,400	14,800	2.4%	64.8%
Nelson	42,000	15,900	16,000	100	0.6%	38.1%
Marlborough	1,040,100	474,300	478,300	4,000	0.8%	46.0%
Canterbury	4,412,000	862,300	1,147,000	284,700	33.0%	26.0%
West Coast	2,297,500	1,935,000	1,935,900	900	0.0%	84.3%
Otago	3,095,700	511,600	588,100	76,500	15.0%	19.0%
Southland	3,093,400	1,757,200	1,763,300	6,100	0.3%	57.0%
<b>South Island - Total</b>	<b>14,936,400</b>	<b>6,160,900</b>	<b>6,548,000</b>	<b>387,100</b>	<b>6.3%</b>	<b>43.8%</b>
<b>New Zealand - Total</b>	<b>26,215,800</b>	<b>8,354,300</b>	<b>8,763,100</b>	<b>408,800</b>	<b>4.9%</b>	<b>33.4%</b>

Source: Adapted from data in Figure 3 of [www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html](http://www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html)

## 1.2 Environmental attitudes and behaviours

### Community outcome(s):

1C We are aware of what we need to do to look after our environment. Our region is renowned for linking environmental awareness with community action.

### Why is this important?

People's attitudes toward the natural environment are an important determinant of environmental actions. Human activity has the potential to either enhance or degrade the Waikato regional environment.

### What are the indicators?

1.2.1 People's environmental attitudes

1.2.2 People's personal environmental actions

### How are we doing?

- A 2008 survey by Environment Waikato using the 'New Environmental Paradigm Scale' (NEP) showed that 16% of people in the Region had pro-ecological values. This was lower than in 2004 when 19% had pro-ecological values, and significantly lower than in 2000 when 36% had pro-ecological values.
- According to survey results, the main actions that Waikato people undertake to protect the environment are recycling, planting trees and composting. A smaller number of people said they also reduced plant and animal pests and saved electricity.

Indicator	State	Trend
1.2.1 People’s environmental attitudes	☹	↓

This indicator monitors people’s attitudes towards the environment at the regional and local levels.

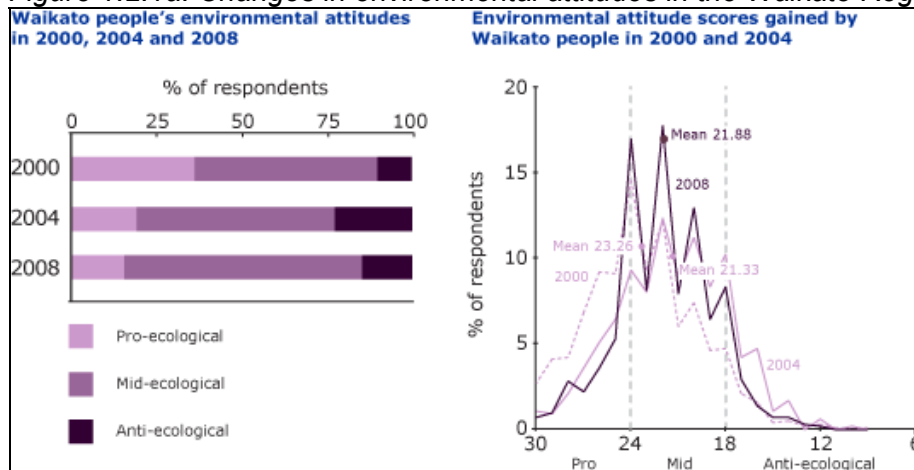
It is important to understand how positive or negative people’s attitudes are towards protecting the environment. It is also useful to know if people are aware of how their actions can affect aspects of the environment. This can help councils find out how much support people have for proposed actions, policies and rules that protect the environment. This can also help guide councils and other organisations in setting goals and planning targeted information provision and environmental education programmes to fill information gaps.

An adapted version of the ‘New Environmental Paradigm Scale’ (NEP) was used for this indicator. The NEP was developed and tested by Dunlap and van Liere, sociologists at Washington State University in 1978. Further testing was done by other researchers using rural and urban communities in the United States. The NEP scale has also been used in Finland, Australia, and the United Kingdom. The NEP scale comprises six statements with which respondents can strongly agree, agree, neither disagree or agree, disagree or strongly disagree. A points scale of 5 to 1 is applied respectively. “Don’t knows” are scored as 3. The total score out of 30 is used to apply one of three categories: Pro ecological (25-30); Mid ecological (19-24); Anti ecological (6-18). Regional results are given as the percent of people giving each score, grouped into one of the three environmental attitude categories. For each district council area, the same process is used (percent giving each score and then the mean of the total).

Figure 1.2.1a shows that in 2008, the average regional NEP scale score was a mid-ecological attitude of 22, compared to a score of 21 in 2004 and 23 in 2000. One-sixth of people in the Region (16%) had pro-ecological attitudes. This is lower than in 2004 when 19% had pro-ecological values, and significantly lower than in 2000, when 36% had pro-ecological values. Some 15% had anti-ecological attitudes in 2008, compared with 23% in 2004 and 10% in 2000.

Table 1.2.1b shows that there was a considerable variation in environmental attitudes throughout the Waikato Region as recorded by the 2008 NEP survey, with the highest proportion of pro-ecological respondents in the Waikato District (21.0%) and South Waikato District (20.5%) and the highest proportion of anti-ecological respondents in the Franklin District (37.5%). Between the 2004 to 2008 survey periods, most of the territorial authorities exhibited a decline in the proportion of respondents with pro-ecological attitudes.

Figure 1.2.1a: Changes in environmental attitudes in the Waikato Region 2000 to 2008



Source: Environment Waikato NEP Surveys 2000, 2004 and 2008

Table 1.2.1b: Environmental attitudes in the Waikato Region 2008 by territorial authority

Area	Percentage of respondents		
	Pro-ecological	Mid-ecological	Anti-ecological
Franklin District	0.0%	62.5%	37.5%
Hauraki District	19.0%	72.9%	7.6%
Hamilton City	15.5%	71.0%	13.5%
Otorohanga District	0.0%	71.5%	28.5%
Rotorua District	0.0%	100.0%	0.0%
South Waikato District	20.5%	61.8%	17.5%
Taupo District	19.1%	73.1%	7.7%
Matamata-Piako District	12.5%	64.6%	23.0%
Thames-Coromandel District	16.2%	72.1%	11.6%
Waikato District	21.0%	65.7%	13.5%
Waipa District	13.5%	70.2%	16.5%
Waitomo District	7.1%	85.7%	7.1%

Source: Environment Waikato NEP Survey 2008

Indicator	State	Trend
1.2.2 People's personal environmental actions	☹	↑

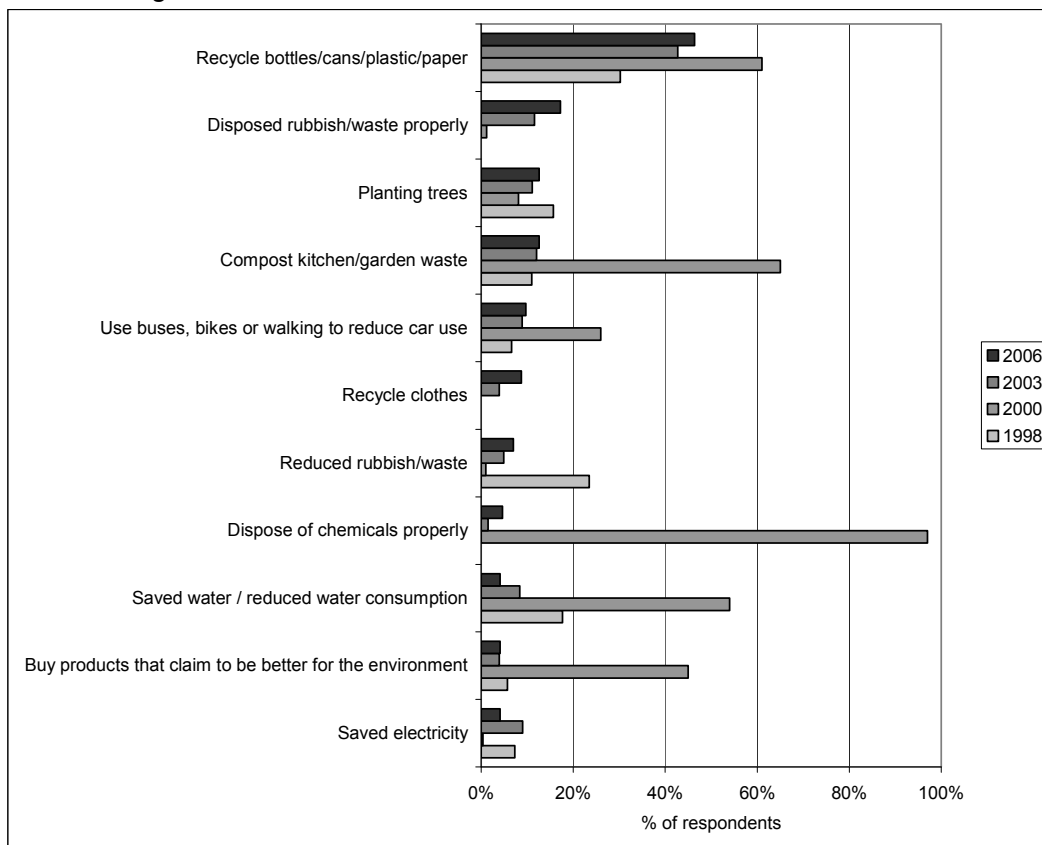
This indicator monitors people's personal actions towards protecting the environment (types and frequency of activities), and people's reasons for not making personal efforts to protect the environment.

It is important to understand what types of actions people undertake in their daily lives to protect the environment, and how often they carry out these actions. Councils and other organisations also need to know what prevents people carrying out these actions. This guides them in setting goals and assists in planning environmental education programmes to fill information gaps.

In 1998, 2000, 2003 and 2006, Environment Waikato surveyed randomly chosen adults living in the Waikato Region about their personal environmental actions. Figure 1.2.2 shows that the main actions that Waikato people undertake to protect the environment are recycling, disposing of waste correctly, planting trees and composting. A smaller number of people said they also saved electricity, bought products that were better for the environment, and various other actions. According to Environment Waikato, in 2006 people made greater efforts in their daily lives to help the environment compared with 1998 (on average). In 2006 people took an average of at least 2.7 actions to protect the environment, compared with an average of 1.4 actions in 1998. Lack of knowledge was one of the main reasons people said was stopping them from taking personal environmental actions.

Data for individual territorial authorities in the Region are contained in the Appendices.

Figure 1.2.2: Most common named actions people have taken to protect the environment – Waikato Region 1998 to 2006



Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

## 1.3 Coastal environment

### Community outcome(s):

1E Our coastal and waterway environments are restored and preserved and access to them is maintained.

### Why is this important?

The Waikato Region coastline has sites of outstanding beauty and high cultural and natural value. Waikato communities enjoy visiting coastal areas particularly during holiday periods. The Region's coasts and marine areas also provide valuable resources.

### What are the indicators?

1.3.1 Coastal water quality for recreation

1.3.2 Public access to coast (coastline ownership)

### How are we doing?

- Coastal water quality for contact recreation such as swimming is usually satisfactory or better. Occasionally some beaches have high bacteria levels.
- Overall, 35.6% of the Region's harbours and open coast are in public ownership. A further 9.0% of the coastline is used for roads. Of the total length of coastline in the Waikato Region (1,175 km), 19% along the West coast is in public ownership, 22% on the west Coromandel and 65% along the east Coromandel. Coastline with road frontage makes up 5% of the total coastline along the West Coast, 26% along the west Coromandel and 6% of east Coromandel.

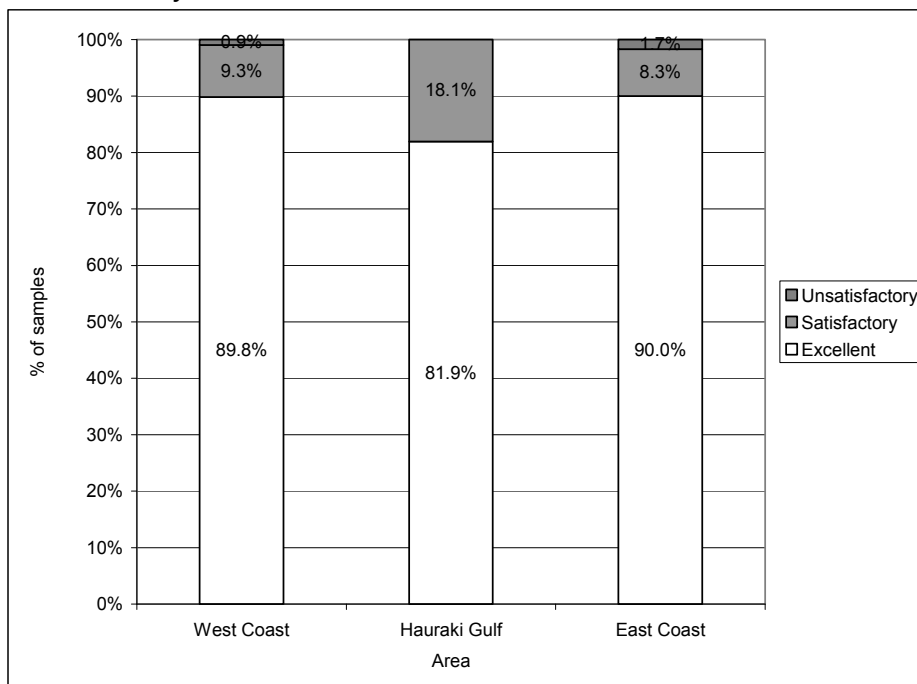
Indicator	State	Trend
1.3.1 Coastal water quality for recreation	☹	⇒

This indicator measures water quality of coasts in terms of enterococci (faecal bacteria) levels. Environment Waikato monitors a representative sample of swimming beaches around the Waikato Region to determine how good the water quality is for contact recreation such as swimming and surfing.

Environment Waikato routinely monitors enterococci (bacteria) levels at 26 coastal swimming beaches. The most recent survey period was 2008-09 for West Coast beaches and 2007-08 for Coromandel Peninsula beaches. At each monitoring site, Environment Waikato determines the proportion of samples which meet Environment Waikato’s guidelines for excellent water quality. Similarly the proportions which meet the guidelines for satisfactory and unsatisfactory water quality are determined. The results for the individual sites are then compiled according to site location. Results from the ten west coast sites are amalgamated into a West Coast result; and those for the six Hauraki Gulf and ten Coromandel Peninsula sites are amalgamated into Hauraki Gulf and east coast results respectively.

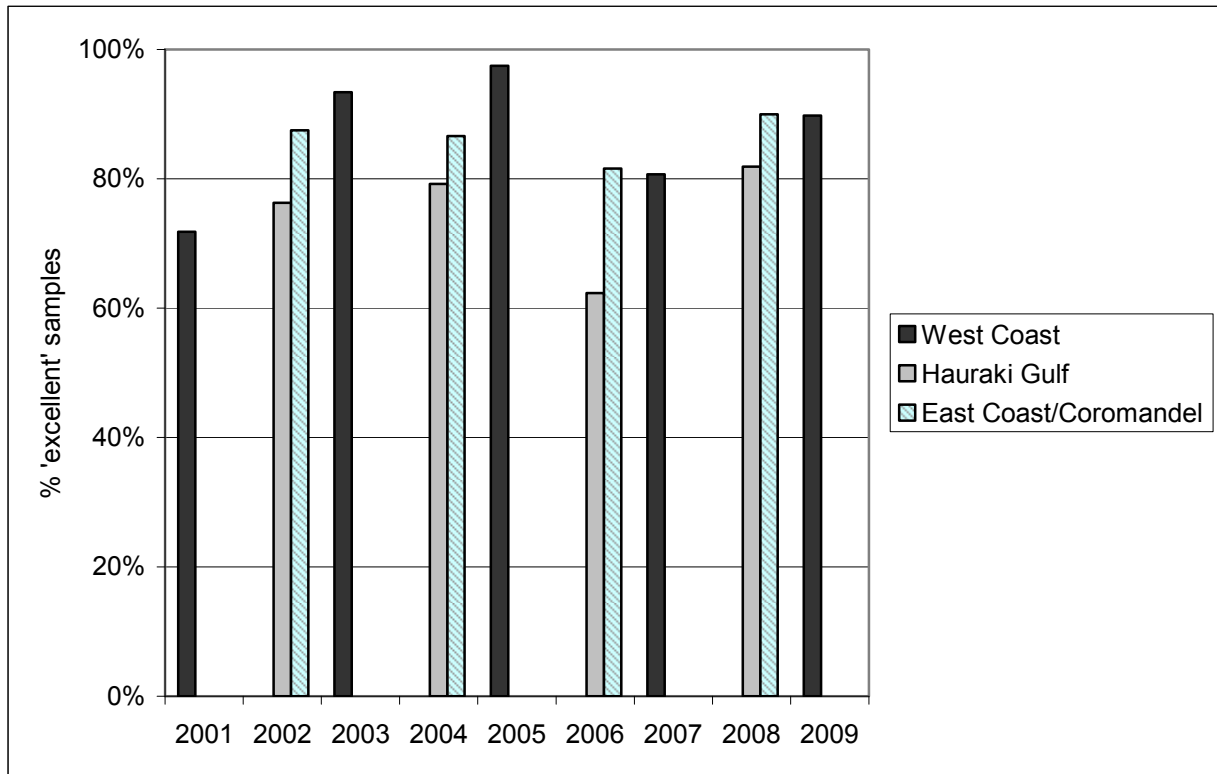
Figure 1.3.1a shows that coastal water quality for contact recreation (such as swimming) is usually satisfactory or better. Occasionally some beaches have high bacteria levels. Generally the Waikato Region’s coastal waters receive less bacterial contaminants than its rivers and lakes. Also, on the coast any contaminants are often quickly diluted and dispersed by tidal flushing and waves. However after heavy rain, contaminant levels from runoff are likely to be higher. Table 1.3.1b shows that there are mixed results over time, with coastal water quality generally improving on the west coast over the period 2001 to 2005 and then dropping slightly during the 2006-07 period and recovering in 2008-09. Coastal water quality deteriorated slightly in the Hauraki Gulf and east coast/Coromandel areas over the period 2002 to 2006 and then recovered in the most recent 2007-08 period.

Figure 1.3.1a: Proportion of samples collected during 2008-09 (west coast) and 2007-08 (Coromandel Peninsula and Hauraki Gulf) which met the ‘excellent’, ‘satisfactory’ and ‘unsatisfactory’ standards for contact recreation on the coast – Waikato Region



Source: Environment Waikato

Figure 1.3.1b: Proportion of samples (%) collected on the West Coast, Hauraki Gulf and East Coast from 2001 to 2009 which met the 'excellent' standards for contact recreation on the coast – Waikato Region



Source: Environment Waikato data spreadsheets for coastal water quality

Notes: Data collected over the summer 2000-2001 is labelled 2001 in the table (and so on for the other years). Guidelines changed in 2003 (2002 data was updated to use 2003 guidelines). For all surveys except 2001 the categories for enterococci levels are as follows; "excellent" <28 (no./100mL), "satisfactory" 28-280, "unsatisfactory" >280. For 2001 an average was taken of the median and single samples, where median categories were; "excellent" <2.1 (no./100mL), "satisfactory" 2.1-35, "unsatisfactory" >35 and single sample categories were; "excellent" <8 (no./100mL), "satisfactory" 8-136, "unsatisfactory" >136. Detailed results for individual sites sampled are available from Environment Waikato.

Indicator	State	Trend
1.3.2 Public access to coast (coastline ownership)	☹	?

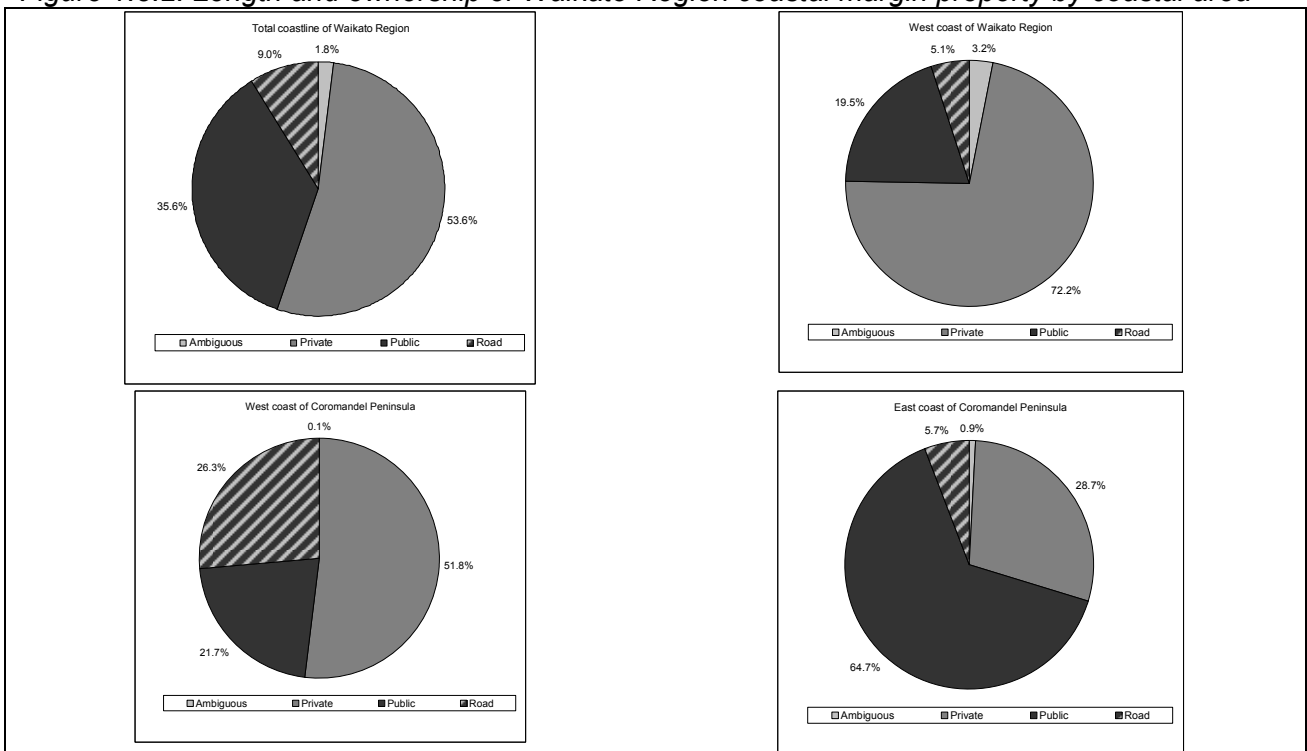
No data source has been identified for the indicator “Public access to coast”. However, the indicator “Coastline ownership” is used here as a proxy. This indicator measures accessibility to the coastline for the public in terms of coastline ownership. The results are split into three main areas of Waikato regional coastline: West coast; west Coromandel; east Coromandel. Results are presented as privately owned, publicly owned or road edge (where public access is likely to be available).

The coast is widely perceived as a public open space, which should be accessible to everyone. Public access is highlighted as a matter of national importance in the New Zealand Coastal Policy Statement (NZCPS). Environment Waikato’s Regional Coastal Plan (RCP) emphasises that public access within the Coastal Marine Area (CMA) – along the foreshore and across the water – should not be unduly restricted. Access within the CMA is dependent largely on access to the coast being available. In New Zealand, no common law of right of access exists over privately occupied land. Public access to the coast (and other areas) therefore relies on the provision of public areas such as access strips, walkways, reserves and conservation areas, or agreements with landowners.

Figure 1.3.2 shows 2002 data on the ownership status of the total length of Waikato Region coastal margin, including harbours and open coast. Overall, 35.6% of the Region’s coastline is in public ownership. A further 9.0% is used for roads.

Coastal land use such as residential subdivision is intensifying. The proportion of publicly owned coastal land reflects the amount of possible public access to the coast. Where roadways are directly adjacent to the coast, public access is likely to be available. Of the total length of coastline in the Waikato Region (1,175 km), 19% along the West coast is in public ownership, 22% on the west Coromandel and 65% along the east Coromandel. Coastline with road frontage makes up 5% of the total coastline along the West Coast, 26% along the west Coromandel and 6% of east Coromandel.

Figure 1.3.2: Length and ownership of Waikato Region coastal margin property by coastal area



Source: Environment Waikato

## 1.4 Rural environment

### Community outcome(s):

1G We use land management practices that protect and sustain our soil and land.

### Why is this important?

Rural pasture land is a defining characteristic of the Waikato Region. Maintaining the Region's commercial viability is essential to economic prosperity and overall quality of life. Waikato communities place importance on maintaining and enhancing environmental well-being in rural areas.

### What are the indicators?

1.4.1 Rural subdivision

1.4.2 Stock density

### How are we doing?

- Between 2001 and 2006, 2,936 hectares of land changed from a low-density rural land use to a more intensive use. Two-thirds of the land affected by subdivision has a 'high productive capability for pastoral use' (Classes I-IV). The greatest amount of subdivision is occurring on the land with the higher productive capabilities (Classes II, III and IV). Rural subdivision is occurring most rapidly in the Waikato District, Hamilton City, Thames-Coromandel District, Franklin District, Taupo District, Hauraki District and Waipa District. Lower rates of rural subdivision are also occurring within South Waikato District and Matamata-Piako District.
- Highest stock densities are in the Lower Waikato, Hauraki, Waipa River and Upper Waikato water catchment zones. Lowest stock densities are in the Taupo, West Coast and Coromandel water catchment zones. Between 2001 and 2008 there appears to have been an increased proportion of farms adopting lower stock density, however some farms have also been adopting increased stock density.

	Indicator	State	Trend
1.4.1	Rural subdivision	☹	⇒

This indicator monitors the amount and type of low density (less than one house per four hectares) that has been subdivided into smaller blocks, possibly for intensive agriculture or horticulture uses, or urban use.

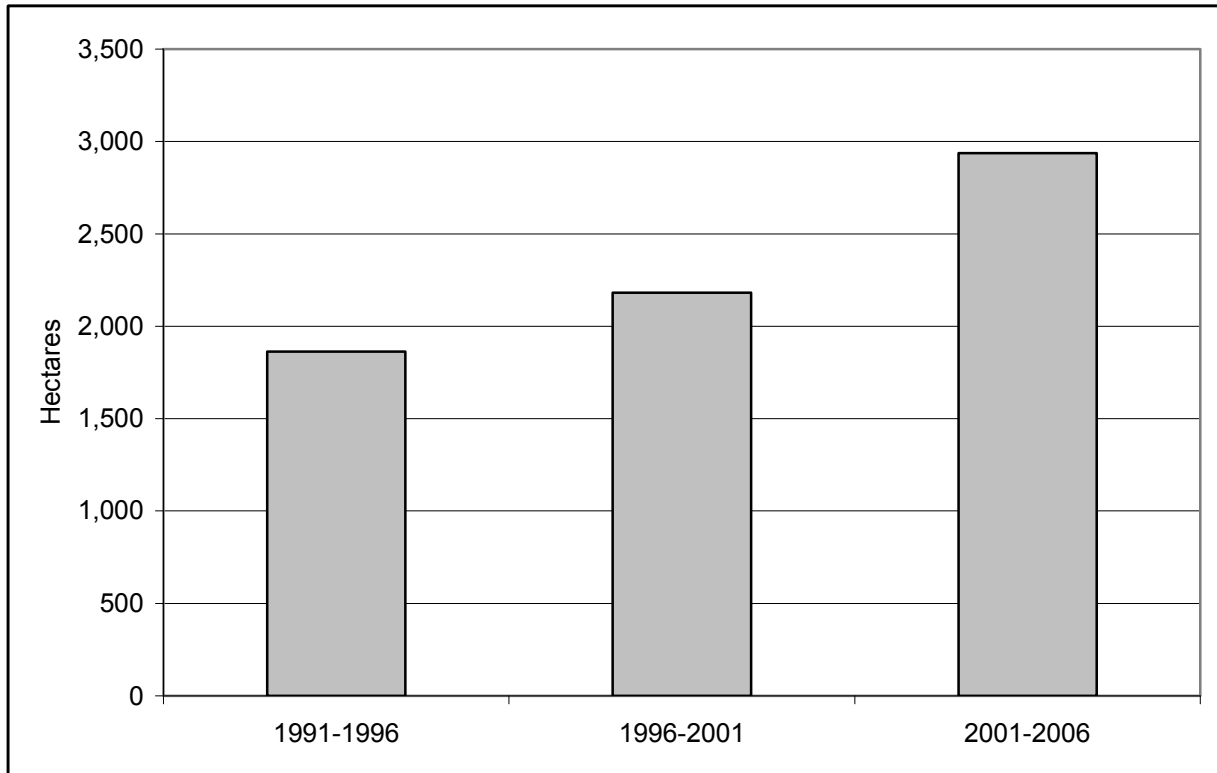
Monitoring rural subdivision provides information used by territorial authorities, land developers and communities about increasing land pressures. This information can indicate: the area and productive capability of land removed from large-scale agricultural enterprises; increased pressure on the environment from subdivision, for example potential water requirements, soil erosion and loss of soil structure, fertiliser leaching and pesticide use; where traffic volumes may increase, with corresponding increases in pollution, energy use and greenhouse gas generation; any increase in impervious surfaces leading to increased pressure on stormwater and flood management; areas where an increased demand for infrastructure and services is expected.

Previous studies have indicated that the average property size after subdivision is 4.4 ha (from a study undertaken in the Western Bay of Plenty). This indicator analyses the areas of meshblocks divided by the number of dwellings to assess the average size of property available to each dwelling. A comparison is made between the 1991 Census and the 1996 Census, and again between the 1996 Census and the 2001 Census to see how many meshblocks changed from less than one dwelling per 4ha to more than one dwelling per 4ha. Note that the Land Use Capability (LUC) is a measure of the land’s capacity for sustained productive use, taking into account physical limitations, soil conservation needs and management requirements. This is a national database administered by Landcare Research Limited, and should not be confused with recommended land use or present land use. The LUC classification includes eight classes of productive capability ranging from Class I – ‘the most versatile multiple use land with virtually no limitations to use’ through to Class VIII – ‘land with very severe to extreme limitations or hazards which make it unsuitable for arable, pastoral or production forestry’ (NWASCO, 1979). In this indicator, Environment Waikato reports subdivision on LUC classes I through IV (flat to strongly rolling slopes – 0 to 20 degree slopes). These classes are reported because they represent land with a high productive capability that is well suited to agricultural or horticultural use but also land that would appeal for urban and lifestyle block development.

Environment Waikato has a role in maintaining the health and productivity of the land. The rural subdivision indicator is a useful tool that allows the Council to identify the amount and type of rural land being subdivided for more intensive uses.

This indicator shows that between 2001 and 2006, 2,936 hectares of land changed from a low-density rural land use to a more intensive use. More than two-thirds of the land affected by subdivision has a ‘high productive capability for pastoral use’ (LUC classes I-IV). The greatest amount of subdivision is occurring on the land with the higher productive capabilities (LUC classes II, III and IV). Within the Waikato Region, class I productive land makes up only 1.9 % of the total land area. Between 1996 and 2006, 423 hectares of class I land was subdivided (0.91% of the total class I land). Over the same period, a total of 1,047 hectares of lower productivity land (classes V-VIII) were subdivided (0.07% of the total class V-VIII land). These classes make up over 61% of the Region’s total land area. Rural subdivision is occurring most rapidly in the Waikato District, Hamilton City, Thames-Coromandel District, Franklin District, Taupo District, Hauraki District and Waipa District. Lower rates of rural subdivision are also occurring within South Waikato District and Matamata-Piako District.

Figure 1.4.1a: Total hectares of rural land subdivided in the Waikato Region



Source: Statistics New Zealand/Environment Waikato

Table 1.4.1b: Summary of intensified rural land in the Waikato Region between 1991–2001 by territorial authority

	Class I land (hectares)	Class II land (hectares)	Class III land (hectares)	Class IV land (hectares)	Classes V-VIII land (hectares)	Total (hectares)
Franklin District	0	42	25	39	2	109
Hamilton City	3	401	0	137	2	543
Hauraki District	0	0	6	0	0	6
Matamata-Piako District	26	90	24	0	92	233
Otorohanga District	0	0	0	0	0	0
Rotorua District	0	0	0	0	0	0
South Waikato District	0	0	1	0	0	1
Taupo District	0	0	26	174	122	322
Thames-Coromandel District	0	27	12	138	736	913
Waikato District	408	128	80	9	157	782
Waipa District	95	132	32	8	21	287
Waitomo District	0	0	0	0	0	0
<b>TOTAL</b>	<b>532</b>	<b>820</b>	<b>205</b>	<b>505</b>	<b>1,133</b>	<b>3,196</b>

Source: Statistics New Zealand/Environment Waikato

Note: 2006 data at the territorial authority level were not available on the EW website at the time of update.

Indicator	State	Trend
1.4.2 Stock density	☹	⇒

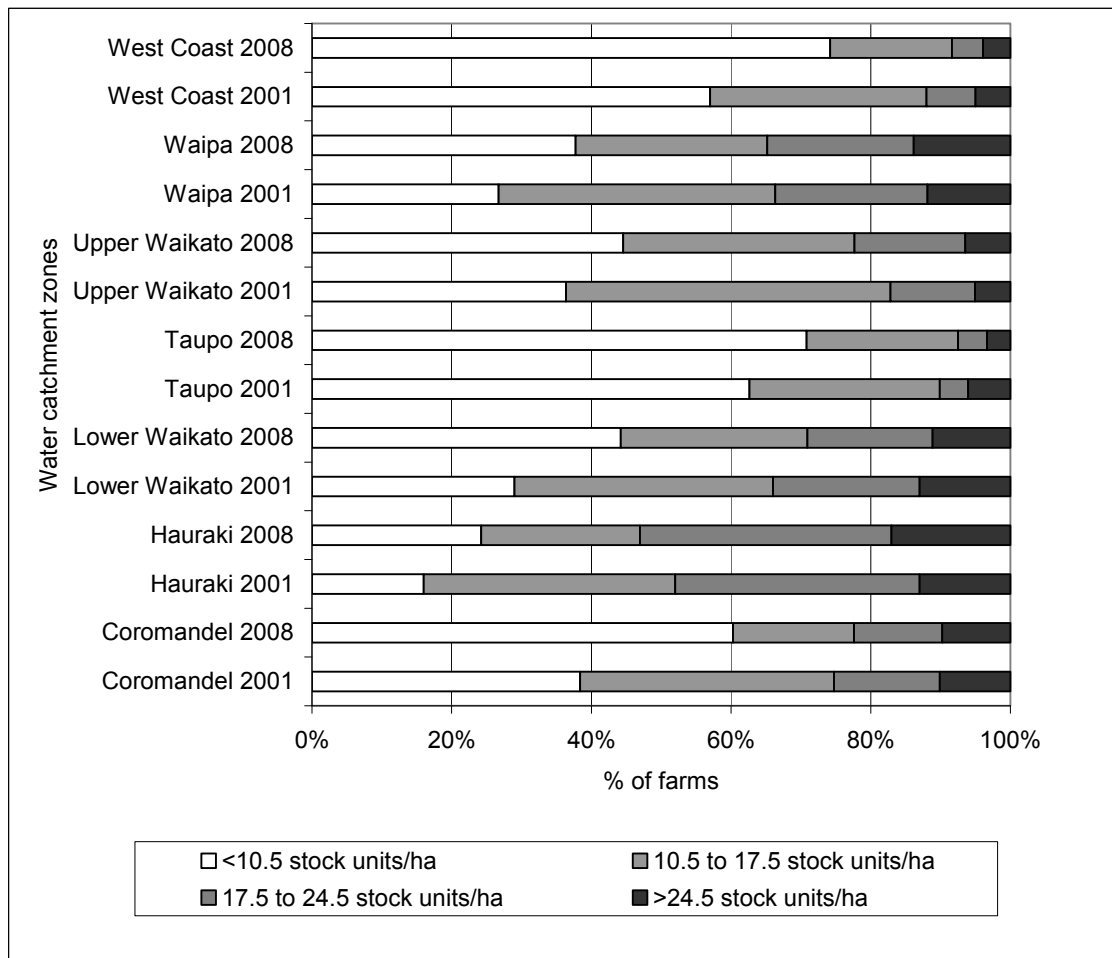
Stock density is a standard way of measuring the amount of stock on an area of land. Environment Waikato calculates stock density by converting the type of stock (for example, sheep, deer or dairy cattle) to common stock units (ewe equivalents). It then divides stock units by the area of land that the stock graze on, to provide stock units per hectare.

Environment Waikato uses stock density to indicate where there are current and possible future pressures on the environment from livestock farming. High stock densities can lead to negative effects on local water quality, stream banks and soil, particularly in areas where waterways are not fenced from stock or protected by riparian planting.

This indicator shows stock density, grouped into four classes, for each of the seven major water catchment zones in the Waikato Region.

Figure 1.4.2 shows that the highest stock densities are in the Lower Waikato, Hauraki, Waipa River and Upper Waikato water catchment zones. The lowest stock densities are in the Taupo, West Coast and Coromandel water catchment zones. Between 2001 and 2008 there appears to have been an increased proportion of farms adopting lower stock density, however some farms have also been adopting increased stock density.

Figure 1.4.2: Stock density in seven major water catchment zones in the Waikato Region, January 2001 and March 2008 (percentage of farms in each class for each catchment)



Source: AgriQuality AgriBase Farm Database/Environment Waikato

Note: Part of the difference between 2001 and 2008 data may be due to changes in methodology.

## 1.5 Energy

### Community outcome(s):

1H We reduce our reliance on non-renewable energy.

1I Waste reduction, recycling, energy conservation and energy efficiency are promoted and are part of how we all live.

### Why is this important?

The majority of climate scientists in the world agree that climate is changing due to human activity, and it is now only a matter of how quickly it changes. Even if climate change was not occurring, policies to conserve energy would still make sense for economic, health and environmental reasons.

### What are the indicators?

- 1.5.1 Total energy consumption
- 1.5.2 Greenhouse gas emissions
- 1.5.3 Energy efficiency

### How are we doing?

- Waikato regional communities consumed an estimated 109,043 terajoules (TJ) of energy during 2003, of which 73% was for industry purposes. Over half of the energy came from non-renewable energy sources. The main sources of energy in the Region were gas (39%) and coal (24%).
- Greenhouse gas emissions in the Waikato Region are highest in the Taupo, Waikato, South Waikato and Franklin districts. Overall the 12 territorial authority areas in the Region produce approximately 21% of New Zealand's total greenhouse gas emissions. The main sources of greenhouse gas emissions in the Region are natural (eg, geothermal activity), agricultural and industrial. Agricultural emissions contribute CH<sub>4</sub> from the digestion process of farm stock, especially cattle.
- The Region's ratio of energy use to GDP is approximately 12.1 megajoules (MJ) per dollar. Almost 30% of the energy used in the Region is for transport and domestic purposes.

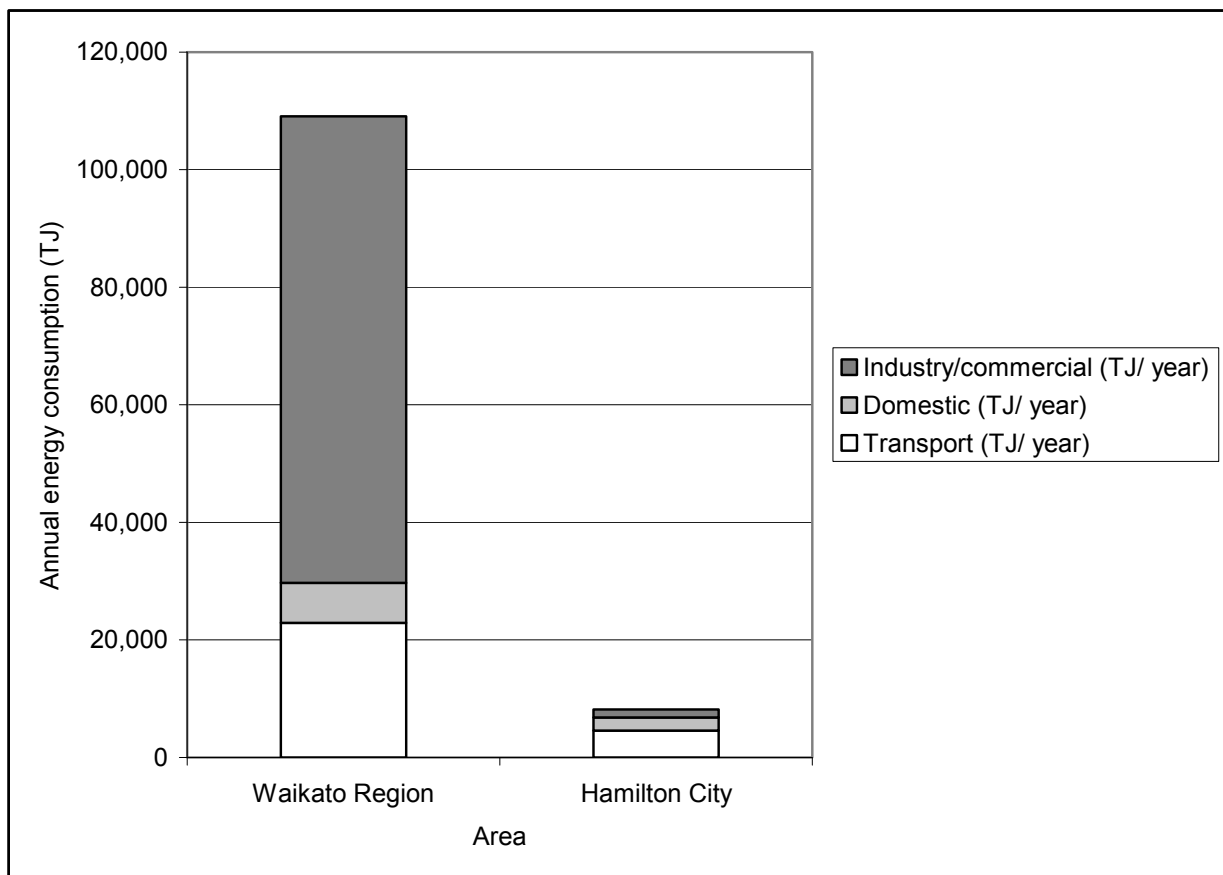
Indicator	State	Trend
1.5.1 Total energy consumption	☹	?

This indicator measures the amount of energy consumed in the Waikato Region, and compares what sources of energy were used.

Energy consumption is part of our everyday lives and is vital to industry and the economy of the country. Energy production can be from renewable or non-renewable sources. Inefficiency in energy production or consumption can mean that non-renewable sources are used quicker than required and pollution problems can occur.

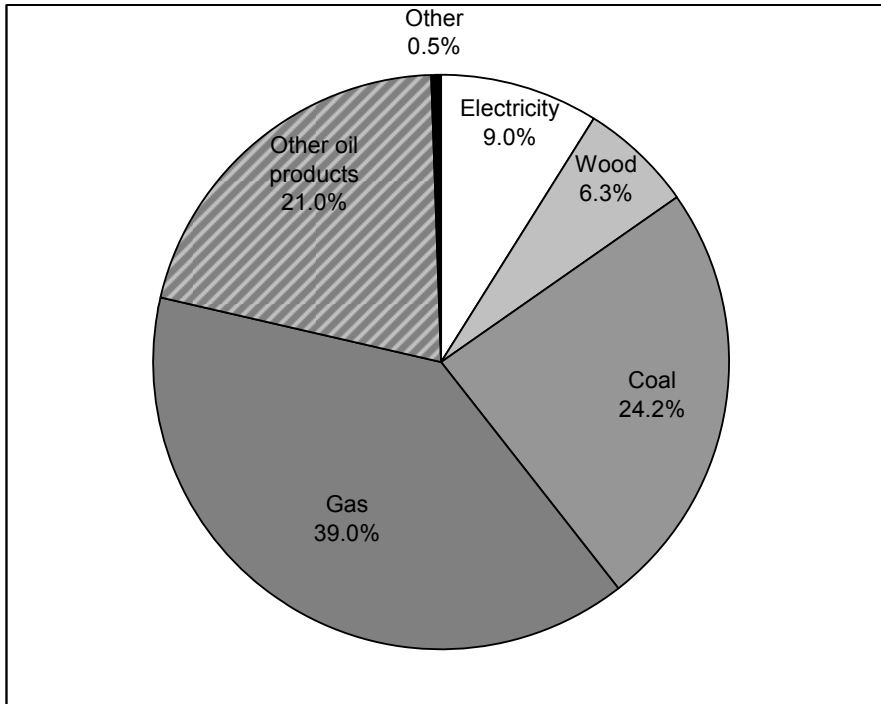
Waikato regional communities consumed an estimated 109,043 terajoules (TJ) of energy during 2003. Industries consumed 73% of the total energy in the Region. Figure 1.5.1a illustrates that around 7.5% of regional energy use occurred in Hamilton City, with over half of this attributable to transport. Figure 1.5.1b shows that the main sources of energy in the Region were gas (39%) and coal (24%). Over half of the energy used in the Region came from non-renewable energy sources. Approximately 9% of the Region’s energy use came from electricity, of which about 6% of this (or 0.54% of total energy use) was lost within the electricity line network system.

Figure 1.5.1a: Annual energy consumption 2003 – Waikato Region and Hamilton City



Source: Environment Waikato: Regional Energy Survey

Figure 1.5.1b: Source of energy consumed in 2003 – Waikato Region



Source: Environment Waikato: Regional Energy Survey

	Indicator	State	Trend
1.5.2	Greenhouse gas emissions	☹	?

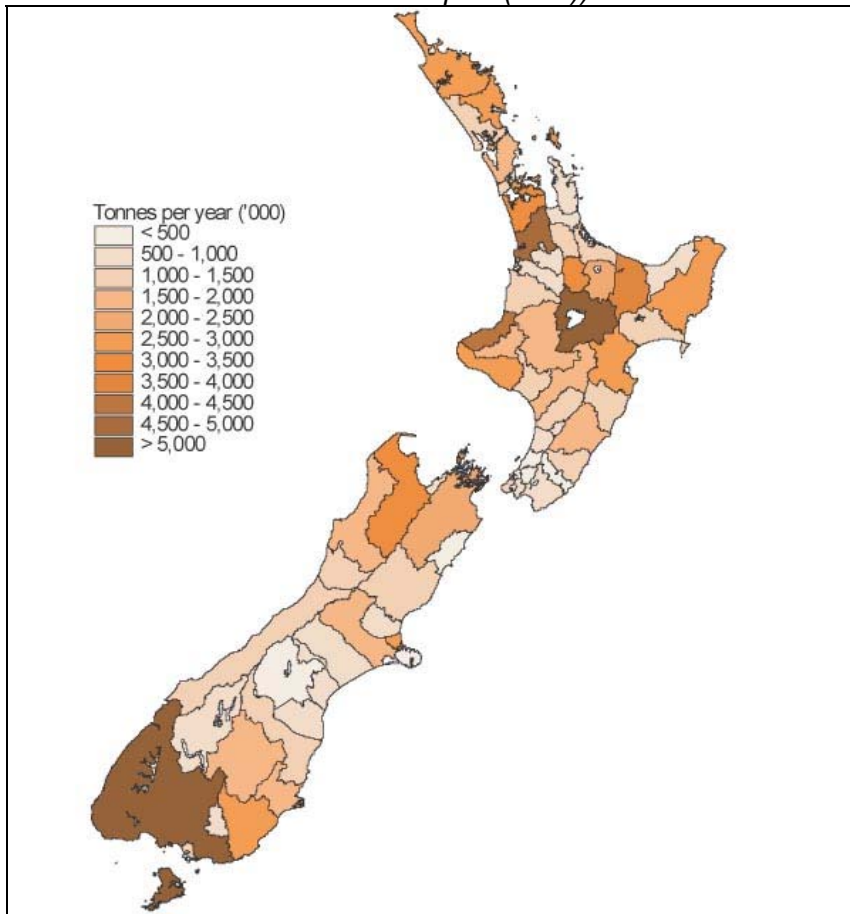
The Inventory of New Zealand Greenhouse Gas Emissions – 2001 is a database of greenhouse gases emissions for all Territorial Local Authorities (TLA) in New Zealand.

Greenhouse gases present in the Earth's atmosphere trap the warmth from the sun, keeping temperatures stable and preventing all the Earth's warmth from radiating away into space. Without these gases, Earth would be too cold to support life as we know it. The greenhouse gases are primarily water vapour, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Until recently the greenhouse effect has existed in a state of natural balance, with the heat gained from the sun being matched by the heat lost by radiation back out to space. While there have been climatic changes in the past, there have been no significant climatic changes since the start of human civilization 10,000 years ago. Earlier changes have been either gradual, occurring over tens or hundreds of thousands of years, or when not gradual (when caused for example by major meteorite impacts) have extinguished much of the life on Earth. In the last 50 to 100 years, human activity has changed markedly and rapidly. These changes have impacted significantly on the atmosphere. Worldwide there have been developments in transportation, agriculture and industry. These activities produce greenhouse gases, and as a consequence the concentration of these gases in Earth's atmosphere has increased. The greenhouse balance has been upset and more heat has been trapped. The Earth has begun to warm and the climate to change. There is evidence of climate change effects, including raised temperatures and sea levels and the increased frequency of extreme weather events. The occurrence of these changes is projected to be more pronounced, and the rate of change more rapid.

This indicator presents data on six greenhouse gases as recommended by the Intergovernmental Panel on Climate Change (1996) – Carbon Dioxide (CO<sub>2</sub>), Nitrous Oxide (N<sub>2</sub>O), Methane (CH<sub>4</sub>), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur Hexafluoride (SF<sub>6</sub>). The inventory is divided into five distinct activity sectors: Agriculture, Area, Industry, Natural and Transport. Data is also available for sub-sectors within these activity sectors but are not presented here. The emissions are calculated using Territorial Local Authority (TLA) boundaries and using the 2001 Census as base year.

Figure 1.5.2a and Table 1.5.2b show that greenhouse gas emissions in the Waikato Region are highest in the Taupo District, Waikato District, South Waikato District and Franklin District. The main greenhouse gas emissions for the 12 territorial authorities in the Region are N<sub>2</sub>O (40.7% of total emissions), CO<sub>2</sub> (35.7%) and CH<sub>4</sub> (23.4%). Overall the 12 territorial authority areas in the Waikato Region produce approximately 21% of New Zealand's total greenhouse gas emissions. For comparison, these territorial areas are home to approximately 12% of the national population. The main sources of greenhouse gas emissions in the Region are natural (eg, geothermal activity) (32.6%), agricultural (29.9%) and industrial (28.2%). Agricultural emissions contribute CH<sub>4</sub> from the digestion process of farm stock, especially cattle. Refer to the Appendices for more detailed TLA level data.

Figure 1.5.2a: Estimated total emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))



Source: NIWA National Centre for Climate-Energy Solutions: <http://www.niwascience.co.nz/ncces/ghge/>

Table 1.5.2b: Estimated total emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)	Total - 6 greenhouse gases
Franklin District	1,982,337	636,979	376,018	9,290	0	761	3,005,385
Thames-Coromandel District	153,652	123,532	711,598	1,505	0	53	990,340
Hauraki District	102,242	325,895	194,904	1,002	0	35	624,078
Waikato District	3,152,968	1,011,655	578,386	8,584	0	736	4,752,329
Matamata-Piako District	182,543	652,892	314,255	1,761	0	62	1,151,513
Hamilton City	649,308	124,901	20,341	6,868	0	241	801,659
Waipa District	243,427	512,085	232,672	2,408	0	84	990,676
Otorohanga District	166,064	357,872	329,413	6,757	0	672	860,778
South Waikato District	1,249,960	329,711	1,710,088	1,403	0	49	3,291,211
Waitomo District	72,389	423,521	576,839	565	0	20	1,073,334
Taupo District	404,228	687,688	4,025,653	8,086	0	719	5,126,374
Rotorua District	480,781	605,982	997,019	3,853	0	135	2,087,770
<b>TOTAL - 12 territorial authorities</b>	<b>8,839,899</b>	<b>5,792,713</b>	<b>10,067,186</b>	<b>52,082</b>	<b>0</b>	<b>3,567</b>	<b>24,755,447</b>
NZ Total Emissions	41,055,418	30,176,706	45,551,043	928,850	56,550	15,660	117,784,227

Source: NIWA National Centre for Climate-Energy Solutions

Indicator	State	Trend
1.5.3 Energy efficiency	☹	?

Because the indicator “Energy efficiency” is not available, the proxy “Energy use relative to economic growth” has been used.

This indicator measures energy use in different sectors of society relative to economic growth (as represented by GDP). A lower ratio of energy consumption to GDP suggests a higher level of energy consumption. Energy efficiency in terms of transport, residential, commercial and industrial use of energy is sometimes referred to as energy conservation.

Environment Waikato monitors energy efficiency because the way that energy is used has impacts on an area’s economic, environmental and social well being. The need to increase the available supply of energy (for example, through the creation of new power plants, or by the importation of more energy) is lessened if societal demand for energy can be reduced, or if growth in demand can be slowed through energy efficiency and conservation. Encouraging energy efficiency among consumers is often advocated as a cheaper or more environmentally sensitive alternative to increased energy production.

Table 1.5.3 shows energy use relative to the regional economy by industry sector. In 2003, the Waikato Region had a GDP of \$9.3 billion and used around 109,043 terajoules (TJ) of energy. The Region’s ratio of energy use to GDP is approximately 12.1 megajoules (MJ) per dollar. This is equivalent to less than the daily home heating requirements of a single house. Greatest energy use relative to economic growth was within the electricity, gas and water sector. This sector used 203 MJ for each dollar it contributed to the Region’s GDP. However, much of the energy was used to generate further power. Almost 30% of the energy used in the Region was for transport and domestic purposes.

*Table 1.5.3: Energy use and contribution to GDP in the Waikato Region by economic sector 2003*

Sector	% Contributed to GDP	\$ Contributed to GDP	TJ/year	MJ/\$ Contributed to GDP
Agriculture, Forestry and Fishing	11.2%	\$901,044,144	12,370	13.7
Mining	3.2%	\$257,441,184	1,147	4.5
Manufacturing	16.4%	\$1,319,386,068	10,874	8.2
Electricity, Gas and Water Supply	3.0%	\$241,351,110	49,091	203.4
Construction	4.8%	\$386,161,776	40	0.1
Wholesale Trade	6.2%	\$498,792,294	40	0.1
Retail Trade	6.1%	\$490,747,257	40	0.1
Accommodation, Cafes and Restaurants	1.5%	\$120,675,555	40	0.3
Transport and Storage	3.8%	\$305,711,406	22,863	74.8
Communication Services	3.8%	\$305,711,406	40	0.1
Finance and Insurance	3.5%	\$281,576,295	40	0.1
Property and Business Services	10.1%	\$812,548,737	6,817	8.4
Government Administration and Defence	3.0%	\$241,351,110	40	0.2
Education	3.9%	\$313,756,443	40	0.1
Health and Community Services	6.0%	\$482,702,220	45	0.1
Cultural and Recreational	1.8%	\$144,810,666	40	0.3
Personal and Other Services	1.0%	\$80,450,370	40	0.5

Source: Environment Waikato

## 1.6 Solid waste

### Community outcome(s):

1| Waste reduction, recycling, energy conservation and energy efficiency are promoted and are part of how we all live.

### Why is this important?

New Zealanders throw away 3.6 million tonnes of “rubbish” every year, around 65% of which could be recycled or composted instead. While the Government is working on ways to address New Zealand’s rubbish problem, it is local and regional actions that will make a real difference.

### What are the indicators?

1.6.1 Waste to landfills

1.6.2 Proportion of recycling

### How are we doing?

- There is a wide variation in the volume of waste to landfill throughout the Region, with households in the Taupo District disposing of an estimated average of 3,562kg of waste to landfill during 2005 compared to 1,274kg in the Hauraki District. Note that there may be differences in methodology which partly explain this difference, for example due to the impact of seasonal visitor patterns. There is also considerable variation in terms of waste disposal trends, with volumes per capita falling in the South Waikato District, rising in the Taupo District, and remaining relatively unchanged in Hamilton City and the Matamata-Piako District over the period 2002 to 2004.
- There is also a wide variation in the proportion of waste diverted from landfill (recycled) throughout the Region, with Taupo diverting approximately 29% of its waste stream compared with approximately 9% in Hamilton City and South Waikato District. There may be differences in methodology which partly explain this difference. Volumes per capita of recycling are generally increasing throughout the Region. According to recent survey results from the Ministry for the Environment, recycling per capita is higher in the Waikato Region than it is in other regions throughout New Zealand.

Indicator	State	Trend
1.6.1 Waste to landfills	☹	⇒

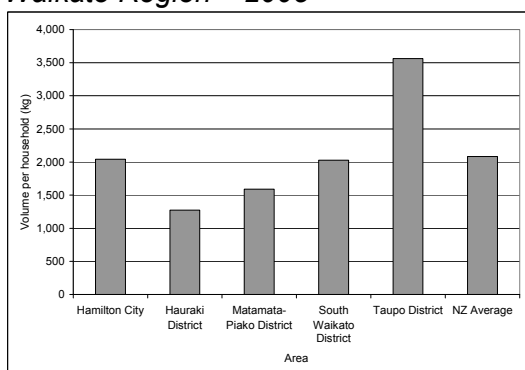
This indicator measures the volume of waste disposed at landfills for selected territorial authorities in the Waikato Region.

In a recent community perceptions survey (2000), waste disposal was the second most mentioned environmental issue in the Waikato Region (water pollution was the most mentioned). People are concerned about waste facilities, methods of waste disposal, and the cost of rubbish disposal. In the Waikato Region, the amount of solid waste for disposal is increasing. Also, wastes from areas outside our Region (such as Auckland and Tauranga) are likely to be increasingly brought into the Waikato Region for disposal. At the same time we are becoming more aware of the potential effects of solid waste disposal. Poorly built and maintained landfills near waterways can leak contaminants into the water. Recently many unsatisfactory disposal sites have been closed or upgraded. Modern landfills are better managed with greater emphasis on avoiding environmental effects. But landfill space is becoming scarce as older sites are closed and suitable new sites are harder to find.

This indicator covers only some of the territorial authorities in the Waikato Region and does not provide a comprehensive regional figure. It is based on a one-off report, prepared for Environment Waikato by Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”) in 2005. Data used for this indicator came from multiple sources, some of which were inconsistent. There are a number of reasons for the poor waste data held by District Councils, including commercial sensitivities due to contracting out of waste management services.

Figure 1.6.1a and Table 1.6.1b show that there is a wide variation in the volume of waste to landfill throughout the Region, with households in the Taupo District disposing of an estimated average of 3,562kg of waste to landfill during 2005 compared to 1,274kg in the Hauraki District. Note that there may be differences in methodology which partly explain this difference, for example due to the impact of seasonal visitor patterns. Alternative studies by Waste Not Consulting during 2006/07 estimated that Hauraki District produced 445kg of waste to landfill per capita per annum compared to 523kg for the Matamata-Piako District. Figure 1.6.1c shows that there is also considerable variation in terms of waste disposal trends, with volumes per capita falling in the South Waikato District, rising in the Taupo District, and remaining relatively unchanged in Hamilton City and the Matamata-Piako District over the period 2002 to 2004. The Waste Minimisation Act 2008 provides the opportunity to collect national information on waste. The Ministry is working to develop a waste composition data collection programme that will more frequently collect data at more landfills in the future.

Figure 1.6.1a: Volume to landfill per household (kg) for selected territorial authorities in the Waikato Region – 2005



Source: Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”), 2005

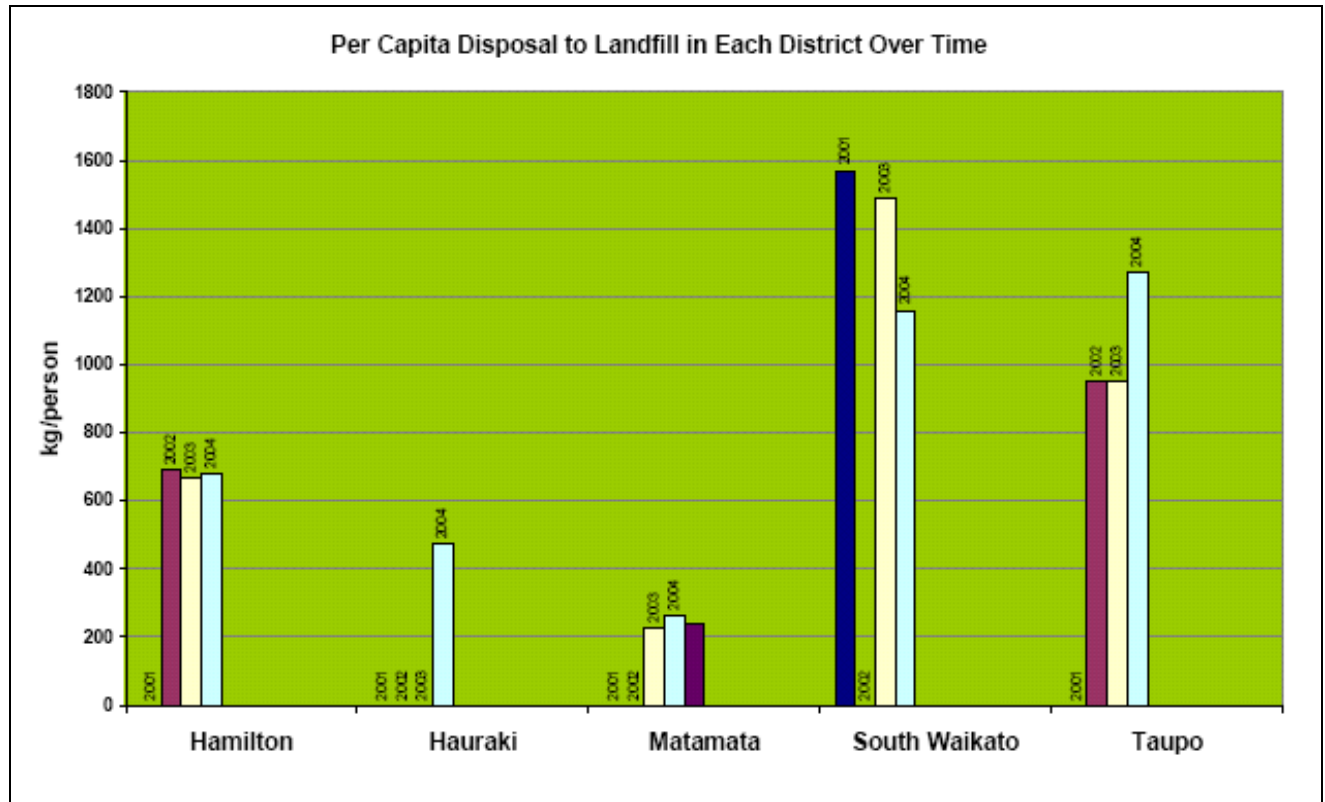
Table 1.6.1b: Landfill disposal data for selected territorial authorities in the Waikato Region – 2005

	Hamilton City	Hauraki District	Matamata-Piako District	South Waikato District	Taupo District	NZ Average
Population	114,921	16,764	29,469	23,472	31,521	3,800,000
Households	40,962	6,219	10,692	8,013	11,262	1,440,000
Number landfills in district	1	1	0	2	1	
Volume to landfill (tonnes)	83,600	7,920	17,000	16,240	40,110	3,001,000
Volume to landfill per resident (kg)	727	472	577	692	1,272	790
Volume to landfill per household (kg)	2,041	1,274	1,590	2,027	3,562	2,084
Landfill price/tonne	\$95.90	\$85.00	\$85.00	\$80.00	\$48.00	\$67.22

Source: Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”), 2005

Note: The source of this data acknowledges that it may have been collected inconsistently between districts, so provides a best estimate only in comparative terms.

Figure 1.6.1c: Per capita waste disposed to landfills for selected districts between 2002 and 2004



Source: Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”), 2005.

Note: The source of this data acknowledges that it may have been collected inconsistently between districts, so provides a best estimate only in comparative terms.

Indicator	State	Trend
1.6.2 Proportion of recycling	☺	↑

This indicator measures the volume of waste diverted from landfills to recycling facilities, as a percentage of the estimated amount of waste disposed at landfills for selected territorial authorities in the Waikato Region.

As industrial activities expand and our population increases we are using more resources and generating more waste. However, much of our waste could be: reused – for example, taking old books and toys to the local kindergarten; recycled – for example, cans, paper and some plastics; composted – if organic, for example, hedge and lawn clippings. Waste disposal is expensive and can cause environmental problems. The less waste we produce, the less we need to dispose of, and the more we use our resources sustainably.

Table 1.6.2a shows there is a wide variation in the proportion of waste diverted from landfill (recycled) throughout the Region, with Taupo diverting approximately 29% of its waste stream compared with approximately 9% in Hamilton City and South Waikato District. There may be differences in methodology which partly explain this difference. Figure 1.6.2b shows that volumes per capita of recycling are generally increasing throughout the Region.

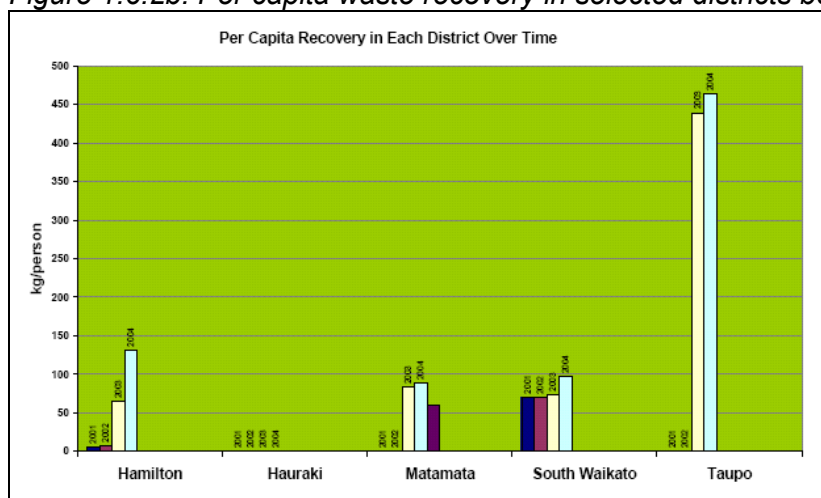
Table 1.6.2a: Waste diverted from landfill (recycled) for selected territorial authorities in the Waikato Region – 2005

	Hamilton City	Hauraki District	Matamata-Piako District	South Waikato District	Taupo District
2001 population	114,921	16,764	29,469	23,472	31,521
2001 households	40,962	6,219	10,692	8,013	11,262
Volume diverted	8,158	n/a	3,135	1,500	15,952
% diverted	8.9%	n/a	15.6%	8.5%	28.5%
Resource recovery centres	3	2	3	2	7
Population per RR centre	38,307	8,382	9,823	11,736	4,503

Source: Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”), 2005

Note: The source of this data acknowledges that it may have been collected inconsistently between districts, so provides a best estimate only in comparative terms.

Figure 1.6.2b: Per capita waste recovery in selected districts between 2001 and 2005

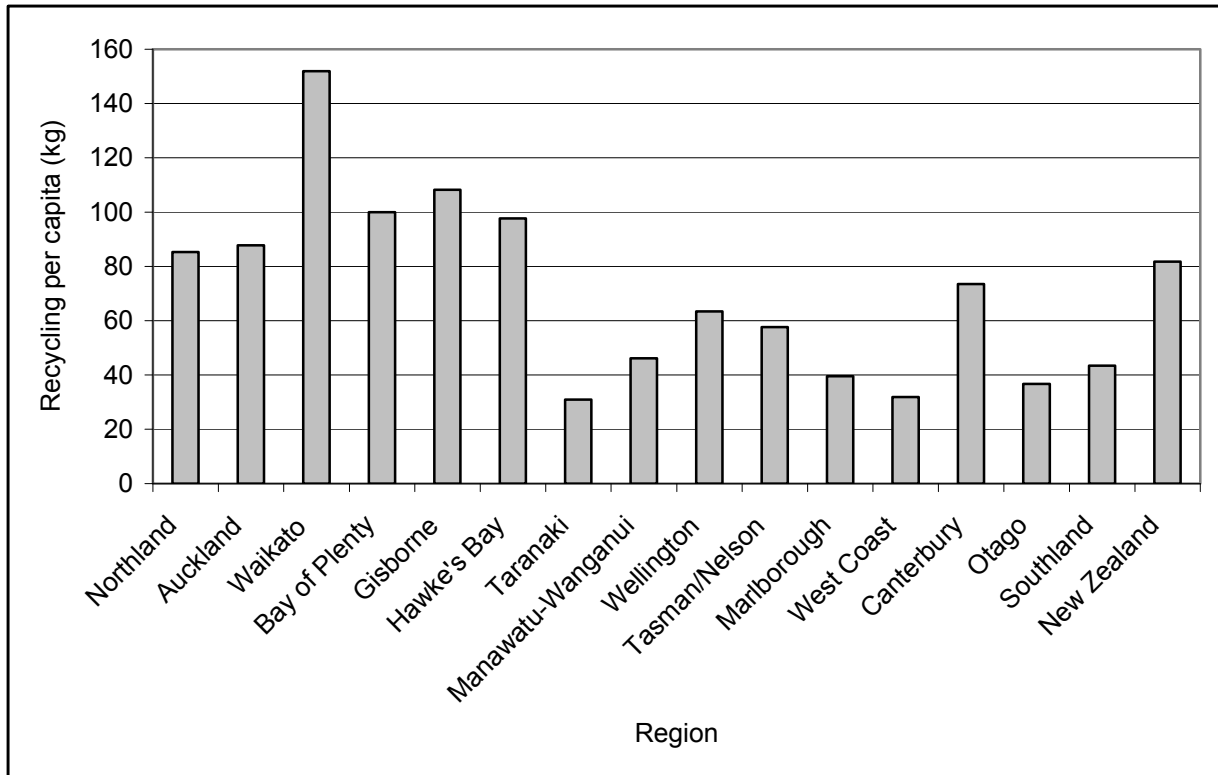


Source: Responsible Resource Recovery Ltd (“Regional Recycling and Recovery Infrastructural Review”), 2005

Note: The source of this data acknowledges that it may have been collected inconsistently between districts, so provides a best estimate only in comparative terms.

According to estimates from the Ministry for the Environment (“Targets in the New Zealand Waste Strategy: 2006 Review of Progress”), community recycling diverted an estimated 329,300 tonnes of materials from landfill in 2005. Based on the 2006 usually resident population estimate (4,027,947) this equates to 82kg per resident, representing approximately 10% of the total waste stream. As territorial authorities improve their services and increase household participation in recycling schemes, this amount is anticipated to increase. Figure 1.6.2c shows the tonnage collected by region in 2005, estimated on a per capita basis. This varies between regions, from a low of 31kg per person per year in the Taranaki Region to a high of 152kg per person per year in the Waikato Region. Note that these figures may not be directly comparable due to differences in reporting methodologies between councils.

Figure 1.6.2c: Recycling diverted from landfill (kg per capita), by region, 2005/06



Source: Survey of territorial authorities (cited in MfE "Targets in the New Zealand Waste Strategy: 2006 Review of Progress"); Population figures are from 2006 Census 'usually resident population'.

## 2. QUALITY OF LIFE

Waikato regional communities aspire towards the following in terms of overall quality of life:

*“The Waikato region is a great place to live, providing the services and opportunities we need to live well”.*

For the purpose of this report, quality of life indicators have been clustered into ten themes as follows:

Code	Theme	Community outcomes
2.1	Health	2A We are healthy, with active lifestyles and enjoy a total sense of well-being. Everyone has access to affordable quality health services throughout the Waikato region. 2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.
2.2	Education	2B Education provides opportunities so we can reach our full potential as individuals and contribute to the well-being of the whole region. 2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.
2.3	Housing	2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori. 2D We have a choice of healthy and affordable housing that we are happy to live in and that is close to places for work, study and recreation. 2E Māori have the ability to live on ancestral land in quality, affordable housing.
2.4	Community safety	2F Our communities and government work together so that we are safe, feel safe and crime is reduced.
2.5	Community participation	2G We can work and participate in the communities where we live, and there are quality work opportunities for people of all ages and skill levels.
2.6	Sport and leisure	2H We can participate in recreation and leisure activities that meet our diverse needs and we have opportunities to enjoy the Waikato region’s natural places and open spaces in responsible ways.
2.7	Family and community cohesion	2I Families are strong and our communities are supportive of them.
2.8	Youth and older people	2J Older people are valued and children are valued and protected. Young people have work, education and leisure opportunities and are included in making decisions that will affect their future.

## 2.1 Health

### Community outcome(s):

2A We are healthy, with active lifestyles and enjoy a total sense of well-being. Everyone has access to affordable quality health services throughout the Waikato region.

2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.

### Why is this important?

Waikato regional communities want to be healthy and feel healthy. Physical health plays a big part in personal and community well-being. Equity of access to health care is important for reducing social and economic disparities.

### What are the indicators?

2.1.1 Life expectancy at birth

2.1.2 Social deprivation index

2.1.3 Avoidable mortality and hospitalisation rates

2.1.4 Overall quality of life

2.1.5 Barriers to accessing General Practitioners (GPs)

### How are we doing?

- Life expectancy in the Region is similar to the national average of 78 years for males and 82 years for females. Gains in life expectancy since the mid-1980s can be attributed to better living standards and improved health care. However there remain marked differences in life expectancy between different ethnic groups, with the life expectancy for Māori at around 8.5 years less than non-Māori.
- Much of the Waikato Region scores relatively well on the NZDep socio-economic deprivation index, however throughout the Region there are pockets of deprived meshblocks. Based on population-weighted average, the overall NZDep2006 score for the Waikato Region is approximately 6 (ie, slightly more deprived than the national median), with territorial authorities scores ranging from approximately 4 (Franklin and Waipa) to 8 (South Waikato).
- The overall number of avoidable hospitalisations has been decreasing in the Waikato Region since the late 1990s while the level of avoidable mortality has been increasing over the same period. Part of this increase may be due to population growth and ageing.
- According to baseline results from the 2007 Waikato Community Outcomes Survey, the majority of regional residents (90%) are happy with their quality of life. The 'Happiness Index' (a weighted score across the quality of life scale) was 82.6 points for the Waikato Region overall, with some variation between territorial authority areas.
- Respondents to the 2007 Waikato Community Outcomes Survey were asked 'Has there been any time in the last 12 months when you or a member of your household wanted to go to a GP, but didn't'. Almost a quarter of the sample (22.5%) said there was a time in the last 12 months when they or a member of their household wanted to go to a GP, but didn't. Respondents most likely to report having barriers to health care were under 35 years of age, renting or boarding, on lower incomes, living in town rather than in the country, and of Māori descent. The main reported barriers were cost (9%) and availability (4%).

Indicator	State	Trend
2.1.1 Life expectancy at birth	☺	↑

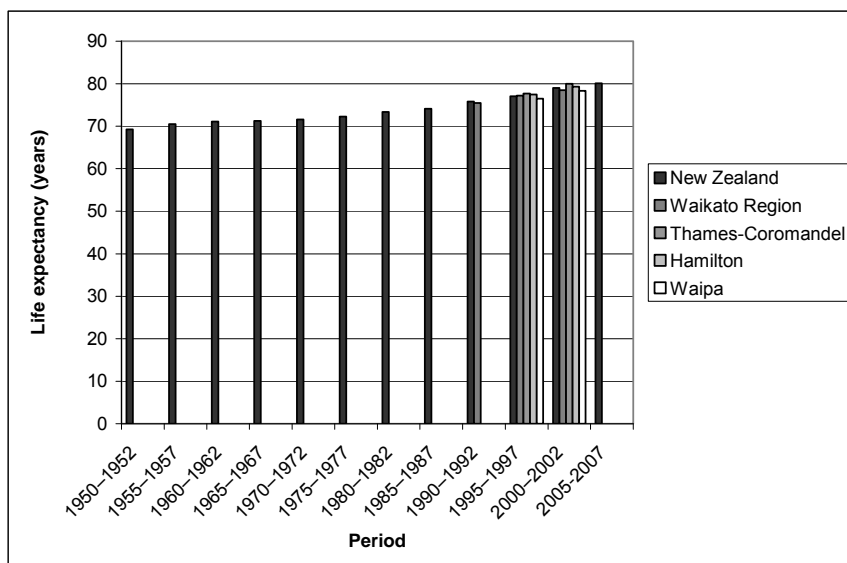
A life table represents the mortality experience of a population during a given period. It comprises a range of measures, including probabilities of death, probabilities of survival and life expectancies at various ages. Statistics NZ derives life tables, which commence with a hypothetical cohort of new-born babies and assumes that they would experience the observed mortality rates of a given period throughout their life. The derived life expectancies give an indication of the average longevity of the whole population but do not necessarily reflect the longevity of an individual.

Life expectancy is a key indicator of the general health of the population. Improvements in overall life expectancy reflect improvements in social and economic conditions, lifestyle, access to health services and medical advances.

In the Waikato Region, life expectancy data is only available for some territorial authorities, because death and population numbers in the others are too small to construct reliable life tables. Note also that life expectancy data for 1990-92 are not directly comparable with 1995-97 and 2000-02 because of differences in methodology.

Figure 2.1.1 shows that life expectancy in the Waikato Region is similar to the national average. Based on the mortality experiences of New Zealanders as a whole in the period 2005–2007, life expectancy at birth was 78.0 years for males and 82.2 years for females. Since the mid-1980s, gains in longevity have been greater for males than for females, and can be attributed mainly to reduced mortality in the middle-aged and older age groups (45–84 years) due to better living standards and improved health care. There remain marked differences in life expectancy for different ethnic groups. In 2000-2002, male life expectancy at birth was 77.2 years for non-Māori and 69.0 years for Māori, a difference of 8.2 years. Female life expectancy at birth was 81.9 years for non-Māori and 73.2 years for Māori, a difference of 8.8 years. However, at the national level, the difference between Māori and non-Māori life expectancy narrowed by approximately one year between 1995/97 and 2005/07 after widening steadily over the preceding 15 years.

Figure 2.1.1: Life expectancy at birth for New Zealand, Waikato Region and selected territorial authorities



Source: Ministry of Health/Statistics New Zealand Life Tables

Note: Life expectancy is calculated above as the simple average of male and female life expectancy estimates.

	Indicator	State	Trend
2.1.2	Social deprivation index	☹	⇒

The New Zealand Index of Deprivation (NZDep) is a measure of socio-economic status calculated for small geographic areas. It shows the percentage of the population in a given area who live in each deprivation index decile. The Index combines a range of key socio-economic factors from the Census and estimates a score of material and social deprivation for a particular area, on a scale of 1 (least deprived) to 10 (most deprived). Deprivation scores generally reflect the ability of households to achieve positive outcomes in areas such as health, income, education and employment.

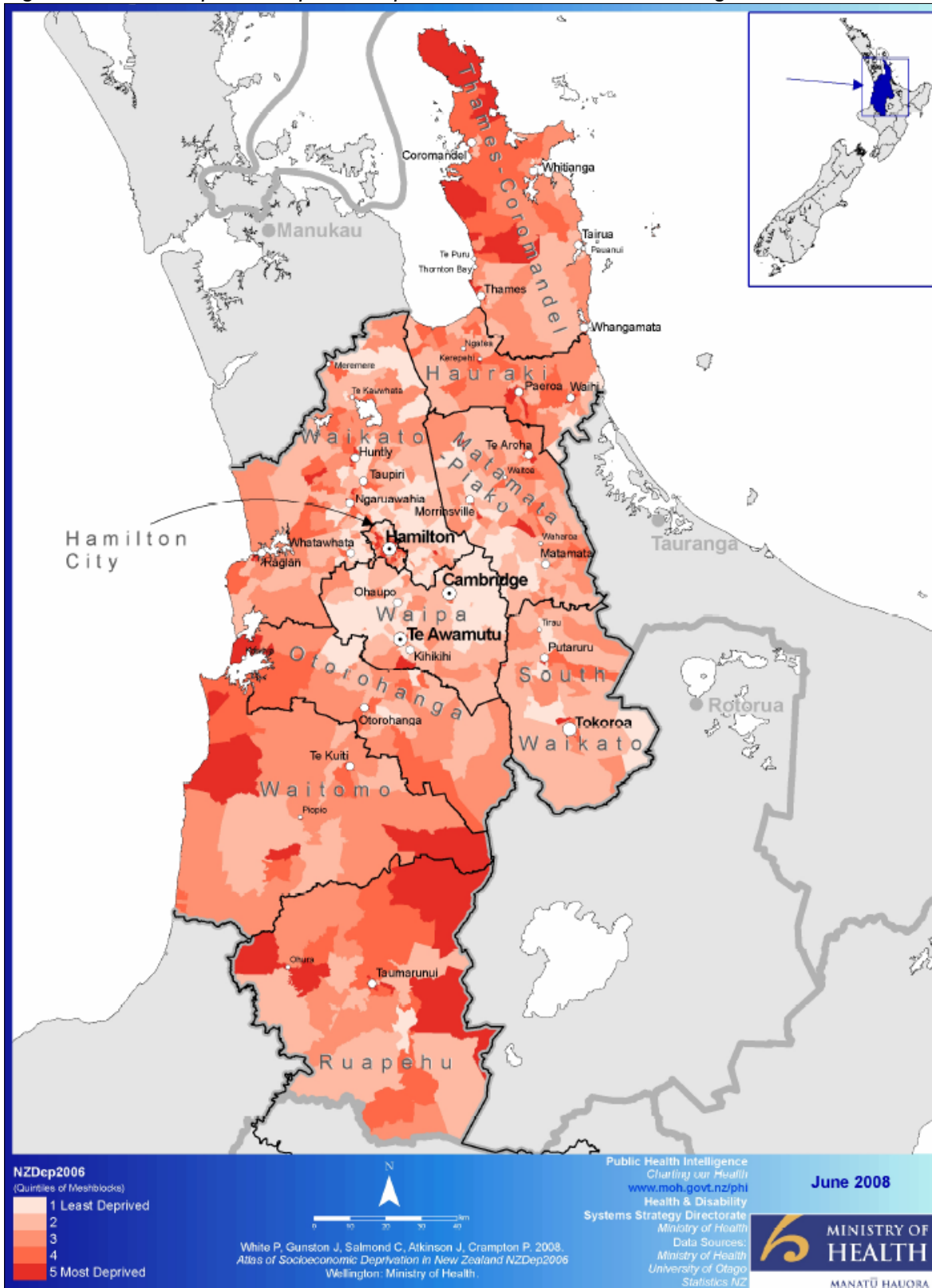
The economic and social circumstances of people impact significantly on their ability to provide for their everyday needs and to participate fully as members of their communities.

The NZDep Index is useful for mapping and profiling relative social deprivation within a region or territorial authority area, and comparing relative deprivation between geographic areas. However it is less useful for monitoring changes in deprivation over time because it is not an absolute measure. The index is recalculated after each five-yearly Census in a way that ensures 10% of all meshblocks in New Zealand have an NZDep score of 1; that 10% have an NZDep score of 2; and so forth.

Figure 2.1.2 shows that much of the Waikato Region scored relatively well on the 2006 NZDep index. Note that meshblocks are difficult for the eye to compare because of variations in size. Larger rural meshblocks tend to be more obvious than the smaller urban meshblocks, but contain much fewer people. When one drills down to a more detailed scale, pockets of deprived meshblocks become apparent. Within Hamilton City this includes areas such as Insoll and Enderley that have a relatively high number of State houses. Additional graphs in the MARCO Benchmark Data Report show that territorial authority areas within the Waikato Region have markedly different social deprivation profiles. For example the Waikato District, Otorohanga, Taupo and Rotorua each have a considerable proportion of meshblocks with NZDep scores of less than 4 and also more than 7, but few meshblocks with scores between 4 and 7, indicating a “missing middle class”.

Appendix Table 2.1.2 at the back of this report presents NZDep2006 average scores for all Census Area Units in the Region. Based on population-weighted average, the overall NZDep2006 score for the Waikato Region is approximately 6 (ie, slightly more deprived than the national median), with territorial authorities scores ranging from approximately 4 (Franklin and Waipa) to 8 (South Waikato). Exact scores at the territorial authority and regional level should be recalculated prior to any in-depth analysis.

Figure 2.1.2: NZDep2006 deprivation profile for the Waikato DHB Region



Source: Atlas of Socioeconomic Deprivation in New Zealand NZDep2006, Ministry of Health 2008

	Indicator	State	Trend
2.1.3	Avoidable mortality and hospitalisation rates	☹	⇒

The concept of avoidable mortality includes deaths that are potentially preventable through population-based interventions (eg, health promotion), as well as those responsive to preventative and curative interventions at an individual level. Almost 80% of all avoidable deaths occur in those aged 45-74 years, dominated by the emergence of chronic diseases such as heart disease, diabetes and smoking-related cancers. Avoidable hospitalisations are hospitalisations which result from diseases and conditions sensitive to interventions delivered through primary health care, and which could therefore be potentially avoided.

Monitoring levels of mortality and hospitalisation, and levels of avoidable mortality and hospitalisation is an important part of the ongoing process of identifying priority areas and themes in a District Health Boards' Health Needs Assessment process, and contributes to identifying continuing priorities and developing strategies to improve the health of society. Mortality/hospitalisation rates (and those that are avoidable) can act as a measure in understanding the broader and more complex multi-layered general health of society. The avoidable hospitalisation rate partly reflects effectiveness and access to primary health care.

Note that the results presented below are for the area covered by the Waikato District Health Board. This area does not include parts of Rotorua and Taupo Districts (part of Lakes DBH) or Franklin District (Counties-Manukau DHB).

According to Waikato DHB's 2008 Health Needs Assessment, avoidable mortality in the Waikato was calculated at 5,433 and unavoidable mortality at 10,872 for the years from 1998 to 2004. The top leading causes of avoidable mortality are shown in Table 2.1.3a. Top of the list are cardiovascular diseases and neoplasm (eg, cancers). There were 545,320 hospitalisations in the Waikato DHB area from 2000 to 2006. Excluding births and postnatal care of healthy babies, routine multiple day attendances for dialysis, medical abortions and other medical care necessary for normal health, the leading causes of hospitalisation in the Waikato DHB area for 2000 to 2006 are as shown in Table 2.1.3b. The top causes were injury and poisoning, ill-defined conditions and digestive system disorders.

Figure 2.1.3c shows that the age standardised avoidable mortality rate for the Waikato DHB region is higher than the national average. This is partly due to the high proportion of Māori in the regional population. The age standardised mortality rate for Waikato Māori for the period 1997-2001 was 546.6 per 100,000 population, compared to the national average (all ethnicities) of 208.3. Figure 2.1.3d shows that the age standardised rate of ambulatory sensitive hospitalisations in the Waikato DHB is similar to the national average, at approximately 2,780 per 100,000 population for the period 1998-2002.

Figures 2.1.3e and 2.1.3f show that the overall number of avoidable hospitalisations has been decreasing in the Waikato Region since the late 1990s while the level of avoidable mortality has been increasing over the same period. Part of this increase may be due to population growth and ageing. Commentary from Waikato DHB states that the avoidable mortality index is increasing at an average rate of 3.7% per year for the Region. Hauraki District has had the highest growth in avoidable mortality relative to its size. Trend data for individual territorial authorities are contained in the Appendices.

**Table 2.1.3a: Leading causes of avoidable mortality, Waikato DHB 1998-2004**

Cause	Frequency
Cardiovascular diseases	1,832
Neoplasm	1,753
Unintentional injuries	447
Respiratory diseases	386
Intentional injuries	323
Nutritional, endocrine and metabolic conditions	238
Other avoidable mortality	454
Total avoidable mortality 1998-2004	5,433
Total unavoidable mortality 1998-2004	10,872

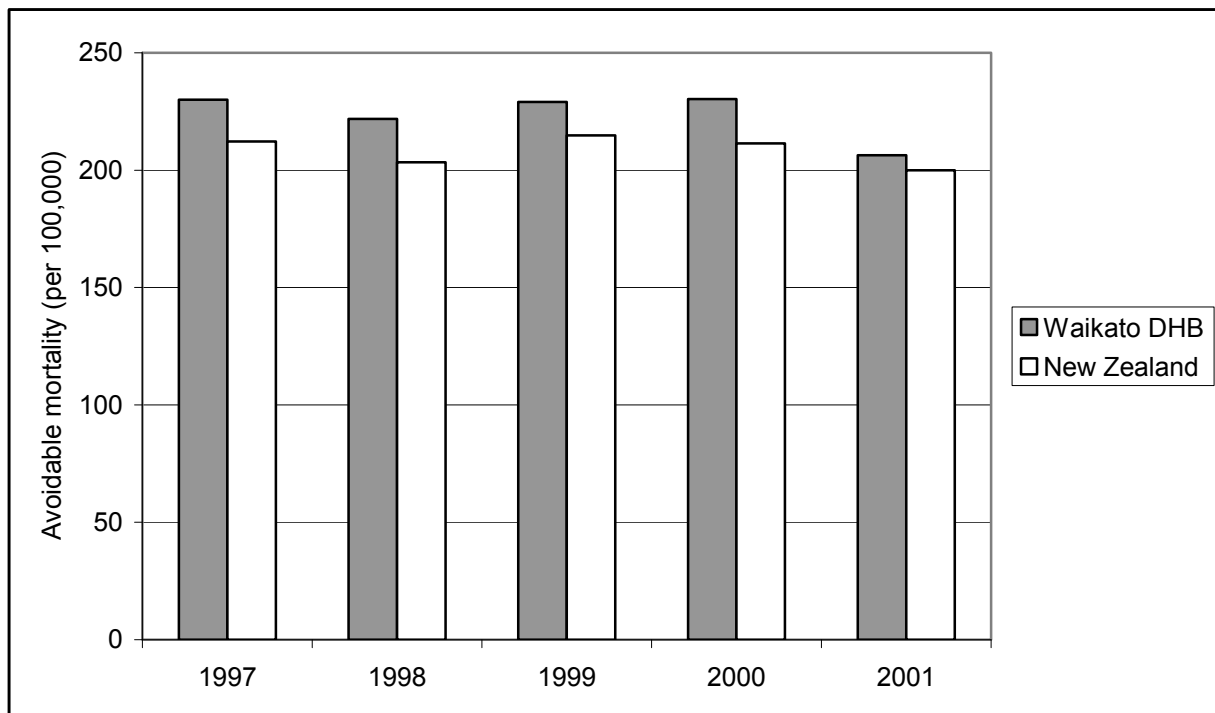
Source: Waikato District Health Board Health Needs Assessment 2008

**Table 2.1.3b: Leading causes of hospitalisation, Waikato DHB 1998-2006**

Cause	2000	2001	2002	2003	2004	2005	2006	Total
Injury and poisoning	6,196	6,762	6,563	6,724	6,646	7,476	7,748	48,115
Ill-defined conditions	5,041	5,936	6,119	6,888	7,232	7,334	7,478	46,028
Digestive system	5,726	5,975	5,845	5,682	5,855	5,993	6,108	41,184
Circulatory system	5,664	5,853	5,485	5,145	5,141	5,291	5,318	37,897
Respiratory system	4,746	5,082	5,097	5,164	4,926	4,873	4,690	34,578
Cancer - Malignant	3,637	3,749	3,814	3,886	3,936	3,981	4,102	27,105
Genito-urinary system	3,238	3,402	3,252	3,235	3,318	3,279	3,144	22,868
Musculoskeletal system	2,624	2,894	2,534	2,460	2,520	2,472	2,685	18,189
Mental disorders	1,722	1,972	1,928	1,835	1,857	1,968	1,916	13,198
Nervous system	1,472	1,666	1,621	1,624	1,808	1,945	2,013	12,149
Remaining hospitalisations	31,500	33,351	33,237	34,276	35,894	38,231	27,520	234,009
Total hospitalisations	71,566	76,642	75,495	76,919	79,133	82,843	72,722	535,320

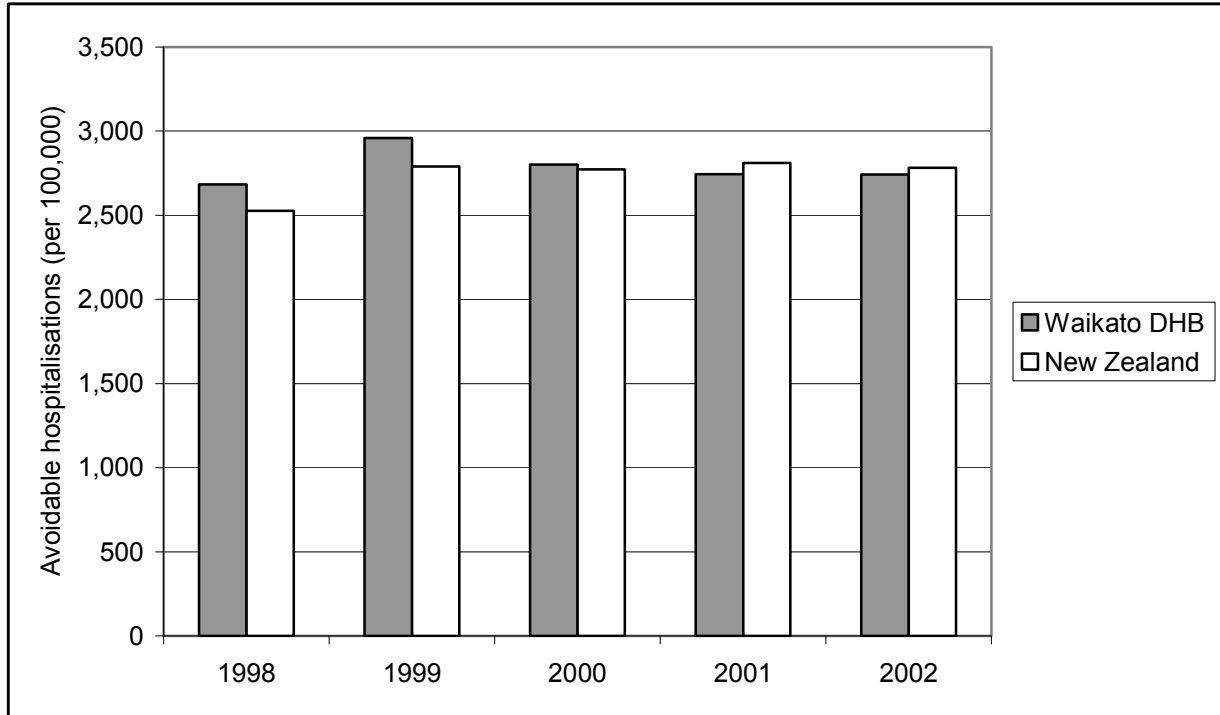
Source: Waikato District Health Board Health Needs Assessment 2008

**Figure 2.1.3c: Avoidable mortality rate (age standardised per 100,000 population)**



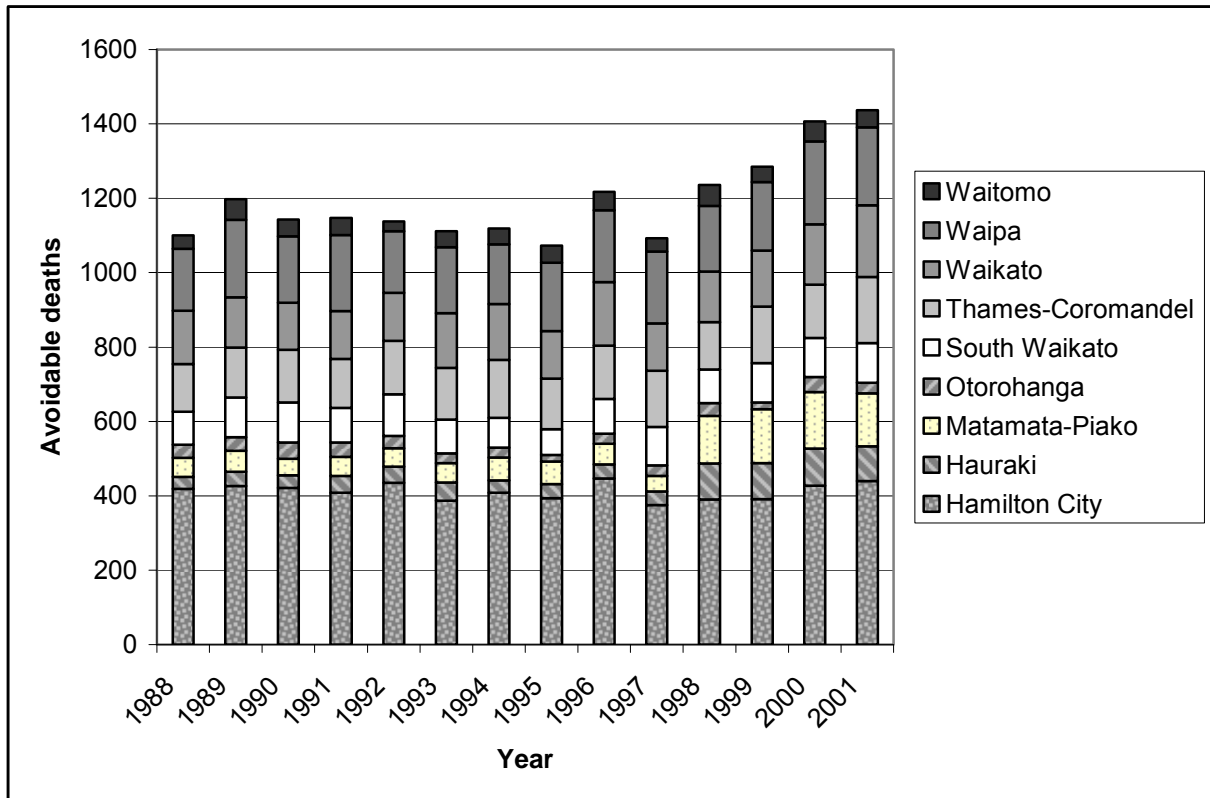
Source: PHI Online - Public Health Intelligence ([www.phionline.moh.govt.nz/webportal.htm](http://www.phionline.moh.govt.nz/webportal.htm))

Figure 2.1.3d: Ambulatory sensitive hospitalisations (age standardised per 100,000 population)



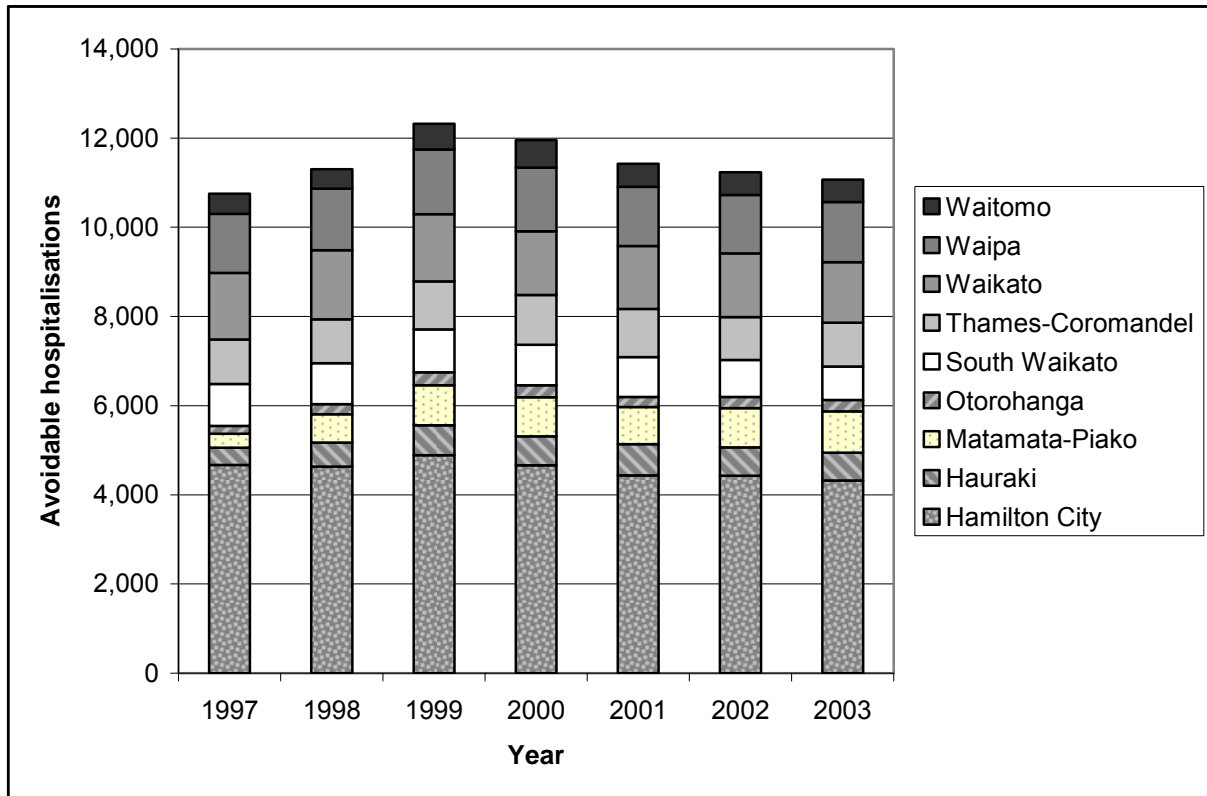
Source: PHI Online - Public Health Intelligence ([www.phionline.moh.govt.nz/webportal.htm](http://www.phionline.moh.govt.nz/webportal.htm))

Figure 2.1.3e: Avoidable mortality for territorial authorities within the Waikato DHB – 1988-2001



Source: Waikato District Health Board Health Needs Assessment and Analysis

Figure 2.1.3f: Avoidable hospitalisations for territorial authorities within the Waikato DHB – 1988-2001



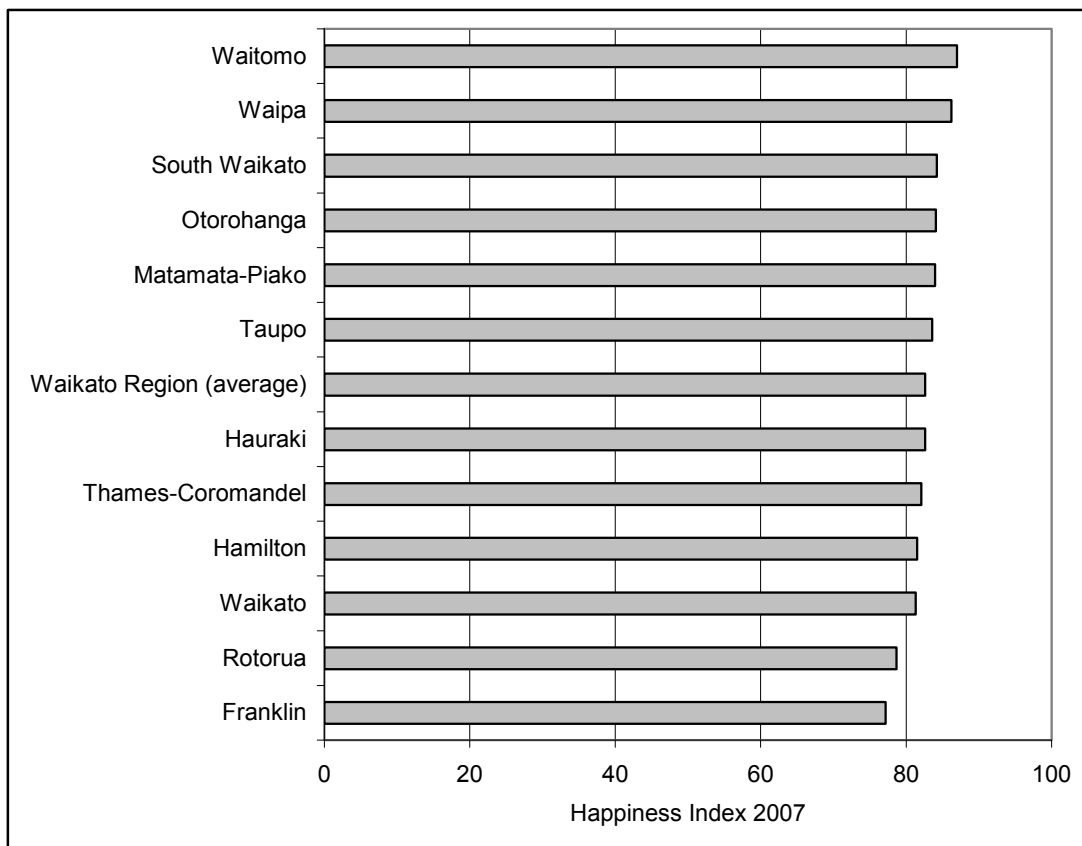
Source: Waikato District Health Board Health Needs Assessment and Analysis

Indicator	State	Trend
2.1.4 Overall quality of life	☹	?

This indicator measures residents’ perception of overall quality of life in selected cities in New Zealand. Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato.

Respondents to the 2007 Waikato Community Outcomes Survey were asked ‘Thinking in general about your Quality of Life and using the scale where 0 = very unhappy and 10 = very happy, how happy are you with your Quality of Life?’ The vast majority of the respondents (90%) said they were happy with their quality of life (scores of 7 – 10). A quarter of the respondents (27%) rated their overall happiness with a score of 10 while 19% rated this with a score of 9. Only a few respondents (1.8%) were actually unhappy with their quality of life (Scores 0 – 3). The ‘Happiness Index’ (a weighted score across the quality of life scale) was 82.6 for the Waikato Region overall, which implies that respondents were very happy with their quality of life. There was some variation in perceived quality of life based on where respondents were from. While the majority of respondents from each territorial authority area were satisfied with their quality of life, those from Waitomo appeared the most happy whereas a higher proportion of those from Rotorua and Franklin were less happy with their quality of life (refer Figure 2.1.4). Note that these results are subject to a certain amount of sample error. Comparable results from the 2008 Quality of Life Survey show that the majority of New Zealand residents (92.1%) rate their overall quality of life positively. The Hamilton City result was 90.2%.

Figure 2.1.4: Respondents’ rating of overall quality of life – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

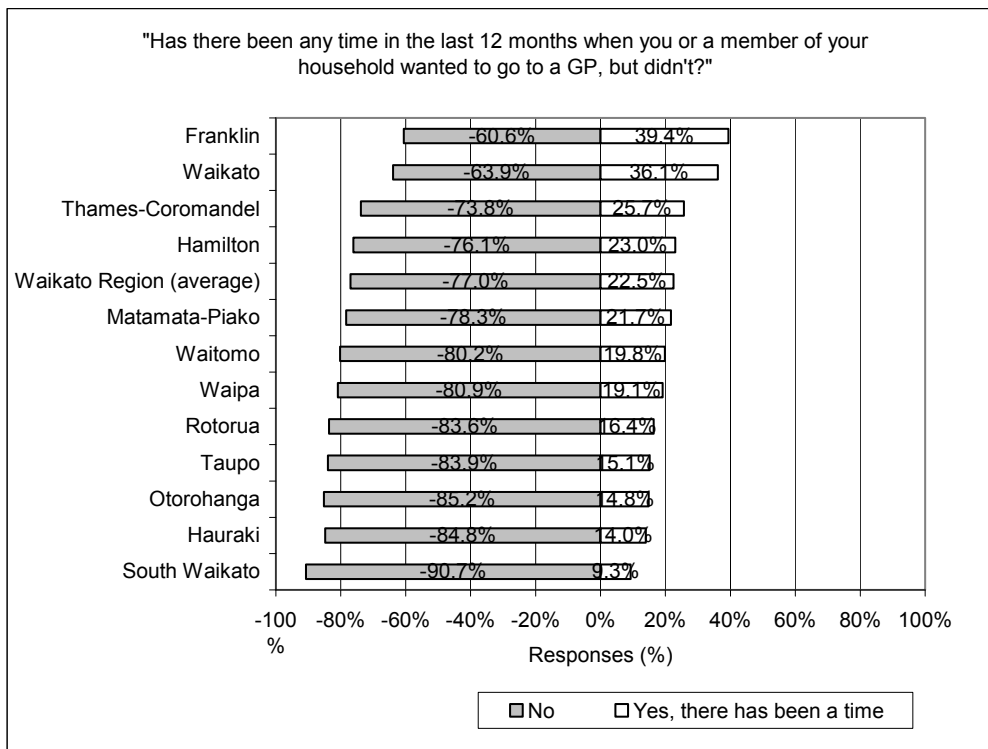
Indicator	State	Trend
2.1.5 Barriers to accessing General Practitioners (GPs)	☹	?

This indicator measures the percentage of people who felt unable to go to a doctor in the previous 12 months, although they wanted to. General Practitioners (GPs) are part of the frontline of primary health care provision. Accessibility to a GP is an important issue in both treatment and prevention of poor health.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato.

Respondents to the 2007 Waikato Community Outcomes Survey were asked ‘Has there been any time in the last 12 months when you or a member of your household wanted to go to a GP, but didn’t’. Three quarters of the respondents said there was no time in the last 12 months when they or a member of their household wanted to go to a GP, but didn’t. However, almost a quarter of the sample (22.5%) said there was a time in the last 12 months when they or a member of their household wanted to go to a GP, but didn’t. There was considerable variation between territorial authority areas, in terms of the proportion who said there was a time in the last 12 months when they or a member of their household wanted to go to a GP, but didn’t. This varied from a low of 9.3% for the South Waikato District to a high of 36.1% in the Waikato District (refer Figure 2.1.5). Note that these results are subject to a certain amount of sample error. Respondents most likely to report having barriers to health care were under 35 years of age, renting or boarding, on lower incomes, living in town rather than in the country, and of Māori descent. The main reported barriers were cost (9%) and availability (4%).

Figure 2.1.5: Respondents’ rating of barriers to accessing health care – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

## 2.2 Education

### Community outcome(s):

2B Education provides opportunities so we can reach our full potential as individuals and contribute to the well-being of the whole region.

2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.

### Why is this important?

Knowledge and skills enhance people's ability to meet their basic needs, widen the range of options and employment available to them, and enable greater control over the direction of their lives. Skills and knowledge can also enhance people's sense of self-esteem, security and belonging. Education is a key to the Waikato Region's ability to realise its economic potential. People's ability to re-skill and up-skill during their working lives is important if they are to keep pace with today's rapidly changing work environment.

### What are the indicators?

- 2.2.1 School leavers with no formal qualification
- 2.2.2 Educational attainment of the adult population
- 2.2.3 Participation in early childhood education
- 2.2.4 Adult and community education
- 2.2.5 Work opportunities matching skills

### How are we doing?

- The proportion of school leavers in the Waikato Region with no formal qualification has apparently fallen dramatically over the past few years at both the regional and national level. In total there were 5,026 school leavers in the Waikato Region in 2008, of whom 336 (6.7%) left school with little or no formal attainment. The official comparative figure for 2002 was 19%. There is considerable variation between territorial authority areas throughout the Region which likely reflects differences in underlying socio-economic status. There are also persistent levels of poor formal academic attainment by Māori and Pacific Islands school leavers, although the disparity has reduced over the past decade.
- Over the period 1996 to 2006 there was a general increase in the proportion of the adult population in the Waikato Region with post-compulsory academic qualifications, including vocational qualifications (up from 20.7% to 24.8% of adults), Bachelor degrees (up from 4.8% to 8.8%) and higher degrees (up from 2.4% to 3.5%). However, the Waikato Region still has a slightly below average proportion of adults with either a secondary school qualification or degree qualification. There is considerable variation throughout the Region, with more people having higher qualifications in Hamilton City compared to surrounding rural and provincial areas.
- There has been an increasing rate of participation by Waikato children in Early Childhood Education (ECE) services, however the ECE participation rate of Māori children remains relatively low compared to other ethnic groups.
- There is no administrative data currently available for monitoring Adult and Community Education (ACE). At the national level, Government funding for ACE was cut in 2009 from \$16 million to \$3 million. Respondents to the 2007 Waikato Community Outcomes Survey were asked about their level of satisfaction with the 'availability of community or tertiary education in your area'. Results were highest for Hamilton and lower for more remote areas such as Thames-Coromandel.
- Most respondents to the 2007 Waikato Community Outcomes Survey were satisfied that their jobs are making good use of their skills, training and experience.

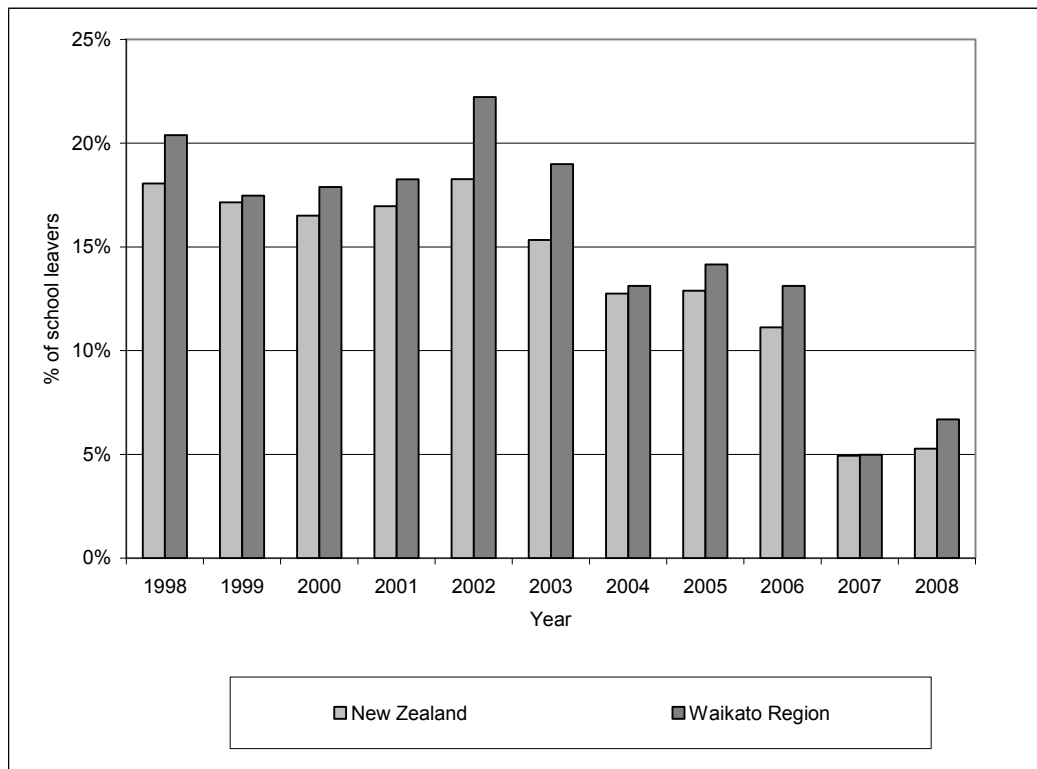
Indicator	State	Trend
2.2.1 School leavers with no formal qualification	☹	↑

This indicator measures the number of school leavers that have no formal school qualifications.

School leavers with no formal qualifications are a concern to the Government which is aiming to develop a knowledge economy. The Statistics New Zealand website states “The extent to which a lack of school qualifications impedes the progress of young people in their transition from school to work must be of major concern to a nation focusing on developing an inclusive, innovative economy.” Those who leave school early with few qualifications are at a much greater risk of unemployment or vulnerability in the labour force and of having low incomes (MSD Social Report).

Figure 2.2.1a shows that the proportion of school leavers with little or no qualifications has apparently fallen dramatically over the past few years at both the regional and national level. In total there were 5,026 school leavers in the Waikato Region in 2008, of whom 336 (6.7%) left school with little or no formal attainment. The official comparative figure for 2002 was 19%. Table 2.2.1b shows there is considerable variation between territorial authority areas throughout the Region which likely reflects differences in underlying socio-economic status. There are also persistent levels of poor formal academic attainment by Māori and Pacific Islands school leavers (refer Figure 2.2.1c), although the disparity has reduced over the past decade.

Figure 2.2.1a: Percentage of school leavers in the Waikato Region and New Zealand with little or no formal qualification



Source: Ministry of Education “Education Counts” website

Note: No formal qualification equates to less than 12 credits at Level 1 NCEA 1998 to 2002 and fewer than 14 credits at NCEA Level 1 from 2003 onwards. From 2002, the school leaver data collection was changed as a result of the introduction of NCEA. Also, school leaver data is now based on the concept of achievement, where students have to both participate and achieve credits in order to be counted as having a qualification. Prior to 2002, school leaver data was based on the concept of participation - if a student sat School Certificate they were deemed to have School Certificate regardless of their grade. Readers should note that these changes have led to discontinuities with previous time-series.

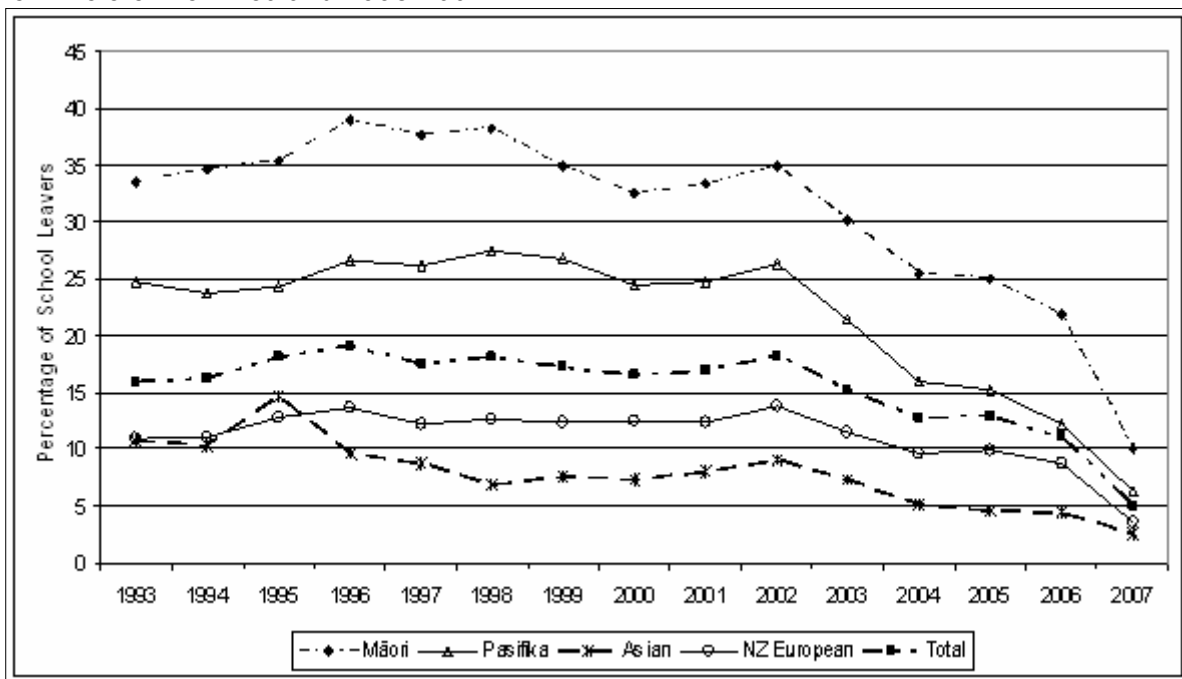
Table 2.2.1b: Percentage of school leavers in the Waikato Region and territorial authorities with no formal qualification

Area	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
New Zealand	18.1%	17.2%	16.5%	17.0%	18.3%	15.3%	12.8%	12.9%	11.1%	4.9%	5.3%
Waikato Region	20.4%	17.5%	17.9%	18.3%	22.2%	19.0%	13.1%	14.2%	13.1%	5.0%	6.7%
Franklin District						18.4%	15.5%	11.3%	11.9%	3.6%	6.0%
Thames-Coromandel District						22.0%	19.0%	15.1%	20.2%	5.2%	8.9%
Hauraki District						17.6%	11.4%	15.9%	14.3%	3.3%	5.4%
Waikato District						20.7%	22.2%	23.3%	17.4%	7.8%	7.8%
Matamata-Piako District						19.3%	20.6%	14.7%	14.8%	6.3%	8.5%
Hamilton City						21.1%	10.4%	14.1%	12.2%	5.0%	6.2%
Waipa District						8.4%	9.5%	7.8%	7.3%	3.3%	2.7%
Otorohanga District						29.1%	27.3%	20.0%	12.5%	c	12.0%
South Waikato District						16.4%	17.7%	18.8%	19.1%	6.1%	8.0%
Waitomo District						15.6%	9.4%	14.3%	19.8%	3.0%	12.1%
Taupo District						23.3%	12.0%	11.5%	13.8%	3.5%	9.4%
Rotorua District						19.3%	16.0%	17.8%	13.3%	6.9%	7.8%

Source: Ministry of Education “Education Counts” website

Notes: (a) No formal qualification equates to less than 12 credits at Level 1 NCEA 1998 to 2002 and fewer than 14 credits at NCEA Level 1 from 2003 onwards. (b) Some districts have only one high school. Commencing 2007, when the number of leavers from these schools is small, the Ministry of Education has suppressed public availability of this data to prevent attainment levels of individual students being identified. This affects only Otorohanga within the Waikato Region.

Figure 2.2.1c Percentage of school leavers with little or no formal attainment, by ethnic group for whole of New Zealand 1993-2007



Source: Ministry of Education:

[http://www.educationcounts.govt.nz/statistics/schooling/school\\_leavers2/school\\_leavers](http://www.educationcounts.govt.nz/statistics/schooling/school_leavers2/school_leavers)

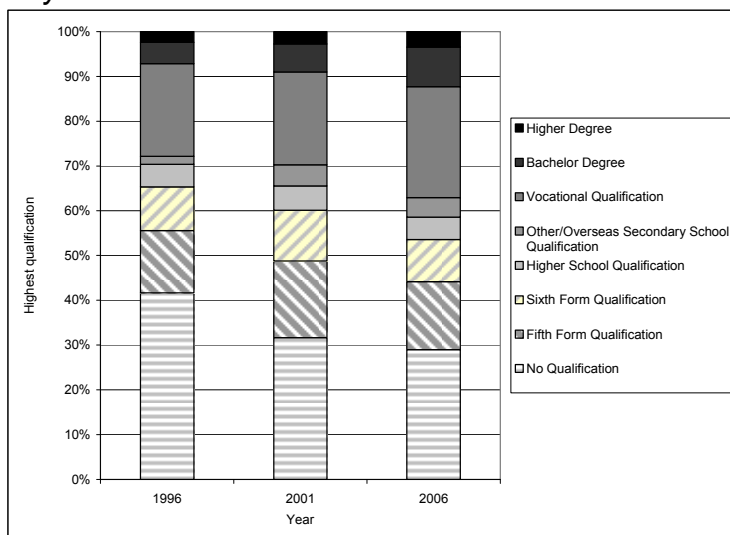
Indicator	State	Trend
2.2.2 Educational attainment of the adult population	☹	↑

This indicator measures the highest level of education or qualification attained for adults (aged 15 years or over). Changes in educational attainment provide information about access to education and the equity of the education system, and serve as a backdrop to current participation and completion rates.

Measuring the qualification levels of a city’s population aged 15 years and over helps to identify the job readiness of the future labour force. An educated population adds to the vibrancy and creativity of communities and is needed to remain competitive in the global economy. Higher educational attainment, in terms of recognised qualifications, is associated with a range of positive outcomes, including better income, employment, and health. As the requirements for many jobs and the expectations of employers are rising, education that provides the necessary skills and knowledge has become essential for full participation in society and for a productive workforce. Education also contributes to an expansion of scientific and cultural knowledge, and a population’s educational levels are positively related to economic growth rates and to a country’s capacity to provide its citizens with a high standard of living.

Figure 2.2.2a shows that over the period 1996 to 2006 there was a general increase in the proportion of the adult population in the Waikato Region with post-compulsory academic qualifications, including vocational qualifications (up from 20.7% to 24.8% of adults), Bachelor degrees (up from 4.8% to 8.8%) and higher degrees (up from 2.4% to 3.5%). Table 2.2.2b shows the Waikato Region still has a slightly below average proportion of adults with either a secondary school qualification or degree qualification. There is considerable variation throughout the Region, with more people having higher qualifications in Hamilton City compared to surrounding rural and provincial areas.

Figure 2.2.2a: Highest qualification for usually resident population of the Waikato Region aged 15 years and over



Source: Statistics New Zealand Census

Notes: Denominator excludes "not elsewhere included". Changes to classifications mean that comparisons over time should be treated with some caution. For the purpose of this analysis (1) Fifth Form Qualification = Level 1 Certificate Gained at School; (2) Sixth Form Qualification = Level 2 Certificate Gained at School; (3) Higher School Qualification = Level 3 or 4 Certificate Gained at School; (4) Other/Overseas Secondary School Qualification = Overseas Secondary Qualification; (5) Vocational Qualification = Level 1, 2, 3 or 4 Certificate Gained Post-School or Level 5 or 6 Diploma; (6) Bachelor Degree = Bachelor Degree & Level 7 Qualifications; (7) Higher Degree = Post-Graduate and Honours Degree, Masters Degree or Doctorate Degree.

**Table 2.2.2b: Highest Qualification for Census Usually Resident Population Count Aged 15 Years and Over, 2006**

Highest Qualification	No Qualification	Secondary School Qualification	Vocational Qualification	Degree	Total
New Zealand	25.0%	35.0%	24.1%	15.8%	100.0%
Waikato Region	29.0%	33.9%	24.8%	12.3%	100.0%
Franklin District	28.1%	35.7%	26.1%	10.1%	100.0%
Thames-Coromandel District	31.3%	32.8%	27.1%	8.7%	100.0%
Hauraki District	39.9%	31.7%	22.7%	5.7%	100.1%
Waikato District	31.1%	32.6%	24.6%	11.8%	100.0%
Matamata-Piako District	34.9%	34.8%	23.2%	7.1%	100.0%
Hamilton City	22.2%	35.1%	24.1%	18.6%	100.0%
Waipa District	28.3%	34.0%	26.3%	11.4%	100.0%
Otorohanga District	37.3%	33.5%	22.8%	6.3%	100.0%
South Waikato District	39.9%	30.8%	23.7%	5.5%	99.9%
Waitomo District	40.2%	31.3%	21.4%	7.2%	100.0%
Taupo District	28.8%	33.9%	28.2%	9.2%	100.0%
Rotorua District	28.5%	33.3%	27.3%	10.9%	100.0%

Source: Statistics New Zealand Census

Note: Denominator excludes "not elsewhere included".

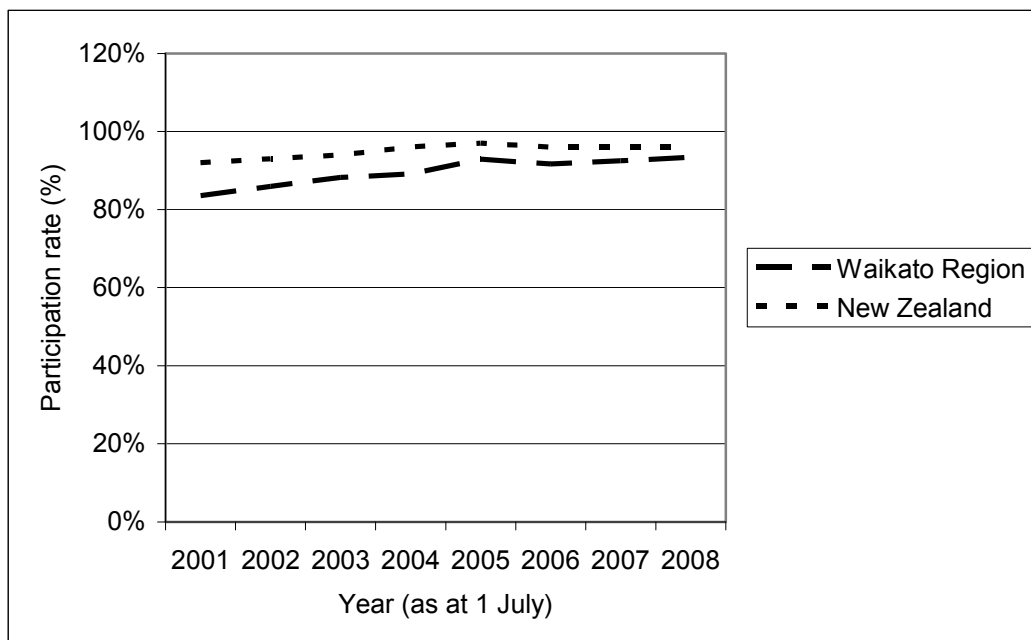
Indicator	State	Trend
2.2.3 Participation in early childhood education	☹	↑

This indicator measures children’s participation in early childhood education.

The aim of early childhood education is to promote children's learning and development. There is a diverse range of services available, many evolved from individual and community initiatives with a range of philosophies. They include kindergartens, playcentres, kōhanga reo, home-based services, childcare centres and crèches. Evidence from New Zealand and international research shows that the early years of childhood are vital to a child’s development and future ability to learn. Quality early childhood programmes prepare young children socially, physically and academically for entry into primary education and can help narrow the achievement gap between children from low-income families and those from more advantaged families.

As at 1 July 2008, the ‘apparent’ early childhood education participation rate throughout New Zealand was approximately 96% for 3 and 4 year olds combined. This figure represents a substantial increase since 1986. Much of the growth in participation in early childhood education occurred in the five years between 1986 and 1991, with slower growth in subsequent years. Figures 2.2.3a and 2.2.3b show that there has been a generally increasing rate of participation by children in Early Childhood Education (ECE) services throughout the Waikato Region. Figure 2.2.3d shows that Māori and Pacific Islands children continue to have lower than average participation rates overall. Additional data at the territorial authority level is included in the Appendices. This shows that the highest rates of participation each year are generally in Hamilton City, Thames-Coromandel District and Matamata-Piako District. There was a relatively lower level of ECE participation by Māori children across all territorial authority areas as at July 2008. Participation by Pacific Islands children was highly variable in percentage terms, due in part to the small numbers of Pacific children in some districts.

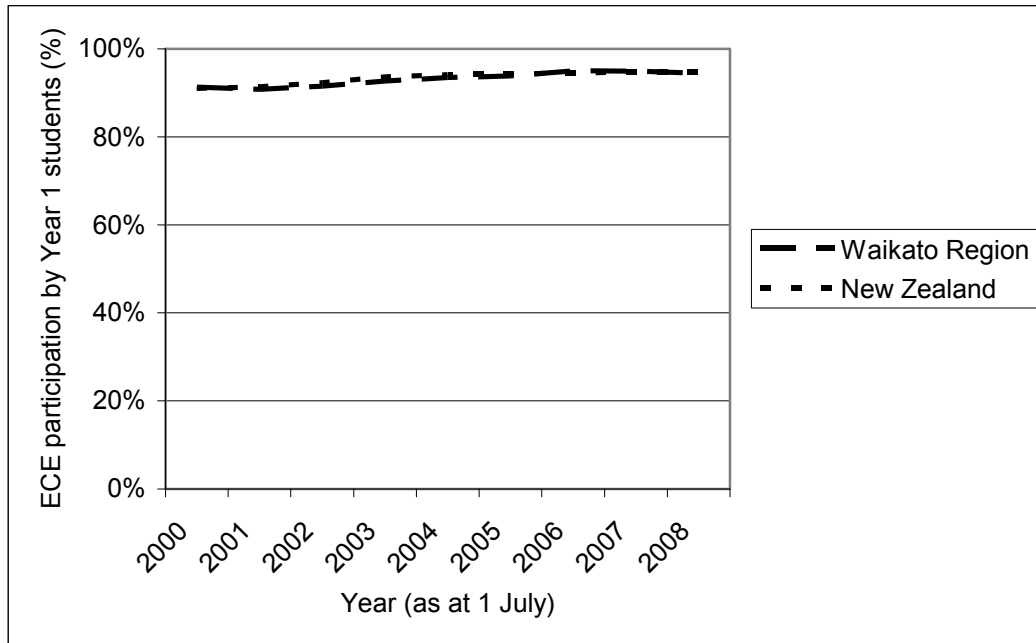
Figure 2.2.3a: Early childhood education “apparent” participation rate for 3 and 4 year-olds combined, Waikato Region and New Zealand



Source: Ministry of Education/MSD Social report

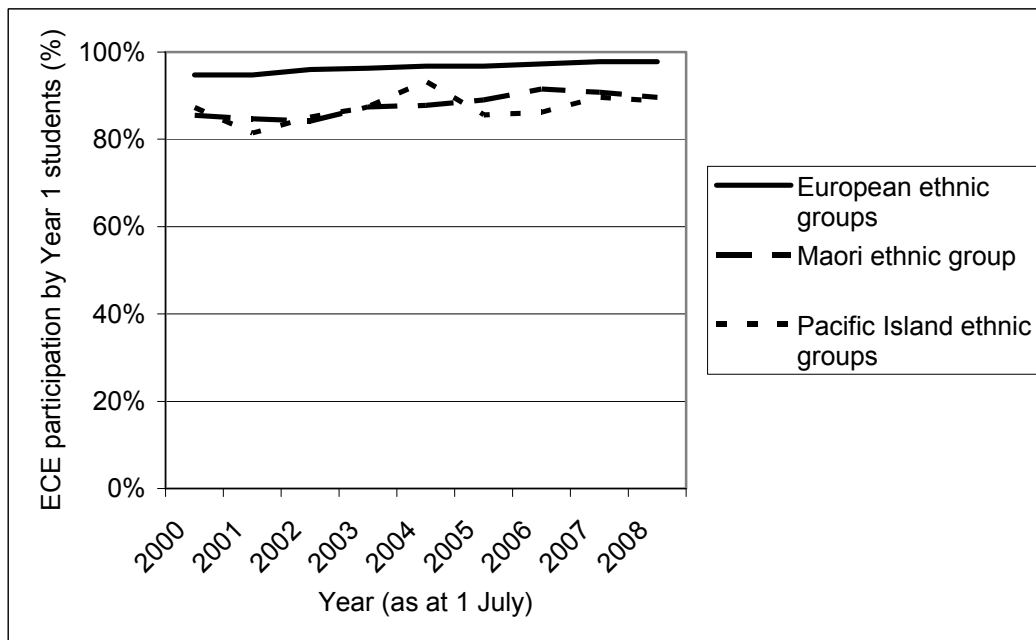
Note: These figures overestimate the true participation rate. Rates in excess of 100% are possible because children can be enrolled in more than one ECE service.

Figure 2.2.3b: Early childhood attendance by Year 1 students, Waikato Region and New Zealand



Source: Ministry of Education/MSD Social Report

Figure 2.2.3c: Early childhood attendance by Year 1 students, by ethnic group for Waikato Region



Source: Ministry of Education/MSD Social Report

	Indicator	State	Trend
2.2.4	Adult and community education	☺	?

This indicator measures the levels of adult and community education (ACE) in the community. ACE happens in a wide range of situations, both formal and informal. ACE does not include education obtained at compulsory education providers or universities and polytechnics, except where provided explicitly as continuing adult or community education.

ACE is an important part of New Zealand's education system, and has a role to play in the Government's goal for a prosperous and confident knowledge society. It provides a bridge to further learning opportunities, fosters a lifelong learning culture, active citizenship and social awareness.

ACE is supported by, and delivered through, a range of community organisations, including other tertiary education providers such as Literacy Aotearoa and the Rural Education Activities Programme. Funding for ACE is also available to schools and tertiary education institutions. There were 140,000 enrolments in school-based adult and community education in 2008. Tertiary education institutions have also been able to run ACE programmes with support from government funding. In 2008, ACE programmes were provided by eight universities, 19 institutes of technology and polytechnics and two wānanga, and attracted an estimated 83,300 learners. In the May 2009 Budget the national funding for ACE was cut from \$16 million to \$3 million, with the Government saying it paid for too many hobby courses. Education Minister Anne Tolley said that due to the economic recession the Government was focusing on foundation skills such as literacy, numeracy and language courses.

There is no administrative data for this indicator currently available at the regional level.

Respondents to the 2007 Waikato Community Outcomes Survey were asked about their level of satisfaction with the 'availability of community or tertiary education in your area', using a 0-10 point scale. The Satisfaction Index (weighted average score) for the Waikato Region overall was 62.4 points. Hamilton was understandably rated the highest for this factor (74.0 points) while Thames-Coromandel was rated the lowest (44.5 points).

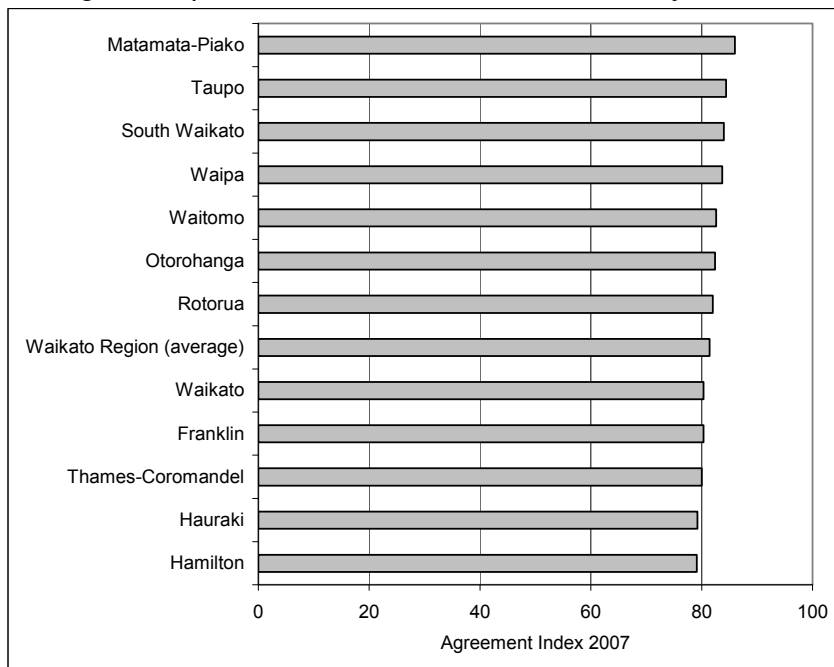
Indicator	State	Trend
2.2.5 Work opportunities matching skills	☹	?

This indicator measures the percentage of residents who “strongly agree” or “agree” that they are using their work skills, training and experience in their current jobs.

Matching the skills and experience of people in the labour force to what is needed by the labour market is crucial to run an efficient economy and make best use of available resources. Education and training are increasingly costly and this investment needs to be recovered by people using their skills and experience in their jobs. Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato.

Respondents to the 2007 Waikato Community Outcomes Survey were asked ‘Using the scale where 0 = strongly disagree and 10 = strongly agree, how strongly do you agree or disagree with your job makes good use of your skills, training and experience?’ A fifth of the respondents (20%) did not answer this question, presumably because they were not working. The majority of the respondents (71%) agreed with the statement ‘Your job makes good use of your skills, training and experience’ (scores of 6 – 10). A quarter of the respondents (25%) strongly agreed (Score of 10) while 16% rated this with a score of 9. The mode (most frequent value) is a score of 10. Only 5% of the sample neither agreed nor disagreed with the statement ‘Your job makes good use of your skills, training and experience’ (Score 5). Only a few respondents (4%) disagreed with the statement ‘Your job makes good use of your skills, training and experience’ (Scores 0 – 4). The Agreement Index (a weighted score across the Agreement scale) was 81.4, a result that implies most respondents feel their jobs are making good use of their skills, training and experience. There was some variation throughout the Region, with those from Matamata-Piako, South Waikato and Taupo most likely to agree that their job makes good use of your skills, training and experience, and people in Hamilton being least likely to agree.

Figure 2.2.5: Respondents’ level of agreement that their job makes good use of their skills, training and experience – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

## 2.3 Housing

### Community outcome(s):

2C Māori enjoy the same quality of health, education, housing, employment and economic outcomes as non-Māori.

2D We have a choice of healthy and affordable housing that we are happy to live in and that is close to places for work, study and recreation.

2E Māori have the ability to live on ancestral land in quality, affordable housing.

### Why is this important?

Quality, affordable housing is an important factor in people's wellbeing. For lower-income households especially, high housing costs relative to income are often associated with severe financial difficulty. Issues relating to housing crisis, such as affordability problems, poor housing quality and household crowding, have flow-on effects in areas such as health, education, community participation, community cohesion and safety.

### What are the indicators?

2.3.1 Rent to income ratio

2.3.2 Housing affordability

2.3.3 Home ownership rate

2.3.4 Household crowding (equivalised crowding index)

2.3.5 Proximity to work, study and recreation

### How are we doing?

- The rent to income ratio in the Waikato Region increased from 19.9% in 1991 to 26.6% in 2001, but remains approximately 1.5 percentage points below the national average. For comparison, the rent to income ratio for the Auckland Region in 2001 was 30.8%. The rent to income ratio throughout the Waikato Region ranged from a low of 17.7% in the Waitomo District to a high of 33.0% in Hamilton City as at March 2001. Comparable figures for 2006 at the sub-national level have not yet been sourced.
- According to 2001 survey data, approximately 23% of households in the Waikato Region paid one-third or more of their income towards housing costs compared to the national average of 25% and Auckland Region average of 32%. According to more recent 2008 survey data, households in the Auckland/upper North Island region spent on average 17% of their income on housing costs.
- Home ownership in the Waikato Region fell by 6.0 percentage points in the Waikato Region between 1991 and 2006, reflecting a wider national trend towards lower rates of home ownership. The trend away from home ownership has occurred to a greater or lesser extent in all territorial authority areas throughout the Waikato Region. In Hamilton City, the home ownership rate fell from 70.7% in 1991 to 60.7% in 2006. Districts that have been least affected are Otorohanga, Franklin and the Waikato District.
- The level of household crowding in the Waikato Region has declined over the past two decades and is marginally below the national average rate of crowding. Average crowding levels vary throughout the region but all districts have experienced some decline in crowding over the past twenty year period. Note that part of the reason for 'household crowding' in New Zealand may be due to cultural preferences for extended households by a proportion of Māori and Pacific Islands families relative to other ethnic groups.
- Results from the 2007 Waikato Community Outcomes Survey showed that the majority of respondents (78%) were satisfied with 'proximity to schools' but this dropped to only 49% for 'proximity to other educational facilities'. Thames-Coromandel respondents were the least satisfied with 'proximity to other educational facilities'. Those who live in towns were more satisfied than those who are living in the country with all the proximity factors except 'proximity to where you work'.

Indicator	State	Trend
2.3.1 Rent to income ratio	☹	↓

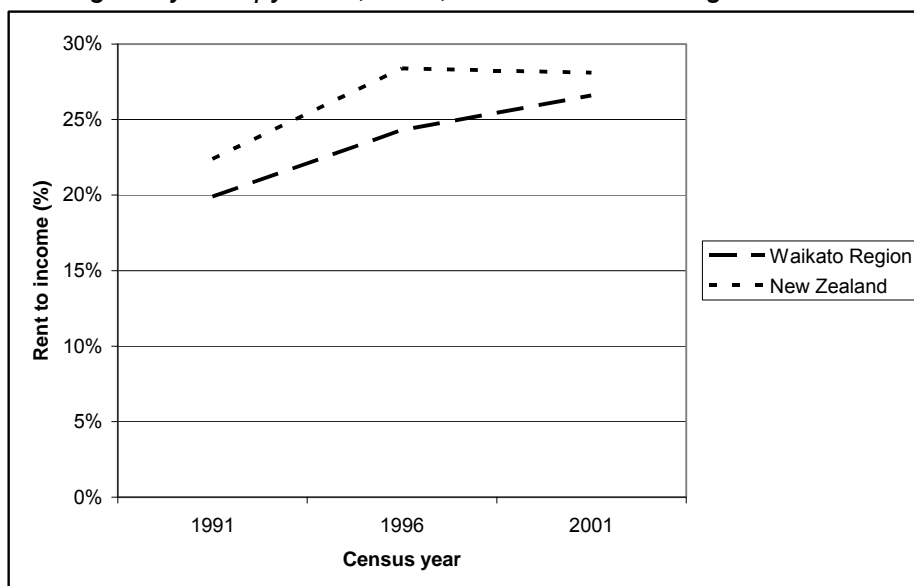
Rent-to-income ratio is calculated as the ratio of the median annual rent paid in each area to the median annual income for households paying rent in that area. Median annual income is derived from responses to the income related questions in the Census of Population and Dwellings.

The amount of rent paid by households for the dwelling they occupy is a significant component of housing affordability. However, high rents do not in themselves compromise affordability. Rents vary greatly according to many factors, including location, dwelling size, sector of landlord and source of income. Rent-to-income ratio is a more sophisticated indicator of how affordable rental properties are across New Zealand. As well as giving an insight into the financial burden of rent payments, this indicator explores the ability of the housing market to provide adequate rental properties for all sections of society, regardless of income. Affordability is defined in Statistics New Zealand’s Housing Statistics as one of the six dimensions of housing adequacy. Housing affordability relates to the ability of households to rent or purchase housing in a locality of choice at a reasonable price, the capacity of households to meet ongoing housing costs, and the degree that discretionary income is available to achieve an acceptable standard of living. Affordable housing should leave enough residual income to cover other basic living costs, as well as allowing households to save for irregular but unavoidable costs such as medical and dental care.

Figure 2.3.1a shows that the rent to income ratio in the Waikato Region increased from 19.9% in 1991 to 26.6% in 2001, but remains approximately 1.5 percentage points below the national average. For comparison, the rent to income ratio for the Auckland Region in 2001 was 30.8%. Table 2.3.1b shows that the rent to income ratio throughout the Waikato Region ranged from a low of 17.7% in the Waitomo District to a high of 33.0% in Hamilton City as at March 2001.

Updated figures are yet to be sourced from Statistics New Zealand. Data on median weekly rent is freely available from the 2006 Census, however the denominator (median annual income for households paying rent) may require a special data extraction.

*Figure 2.3.1a: Rent to Income Ratio (percentage) for households paying rent for the private dwellings they occupy 1991, 1996, 2001 – Waikato Region and New Zealand*



Source: Statistics New Zealand Census

Note: Calculated as ratio of median annual rent to median annual household income for each area (ratio of medians for each area).

*Table 2.3.1b: Rent to Income Ratio (percentage) for households paying rent for the private dwellings they occupy 1991, 1996, 2001 - Waikato Region and territorial authorities*

Area	1991	1996	2001
New Zealand	22.4%	28.4%	28.1%
Waikato Region	19.9%	24.3%	26.6%
Franklin District	18.6%	25.5%	28.4%
Thames-Coromandel District	23.0%	28.0%	30.6%
Hauraki District	19.4%	25.5%	27.8%
Waikato District	18.5%	21.1%	24.0%
Matamata-Piako District	17.2%	20.5%	21.1%
Hamilton City	24.7%	30.2%	33.0%
Waipa District	18.8%	23.9%	26.0%
Otorohanga District	11.0%	14.9%	18.2%
South Waikato District	16.1%	22.0%	22.5%
Waitomo District	13.8%	18.0%	17.7%
Taupo District	21.0%	23.7%	25.0%
Rotorua District	23.4%	26.5%	28.2%

*Source: Statistics New Zealand Census*

*Note: Calculated as ratio of median annual rent to median annual household income for each area (ratio of medians for each area).*

Indicator	State	Trend
2.3.2 Housing affordability	☹	?

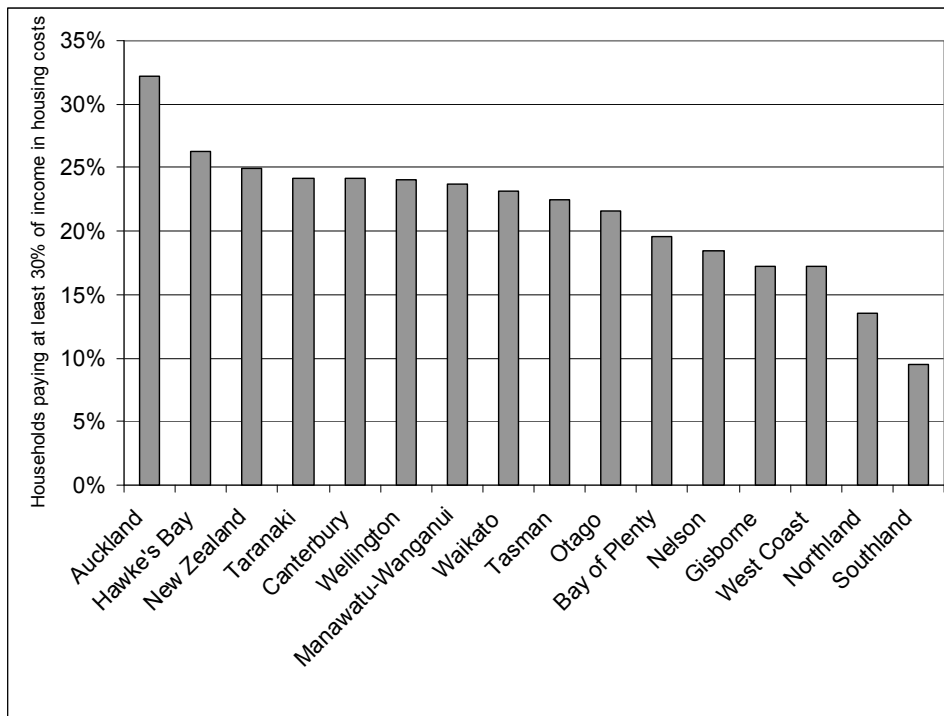
This indicator provides information on households that spend 25% or more, 30% or more, and 40% or more of their net income on housing costs. Housing costs are those mandatory expenses such as mortgage/rent payments and local authority rates (insurance, utility and other costs are excluded).

Housing affordability relates to the ability of households to rent or purchase housing in a locality of choice at a reasonable price, the capacity of households to meet ongoing housing costs, and the degree that discretionary income is available to achieve an acceptable standard of living. Affordable housing should leave enough residual income to cover other basic living costs, as well as allowing households to save for irregular but unavoidable costs such as medical and dental care.

Figure 2.3.2 shows that a substantially smaller proportion of households in the Waikato Region pay 30% or more of their total income towards housing costs compared to the Auckland Region. Approximately 23% of households in the Waikato Region pay one-third or more of their income towards housing costs compared to the national average of 25% and Auckland Region average of 32%. Future monitoring should help identify trends.

Regional information such as that in Figure 2.3.2 is only available by special request, as survey numbers in the Household Economic Survey are generally too low. Freely available results from the 2007 Survey show that households in the Auckland Region spent on average 15% of their total net expenditure on housing costs (not including household utilities). This was the highest of the five ‘regions’ covered by the HES. Subsequent figures from the 2008 survey show that households in the Auckland Region spent on average 17% of their income on housing costs (not including household utilities).

Figure 2.3.2: Households with housing costs that are at least 30% of total net income, as a percentage of all households 2000-2001 – Waikato and other regions



Source: Statistics New Zealand Household Economic Survey

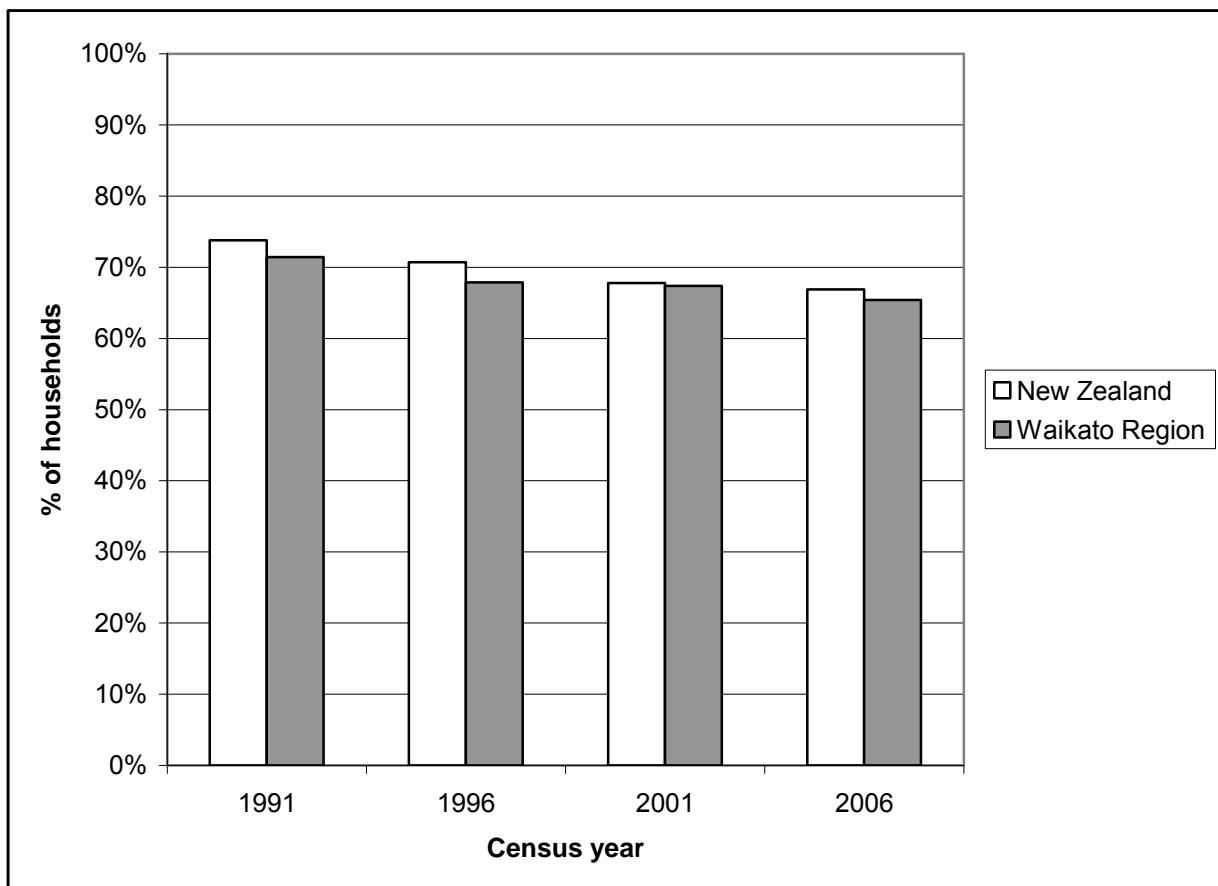
Indicator	State	Trend
2.3.3 Home ownership rate	☹	↓

This indicator reports the number of households living in owner occupied private dwellings, as a percentage of all households living in private occupied dwellings (Statistics NZ Housing Indicator 4).

Household tenure is an important aspect of housing in New Zealand since it has implications for household security (both physical and financial), as well as for the national economy. The highest form of tenure security for a household is ownership of the dwelling it occupies. Numerous benefits accompany dwelling ownership, including a degree of financial security and a reduced risk of disruption from frequent changes of dwelling. Recent US research also indicates that home ownership encourages investment in local amenities and social capital, because ownership gives individuals an incentive to improve their community and creates barriers to mobility.

Figure 2.3.3a shows that home ownership in the Waikato Region fell by 6.0 percentage points in the Waikato Region between 1991 and 2006, reflecting a wider national trend towards lower rates of home ownership. Table 2.3.3b shows that the trend away from home ownership has occurred to a greater or lesser extent in all territorial authority areas throughout the Waikato Region. In Hamilton City, the home ownership rate fell from 70.7% in 1991 to 60.7% in 2006. Districts that have been least affected are Otorohanga, Franklin and the Waikato District.

Figure 2.3.3a: Households in owner occupied private dwellings as a percentage of households in all private occupied dwellings – Waikato Region and New Zealand



Source: Statistics New Zealand Census

Note: Denominator excludes “not elsewhere included”. Numerator includes dwellings held in trust by usual residents.

*Table 2.3.3b: Households in owner occupied private dwellings as a percentage of households in all private occupied dwellings – Waikato Region and territorial authorities*

	1991	1996	2001	2006
New Zealand	73.8%	70.7%	67.8%	66.9%
Waikato Region	71.4%	67.9%	67.4%	65.4%
Franklin District	74.9%	73.6%	74.0%	73.1%
Thames-Coromandel District	76.1%	72.7%	71.4%	69.4%
Hauraki District	73.9%	70.8%	72.9%	69.2%
Waikato District	70.3%	68.3%	70.3%	67.7%
Matamata-Piako District	69.9%	67.5%	71.5%	66.2%
Hamilton City	70.7%	65.3%	61.1%	60.7%
Waipa District	75.2%	72.5%	73.3%	71.9%
Otorohanga District	64.2%	63.8%	69.9%	62.7%
South Waikato District	73.3%	68.6%	68.8%	65.4%
Waitomo District	66.8%	64.9%	64.0%	59.7%
Taupo District	67.9%	66.0%	65.0%	64.0%
Rotorua District	73.6%	68.7%	66.1%	64.5%

*Source: Statistics New Zealand Census*

*Note: Denominator excludes “not elsewhere included”. Numerator includes dwellings held in trust by usual residents.*

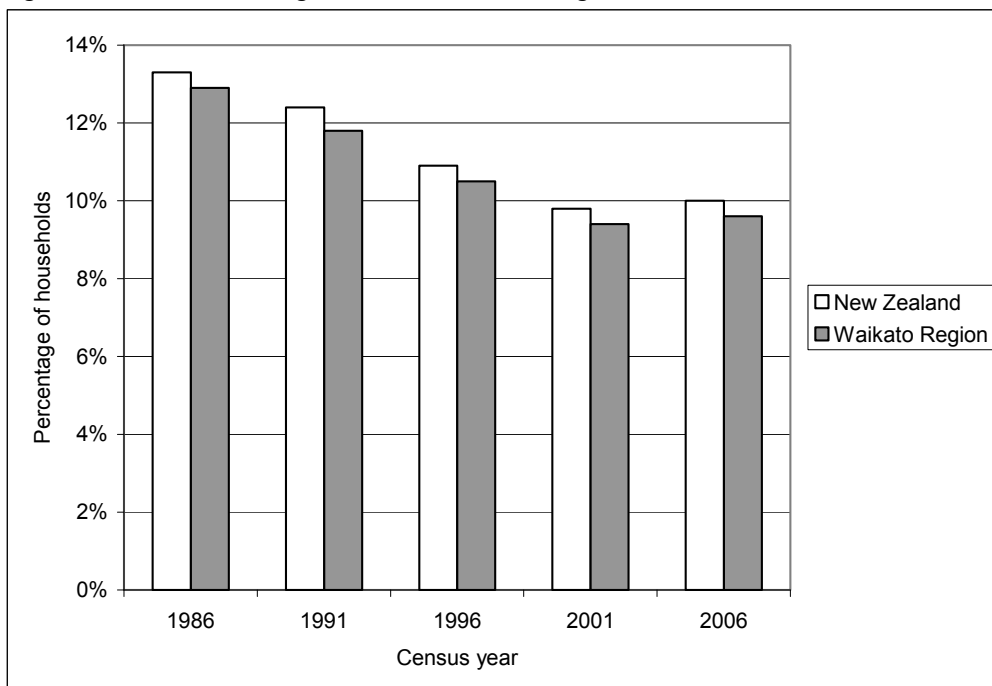
Indicator	State	Trend
2.3.4 Household crowding (equivalised crowding index)	☹	↑

The Canadian Crowding Index is one of a number of indices used to evaluate the extent of crowding in New Zealand. Using this index, a household is deemed to be ‘crowded’ if it has insufficient bedrooms according to the Canadian National Occupancy Standard (refer to [www.stats.govt.nz](http://www.stats.govt.nz) for details of this standard).

Freedom from crowding is one of the six dimensions of housing adequacy, as defined in the Statistics New Zealand, Housing Statistics Strategy. Crowding in dwellings relates to situations where the number of people residing in a household exceeds the ability of the household to provide adequate shelter and services to its members. (However, using this indicator, household crowding relates more to a lack of bedrooms rather than an ability of the household to provide adequate shelter and services to its members). Crowding in dwellings may arise for a number of reasons including cultural preference, social cohesion and accepting high occupant density as a means of containing cost.

Figure 2.3.4a shows that the level of household crowding in the Waikato Region has declined over the past two decades and is marginally below the national average rate of crowding. Table 2.3.4b shows that average crowding levels vary throughout the region but all districts have experienced some decline in crowding over the past twenty year period. Note that part of the reason for “household crowding” in New Zealand may be due to cultural preferences for extended households by a proportion of Māori and Pacific Islands families relative to other ethnic groups (refer Figure 2.3.4c).

Figure 2.3.4a: Crowding Index – Waikato Region and New Zealand



Source: Statistics New Zealand Census/MSD Social Report

Note: The Canadian Crowding Index measures the 'percentage of households with fewer bedrooms than needed'.

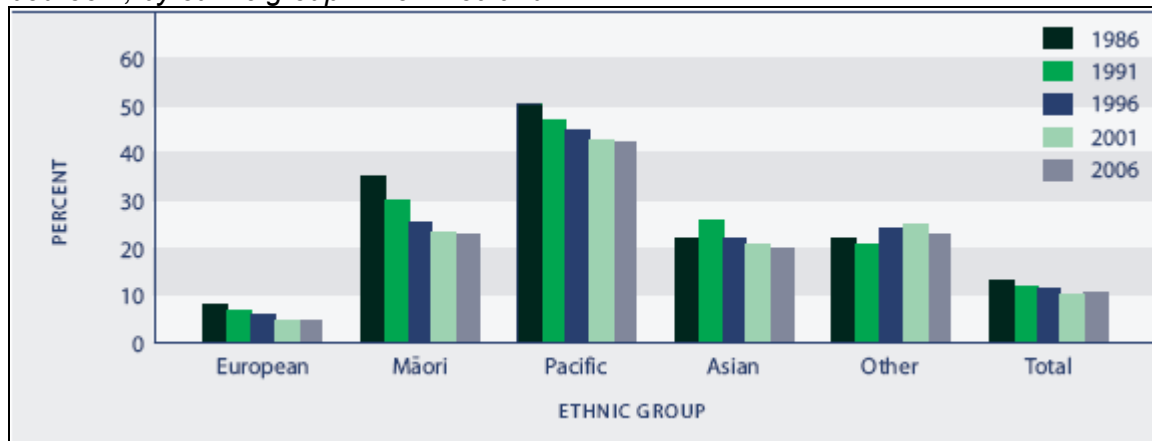
Table 2.3.4b: Crowding Index – Waikato Region and territorial authorities

	1986	1991	1996	2001	2006
New Zealand	13.3%	12.4%	10.9%	9.8%	10.0%
Waikato Region	12.9%	11.8%	10.5%	9.4%	9.6%
Franklin District	13.4%	11.7%	10.5%	8.6%	8.3%
Thames-Coromandel District	9.0%	8.6%	7.5%	6.4%	5.6%
Hauraki District	11.7%	10.8%	9.0%	7.3%	7.9%
Waikato District	15.6%	14.7%	12.1%	11.3%	11.2%
Matamata-Piako District	9.9%	8.7%	6.9%	6.6%	6.6%
Hamilton City	13.1%	12.0%	11.3%	10.6%	11.8%
Waipa District	10.9%	9.7%	8.3%	6.5%	5.6%
Otorohanga District	10.4%	10.8%	8.2%	9.9%	8.1%
South Waikato District	16.2%	14.5%	13.4%	13.0%	11.7%
Waitomo District	13.4%	13.0%	13.4%	11.4%	13.2%
Taupo District	14.6%	12.9%	12.2%	9.6%	9.9%
Rotorua District	17.3%	14.8%	14.1%	12.4%	12.5%

Source: Statistics New Zealand Census/MSD Social Report

Note: The Canadian Crowding Index measures the 'percentage of households with fewer bedrooms than needed'.

Figure 2.3.4c: Proportion of population living in households requiring at least one additional bedroom, by ethnic group – New Zealand



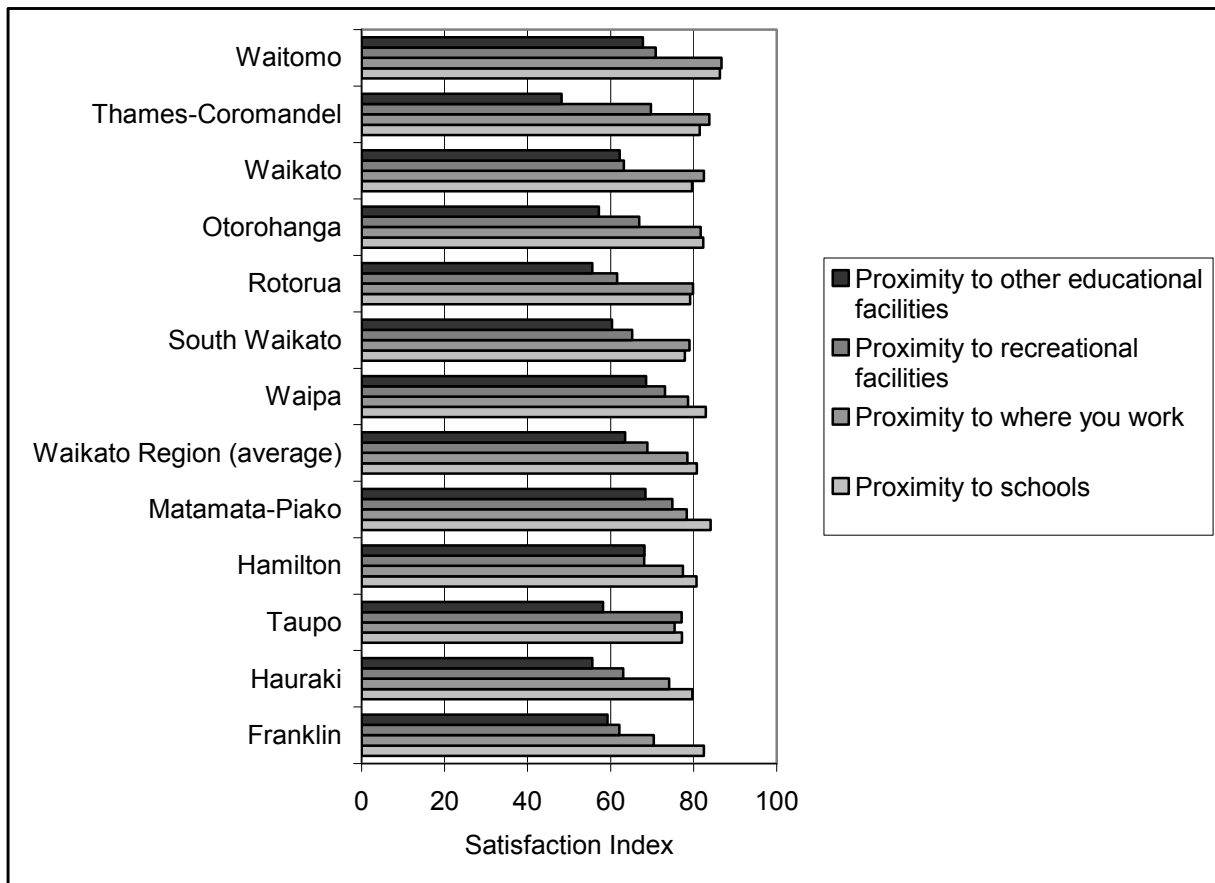
Source: Statistics New Zealand Census/MSD Social Report

Indicator	State	Trend
2.3.5 Proximity to work, study and recreation	☹	?

Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato.

Respondents to the 2007 Waikato Community Outcomes Survey were asked ‘The proximity to work, recreational facilities and other community resources varies from place to place. Using the scale where 0 is very dissatisfied to 10 being very satisfied, how satisfied are you with how close you live to each of the following?’ The majority of respondents (78%) were satisfied with the ‘proximity to schools’ but this dropped to only 49% for ‘proximity to other educational facilities’. This reflects in the CSI (Customer Satisfaction Index) scores which range from 80.8 points for ‘proximity to schools’ down to 63.5 points for ‘proximity to other educational facilities’. The lower CSI scores for the ‘proximity to other educational facilities’ and the ‘proximity to recreational and leisure facilities’ show respondents are less satisfied with the proximity of these resources. The CSI scores vary by location but the variance is greatest for the ‘proximity to other educational facilities’. Thames-Coromandel respondents are the least satisfied with this factor (CSI score 48.3). Those who live in town are more satisfied than those who are living in the country with all the proximity factors except for the ‘Proximity to where you work’.

Figure 2.3.5: Respondents’ level of satisfaction with proximity to work, study and recreation – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

## 2.4 Community safety

### Community outcome(s):

2F Our communities and government work together so that we are safe, feel safe and crime is reduced.

### Why is this important?

Feeling and being safe in one's home and community is vital to overall sense of wellbeing. It is a key determinant of perceptions of health and quality of life. Violence and injury reduce people's enjoyment of life and ability to participate in society. Property crimes, such as burglary affect people financially and through loss of confidence in other people. In addition community safety is a crucial determinant, and indicator, of community spirit and regional image.

### What are the indicators?

2.4.1 Criminal victimisation rates

2.4.2 Perceptions of safety

2.4.3 Road traffic crashes and casualties

### How are we doing?

- At the present time there is no criminal victimisation data available at the Waikato regional level. At the national level, approximately 39% of New Zealand adults aged 15 and over experienced some form of victimisation in 2005. Comparisons with data from earlier surveys are difficult owing to changes in the survey design. A conservative conclusion is that the risk of victimisation did not change much between 1995 and 2005 for personal offences (eg, theft of personal property) but increased slightly for household offences (eg, burglaries and vehicle theft). A rough proxy for victimisation rates, the number of recorded offences in the Waikato Police District, fell relative to the national trend over the period 1996 to 2001 and has since remained fairly stable, although latest figures suggest a possible upward underlying trend. Of concern, the number of reported violence offences per annum in the Waikato area increased by 79% over the period 1996 to 2009.
- In 2005 approximately 40% of New Zealanders said that fear of crime had a moderate or high impact on their quality of life. Respondents to the 2007 Waikato Community Outcomes Survey were asked: 'Thinking now about issues of crime and safety, please tell me how safe or unsafe you would feel in the following situations'. The majority of respondents felt safe in their community during the daytime but relatively less safe at night, particularly women. The results vary by location but it seems that Thames-Coromandel and Otorohanga are perceived as the safest places by residents. Generally speaking, those who live in the country feel safer in their community compared to those who live in town.
- According to the 2009 Social Report, 365 New Zealanders died as a result of motor vehicle crashes during 2008, a rate of 8.6 deaths per 100,000 population. The Waikato regional death rate per annum from motor vehicle crashes was 18.6 per 100,000 population during 2008. Deaths and injuries from motor vehicle crashes have declined substantially since 1986. However, over the shorter-term, the number of motor vehicle injuries on Waikato Region roads has risen slightly since 2001, reflecting a national trend. Sustained increases in injury crashes have been recorded in particular in Thames-Coromandel, Otorohanga and other rural areas. In contrast, the number of motor vehicle deaths has been generally declining. Casualty rates remain relatively higher in rural areas (particularly those with state highway corridors) compared to urban areas such as Hamilton City.

	Indicator	State	Trend
2.4.1	Criminal victimisation rates	☹	⇒

The criminal victimisation rate provides a broad measure of personal safety and wellbeing. Surveys of criminal victimisation generally provide a more comprehensive picture of victimisation than Police data, as not all offending is reported or recorded. This indicator uses data collected in the 2001 New Zealand National Survey of Criminal Victims (NZNSCV) and the more recent New Zealand Crime and Safety Survey Report 2006.

Criminal activity has important social and community implications. Individual personal safety and well-being are influenced by criminal activity. It is important to see where these criminal victimisation rates are the highest so that social support services for victims can be most appropriately targeted, as well as supporting the development of policy and process that seek to reduce victimisation rates in areas not otherwise reported. Note that because this indicator is only available at the national level, results for the proxy indicator “Recorded offences and resolution rates” are also included below for the Waikato Police District (not aligned with the Environment Waikato Region). It is important to emphasise that the recorded offences indicator presents quite different information to victimisation rates, so the two should not be directly compared.

At the present time there is no victimisation data available at the Waikato regional level, but data is available at the national level. Survey data from 2005 shows 39% of New Zealand adults aged 15 years and over experienced some form of criminal victimisation during that year.

An important feature of crime surveys that are repeated over time is that they should provide an alternative measure of trends in crime. However, in the case of the three New Zealand crime survey rounds (1995, 2000 and 2005), design changes have compromised comparisons. Details are discussed in the New Zealand Crime and Safety Survey Report 2006, available on the Ministry of Justice website. To accommodate design changes, a separate analysis was done to compare the number of crimes per 100 households or adults in 2005 (as reported in the 2006 survey document) with those in 2000 (as reported in the 2001 survey document). Table 2.4.1a below shows a comparison of incidence rates for 2000 and 2005 when analysis procedures were matched. The rate for sexual victimisation is not shown because of marked changes to the screener questions. It was also considered injudicious to compare rates of vandalism to personal and household property because of survey changes.

On the face of it, the picture from Table 2.4.1a is that risks in 2005 were rather higher than in 2000 for all categories of offences except bicycle theft, and robbery and theft from the person. However, various factors undermine any conclusion that a real increase has occurred. In particular, the 2005 survey design enabled a shorter respondent recall period which would have boosted the number of incidents recalled compared to the 2000 survey. The most judicious conclusion is that risks of victimisation have not changed much between 2000 and 2005 for personal offences. If account is taken of survey design changes, the difference in the rate of personal offences would be likely to shrink from the apparent difference of 12 offences per 100 people between 2000 and 2005 to less than two offences per 100 people. This is well within the bounds of random sampling variation, and so the difference would not be statistically significant. For household offences, the picture is different. The analysis in Table 2.3 showed risks in 2000 of 34 per 100 households, compared to 44 per 100 households in 2005 – a difference of 10 offences per 100 households. If this figure were adjusted for the change in interviewing period, the difference would probably still be at least five offences per 100 households, which is a statistically significant increase.

A comparison of figures for 2005 with those for 1995 can also only be tentative because of even more substantial design changes between the first and third surveys than between the second and third. Further work would be needed to account properly for these changes, as it is

currently unclear whether the risk of personal offences was lower in 2005 than in 1995. For household offences, the increase in risks in 2005 compared to 2000 also stands for 1995. Vandalism needs to be omitted because of marked differences in how this was measured in the 1995 survey. With this done, and taking changes in the fieldwork period into account, there is evidence of some increase in household offences between 2005 and both the earlier periods (1995 and 2000).

The findings overall show a sizeable ‘dark figure’ of crime in New Zealand in 2005 – that is, crimes that remain outside the Police count. In general, though, the offences that do so are less serious.

Interviews for the most recent New Zealand Crime and Safety Survey began in August 2009. Findings are expected to be published in June 2010.

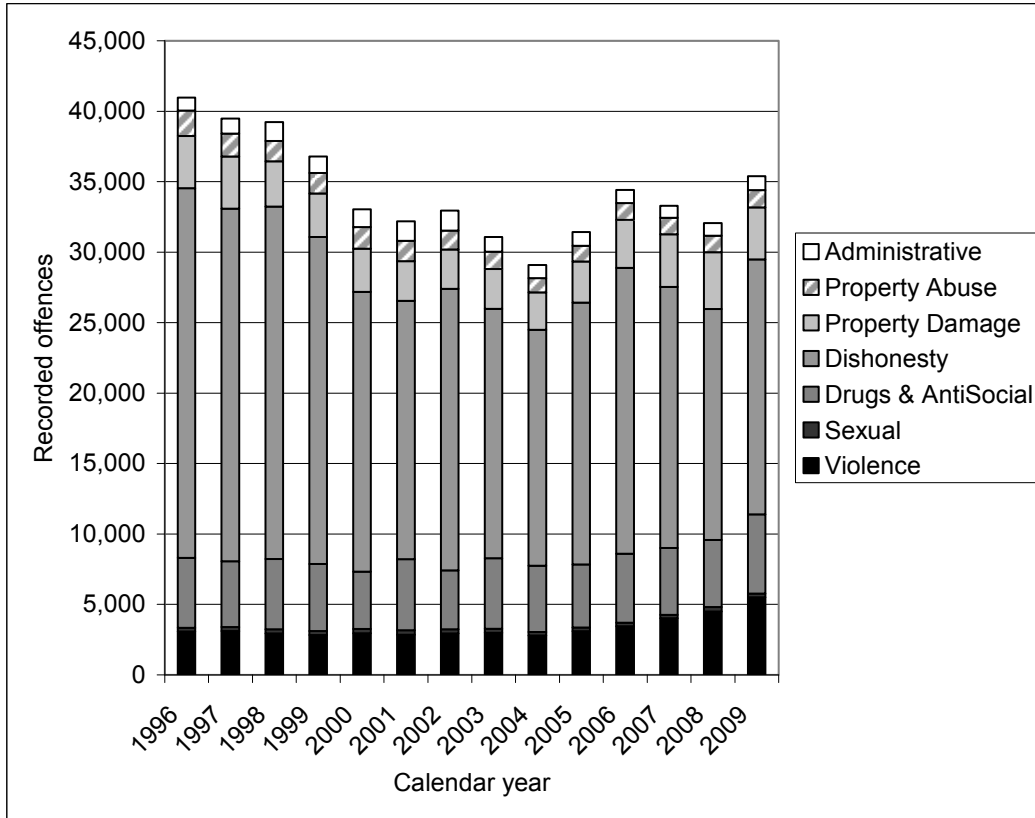
Because the Crime Survey indicator is only available at a national level, results for the proxy indicator ‘recorded offences’ are also included below for the Waikato Police District (not aligned with Environment Waikato Region). It is important to emphasise that this indicator presents quite different information to victimisation rates, so the two cannot be compared. Figures 2.4.1b and 2.4.1c show that the number of recorded offences in the Waikato Police District fell relative to the national trend over the period 1996 to 2001 and has since remained fairly stable, although latest figures suggest a possible upward underlying trend. The largest proportionate decreases in recorded offences over the period 1996 to 2009 in the Waikato Police District were in relation to dishonesty (down 31%) and property abuse (down 32%), which reflects a national trend over this period. However, of concern, the number of reported violence offences per annum in the Waikato area increased by 79% over the period 1996 to 2009.

*Table 2.4.1a: Survey estimates of victimisation rates: 2000 and 2005 (partially adjusted) - New Zealand*

	Incidence rate per 100 households	
	2000	2005
Burglary	7	9
Other household thefts	12	14
Theft of vehicles	2	3
Thefts from vehicles/vehicle interference	10	13
Vehicle vandalism	3	5
Household offences above	34	44
	Incidence rate per 100 adults	
	2000	2005
Assaults	12	17
Threats	12	18
Robbery/thefts from the person	1	1
Theft of personal property	4	5
Bicycle theft	1	1
Personal offences above	30	42

Source: Ministry of Justice: New Zealand National Survey of Crime Victims 2001; New Zealand Crime and Safety Survey 2006

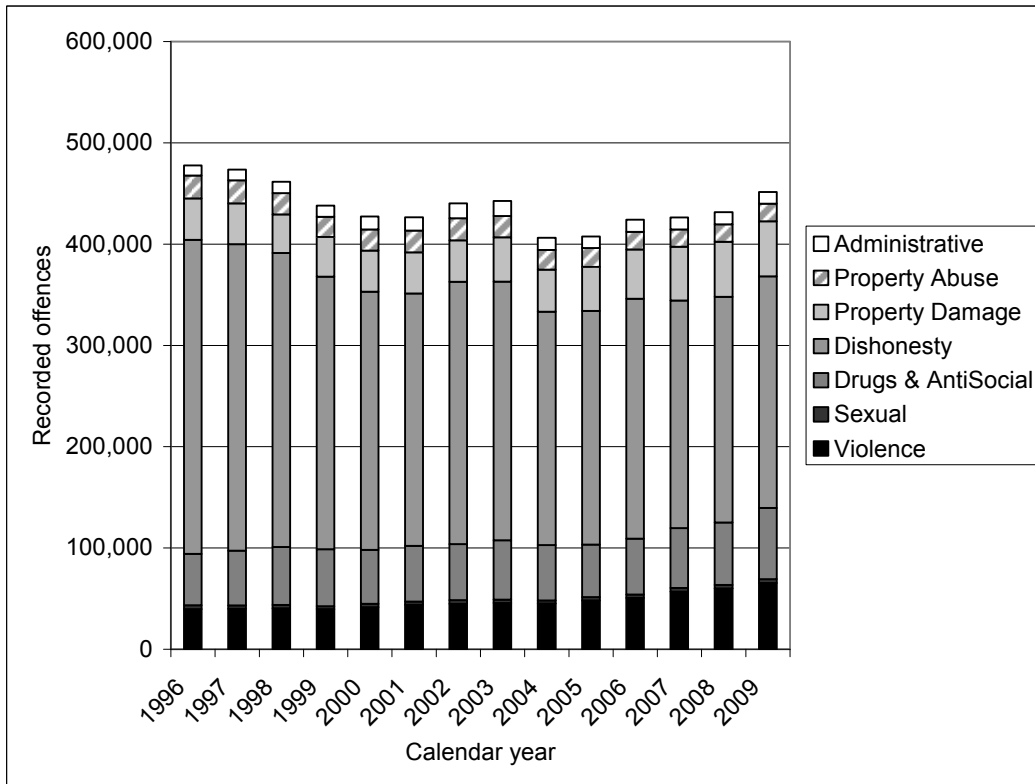
Figure 2.4.1b: Recorded offences for Waikato Police District



Source: Statistics New Zealand/Police administrative data

Note: Waikato Police District differs from Environment Waikato region, in particular due to exclusion of South Waikato and Rotorua districts (these are within the BOP Police District).

Figure 2.4.1c: Recorded offences for New Zealand



Source: Statistics New Zealand/Police administrative data

	Indicator	State	Trend
2.4.2	Perceptions of safety	☹	?

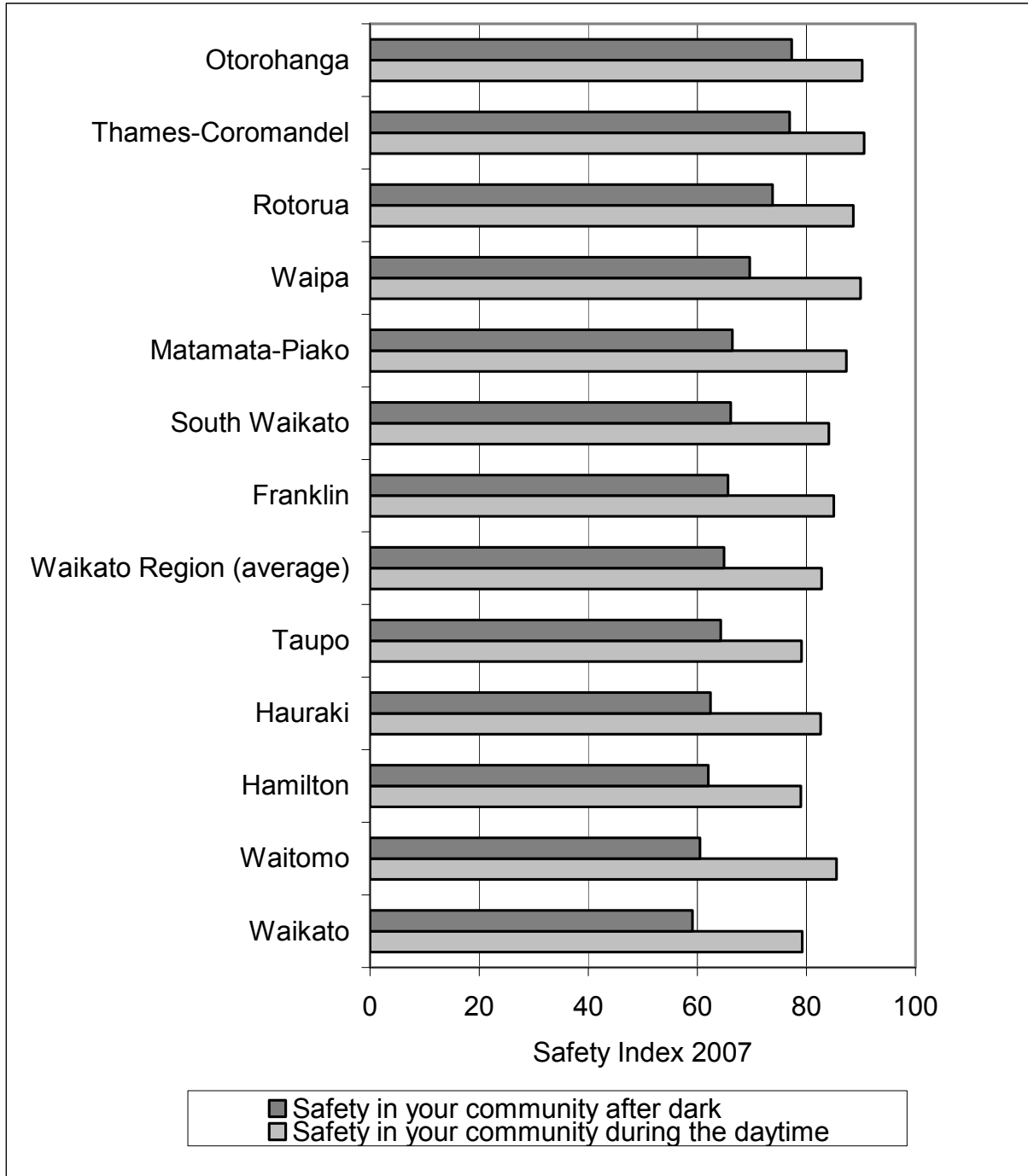
According to the 2007 Social Report, in 2005 approximately 40% of New Zealanders said that fear of crime had a moderate or high impact on their quality of life, scoring its effect at 4 or higher on a 0–10 scale. One third (33%) scored its effect at 4–7, while 7% scored it at 8–10. People who had been a victim of any crime were more likely than average to report that fear of crime affected their quality of life.

This indicator measures the percentage of residents who felt ‘very safe’ or ‘safe’ at home, in their neighbourhood, and in the city centre after dark. Also expressed as “sense of freedom from crime”. Perceptions of safety impact on the health and well-being of the individual, family and the wider community. If people feel unsafe, they are less likely to talk to their neighbours, use public transport, go out in the evening, use public amenities and generally participate in their communities.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato.

Respondents to the 2007 Waikato Community Outcomes Survey were asked: ‘Thinking now about issues of crime and safety, and using a scale where 0 = very unsafe and 10 = very safe; please tell me how safe or unsafe you would feel in the following situations’. The majority of respondents (92%) felt safe (scores 6 – 10) with the factor ‘Safety in your community during the daytime’ and only 3% felt unsafe (Scores 0 – 4). Conversely, two thirds of the sample (66%), felt safe (Scores 6 – 10) with the factor ‘Safety in your community after dark’ and 16% felt unsafe (Scores 0 – 4). This reflects in the Safeness Index which is 82.8 points for the ‘Safety in your community during the daytime’ versus 64.9 points for the ‘Safety in your community after dark’ (refer Figure 2.4.2). The lower Index for the latter implies that the safety after dark is more of an issue for respondents. The Safeness Index for varies by location but it seems that Thames-Coromandel and Otorohanga are rated the highest for both factors. The Waikato District is rated the lowest for ‘safety in your community after dark’ (Index 59.1). Hamilton, Taupo and the Waikato District are rated the lowest for the ‘safety in your community during the daytime’ (Index 79.0, 79.1 and 79.2 respectively). Men feel significantly safer than women with the factor ‘Safety in your community after dark’ although both groups feel much safer during the day. Those who live in the country feel significantly safer in their community during the day or at night versus those who live in town.

Figure 2.4.2: Respondents' feeling of safety during the daytime and after dark – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

Indicator	State	Trend
2.4.3 Road traffic crashes and casualties	☹	⇒

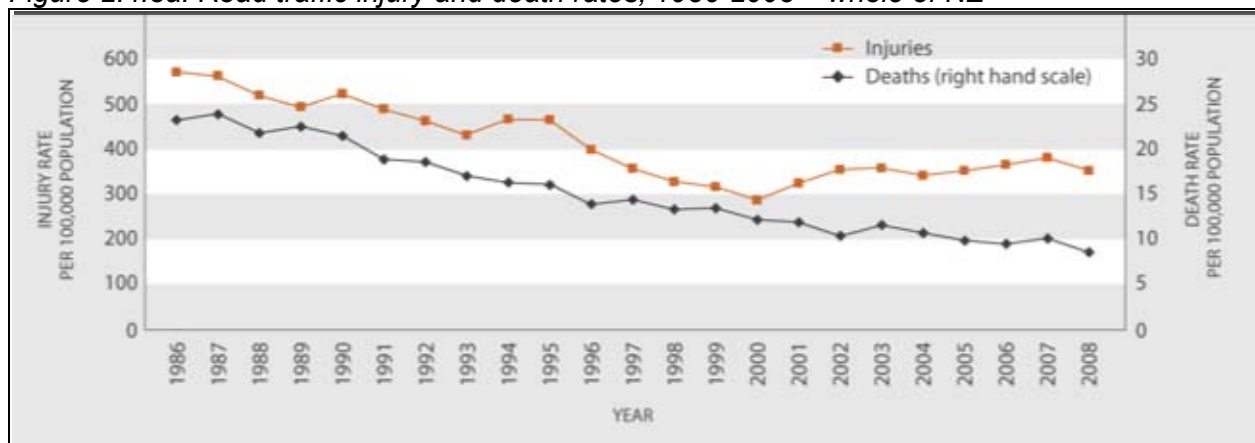
This indicator measures the number of injuries annually resulting from road traffic incidents.

New Zealand is a country reliant on motor vehicles for transport and commerce. In 1951 there was an average of 224 vehicles per 1000 people. By 2000 that figure had risen to 678 vehicles per 1000 people (Statistics New Zealand), together with a significant increase in the overall population. The increasing number of cars on New Zealand roads brings a greater risk of injury from road traffic incidents. City areas are increasingly being designed around motor vehicle transport, increasing the risk of injury to pedestrians and cyclists. Measuring the number of road traffic injuries helps to assess this risk. Injuries resulting from road traffic crashes can have large costs to individuals and communities. Some the costs that arise from road traffic injuries include: Loss of quality of life; Loss of economic output due to temporary incapacitation; Medical costs; Legal costs; Property damage costs.

According to the 2009 Social Report (refer Figure 2.4.3a), 365 New Zealanders died as a result of motor vehicle crashes during 2008, a rate of 8.6 deaths per 100,000 population. A further 15,022 people were injured, a rate of 352 injuries per 100,000 population. Deaths and injuries from motor vehicle crashes have declined substantially since 1986, when the rates were 23.1 and 570 per 100,000 respectively. The number of people killed in motor vehicle crashes was 52% lower in 2008 than it was in 1986. Although the number of people injured has risen since 2000 (partly because of better recording by police), there were 20% fewer people injured in 2008 than in 1986. There is no conclusive evidence on the reasons for the reduction in road casualties since 1986. Better roads and better vehicles, as well as legislation, enforcement and education aimed at reducing road casualties, may all have contributed to an improvement in drivers' attitudes and behaviour. The Waikato regional death rate per annum from motor vehicle crashes was 18.6 per 100,000 population during 2008.

Tables 2.4.3b and 2.4.3c show that the number of motor vehicle injuries on Waikato Region roads has risen since 2001, reflecting the national trend. Increases in injury crashes have been recorded in particular in Thames-Coromandel, Otorohanga and other rural areas. In contrast, the number of motor vehicle deaths has been generally declining. Casualty rates remain relatively higher in rural areas (particularly those with state highway corridors) compared to urban areas such as Hamilton City.

Figure 2.4.3a: Road traffic injury and death rates, 1986-2008 – whole of NZ



Source: MSD Social Report/ Land Transport New Zealand Crash Analyst System Database

*Table 2.4.3b: People injured in motor vehicle crashes per 100,000 of the total population – Waikato Region and territorial authorities*

	2001	2002	2003	2004	2005	2006	2007	2008
Franklin District	335.8	397.8	497.3	460.2	442.5	500.9	356.9	462.0
Thames-Coromandel District	275.7	250.0	334.6	320.8	434.5	455.2	447.8	421.6
Hauraki District	469.9	653.1	582.4	810.7	746.3	528.5	583.6	485.9
Waikato District	585.5	585.1	703.1	662.7	603.3	619.2	621.7	525.6
Matamata-Piako District	362.1	390.7	356.4	369.6	432.3	429.0	368.6	621.0
Hamilton City	273.0	294.3	294.4	270.5	242.8	258.0	348.5	332.1
Waipa District	356.3	394.7	363.2	443.4	410.9	416.9	339.4	366.9
Otorohanga District	453.2	448.4	703.2	611.2	538.0	815.7	594.6	629.1
South Waikato District	482.6	558.8	622.9	463.5	497.8	381.2	519.7	412.3
Waitomo District	845.1	743.8	989.7	869.6	1040.6	901.5	1072.9	583.3
Taupo District	545.5	426.8	519.5	503.0	504.4	627.6	558.2	526.9
Rotorua District	302.1	327.4	400.9	377.6	359.5	355.6	373.5	365.6
Waikato Region	402.4	414.9	446.3	442.8	431.9	436.0	457.6	445.3

Source: MSD Social Report/ Land Transport New Zealand Crash Analyst System Database

*Table 2.4.3c: People killed in motor vehicle crashes per 100,000 of the total population – Waikato Region and territorial authorities*

	2001	2002	2003	2004	2005	2006	2007	2008
Franklin District	26.0	29.5	18.0	40.7	22.6	17.1	22.5	14.2
Thames-Coromandel District	18.4	7.7	15.2	7.5	18.7	29.9	7.5	11.2
Hauraki District	34.4	11.7	41.2	41.4	53.7	30.0	62.3	39.5
Waikato District	38.6	40.8	52.3	30.7	42.3	32.7	41.3	21.4
Matamata-Piako District	27.6	29.8	9.9	26.4	39.6	6.6	48.1	51.0
Hamilton City	0.0	2.5	6.4	2.3	9.1	5.2	4.4	0.7
Waipa District	27.0	4.8	14.2	14.5	19.0	18.7	6.8	15.7
Otorohanga District	40.3	20.9	10.5	10.5	31.6	21.2	32.4	0.0
South Waikato District	52.2	42.0	25.4	51.5	39.3	31.4	34.9	52.6
Waitomo District	43.3	20.7	10.3	51.8	62.4	73.4	20.8	20.8
Taupo District	54.5	27.4	63.1	44.6	32.4	11.7	62.7	44.9
Rotorua District	13.4	13.4	14.8	11.8	5.9	17.8	14.7	8.8
Waikato Region	25.3	17.4	21.4	22.3	25.5	17.3	23.8	18.6

Source: MSD Social Report/ Land Transport New Zealand Crash Analyst System Database

## **2.5 Community participation**

### **Community outcome(s):**

2G We can work and participate in the communities where we live, and there are quality work opportunities for people of all ages and skill levels.

### **Why is this important?**

Waikato regional communities value the sense of community spirit and local pride in their cities, town and rural areas. People value the opportunity to live and work in the area of their choosing.

### **What are the indicators?**

#### 2.5.1 Unpaid work

### **How are we doing?**

- The most frequent form of unpaid activity in New Zealand is household work, cooking, repairs, gardening, etc, for own household, followed by looking after a child who is a member of own household. As at the 2006 Census, rates of unpaid activity in the Waikato Region were similar to the national average. There was no significant change in the pattern of unpaid activities in the Waikato Region over the period 2001 to 2006.

Indicator	State	Trend
2.5.1 Unpaid work	☹	⇒

This indicator presents information on the number of people who performed unpaid work (specified by type of activity) in the four weeks prior to the Census, where the work was either for people living in the same household as the respondent, or for people outside the respondent's household for which the performance of those activities is not paid.

Conventional economic statistics, such as the national accounts and employment measures, are largely designed to measure the market economy and exclude (in developed economies at least) most of the non-market productive activities occurring within the household. Yet it is clear that the goods and services resulting from these activities are a source of utility to the members of the household and contribute to their well-being.

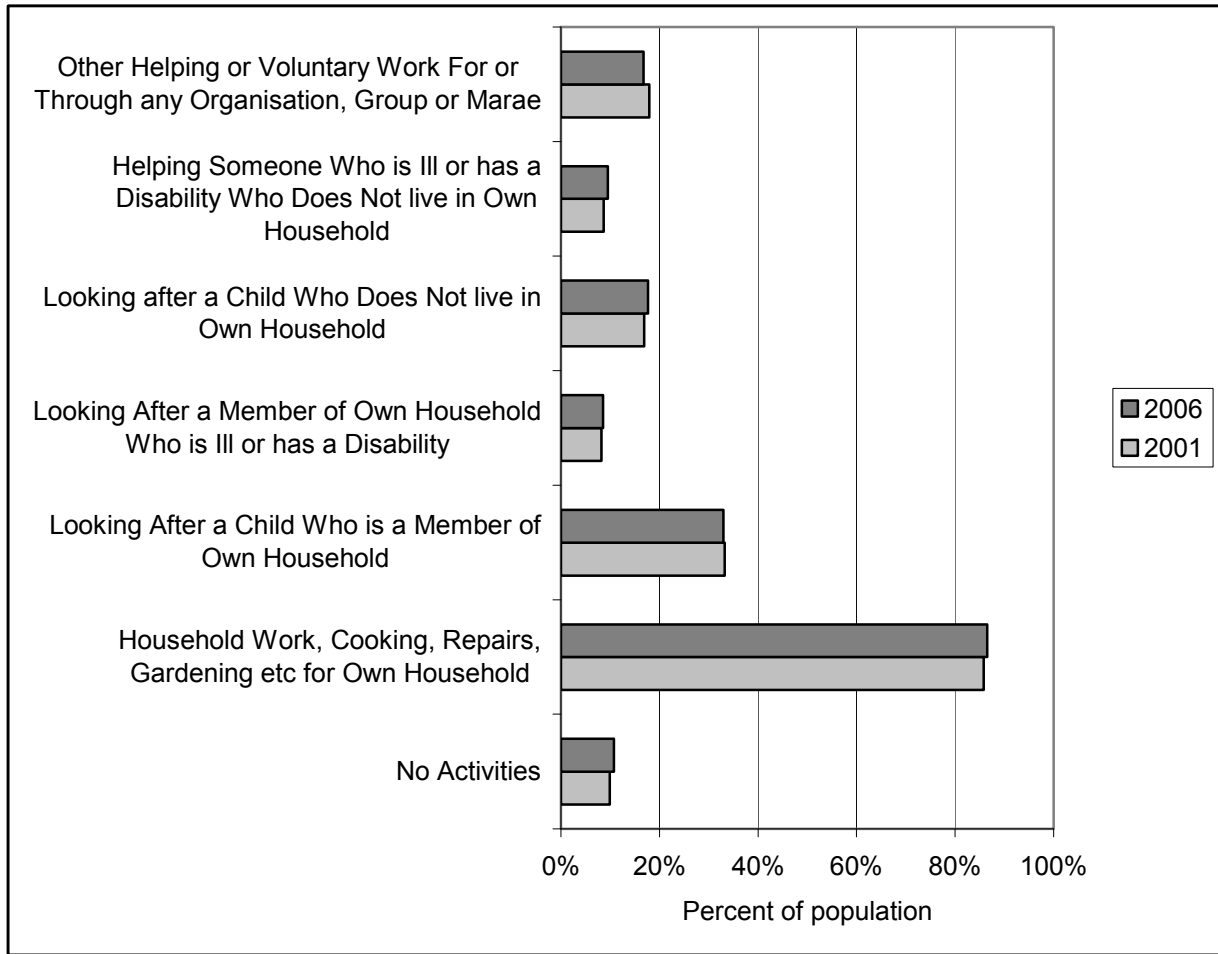
Table 2.5.1a shows that the most frequent form of unpaid activity in New Zealand is household work, cooking, repairs, gardening, etc, for own household, followed by looking after a child who is a member of own household. As at the 2006 Census, rates of unpaid activity in the Waikato Region were similar to the national average (as they were also in the 2001 Census). Figure 2.5.1b shows that there was no significant change in the pattern of unpaid activities in the Waikato Region over the period 2001 to 2006.

*Table 2.5.1a: Unpaid Activities for the Census Usually Resident Population Count Aged 15 Years and Over, 2006 (% of total people)*

Unpaid Activity	No Activities	Household Work, Cooking, Repairs, Gardening etc for Own Household	Looking After a Child Who is a Member of Own Household	Looking After a Member of Own Household Who is Ill or has a Disability	Looking after a Child Who Does Not live in Own Household	Helping Someone Who is Ill or has a Disability Who Does Not live in Own Household	Other Helping or Voluntary Work For or Through any Organisation, Group or Marae
New Zealand	11.3%	86.1%	31.6%	7.8%	16.2%	9.1%	15.4%
Waikato Region	10.8%	86.5%	33.0%	8.5%	17.7%	9.5%	16.8%
Franklin District	9.8%	87.9%	36.3%	7.8%	17.1%	8.5%	14.9%
Thames-Coromandel District	10.5%	86.7%	26.0%	8.4%	16.3%	11.4%	19.7%
Hauraki District	12.0%	84.9%	30.4%	10.0%	16.3%	10.4%	18.2%
Waikato District	9.9%	87.5%	37.2%	9.5%	18.7%	9.9%	17.8%
Matamata-Piako District	11.5%	85.4%	32.8%	8.0%	16.9%	8.6%	17.1%
Hamilton City	10.6%	86.8%	31.9%	8.3%	17.8%	9.5%	14.8%
Waipa District	10.9%	86.7%	33.8%	8.0%	17.1%	9.0%	16.2%
Otorohanga District	13.7%	82.9%	34.1%	8.2%	17.1%	9.4%	18.0%
South Waikato District	11.4%	85.6%	35.7%	10.0%	19.7%	10.1%	17.7%
Waitomo District	11.9%	84.9%	34.9%	9.2%	19.7%	10.2%	22.5%
Taupo District	10.6%	86.6%	32.1%	8.1%	17.1%	9.2%	18.5%
Rotorua District	10.4%	86.6%	36.3%	9.3%	19.5%	10.3%	17.9%

Source: Statistics New Zealand Census

Figure 2.5.1b: Unpaid Activities, Waikato Region 2001 - 2006



Source: Statistics New Zealand Census

Note: Denominator is Total People (Includes People Stating One or More Unpaid Activity(s) and No Activities. Excludes People Not Stating a Response)

## **2.6 Sport and leisure**

### **Community outcome(s):**

2H We can participate in recreation and leisure activities that meet our diverse needs and we have opportunities to enjoy the Waikato region's natural places and open spaces in responsible ways.

### **Why is this important?**

Sport and leisure are important for personal and community health. Sport and leisure are also an important part of the cultural well-being of the Waikato Region, providing structured and informal opportunities to meet people, learn new skills and have fun.

### **What are the indicators?**

#### 2.6.1 Participation in sport and active leisure

### **How are we doing?**

- Waikato young people's overall levels of physical activity showed little change between 1997 and 2001. Boys tend to be more active, although not significantly so. The overall proportion of Waikato adults who were active also remained fairly constant between 1997 and 2001. More recent baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. An average 88% of respondents throughout the Region reported having undertaken brisk walking, running, gardening or other physical activities at least once per week.

	Indicator	State	Trend
2.6.1	Participation in sport and active leisure	☹	⇒

This indicator measures the proportion of young people aged 5–17 years and adults aged 18 years and over engaging in at least 2.5 hours of sport and/or leisure-time physical activity in the preceding seven days, based primarily on results of Sport and Recreation New Zealand’s Sport and Physical Activity Surveys. Being "physically active" means being either "relatively active" or "highly active". "Relatively active" means the respondent took part in at least 2.5 hours but less than five hours of sport or leisure-time physical activity in the seven days before the interview. "Highly active" means the respondent took part in five hours or more of sport or leisure-time physical activity in the seven days before the interview.

Participation in sport and active leisure is a source of enjoyment and entertainment. It can contribute to personal growth and development and is a good way to meet new people. It also has positive benefits for physical fitness and mental well-being.

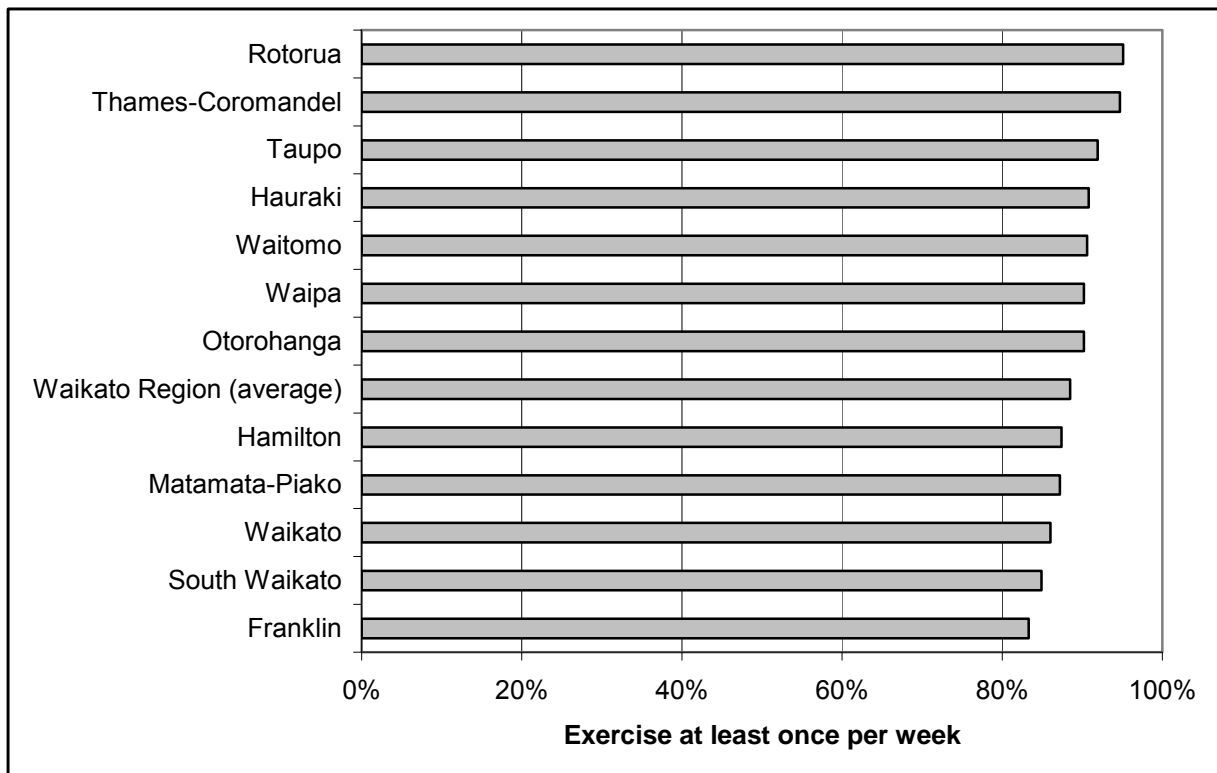
According to the MSD Social Report, based on results from the New Zealand Health Survey 2006/07, 51% of New Zealanders aged 15 years and over met physical activity guidelines, reporting they had been physically active for at least 30 minutes a day on five or more days over the last week. In the previous survey in 2002/03, the proportion was slightly higher at 53%, however the change between 2002/03 and 2006/2007 was not statistically significant. Key results from previous surveys of Waikato regional communities (1997 and 2001) include the following:

- Generally, Waikato young people’s overall levels of activity showed little change in the proportions being active between 1997 and 2001.
- Boys tended to be more active (increasing from 68% to 78%) while girls were less active (decreasing from 80% in 1997 to 63% in 1999 and 72% in 2001), although not significantly so.
- The major change for boys was a shift from relatively inactive to relatively active – the proportions that were sedentary or highly active had been more constant (although peaking in the latter in 1999 at 54% before declining to 42% again in 2001). Girls, though, were less likely to be sedentary or relatively active now than in 1997, with higher proportions being relatively inactive.
- Among the age groups, Waikato teenagers tended to be less active in 2001 than in 1997 (in particular declining from 54% highly active in 1997 to 41% in 2001), and while the proportions who were sedentary decreased, the numbers that were relatively inactive increased substantially from 7% in 1997 to 23% in 2001 (peaking at 29% in 1999).
- This trend was different among younger children under the age of 13 years – more were active in 2001 than in 1997, particularly among the highly active, which increased from 38% (1997) to 48% (2001). Again, these differences were not statistically significant.
- Generally, the overall proportions of Waikato adults who had been active or inactive remained fairly constant between 1997 and 2001. However, there was a significant shift in the balance of those who were inactive, with fewer people being relatively inactive (26% in 1997 and 20% in 2001), and a corresponding increase in the proportion that were sedentary.
- Much of this shift was within the 25-34 year old age group, which showed significant increases in the proportions who were sedentary (9% in 1997 to 24% in 2001) at the expense (mostly) of a decrease in those that relatively inactive (from 34% to 14% in 2001). Within this age group, however, there was also a small decrease in the number that were inactive, from 43% in 1997 to 25% in 1999 and 38% in 2001. Variations in other age groups were not as marked.

Source: Sport and Recreation New Zealand (2003) "Trends in Participation in Sport and Active Leisure 1997 - 2001".

More recent baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents to the 2007 Waikato Community Outcomes Survey were asked: ‘Now a question about exercise and other physical activities. By that I mean activity that increases your heart rate or breathing for 30 minutes or more. This might include brisk walking, running and gardening. How often do you do this kind of activity for 30 minutes or more’. The largest group, (42%) said they exercised for 30 minutes or more every day while 38% said they did this 2 to 4 times per week and 9% said they did this weekly. Only 3% of the sample said they exercised for 30 minutes or more 2 – 3 times per month and 2% did this monthly while 2% did this less often. Only 4% of the respondents said they never exercised for 30 minutes or more and the remaining 1% did not know how often they did this level of exercise. The proportion that exercised at least weekly ranged from 95% in Rotorua down to 83% in Franklin (refer Figure 2.6.1).

Figure 2.6.1: Reported participation in sport and active leisure – Waikato territorial authority areas 2007 (percent exercising at least once per week)



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

## 2.7 Family and community cohesion

### Community outcome(s):

2I Families are strong and our communities are supportive of them.

### Why is this important?

Positive relationships enable participation in society, encourage a sense of belonging, and help create stable communities.

### What are the indicators?

2.7.1 Participation in social networks and groups

2.7.2 Contact between young people and their parents

### How are we doing?

- Data on the groups or social networks that matter most to people is available for Hamilton City residents but not for other parts of the Waikato Region. Of the total number of Hamilton respondents during 2006, 24% said they relate mostly to people with same interests, culture or beliefs, 18% said they relate mostly to people living in the same area, and 52% said it was a mixture. According to 2008 survey results, the most common social networks to which New Zealand residents belong are family (81.6%), work or school (59.8%) and hobby or interest groups (38.3%). The profile for Hamilton City is similar to the national average.
- According to results from the national Youth'07 Survey, 57% of secondary school students in New Zealand reported that they get enough time with at least one parent most of the time. This was a smaller proportion than in 2001 (62%). Similarly, results for the Waikato Region were approximately 56% in 2007 compared to 62% in 2001. The decline has been particularly notable from the perspective of female young people.

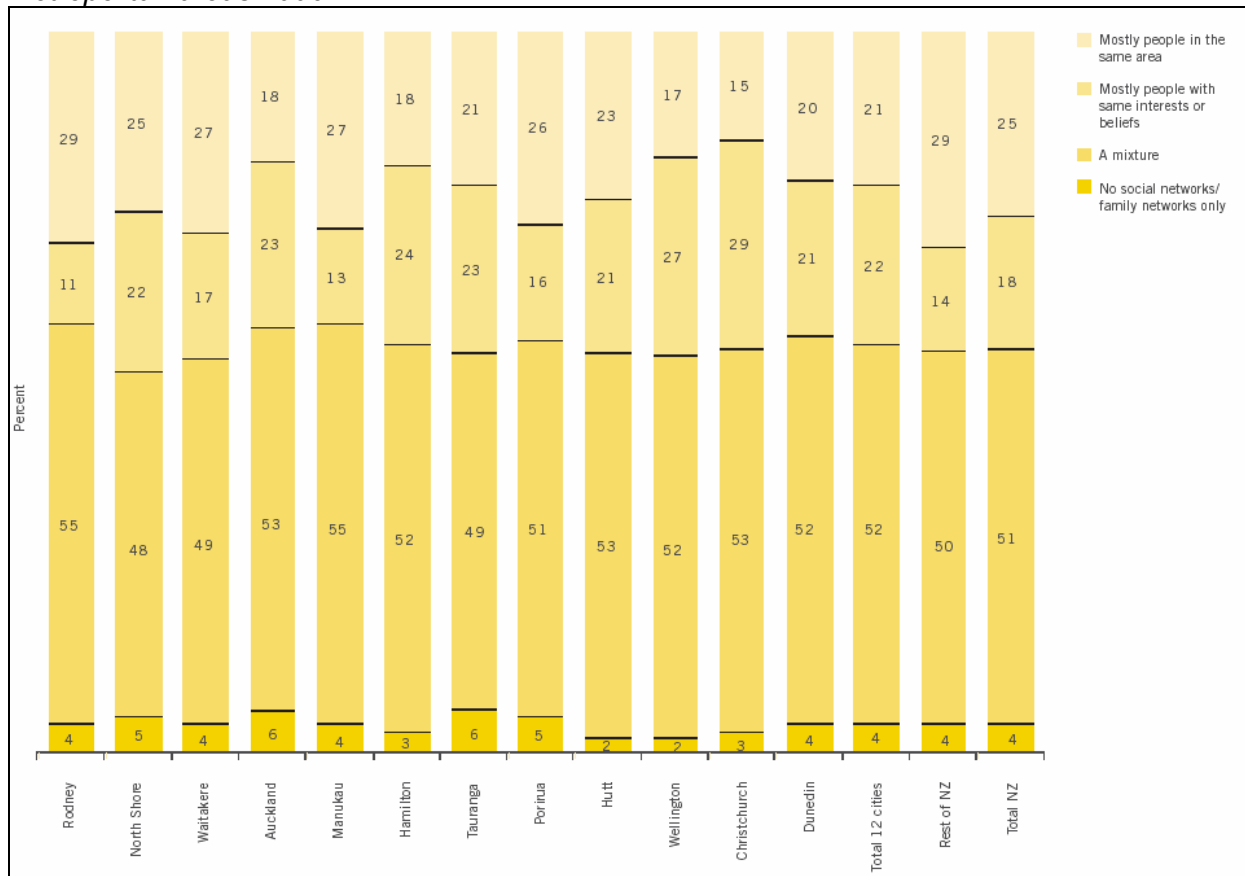
Indicator	State	Trend
2.7.1 Participation in social networks and groups	☹	⇒

This indicator measures respondents participation in social groups and networks, in particular whether the social group or network that matters to them most is made up of people who live in the same area or people who have the same interest, culture or beliefs. Note that the 2006 survey asks for a specific description of the type of social groups or networks that the respondent belongs to and about the nature of the group but doesn't ask which one matters the most.

Being part of a social group or network generally has positive outcomes for the individual and society. The presence of formal and informal relationships between people facilitates participation in society, encourages a sense of belonging, and enables stable communities.

Data on the groups or social networks that matter most to people is available for Hamilton City residents but not for other parts of the Waikato Region. Due to changes in survey design, responses from the 2006 and 2008 Quality of Life surveys are not directly comparable for this item with results from the 2001 and 2004 surveys. However it anticipated that the trend would be minimal if corrections were made to the data. Of the total number of Hamilton respondents during 2006, 24% said they relate mostly to people with same interests, culture or beliefs, 18% said they relate mostly to people living in the same area, and 52% said it was a mixture (refer Figure 2.7.1a). According to 2008 survey results, the most common social networks to which New Zealand residents belong are family (81.6%), work or school (59.8%) and hobby or interest groups (38.3%). The profile for Hamilton City is similar to the national average (refer Table 2.7.1b).

Figure 2.7.1a: Location of social networks to which residents belong – Hamilton City and other metropolitan areas 2006



Source: Quality of Life in New Zealand's Twelve Largest Cities – Residents' Survey 2006

Table 2.7.1b: Social networks and groups to which residents belong – Hamilton City and New Zealand 2008

	Hamilton	New Zealand (total sample)
A sports club	29.7%	31.9%
A church or spiritual group	31.5%	28.9%
A hobby or interest group	34.4%	38.3%
A community or voluntary group such as Rotary, the RSA or Lions	16.8%	20.4%
Family	82.7%	81.6%
Online community or interest group, including sites like Bebo or Facebook	41.1%	30.6%
A network of people from work or school	65.5%	59.8%
Friends	13.3%	9.5%
Other social network or group	7.5%	8.9%
None of the above	2.5%	3.1%

Source: Quality of Life Survey 2008

Indicator	State	Trend
2.7.2 Contact between young people and their parents	☹	↓

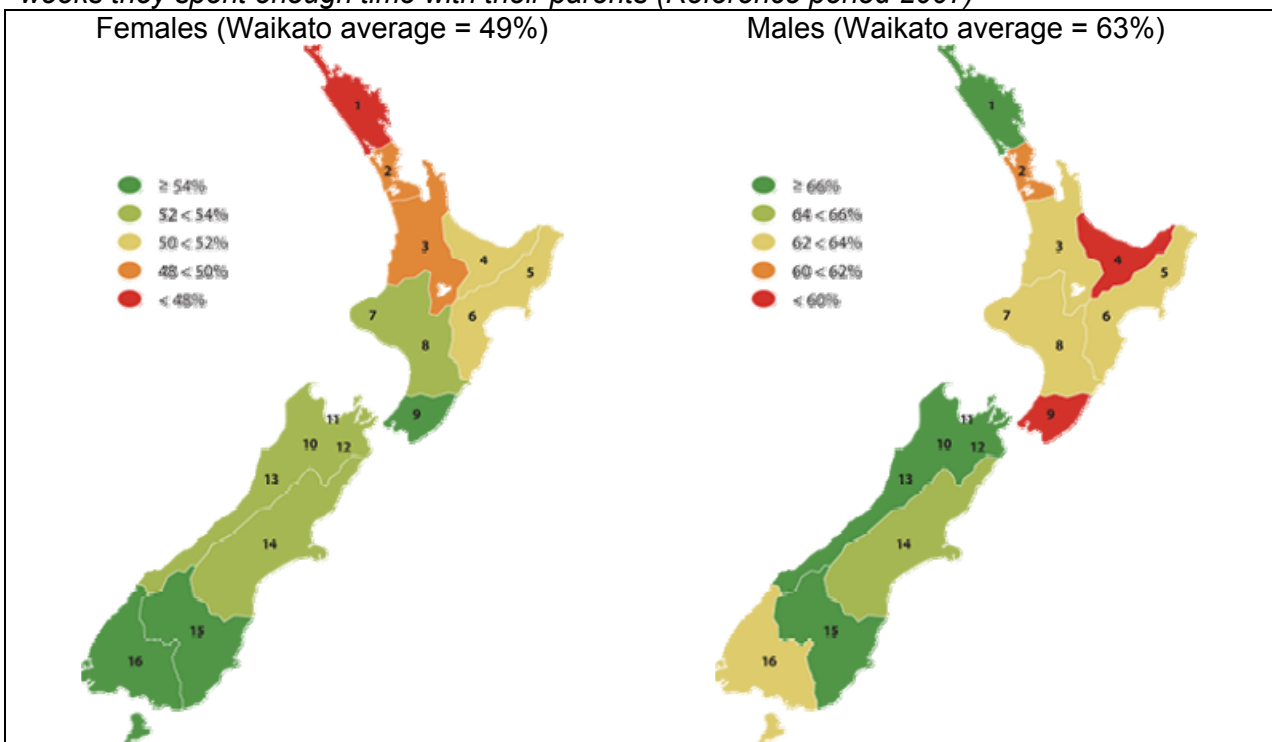
This indicator measures the proportion of secondary school students (aged 12–18 years) reporting that most weeks they spent enough time with their parents.

Healthy relationships are built through both the quantity and quality of time spent together. Having a close and caring relationship with a parent is one of the most important predictors of good health and wellbeing for young people.

According to results from the national Youth'07 Survey, 57% of secondary school students in New Zealand reported that they get enough time with at least one parent most of the time. This was a smaller proportion than in 2001 (62%). Similarly, results for the Waikato Region were approximately 56% in 2007 compared to 62% in 2001.

Figure 2.7.2a shows that an estimated 49% of female secondary school students and 63% of male secondary school students in the Waikato Region in 2007 reported that most weeks they spent enough time with their parents. Table 2.7.2b summarises the comparisons with 2001 survey results, which show a decline for female young people in particular.

Figure 2.7.2a: Proportion of secondary school students (aged 12–18 years) reporting that most weeks they spent enough time with their parents (Reference period 2007)



Source: MSD Social Report/Adolescent Health Research Group

Table 2.7.2b: Proportion of secondary school students (aged 12–18 years) reporting that most weeks they spent enough time with their parents

	2001	2007
Waikato Region – females	60%	49%
Waikato Region – males	64%	63%
New Zealand – females	61%	50%
New Zealand – males	63%	62%

## 2.8 Youth and older people

### Community outcome(s):

2I Families are strong and our communities are supportive of them.

### Why is this important?

Strong family relationships can help enhance personal development including education and sense of belonging. Families are the building blocks of communities. A social development approach includes support for sectors that are less able to be independent, including children and older people.

### What are the indicators?

2.8.1 Youth and older people's engagement in decision-making

### How are we doing?

- No data source has yet been identified for this indicator.

	Indicator	State	Trend
2.8.1	Youth and older people's engagement in decision-making	☹	?

No data source has yet been identified for this indicator.

### 3. SUSTAINABLE ECONOMY

Waikato regional communities aspire towards the following economic outcome:

*“The Waikato region balances a thriving economy with looking after its people, places and environment”.*

For the purpose of this report, economic indicators have been clustered into eight themes as follows:

Code	Theme	Community outcomes
3.1	Sustainable development	3A Our region has economic growth and development that is well-planned and balanced with environmental, cultural and social needs and values.
3.2	Economic prosperity	3B Our regional and local economies are robust and diverse, providing opportunities throughout the Waikato region. 3E The growth, wealth and uniqueness of the Māori economy is acknowledged and supported.
3.3	Transport, infrastructure and services	3C We have reliable, efficient and well-planned infrastructure and services, including transport that is safe, interconnected, and easy to get to and use.
3.4	Regional planning	3D We take a practical and coordinated approach to planning and providing services, which works effectively across boundaries and sectors and responds to our communities' needs.
3.5	Land-based industries	3F Our economy is built on land-based industries, and we encourage planning and practices that protect and sustain our productive resources.
3.6	Tourism	3G We have a tourism industry that recognises the region's cultural and environmental heritage and values, and supports economic growth.
3.7	Research and innovation	3H Our region has a reputation for entrepreneurship, innovation, research and education, attracting investment and people to work, study and visit.

## **3.1 Sustainable Development**

### **Community outcome(s):**

3A Our region has economic growth and development that is well-planned and balanced with environmental, cultural and social needs and values.

### **Why is this important?**

Waikato communities value the characteristics that define their Region, including the quality of the natural environment. There is a desire for economic activity to be in keeping with the Region's character and environment.

### **What are the indicators?**

#### 3.1.1 Genuine Progress Indicator (or Ecological footprint)

### **How are we doing?**

- A Genuine Progress Indicator (GPI) for New Zealand has not yet been completed. In the interim, results are shown for the proxy indicator "Ecological footprint." This measures how much productive land it takes to support the lifestyle of an individual, a city, region or country in today's economy. This is calculated as the land use required for production and consumption of goods and services. Based on data from 2003-2004, the ecological footprint of an average Waikato Region resident is 5.8 ha, which is slightly smaller than the national average. However compared to most other countries, New Zealanders have a large ecological footprint – five to ten times larger than people living in India or China, and larger than Japan and many European nations.

	Indicator	State	Trend
3.1.1	Genuine Progress Indicator (or Ecological footprint)	☹	⇒

This indicator measures the Genuine Progress (GPI) of areas. It is similar to the concept of Gross Domestic Product (GDP) as a means of measuring economic progress, but takes into account the “true” cost of economic progress by measuring things such as environmental and social costs. The difference between GDP and GPI is analogous to the difference between Gross Profit and Net Profit of a company – in the long term the Net Profit determines the overall success of a company.

The GPI is an attempt to measure whether or not an area's growth, increased production of goods, and expanding services have actually resulted in the improvement of the welfare (or well-being) of the people in the area. GPI also reflects sustainability: whether a country's economic activity over a year has left the country with a better or worse future possibility of repeating at least the same level of economic activity in the long run. We measure GPI to monitor the long term ‘health’ of an area by balancing the benefit of economic growth development with social and environmental costs and benefits associated with that growth.

Ecological Economics Research New Zealand (EERNZ), formerly known as the New Zealand Centre for Ecological Economics (NZCEE) at Massey University is developing a GPI for New Zealand in partnership with the Parliamentary Commissioner for the Environment. According to the EERNZ website (accessed 12 April 2010), a GPI has now been developed and is soon to be publicly launched. A regional GPI has already been calculated for the Auckland Region, incorporating information from 20 components ranging from air quality to unemployment. A similar exercise is being undertaken for the Waikato Region (completion date June 2010).

A GPI for the Waikato Region has not yet been completed. In the interim, results are included below for the proxy indicator “Ecological footprint.” The ‘ecological footprint’ measures how much productive land it takes to support the lifestyle of an individual, a city, region or country in today’s economy. This is calculated as the land use types (built up areas, crop and pastoral land, managed forest land and “energy” land (used to absorb carbon from burning of fossil fuels)) required for production and consumption of goods and services (food, housing, transport, consumer goods and services). Ecological footprints are usually expressed in hectares, or hectares per capita (per person), for a given year. The larger the ecological footprint, the more resources are needed to sustain an individual's or population’s current lifestyle.

Based on data from 1996-1999:

- The ecological footprint of an average Waikato person was 8.9 ha.
- The ecological footprint of an average Waikato resident (8.9 ha per person) was slightly smaller than that of an average New Zealander (9.6 ha per person).
- Compared to most other countries, New Zealanders had a large ecological footprint – five to ten times larger than people living in India or China, and larger than Japanese and Europeans.
- New Zealand’s ecological footprint was in the top 10 (including the United States of America and Australia) out of 150 nations surveyed in the ‘Living Planet Report 2000’.

Based on data from 2003-2004:

- The ecological footprint of an average Waikato resident (5.8 ha person) was slightly smaller than that of an average New Zealander (5.9 ha per person).
- The ecological footprint of an average Waikato (or New Zealand) resident was about 7 times greater than that of an average person living in India.
- Waikato's (and New Zealand's) per person ecological footprint was also larger than that of Japan and many European Nations.
- New Zealand's ecological footprint was in the top 10 (which includes the United States, Canada and Australia) out of 150 nations surveyed in the 'Living Planet Report 2006'.

Note that the data for 1996-99 and 2003-04 above may not be directly comparable over time due to methodology changes. The information was sourced from Environment Waikato.

## 3.2 Economic Prosperity

### Community outcome(s):

3B Our regional and local economies are robust and diverse, providing opportunities throughout the Waikato region.

3E The growth, wealth and uniqueness of the Māori economy is acknowledged and supported.

### Why is this important?

Economic development underpins quality of life and prosperity. Strong businesses and industry create employment opportunities, profits and wages for the Region.

### What are the indicators?

- 3.2.1 Regional Gross Domestic Product (GDP)
- 3.2.2 Unemployment rate
- 3.2.3 Median weekly income
- 3.2.4 Number of businesses and employees by industry
- 3.2.5 Building consents

### How are we doing?

- Based on recent estimates by Statistics New Zealand, the Waikato Region contributed approximately \$10.6 billion or 8.1% of national GDP in 2003. Based on the National Bank's Regional Economic Activity Index, the Waikato Region has tended to outperform national average economic growth over much the period since the late 1980s. The rate of economic growth recently slowed following a relatively lengthy period of sustained growth, and entered a recessionary period during 2008-2009. As at December 2009, annual average percent growth in economic activity was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level.
- Estimates from the quarterly Household Labour Force Survey indicate that the Waikato regional unemployment rate reached a long-term low of 2.6% in December 2006 but rebounded up to 5.8% in the December 2009 quarter. By comparison, the national unemployment rate estimate as at December 2009 was 6.8%. These latest figures reflect a general economic slow-down during 2008-2009. There remains considerable variation between different territorial authority areas in the Region, as well as disparities between Māori and non-Māori unemployment rates throughout the Region.
- Real median weekly income in the Waikato Region is similar to the national average, with a value of \$537 as at June 2009. After adjusting for inflation, median weekly income in the Waikato Region has increased by more than 40% since 1998. The median weekly income for males in the Region as at June 2009 was \$662 and for females \$425. The disparity between male and female median weekly incomes increased significantly over the period 1998 to 2005 and has subsequently been generally declining. There are also disparities between ethnic groups, with Māori and other ethnic groups earning a lower median weekly income than the European/Pākehā ethnic group.
- The number of business units in the Waikato Region increased from 43,417 in 2000 to 52,447 in 2009. The number of employees in the Region increased from 132,380 in 2000 to 165,410 in 2009. For the Waikato Region, the employee count grew slightly more quickly than the number of businesses over this period. The Waikato Region employee profile is concentrated more heavily towards primary and secondary industries than in many other regions. Primary industries and manufacturing are strongly prevalent in provincial areas, while more service oriented industries are focused around Hamilton City.

- Since June 2007 there has been a decline in the trend for the number of new housing units. The slump appears to have bottomed out during the first quarter of 2009. According to Statistics New Zealand figures, 2,271 building consents were issued in the year to January 2009 in the Waikato Region, slipping to 1,783 in the year to January 2010.

	Indicator	State	Trend
3.2.1	Regional Gross Domestic Product (GDP)	☹	⇒

Gross Domestic Product (GDP) is an internationally accepted measure of economic activity. When presented on a regional basis, it provides an indication of the size and structure of a regional economy and measures the changes taking place within it. The Statistics NZ Regional GDP Feasibility Study is looking at generating an experimental measure of real annual regional GDP and its components, by industry for a limited time-period using the production based method.

Economic statistics such as GDP provide a basis for monitoring and evaluating economic growth, and for making economic decisions. If the compilation of regional GDP proves feasible, this will provide another tool to help understand the economic structures of regions and the factors influencing regional economic growth. Improved regional economic data will support Government’s ability to identify and address region-specific issues more efficiently.

A report was released by Statistics New Zealand in December 2006 confirming that regional gross domestic product (GDP) estimates can be produced using existing data sources. The Research Report on Regional Gross Domestic Product contains findings on the feasibility of regional GDP. The project yielded new current-price annual estimates for regional GDP by industry for the years ended March 2000-2003, and confirmed that ongoing regional GDP series can be produced if required.

Table 3.2.1a shows that the Waikato Region contributed approximately \$10.6 billion or 8.1% of national GDP in 2003. According to Statistics New Zealand’s estimates, Waikato regional GDP grew strongly in 2000/01 and 2001/02, with annual growth rates of 13.3% and 9.6% respectively, but then slumped in the year to March 2003. For further information refer to the Ministry of Economic Development’s “Regional Economic Performance” report published by NZIER in September 2004. Ongoing work in this area is not currently in the Statistics New Zealand work programme.

Supplementing the Statistics New Zealand estimates, a composite index of regional economic activity compiled by the National Bank of New Zealand (NBNZ) provides a simple estimate of movements in regional economic activity. The 23 measures on which this indicator is based include: business confidence; consumer confidence; retail sales; new motor vehicle registrations; regional exports; registered unemployment; building permits approved; real estate turnover; household labour force data; job ads; and accommodation survey data. Regional performance may be misrepresented due to its reliance on quarterly indicators and inaccurate weighting of industry indicators. Figure 3.2.1b shows that, based on the National Bank’s Regional Economic Activity Index, the Waikato Region has tended to outperform national average economic growth over much the period since the late 1980s. The rate of economic growth recently slowed following a relatively lengthy period of sustained growth, and entered a recessionary period during 2008-2009. As at December 2009, annual average percent growth in economic activity was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level.

Additional data is now also available through regular updates from Environment Waikato’s Regional Economic Model. According to the latest results, Waikato Gross Regional Product was \$15.6 billion for the year ended March 2007, and real GRP growth averaged 5% per year between 2004 and 2007. Source: Market Economics (2009) ‘Waikato Regional Dynamic Environment and Economy Model’ (WRDEEM).

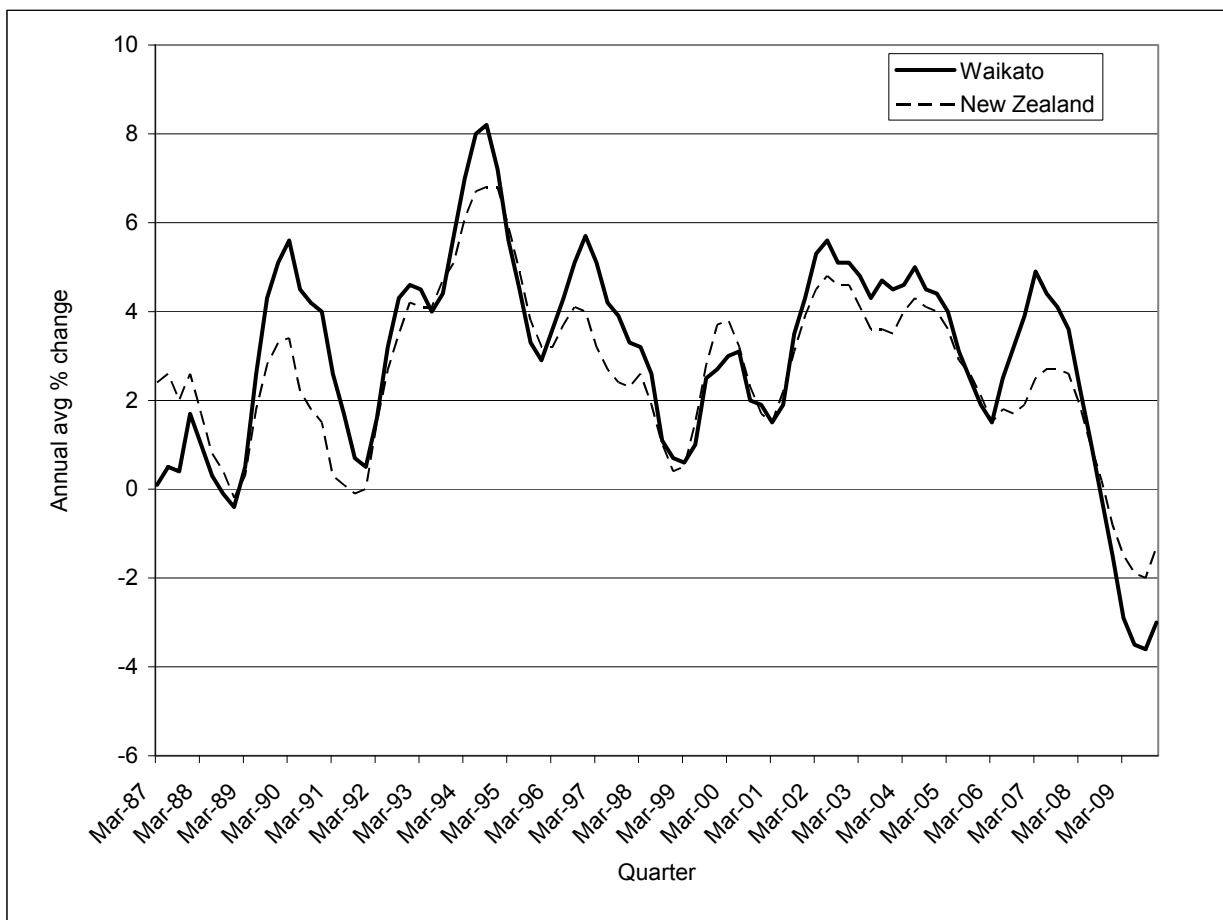
Table 3.2.1a: Regional GDP estimates – Waikato Region

	2000	2001	2002	2003
Northland	2,787	3,106	3,370	3,243
Auckland	39,518	40,277	43,301	47,689
Waikato	8,930	10,119	11,087	10,598
Bay of Plenty	5,721	6,134	6,551	6,689
Gisborne	916	960	1,001	1,031
Hawke's Bay	3,569	3,839	4,122	4,318
Taranaki	3,743	4,600	4,678	4,414
Manawatu-Wanganui	4,847	5,201	5,557	5,594
Wellington	16,790	17,046	18,283	19,286
Tasman / Nelson	1,943	2,080	2,282	2,343
Marlborough	955	1,045	1,161	1,193
West Coast	662	755	804	779
Canterbury	12,538	13,237	14,195	15,074
Otago	4,344	4,683	5,127	5,411
Southland	2,434	2,861	3,120	3,023
New Zealand GDP	109,696	115,941	124,639	130,687

Source: Statistics New Zealand

Notes: Figures may not sum due to rounding. All figures are in current prices (\$million). Timeframe is year ended March.

Figure 3.2.1b: Annual average percent growth of NBNZ index of regional economic activity, March 1987 to December 2009



Source: National Bank of New Zealand (NBNZ): Regional Trends

<http://www.nationalbank.co.nz/economics/regional/default.aspx>

Note: Historical series is subject to retrospective change each quarter.

Indicator	State	Trend
3.2.2 Unemployment rate	☹	⇒

This indicator measures the number of unemployed persons expressed as a percentage of the labour force.

Paid employment is a major factor determining personal income, which in turn determines the ability of households to purchase goods and services. It also affects health, housing, education and crime outcomes. People often define themselves by employment status and thus employment is also related to the ability of people to participate and have a sense of belonging in their community.

Data is provided from both the Household Labour Force Survey at regional level and from the Census at the territorial authority level. Both sources are used here as they cover different geographic units at different time series.

Table 3.2.2a shows that, as at the March 2006 Census, the Waikato Region unemployment rate was 5.2%, slightly above the national average of 5.1%. There was considerable variation throughout the Region, ranging from a low of 3.3% unemployment in the Waipa District to a high of 7.9% in the South Waikato District. Māori unemployment rates ranged from a low of 7.7% in Thames-Coromandel District to a high of 15.4% in South Waikato District, despite improvements over the period 2001 to 2006 (refer Figure 3.2.2b). Overall, unemployment has been falling in the Waikato Region as it has been for the country as a whole since peaking in the early 1990s (refer Figure 3.2.2c).

Recent estimates from the quarterly Household Labour Force Survey show that the Waikato regional unemployment rate reached a long-term low of 2.8% in December 2006 but rebounded up to 5.8% in the December 2009 quarter. By comparison, the national unemployment rate estimate as at December 2009 was 6.8%. These latest figures reflect a general economic slow-down during 2008-2009.

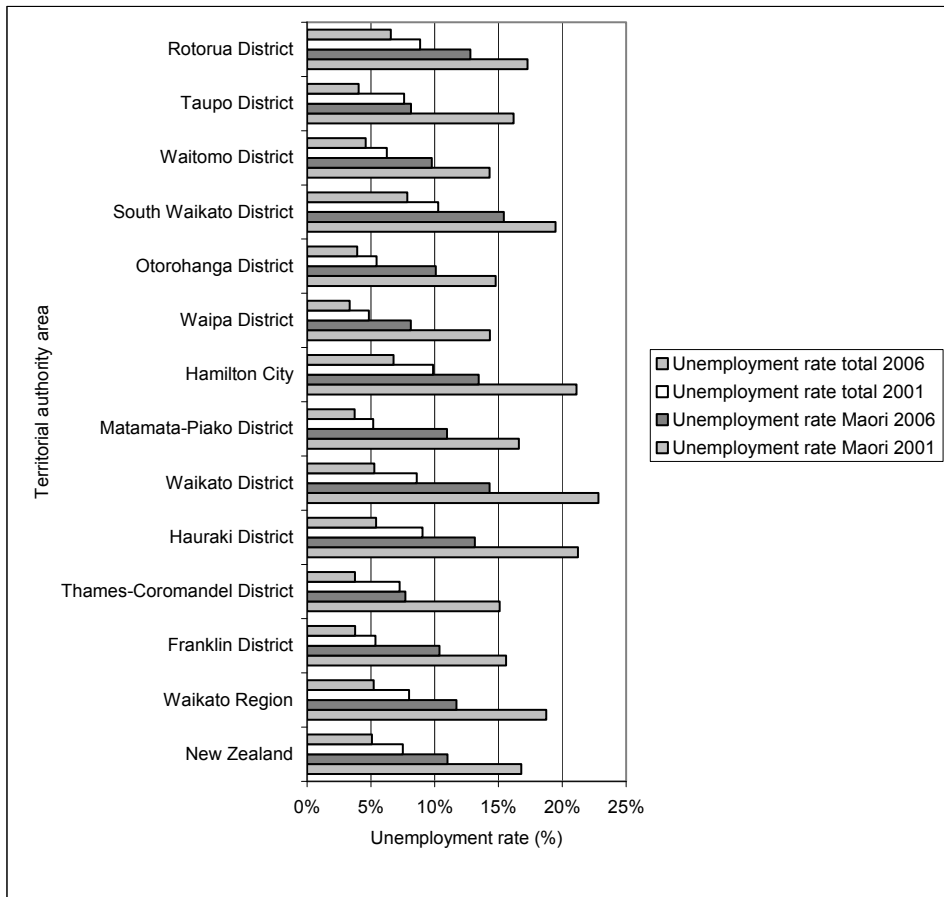
*Table 3.2.2a: Labour Force Status for the 2006 Census Usually Resident Population Count Aged 15 Years and Over*

	Employed Full-time	Employed Part-time	Unemployed	Unemployment rate (%)	Not in the Labour Force	Work and Labour Force Status Unidentifiable	Total
New Zealand	1,531,017	454,758	106,497	5.1%	961,788	106,308	3,160,371
Waikato Region	142,416	43,272	10,260	5.2%	88,236	10,995	295,179
Franklin District	23,454	6,291	1,170	3.8%	11,226	2,310	44,451
Thames-Coromandel District	8,772	3,381	477	3.8%	8,193	555	21,381
Hauraki District	5,754	2,016	444	5.4%	4,887	252	13,353
Waikato District	16,053	4,767	1,158	5.3%	8,988	1,788	32,754
Matamata-Piako District	11,601	3,531	588	3.7%	7,140	591	23,454
Hamilton City	48,549	14,223	4,581	6.8%	29,745	3,900	100,995
Waipa District	16,995	4,908	753	3.3%	9,501	735	32,895
Otorohanga District	3,447	1,152	189	4.0%	1,983	123	6,888
South Waikato District	7,206	2,202	810	7.9%	5,529	861	16,608
Waitomo District	3,549	1,047	219	4.5%	1,923	243	6,981
Taupo District	12,333	3,831	687	4.1%	7,188	1,182	25,218
Rotorua District	23,883	6,939	2,172	6.6%	14,190	2,055	49,239

Source: Statistics New Zealand 2006 Census

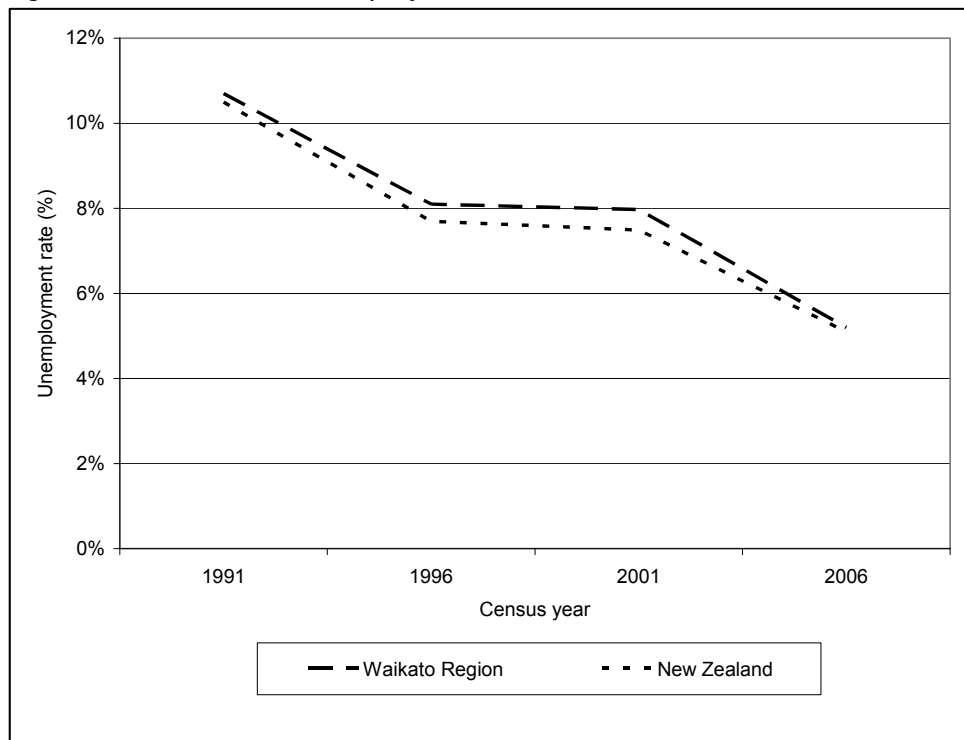
Note: Census data is randomly rounded to protect confidentiality. Individual figures may not add up to totals, and values for the same data may vary in different tables.

Figure 3.2.2b: Unemployment rate for territorial authorities by total population and Māori population, 2001 and 2006



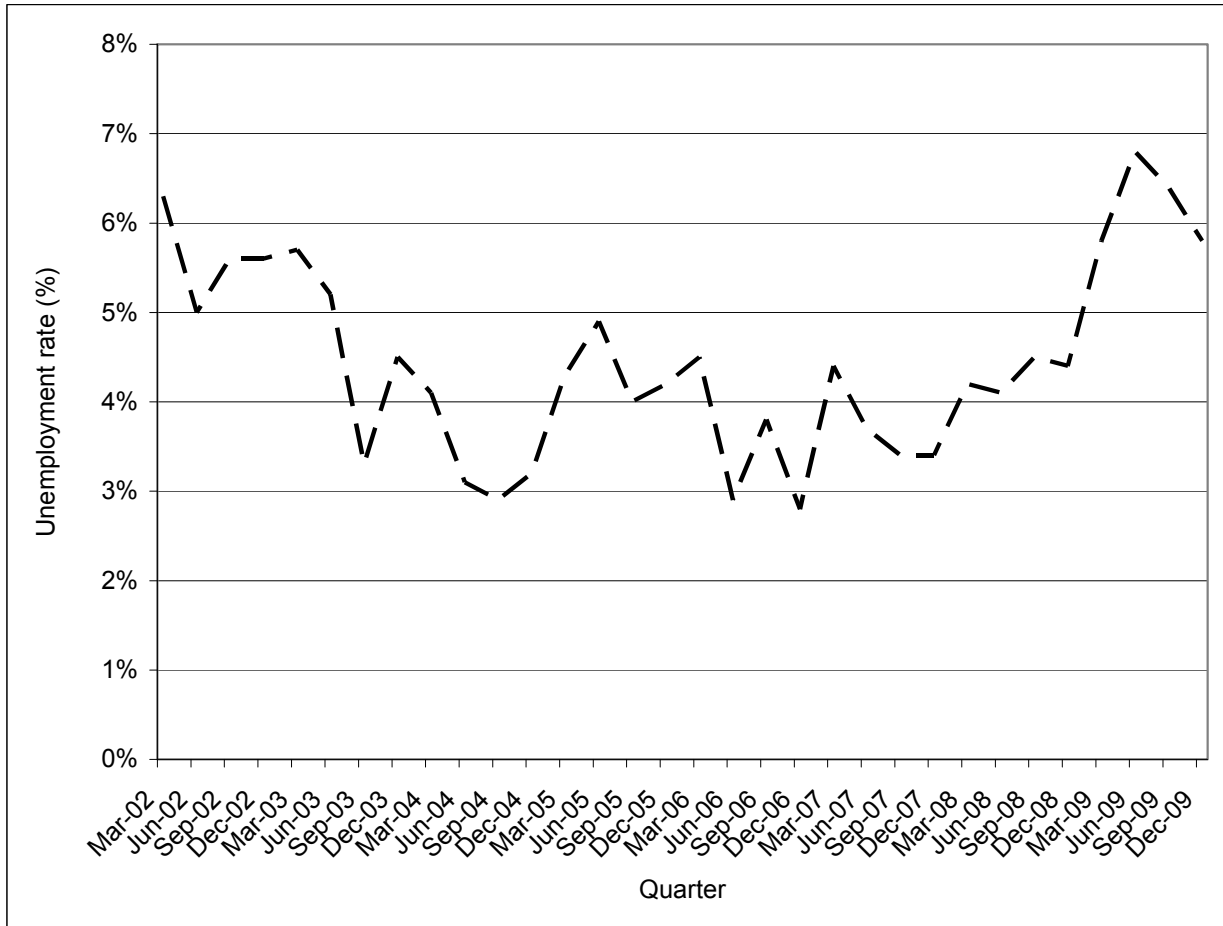
Source: Statistics New Zealand Census

Figure 3.2.2c: Census unemployment rate



Source: Statistics New Zealand Census

Figure 3.2.2d: Estimated quarterly unemployment rate for the Waikato Region



Source: Statistics New Zealand Quarterly Household Labour Force Survey

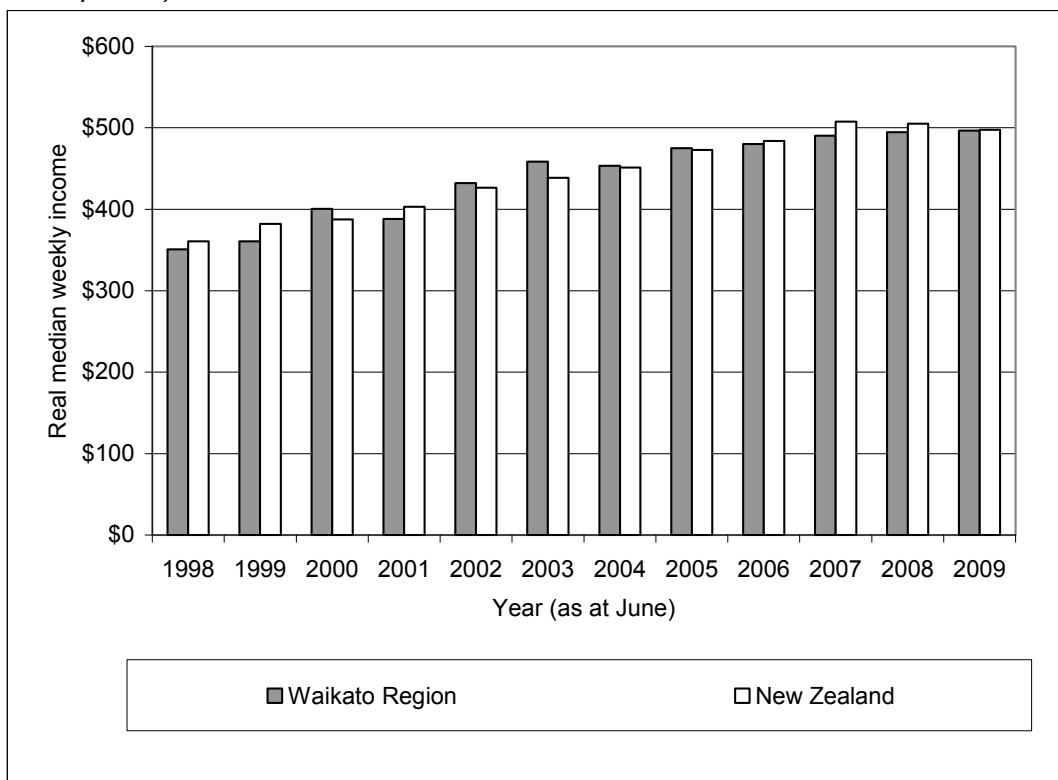
Indicator	State	Trend
3.2.3 Median weekly income	☹	↑

Median weekly income is a measure of the middle point of the distribution of weekly income. For example, if there were 99 people, the median weekly income would be the weekly income of the fiftieth person when people are ranked by weekly income.

People’s income is an important driver of the local economy. The disposable income, derived from weekly income minus fixed expenses, indicates what spending power people have. What people buy and consume with their income determines the health of the local economy.

Figure 3.2.3a shows that median weekly income in the Waikato Region is similar to the national average, with a value of \$537 as at June 2009. After adjusting for inflation, median weekly income in the Waikato Region has increased by more than 40% since 1998. Table 3.2.3b shows that the median weekly income for males as at June 2009 was \$662 and for females \$425. The disparity between male and female median weekly incomes increased significantly over the period 1998 to 2005 and has subsequently been generally declining. Table 3.2.3c shows there are also disparities between ethnic groups, with Māori and other ethnic groups earning a lower median weekly income than the European/Pākehā ethnic group.

Figure 3.2.3a: Real median weekly income, Waikato Region and New Zealand (base June 2006 quarter)



Source: New Zealand Income Survey

Notes: Weekly income is the income received before tax from all sources, such as wages, salary, self-employment, government transfers, private superannuation and pension schemes, annuities and investment income. It measures the income received over an average week in the June quarter. Median weekly income is the middle point of the distribution of weekly income. For example, if there were 99 people, the median weekly income would be the weekly income of the fiftieth person when people are ranked by weekly income. For the purpose of this indicator, median weekly income is adjusted by the Consumers Price Index (CPI) (base June 2006 quarter) to calculate real median weekly income.

Table 3.2.3b: Median weekly income, Waikato Region and New Zealand by sex

	Waikato Region	New Zealand	Waikato Region	New Zealand	Waikato Region	New Zealand
	Total	Total	Males	Males	Females	Females
1998	\$293	\$301	\$435	\$447	\$245	\$248
1999	\$300	\$318	\$430	\$445	\$250	\$252
2000	\$340	\$329	\$465	\$460	\$265	\$265
2001	\$340	\$353	\$500	\$489	\$272	\$277
2002	\$389	\$384	\$551	\$530	\$293	\$301
2003	\$419	\$401	\$537	\$540	\$323	\$307
2004	\$424	\$422	\$588	\$563	\$318	\$323
2005	\$457	\$455	\$640	\$600	\$338	\$347
2006	\$480	\$484	\$648	\$640	\$384	\$377
2007	\$500	\$518	\$681	\$672	\$384	\$392
2008	\$525	\$536	\$672	\$690	\$416	\$413
2009	\$537	\$538	\$662	\$681	\$425	\$430

Source: New Zealand Income Survey

Notes: Weekly income is the income received before tax from all sources, such as wages, salary, self-employment, government transfers, private superannuation and pension schemes, annuities and investment income. It measures the income received over an average week in the June quarter. Median weekly income is the middle point of the distribution of weekly income. For example, if there were 99 people, the median weekly income would be the weekly income of the fiftieth person when people are ranked by weekly income.

Table 3.2.3c: Median weekly income, Waikato Region and New Zealand by ethnic group

	Waikato Region	New Zealand	Waikato Region	New Zealand	Waikato Region	New Zealand
	European / Pakeha	European / Pakeha	Māori	Māori	Pacific Peoples	Pacific Peoples
1998	\$312	\$320	\$272	\$286	\$226	\$281
1999	\$328	\$338	\$255	\$298	\$263	\$280
2000	\$344	\$341	\$333	\$330	\$400	\$331
2001	\$360	\$380	\$288	\$325	\$360	\$300
2002	\$420	\$420	\$326	\$360	\$415	\$317
2003	\$446	\$439	\$360	\$373	\$408	\$360
2004	\$450	\$458	\$400	\$395	\$362	\$360
2005	\$484	\$493	\$390	\$408	\$286	\$400
2006	\$515	\$518	\$378	\$440	\$437	\$409
2007	\$537	\$564	\$422	\$473	\$439	\$450
2008	\$544	\$575	\$480	\$499	\$320	\$455
2009		\$575		\$480		\$425

Source: New Zealand Income Survey

Notes: Weekly income is the income received before tax from all sources, such as wages, salary, self-employment, government transfers, private superannuation and pension schemes, annuities and investment income. It measures the income received over an average week in the June quarter. Median weekly income is the middle point of the distribution of weekly income. For example, if there were 99 people, the median weekly income would be the weekly income of the fiftieth person when people are ranked by weekly income.

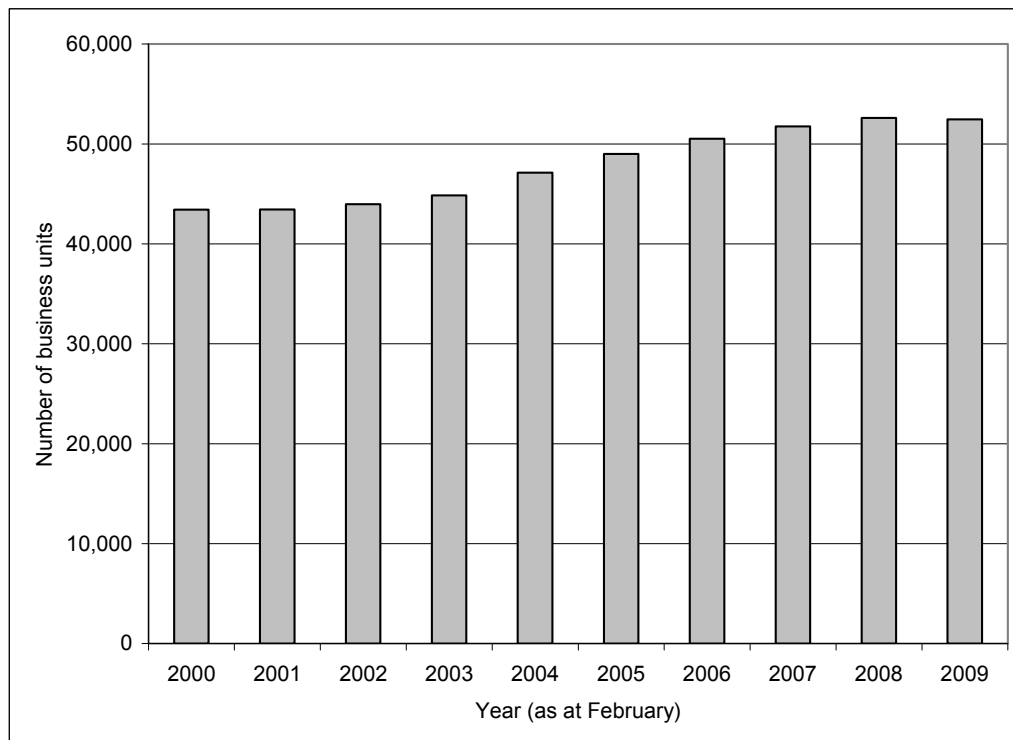
Indicator	State	Trend
3.2.4 Number of businesses and employees by industry	☹	↑

This indicator provides information on the number of business enterprises by industry using the Australia and New Zealand Standard Industrial Classification (ANZSIC) for each territorial authority area in the Waikato Region. For a firm that holds more than one business location in a Region, this will be a distinct count of one enterprise. Note that farming is excluded from the Agriculture category within this indicator but is available separately from Statistics New Zealand from 2004 on request. The indicator also provides information on the employee count (a head-count of all salary and wage earners for the February reference month) for businesses in each industry type for each territorial authority area in the Waikato Region. However, this is for the purpose of estimating business size – it is not an official employment statistic.

The number of businesses and employees indicates the health of the economy. An increase in new businesses and associated employees reflects growth in economic activity.

Figure 3.2.4a shows that the number of business units in the Waikato Region increased from 43,417 in 2000 to 52,447 in 2009. The rate of growth in the number of business units in the Region has been slightly slower than the national average over this period. Figure 3.2.4b shows a similar pattern for employee counts, with the number of employees in the Region increasing from 132,380 in 2000 to 165,410 in 2009. For the Waikato Region, the employee count grew slightly more quickly than the number of businesses over this period. Table 3.2.4c reveals that the Waikato Region employee profile is concentrated more heavily towards primary and secondary industries than in many other regions. Figure 3.2.4d illustrates the sub-regional variation, with primary industries and manufacturing strongly prevalent in provincial areas compared to the more service oriented industries focused around Hamilton City. Further data at the territorial authority level are included in the Appendices.

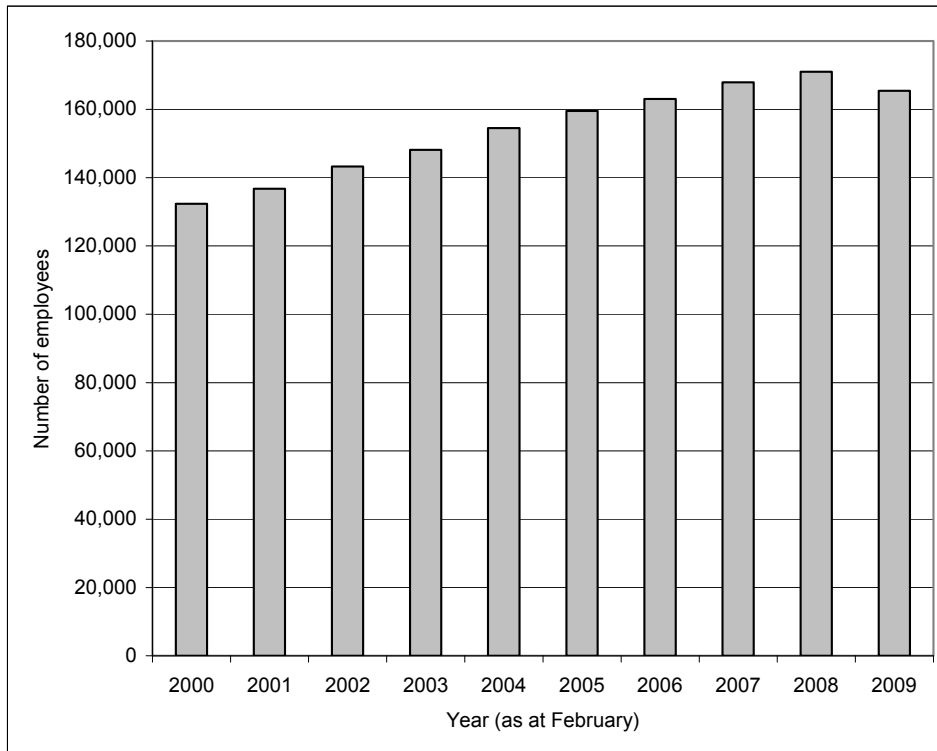
Figure 3.2.4a: Number of business geographic units, Waikato Region



Source: Statistics New Zealand Business Tables

Notes: (a) 'Geographic unit' means a separate operating unit engaged in New Zealand in one, or predominately one, kind of economic activity from a single physical location or base. (b) Historical series may be subject to retrospective updates.

Figure 3.2.4b: Employee counts, Waikato Region



Source: Statistics New Zealand Business Tables

Notes: (a) 'Employee count' is a head-count of all salary and wage earners for the February reference month. Figures have been rounded, and discrepancies may occur between sums of component items and totals. (b) Historical series may be subject to retrospective updates.

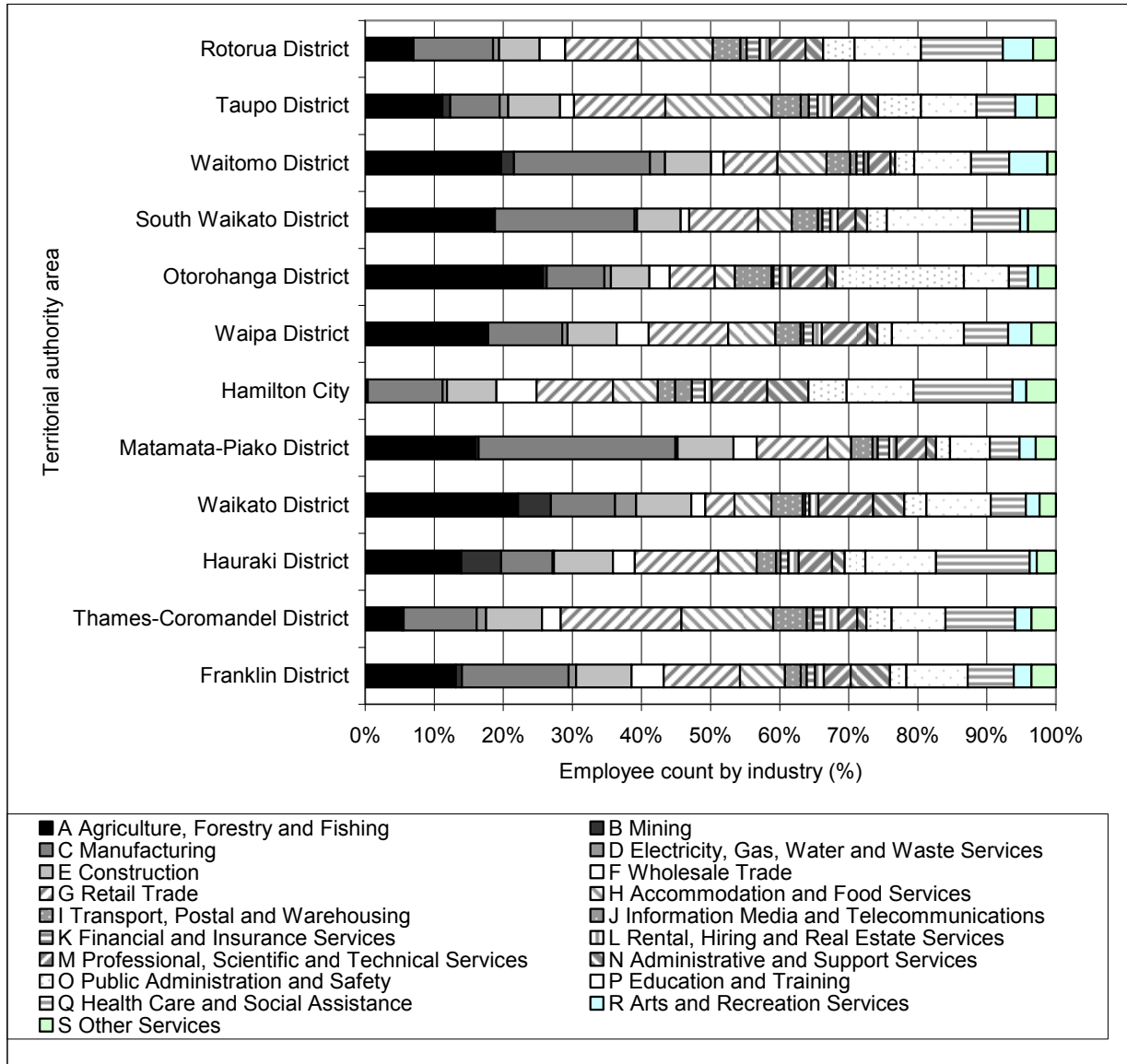
Table 3.2.4c: Employee counts by industry classification (ANZSIC), Waikato Region and New Zealand 2009

ANZSIC	New Zealand	Waikato Region	New Zealand	Waikato Region
A Agriculture, Forestry and Fishing	110,730	15,450	5.8%	9.3%
B Mining	5,930	1,400	0.3%	0.8%
C Manufacturing	228,520	20,440	11.9%	12.4%
D Electricity, Gas, Water and Waste Services	13,170	1,490	0.7%	0.9%
E Construction	121,240	12,240	6.3%	7.4%
F Wholesale Trade	105,260	6,920	5.5%	4.2%
G Retail Trade	198,000	17,660	10.3%	10.7%
H Accommodation and Food Services	130,190	11,910	6.8%	7.2%
I Transport, Postal and Warehousing	84,180	5,360	4.4%	3.2%
J Information Media and Telecommunications	41,080	2,430	2.1%	1.5%
K Financial and Insurance Services	53,810	2,490	2.8%	1.5%
L Rental, Hiring and Real Estate Services	28,040	2,050	1.5%	1.2%
M Professional, Scientific and Technical Services	143,360	10,290	7.5%	6.2%
N Administrative and Support Services	87,660	6,330	4.6%	3.8%
O Public Administration and Safety	104,540	7,550	5.4%	4.6%
P Education and Training	165,640	15,240	8.6%	9.2%
Q Health Care and Social Assistance	196,130	16,450	10.2%	9.9%
R Arts and Recreation Services	37,780	3,810	2.0%	2.3%
S Other Services	64,050	5,910	3.3%	3.6%
Total Industry	1,919,290	165,410	100.0%	100.0%

Source: Statistics New Zealand Business Tables

Notes: ANZSIC = Australian and New Zealand Standard Industrial Classification.

Figure 3.2.4d: Employee counts by industry classification (ANZSIC), territorial authority areas in the Waikato Region 2009



Source: Statistics New Zealand Business Tables

Notes: ANZSIC = Australian and New Zealand Standard Industrial Classification.

Indicator	State	Trend
3.2.5 Building consents	☹	↓

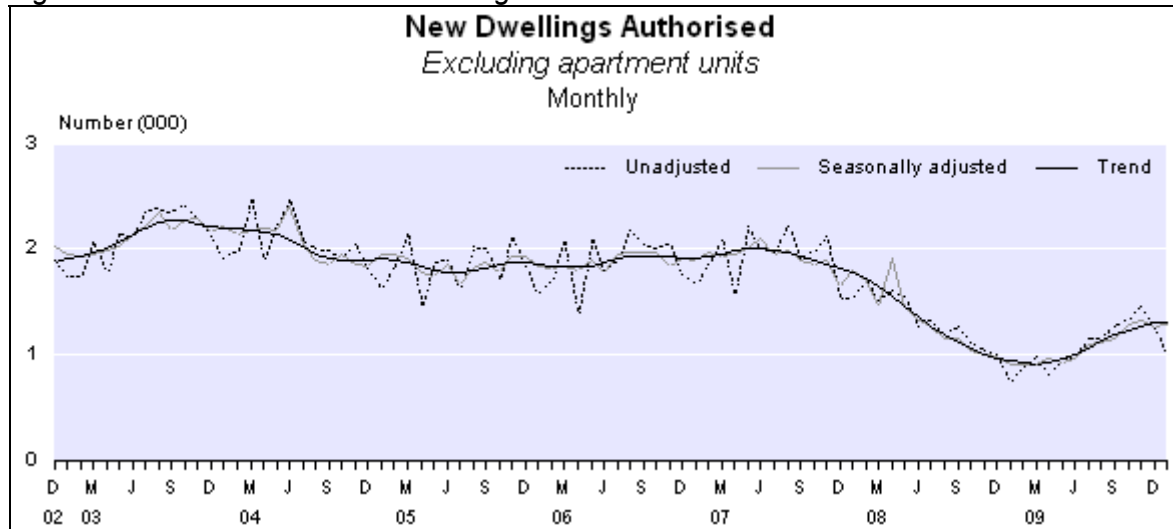
This indicator provides a monthly measure of the number and value of all building consents issued in a territorial authority area that have a value of \$5,000 or higher.

The number of building consents issued is seen as a leading indicator of economic activity in an area.

Results are available free of charge from the Statistics NZ website for Hamilton City and the Franklin, Thames-Coromandel, Waikato, Matamata-Piako, Waipa, Taupo and Rotorua Districts. Data for other territorial authorities is available for a fee or directly from the territorial authorities.

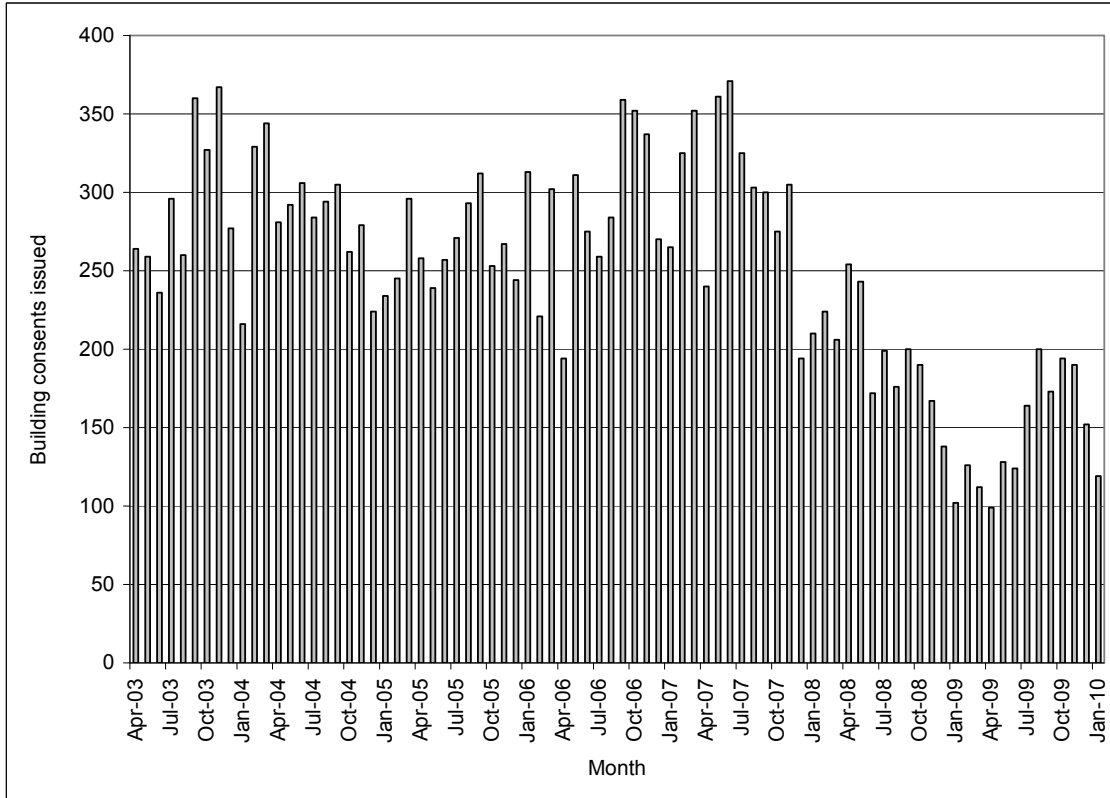
Figure 3.2.5a shows that the national number of building consents issued remained relatively stable over the period 2004-2007 following a boom period during the preceding two year period. However since June 2007 there has been a decline in the trend for the number of new housing units. The slump appears to have bottomed out during the first quarter of 2009. Figure 3.2.5b shows the Waikato Region monthly data, with 2,271 building consents issued in the year to January 2009 slipping down to 1,781 in the year to January 2010. Figure 3.2.5c shows a similar pattern for most territorial authority areas in the Region. Much of the partial regional recovery during mid-2009 was supported by strong building consent figures for Hamilton City. Note: Data from remaining territorial authorities not included in Figure 3.2.5c may be obtainable from the agencies themselves.

Figure 3.2.5a: Number of new dwelling units authorised – New Zealand 2003-2009



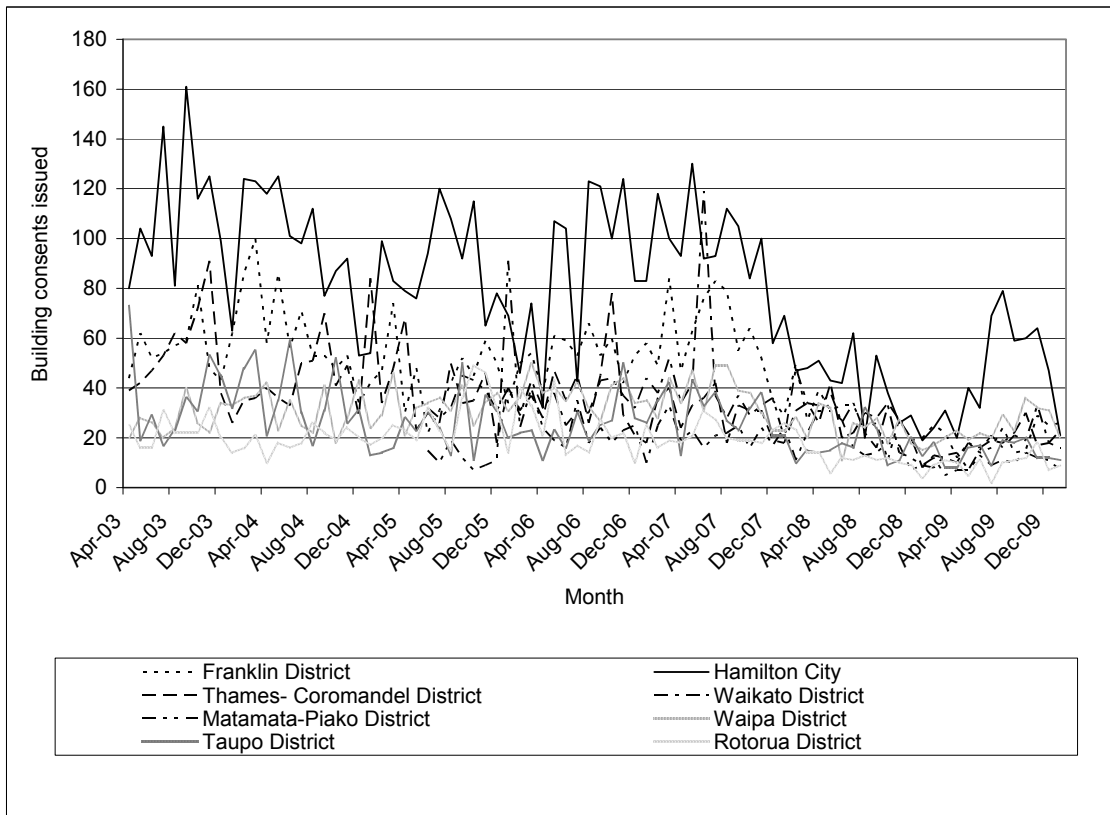
Source: Statistics New Zealand

Figure 3.2.5b: Number of new dwelling units authorised – Waikato Region



Source: Statistics New Zealand

Figure 3.2.5c: Number of new dwelling units authorised – Selected territorial authorities



Source: Statistics New Zealand

Note: Data is only available free of charge from Statistics New Zealand for selected territorial authorities but is available for the other territorial authorities for a fee.

### **3.3 Transport, infrastructure and services**

#### **Community outcome(s):**

3C We have reliable, efficient and well-planned infrastructure and services, including transport that is safe, interconnected, and easy to get to and use.

#### **Why is this important?**

Infrastructure such as water supply, sewerage, stormwater drainage, telecommunications, power supply and solid waste management are fundamental to community wellbeing and economic development.

#### **What are the indicators?**

##### 3.3.1 Drinking water quality

*Refer also to 2.4.3 Road traffic crashes and casualties.*

#### **How are we doing?**

- Many drinking water community supplies are listed as having a Public Health Grading of “U”, or Ungraded. There is a push for grading to happen annually (driven by the Ministry of Health) but this has not yet occurred.
- The number of motor vehicle crashes and injuries on Waikato Region roads has risen slightly since 2001, reflecting a national trend.

Indicator	State	Trend
3.3.1 Drinking water quality	☹	?

This indicator measures the public health grading of drinking water in community supplies. Community supplies are defined as supplies that provide drinking water to 25 people for more than 60 days of a year, and includes cities, towns, camping grounds, marae and schools. The public health risk of drinking water is measured using a grading system developed by the Ministry of Health.

In 2003, 87% of New Zealand’s population was served by community drinking water supplies. Maintaining good drinking water quality is critical for human health and quality of life outcomes. The health risk to consumers from water-borne disease in drinking water supplies comes from two main types of microorganisms: bacteria (such as faecal coliforms and E. coli) and parasites (such as Giardia and Cryptosporidium). Throughout the world by far the most common problems arise from microbiological contamination of the source waters. Animal, bird and even human effluent, introduced in one way or another upstream from a water supply, can make that water unfit for consumption.

Many drinking water community supplies are listed as having a Public Health Grading of “U”, or Ungraded. These are generally supplies that have less than 500 people connected, but also include those supplies not graded since December 2005. As of January 2006 the new grading system (implemented 2003) has replaced all previous grading values. However, grading occurs “ad-hoc” and most have not been graded since January 2006. There is a push for grading to happen annually (driven by the Ministry of Health) but this has not yet occurred.

Of the supplies in the Waikato Region that had a grading listed on the Drinking Water website as at April 2010, many of these were smaller supplies considered by the Ministry of Health to have an ‘unsatisfactory’ or ‘unacceptable’ level of risk associated with condition of their reticulation system, in some cases also accompanied by an ‘unsatisfactory’ or ‘unacceptable’ level of risk associated with the water source. Between the 2009 and 2010 updates of this report, a number of areas had their water gradings changed. These are shown in Table 3.3.1b.

*Table 3.3.1a: Public health grading for selected community water supplies by territorial authority, as at April 2010*

Territorial Authority	Community	Grade
Hamilton City	Hamilton City	Aa
Hamilton City	Templeview	Aa
Hauraki District	Turua	Uu
Hauraki District	Waitakaruru	Uu
Hauraki District	Kerepehi	Uu
Hauraki District	Ohinemuri	Uu
Hauraki District	Paeroa	Ec
Hauraki District	Waihi	Uu
Matamata-Piako District	Matamata	Eb
Matamata-Piako District	Morrinsville	Uu
Matamata-Piako District	Waitoa	Uu
Matamata-Piako District	Te Aroha	Uu
Otorohanga District	Otorohanga	Ee
Otorohanga District	Waikeria	Uu
South Waikato District	Carter Holt Harvey Kinleith	Uu
South Waikato District	Putaruru	Ue
South Waikato District	Tirau	Ed
South Waikato District	Tokoroa	Ed
Thames-Coromandel District	Coromandel	Eb
Thames-Coromandel District	Pauanui	Uu

Territorial Authority	Community	Grade
Thames-Coromandel District	Tairua	Ec
Thames-Coromandel District	Thames	Bb
Thames-Coromandel District	Whangamata	Uu
Thames-Coromandel District	Whitianga	Uu
Waikato District	Huntly - Rotongaro	Ed
Waikato District	Huntly	Eb
Waikato District	Matangi	Au
Waikato District	Newstead	Au
Waikato District	Ngaruawahia	Ee
Waikato District	Raglan	Ed
Waikato District	Tamahere	Au
Waikato District	Taupiri	Ee
Waikato District	Taupiri - Hopu Hopu	Ee
Waikato District	Te Kauwhata	Ed
Waipa District	Cambridge	Uu
Waipa District	Kihikihi	Uu
Waipa District	Pukerimu Rural	Eb
Waipa District	Te Awamutu	Eb
Waipa District	Te Awamutu - Pirongia	Ec
Waitomo District	Piopio	Uu
Waitomo District	Te Kuiti	Eb
Waitomo District	Waitomo Caves	Ee
Rotorua District	Hamurana	Eb
Rotorua District	Kaharoa	Eb
Rotorua District	Mamaku	Da
Rotorua District	Ngongotaha	Da
Rotorua District	Okareka	Da
Rotorua District	Reporoa	Ec
Rotorua District	Rotoiti	Db
Rotorua District	Rotorua Central	Ea
Rotorua District	Rotorua East	Ec
Rotorua District	Te Takinga Marae	Uu
Taupo District	Acacia Bay	Ed
Taupo District	Hautu Prison	Du
Taupo District	Kinloch	Ed
Taupo District	Mangakino	Dd
Taupo District	Motuoapa	Uu
Taupo District	Omori	Uu
Taupo District	Taupo - Lake Terrace	Ed
Taupo District	Taupo - Rainbow Point	Uu
Taupo District	Tirohanga Valley Community	Uu
Taupo District	Turangi	De
Taupo District	Wairakei Resort & SH1 Dvlpmt	Uu
Franklin District	Awhitu Water Farm	Uu
Franklin District	Bombay	Bd
Franklin District	Buckland	Uu
Franklin District	Clarks Beach/Waiiau Beach	Eb
Franklin District	Karaka Sports Ground	Uu
Franklin District	Onewhero Golf Club	Uu
Franklin District	Patumahoe	Dd
Franklin District	Pokeno	Ba
Franklin District	Pukekohe	Ua
Franklin District	Tuakau	Ea

Territorial Authority	Community	Grade
Franklin District	Waiuku	Db
Franklin District	Wesley College	Uu

Source: [www.drinkingwater.org.nz](http://www.drinkingwater.org.nz)

Note 1: Distribution Zone Grades

Zone grading (a1 to e) is based upon the microbiological and chemical quality of the water, along with the condition of the reticulation system and the quality of its care, etc. A zone grading should always be considered with the accompanying plant and source grading.

- a1 Completely satisfactory, negligible level of risk, demonstrably high quality
- a Completely satisfactory, extremely low level of risk
- b Satisfactory, very low level of risk
- c Marginally satisfactory, moderate level of risk.
- d Unsatisfactory level of risk
- e Unacceptable level of risk
- u Not yet graded

(Not yet required if less than 500 people)

Note 2: Source and Plant Grading

Plant and source grading is based primarily on the likely health risks to the community arising from bacteria, protozoa (*Giardia* and *Cryptosporidium*) and chemical substances in the source water, and how effectively the treatment plant can act as a barrier to such contaminants passing through to the reticulation.

Possible gradings are A1 (best), then A to E. As well as appearing against each plant, each zone inherits the plant grading from the worst plant providing it with water.

- A1 Completely satisfactory, negligible level of risk, demonstrably high quality
- A Completely satisfactory, extremely low level of risk
- B Satisfactory, very low level of risk when the water leaves the treatment plant.
- C Marginally satisfactory, low level of microbiological risk when the water leaves the treatment plant, but may not be satisfactory chemically.
- D Unsatisfactory level of risk
- E Unacceptable level of risk
- u Ungraded

Note 3: Results are shown only for communities of 500 or more people, including communities that are within the district boundary but not the Waikato Region boundary. Additional information for smaller supplies is available from [www.drinkingwater.org.nz](http://www.drinkingwater.org.nz).

Table 3.3.1b: Changes to public health grading for selected community water supplies between 2009 and 2010

Territorial Authority	Community	2009 Grade	2010 Grade
Hamilton City	Templeview	Ab	Aa
Hauraki District	Paeroa	Uu	Ec
Otorohanga District	Otorohanga	Uu	Ee
South Waikato District	Putaruru	Uu	Ue
South Waikato District	Tirau	Uu	Ed
South Waikato District	Tokoroa	Uu	Ed
Thames-Coromandel District	Tairua	Uu	Ec
Thames-Coromandel District	Thames	Uu	Bb
Waikato District	Ngaruawahia	Uu	Ee
Waikato District	Te Kauwhata	Uu	Ed
Rotorua District	Hamurana	Ee	Eb
Rotorua District	Kaharoa	Ee	Eb
Rotorua District	Okareka	Uu	Da
Rotorua District	Reporoa	Uu	Ec
Rotorua District	Rotorua Central	Ee	Ea
Rotorua District	Rotorua East	Ee	Ec

Source: [www.drinkingwater.org.nz](http://www.drinkingwater.org.nz)

Notes: Aa = completely satisfactory for distribution zone, source and plant; Au = completely satisfactory for distribution zone but ungraded for source and plant; Uu = not yet graded for distribution zone, source or plant. Results are shown only for communities of 500 or more people, including communities that are within the district boundary but not the Waikato Region boundary. Additional information for smaller supplies is available from [www.drinkingwater.org.nz](http://www.drinkingwater.org.nz).

## **3.4 Regional planning**

### **Community outcome(s):**

3D We take a practical and coordinated approach to planning and providing services, which works effectively across boundaries and sectors and responds to our communities' needs.

### **Why is this important?**

Waikato regional communities wish to see agencies working efficiently and effectively to create a joined-up approach to service provision. Local authorities are seen as community advocates and leaders, with an important role in linking agencies and communities.

### **What are the indicators?**

3.4.1 Residents' confidence in councils' decision-making

3.4.2 Residents' satisfaction with councils' approach to planning and providing services

### **How are we doing?**

- Survey data shows that Waikato regional communities have a reasonably high level of confidence in their councils' decision-making. This indicator varies between territorial authority areas.
- No data source has yet been identified for monitoring residents' satisfaction with councils' approach to planning and providing services.

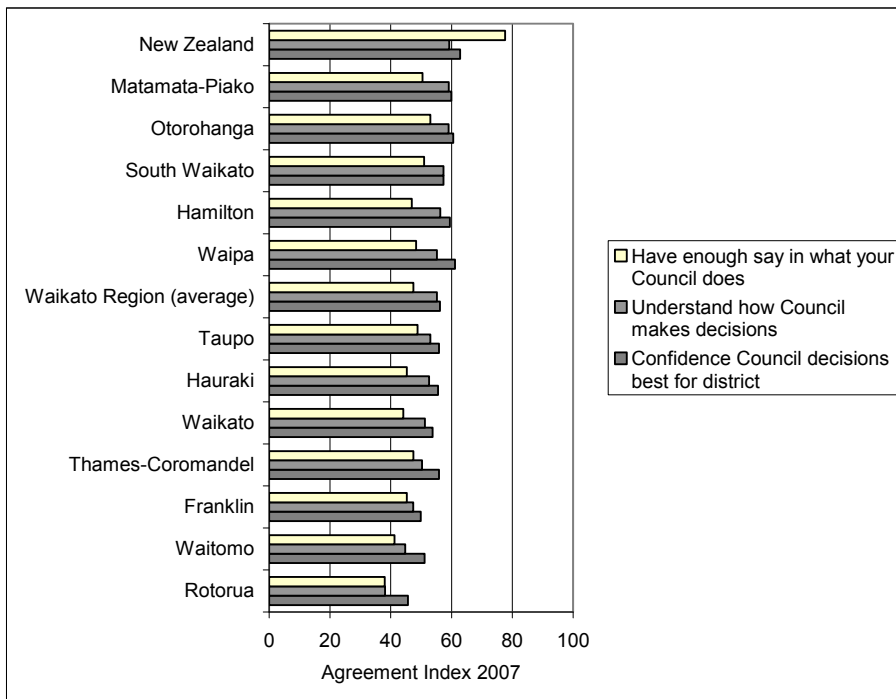
Indicator	State	Trend
3.4.1 Residents' confidence in councils' decision-making	☹	?

This indicator measures residents' rating of agreement that decisions made by their local council are in the best interests of the city.

Residents' confidence in council processes and decision-making is important for a functioning democracy. Elected members have a responsibility to reflect their communities' values. The perception of residents' confidence in council decision-making is a measure of community representation and reflects how close local government is to its community of interest.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents were asked: 'We are interested in understanding your views on the role of your local Council. For each of the following statements can you please tell if you agree or disagree using the scale where 0 = Strongly Disagree and 10 is Strongly Agree.' Over half of the respondents (52%) agreed (scores 6-10) with the statement 'Overall, you have confidence that the Council makes decisions that are in the best interests of your District' but this dropped to 47% for the statement 'You have enough say in what your Council does'. Between 26% and 37% disagreed with each statement (scores 0 – 4). This reflects in the Agreement Index (weighted average score) which is 56.2 points for the statement 'Overall, you have confidence that the Council makes decisions that are in the best interests of your District' down to an Agreement Index of 47.5 points for the statement 'You have enough say in what your Council does'. The Agreement Index varied by location, with Rotorua respondents being the least satisfied with this factor in 2007 (Agreement Index 38.1 points) (refer Figure 3.4.1).

Figure 3.4.1: Respondents' confidence in council decision-making – Waikato territorial authority areas and New Zealand average 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2006

Note: The Agreement Index for New Zealand was calculated as a weighted average index from a five-point scale. Results for New Zealand come from a different source than the other results and may be influenced by methodological differences. For these reasons, comparisons with the New Zealand figures should be interpreted cautiously.

	Indicator	State	Trend
3.4.2	Residents' satisfaction with councils' approach to planning and providing services	☺	?

No data source has yet been identified for this indicator.

## **3.5 Land-based industries**

### **Community outcome(s):**

3F Our economy is built on land-based industries, and we encourage planning and practices that protect and sustain our productive resources.

### **Why is this important?**

Waikato communities value the characteristics that define their Region, including the quality of the natural environment and land-based industries such as dairying.

### **What are the indicators?**

#### 3.5.1 Regional GDP contributed by primary industries

### **How are we doing?**

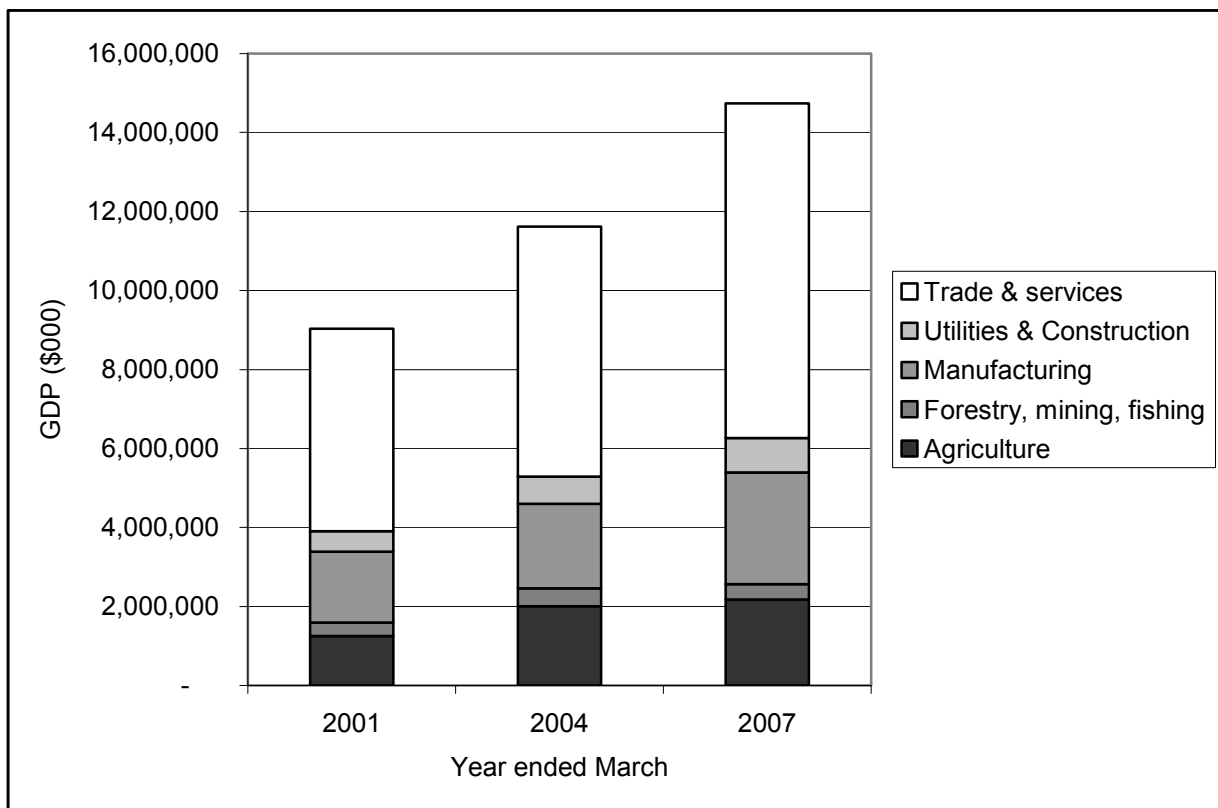
- In the year ended March 2007, the Waikato Region contributed approximately 9.1% of national GDP. Of this, approximately 14% (\$2.2 billion) is agricultural production. The proportion contributed by agriculture has increased since 2001, when it was 12.7%. The dairy industry, including dairy farming and manufacturing, grew from 10.8% of GDP in 2001 to 12.7% in 2007.

Indicator	State	Trend
3.5.1 Regional GDP contributed by primary industries	☹	↑

Gross Domestic Product (GDP) is an internationally accepted measure of economic activity. When presented on a regional basis, it provides an indication of the size and structure of a regional economy and measures the changes taking place within it. Regional economic data supports Government’s ability to identify and address region-specific issues more efficiently.

Statistics New Zealand released industry-level GRP estimates for the year ended March 2007, and these were regionalised by Garry MacDonald, Market Economics Limited. According to these results, the Waikato Region is still the fourth largest regional economy in New Zealand after Auckland, Wellington and Canterbury. In the year ended March 2007, the Waikato Region contributed 9.1% of national GDP. Of this, approximately 14% (\$2.2 billion) is agricultural production. The proportion contributed by agriculture has increased since 2001, when it was 12.7%. The dairy industry, including dairy farming and manufacturing, grew from 10.8% of GDP in 2001 to 12.7% in 2007.

Figure 3.5.1: Regional GDP estimates – Waikato Region



Source: Market Economics Limited, 2009, based on Statistics New Zealand data.

Notes: Figures may not sum due to rounding. All figures are in current prices (\$000). Timeframe is year ended March.

## 3.6 Tourism

### Community outcome(s):

3G We have a tourism industry that recognises the region's cultural and environmental heritage and values, and supports economic growth.

### Why is this important?

Developing the Waikato Region's tourism sector is seen as a key step in overall economic development. The Region contains a diversity of attractions, events and visitor facilities.

### What are the indicators?

- 3.6.1 Visitor nights in commercial accommodation
- 3.6.2 International visitors
- 3.6.3 Income from tourism (international and domestic)
- 3.6.4 Employment in the tourism industry

### How are we doing?

- An estimated 4.5 million guest nights were recorded in commercial accommodation in the Waikato Region in the year to February 2010, including guest nights in Rotorua. The Waikato Region contributes approximately 8-9% of New Zealand's overall guest nights in commercial accommodation (excluding the Rotorua area).
- For the year ended February 2010 there were 2.5 million international visitor arrivals to New Zealand, up 2.4% on the previous year. For the Waikato Region, international visitor numbers and nights steadily increased between 1998 and 2006 but dipped slightly in 2007. The average length of stay for international visitors has increased substantially since the 1990s.
- An estimated \$1.52 billion was spent by international and domestic visitors in the Waikato Region during 2006, down from \$1.58 billion in 2002. Despite recent declines in regional visitor expenditure, the Ministry of Tourism is projecting that by 2013 total visitor expenditure in the Region will rise to an estimated \$1.98 billion. However, significant changes to the global economy over the past two years mean that the Ministry of Tourism's forecasts need to be treated with caution.
- At the national level, an estimated 4.9% of full-time equivalent employees were directly engaged in producing goods and services purchased by tourists in 2009. No known data is available at the regional level for this indicator.

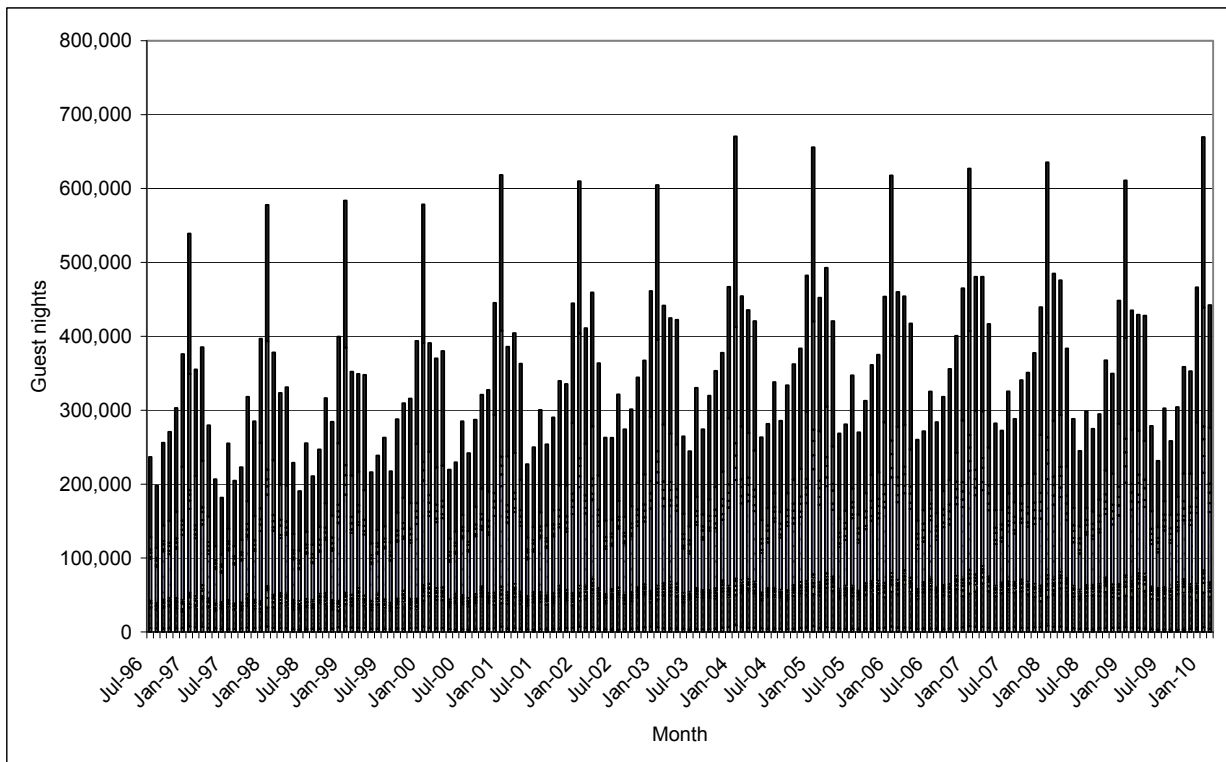
Indicator	State	Trend
3.6.1 Visitor nights in commercial accommodation	☹	⇒

This indicator measures the number of guest nights spent in commercial accommodation for each territorial authority.

Information on the demand for accommodation is used in policy planning at the regional and local level.

An estimated 4.5 million guest nights were recorded in commercial accommodation in the Waikato Region in the year to February 2010, including guest nights in Rotorua (refer Figure 3.6.1a). Approximately 39% of all guest nights in the Region are in the Rotorua District, of which only a small part is included within the Waikato Regional Council boundary. This is followed by 22% in the Taupo District, 14% in Thames-Coromandel and 12% in Hamilton City. There is also a high level of seasonality, with visitor nights peaking during the summer months. The Waikato Region contributes approximately 8-9% of New Zealand’s overall guest nights in commercial accommodation (excluding the Rotorua area). Figures 3.6.1a and 3.6.1b show that overall guest nights per annum for the Region remaining relatively steady until recently, then dropped during 2008/09 and recovered during 2009/10. In February 2010 compared with February 2009, total guest nights in New Zealand increased 1.5% to 3.3 million.

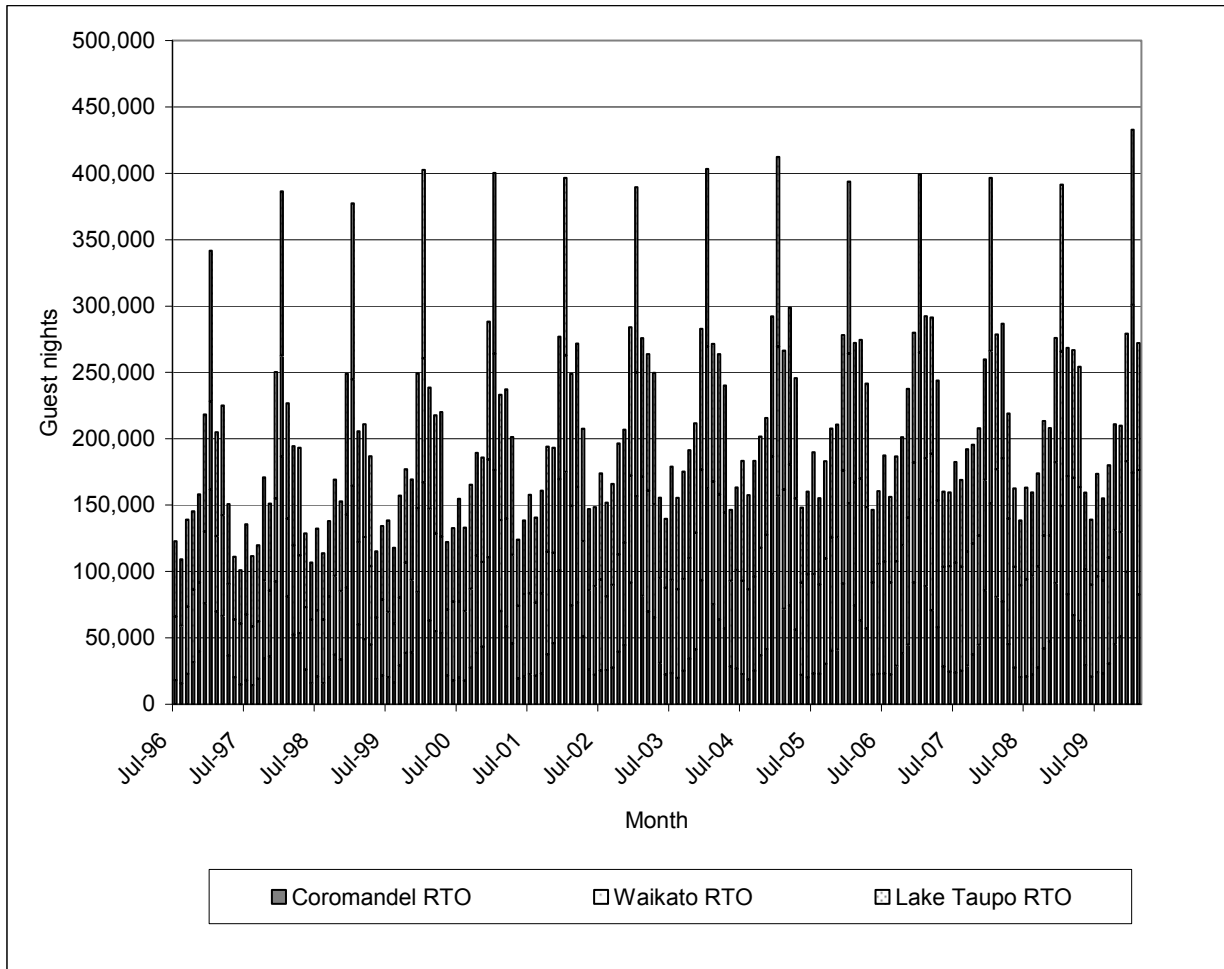
Figure 3.6.1a: Guest nights by month for territorial authorities in the Waikato region



Source: Ministry of Tourism – Commercial Accommodation Monitor

Note: Waikato figures are calculated as the sum of guest nights for all territorial authorities in the Region (including Rotorua).

Figure 3.6.1b: Guest nights by month - Coromandel RTO, Waikato RTO, Lake Taupo RTO



Source: Ministry of Tourism - Commercial Accommodation Monitor

Note: RTO = Regional Tourism Organisation area

Note: Waikato figures are calculated as the sum of guest nights for all RTOs in the Region (excluding Rotorua).

Indicator	State	Trend
3.6.2 International visitors	☹	↑

This indicator measures the number of international visitors who visited the Waikato Region and the average number of nights they stayed in the Region.

Information on international visitor trend is used for marketing purposes at the regional and local level.

For the year ended February 2010 there were 2.5 million international visitor arrivals to New Zealand, up 2.4% on the previous year. Table 3.6.2a shows that for the Waikato Region, according to the International Visitor Survey (IVS), international visitor numbers and nights steadily increased between 1998 and 2006 but dipped slightly in 2007. (Note: regional-level data for 2008 and 2009 are not available). The average length of stay for international visitors has increased substantially since the 1990s.

*Table 3.6.2a: Number of international visitors visiting Waikato Region and nights spent*

Year ended March	Number of people	Number of nights in area	Average number of nights in area per person
1998	319,519	1,490,167	4.7
1999	324,324	1,649,296	5.1
2000	352,285	1,734,651	4.9
2001	387,670	1,677,495	4.3
2002	398,143	2,294,830	5.8
2003	467,045	2,901,054	6.2
2004	477,255	3,074,324	6.4
2005	574,979	3,595,409	6.3
2006	527,908	3,187,880	6.0
2007	506,730	3,226,036	6.4

Source: Ministry of Tourism: International Visitor Survey (IVS)

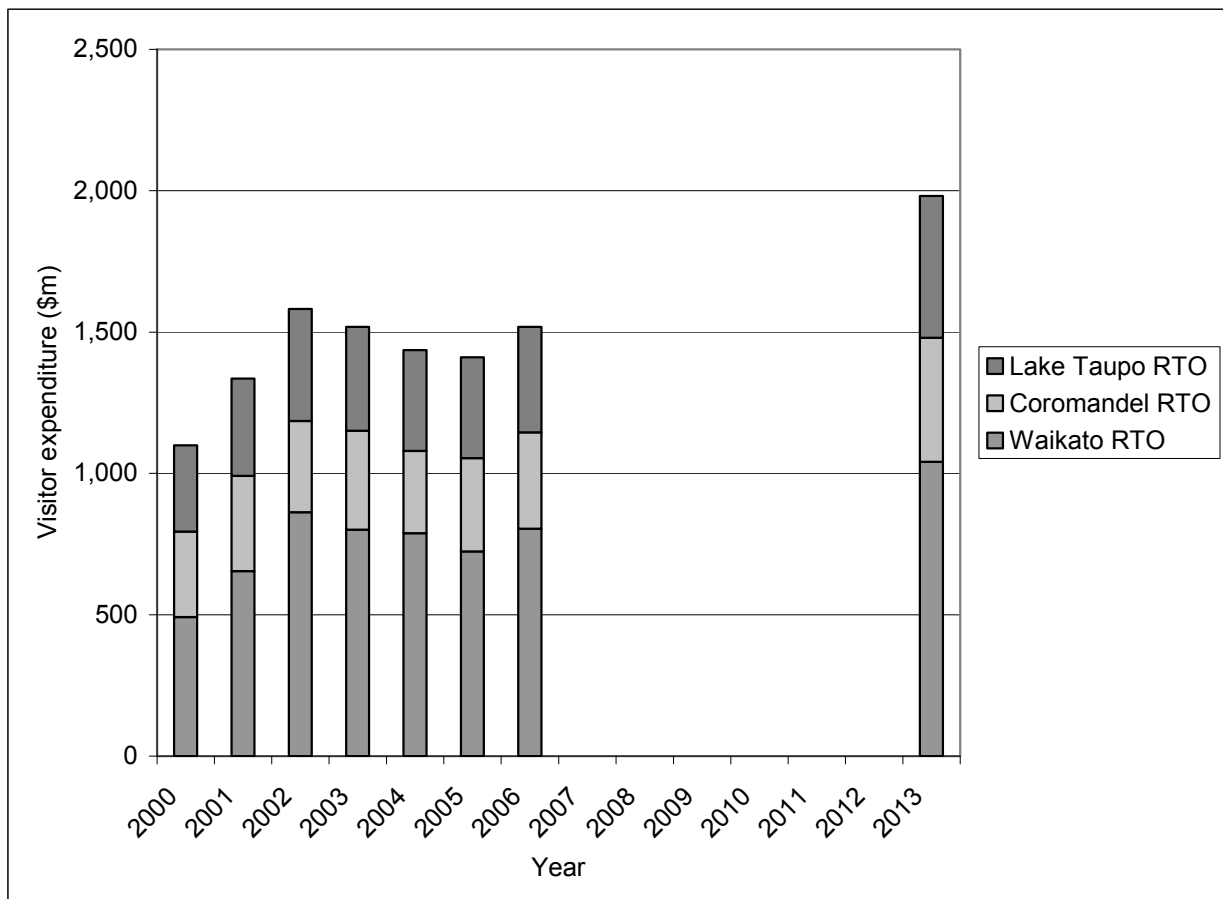
Indicator	State	Trend
3.6.3 Income from tourism (international and domestic)	☹	⇒

This indicator measures the income generated from international and domestic visitor expenditure.

Tourism plays a significant role in the New Zealand economy in terms of the production of goods and services and the creation of employment opportunities. In 2006 international and domestic travellers spent an estimated total of \$804m in the Waikato Regional Tourism Organisation (RTO) area, \$373m in the Lake Taupo RTO and \$341m in Coromandel RTO. International overnight travellers accounted for more than 25% of this spend. The ability to measure tourism trends and impacts at a local and regional level assists local government to better plan for tourism infrastructure and services.

Figure 3.6.3 shows that an estimated \$1.52 billion was spent by international and domestic visitors in the Waikato Region during 2006, down from \$1.58 billion in 2002. Despite recent declines in regional visitor expenditure, the Ministry of Tourism is projecting that by 2013 total visitor expenditure in the Region will rise to an estimated \$1.98 million. However, significant changes to the global economy over the past two years mean that the Ministry of Tourism’s forecasts need to be treated with caution.

Figure 3.6.3: Total visitor expenditure – Waikato RTO, Coromandel RTO, Lake Taupo RTO



Source: Ministry of Tourism

Indicator	State	Trend
3.6.4 Employment in the tourism industry	☹	↑

This indicator measures the numbers of people in employment resulting from direct and indirect tourism demand.

An estimated 94,600 full-time equivalent employees (4.9% of total employment in New Zealand) were directly engaged in producing goods and services purchased by tourists in 2009. This includes employment generated by international students studying short-term in New Zealand. The ability to measure tourism trends and impacts at a local and regional level assists local government to better plan for tourism infrastructure and services.

Statistics New Zealand's Tourism Satellite Account is the only known source of data for employment through direct and indirect tourist demand. The Tourist Satellite Accounts provide national summary data only. No known data is available at the regional level.

**Table 3.6.4: Summary of Tourism Employment for New Zealand**

Year ended March	Employment (FTE persons)			Employment (FTE persons) engaged in tourism as a percentage of total employment in New Zealand		
	Directly engaged in tourism	Indirectly engaged in tourism	Total tourism employment in New Zealand	Directly engaged in tourism	Indirectly engaged in tourism	Total tourism employment in New Zealand
2001	85,200	73,400	158,600	5.3%	4.6%	9.9%
2002	87,600	76,400	164,000	5.3%	4.6%	10.0%
2003	94,000	82,000	176,000	5.6%	4.9%	10.4%
2004	90,700	81,200	171,900	5.2%	4.7%	9.9%
2005	90,100	84,200	174,300	5.0%	4.7%	9.7%
2006	93,100	85,000	178,100	5.0%	4.6%	9.6%
2007	92,600	88,500	181,100	4.9%	4.7%	9.6%
2008	94,200	89,600	183,800	5.0%	4.7%	9.7%
2009	94,600	90,200	184,800	4.9%	4.7%	9.6%

Source: Tourism New Zealand: Tourism Satellite Account

Notes: (1) A change in the data source for employment numbers means that the new series is currently only available from 2001. (2) Employment numbers are rounded to the nearest hundred. (3) FTE is an abbreviation for full-time equivalent. (4) Historical data is subject to retrospective revision upon release of updated annual estimates.

## **3.7 Research and innovation**

### **Community outcome(s):**

3H Our region has a reputation for entrepreneurship, innovation, research and education, attracting investment and people to work, study and visit.

### **Why is this important?**

The Waikato Region is home to nationally and internationally renowned research and education facilities including a university, institutes of technology and polytechnics, various Crown research Institutes and commercially owned research and innovation specialists. Waikato regional communities value the Region's reputation has for high quality education and research.

### **What are the indicators?**

3.7.1 Total research funding

3.7.2 Enrolments at tertiary education institutes

### **How are we doing?**

- Total research and development expenditure in New Zealand for 2008 was estimated at \$2.14 billion. This compares with \$1.11 billion in 1998, an increase of 52% on an inflation-adjusted basis over a ten year period. R&D expenditure more than doubled as a percentage of overall national GDP over the period 1998 to 2008. R&D expenditure was 1.20 percent of GDP in the 2008 reference year compared with the OECD average of 2.26 percent in the 2006 reference year. Research income by the University of Waikato increased by around 25% in real terms over the period 2002 to 2007 but subsequently fell in 2008. Research income contributed approximately 12% of total revenues for the University of Waikato in 2008.
- The total number of Effective Full-Time Equivalent Students (EFTS) increased at both Waikato Institute of Technology (Wintec) and the University of Waikato over the period 2000 to 2005 but subsequently declined. In 2008 there were approximately 16,000 students enrolled at both institutes combined.

Indicator	State	Trend
3.7.1 Total research funding	☹	↑

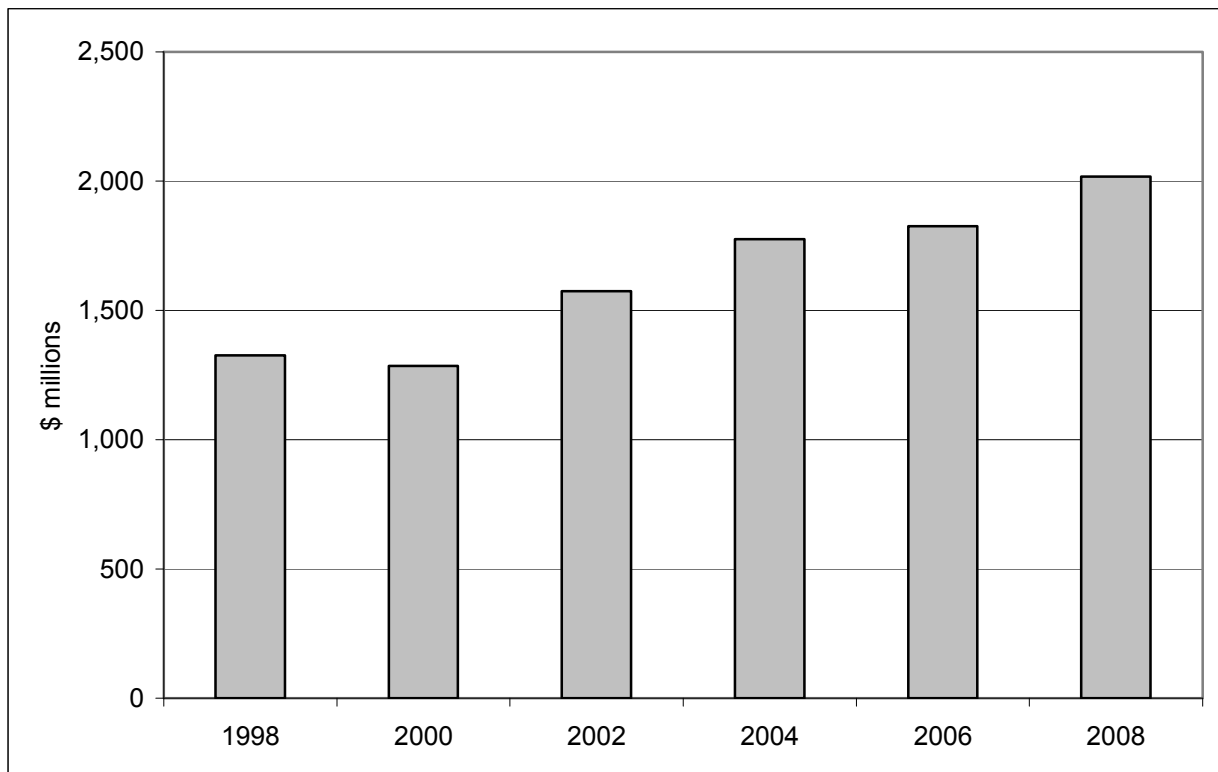
At the national level only, this indicator presents information on research and development expenditure, type of research and development by sector, and source of funding for research and development expenditure.

Expenditure for research indicates the level of innovation and investment in science and technology. This reflects the type of society and is a driver towards a knowledge-based economy.

According to figures in the report “Research and Development in New Zealand: 2008” (Statistics New Zealand/MoRST), total research and development expenditure in New Zealand for 2008 was estimated at \$2.14 billion. This compares with \$1.11 billion in 1998, an increase of 93% in nominal terms over a ten year period and 52% on an inflation-adjusted basis (refer Figure 3.7.1a). Note in figure 3.7.1a that the observed increase between 2000 and 2004 was partly due to methodology changes. Figure 3.7.1b shows that R&D expenditure more than doubled as a percentage of overall national GDP over the period 1998 to 2008. R&D expenditure was 1.20 percent of GDP in the 2008 reference year compared with 1.16 percent of GDP in 2006. The OECD total was 2.26 percent in the 2006 reference year.

Figure 3.7.1c shows that research income by the University of Waikato increased by around 25% in real terms over the period 2002 to 2007 but subsequently fell in 2008. Research income contributed approximately 11.67% of total revenues for the University of Waikato in 2008. The research funding is being managed independently of the University's other business under a Research Trust.

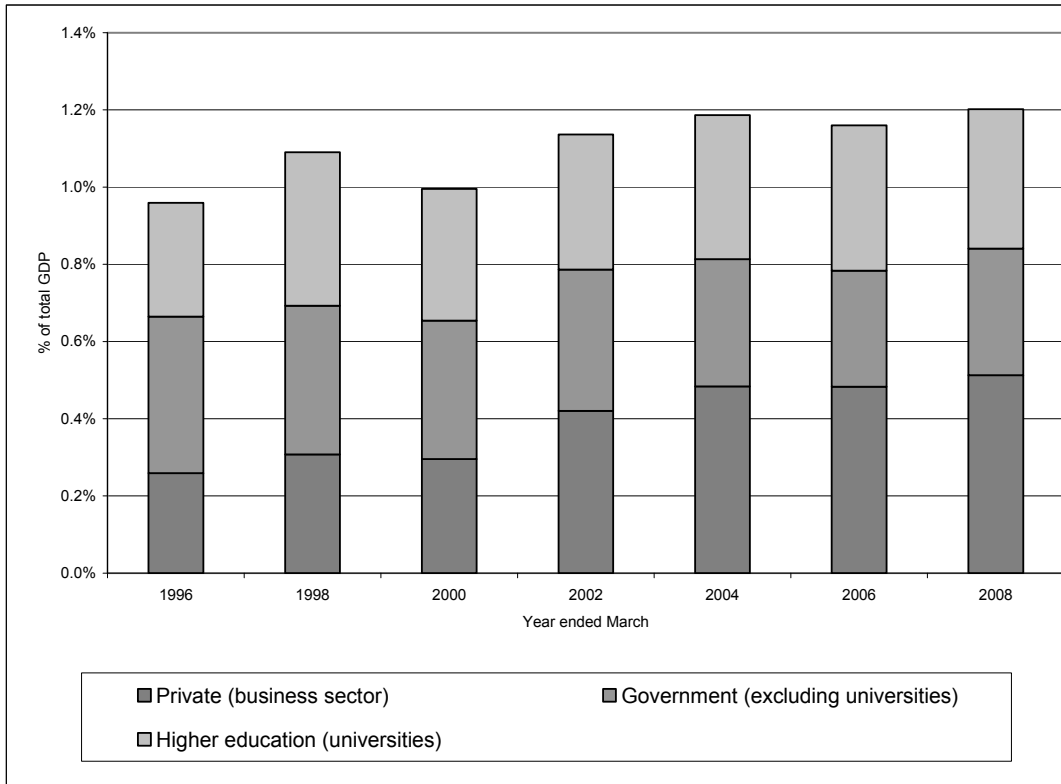
Figure 3.7.1a: Real expenditure on research and development in New Zealand (\$million) in June 2006 dollars



Source: Statistics New Zealand: Research and Development Surveys

Notes: For the purpose of this indicator, gross expenditure on R&D is adjusted by the Consumers Price Index (CPI) (base June 2006 quarter) to calculate real R&D expenditure.

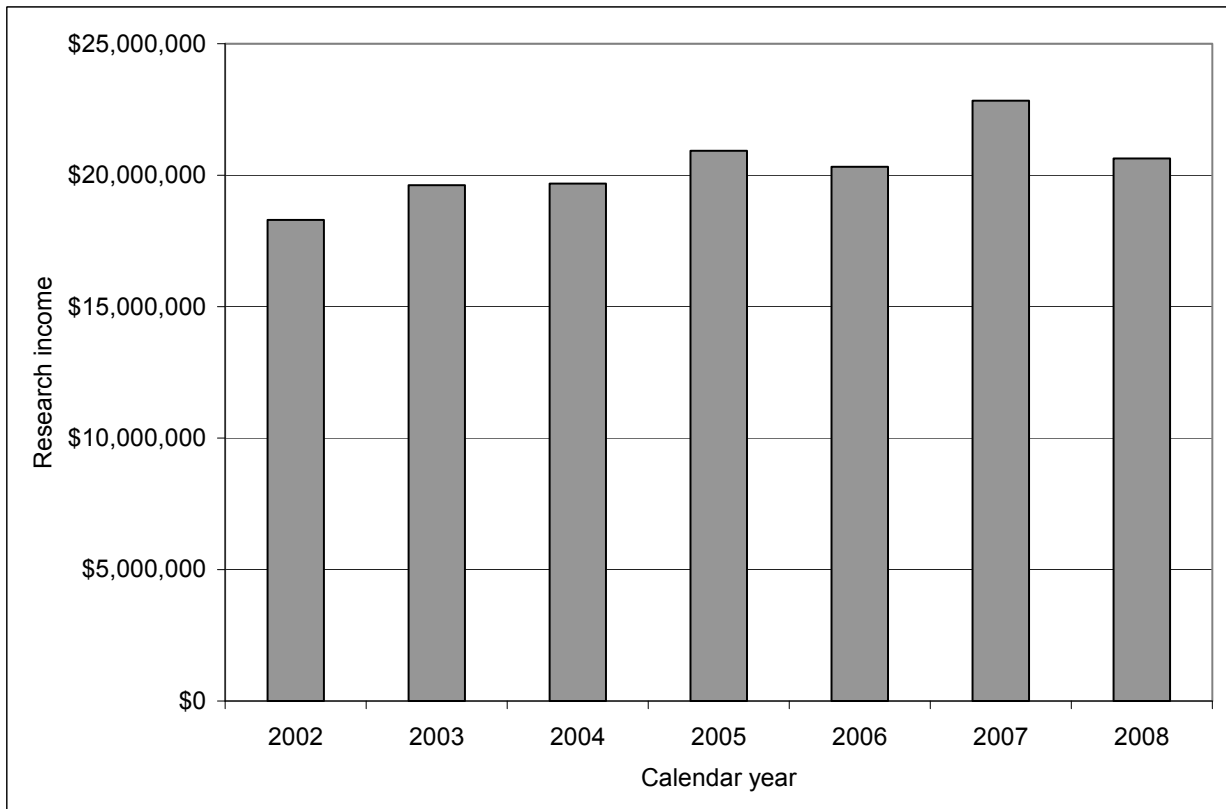
Figure 3.7.1b: Research and development expenditure as a proportion of GDP by sector



Source: Statistics New Zealand: Research and Development Surveys

Notes: Based on Statistics New Zealand GDP current price expenditure measure, year ended 31 March. Figures may not sum to totals due to rounding. P = Provisional.

Figure 3.7.1c: Real research income (June 2006 dollars) – University of Waikato



Source: Annual Reports – University of Waikato

Notes: Includes income earned by subsidiaries and associates (ie, consolidated).

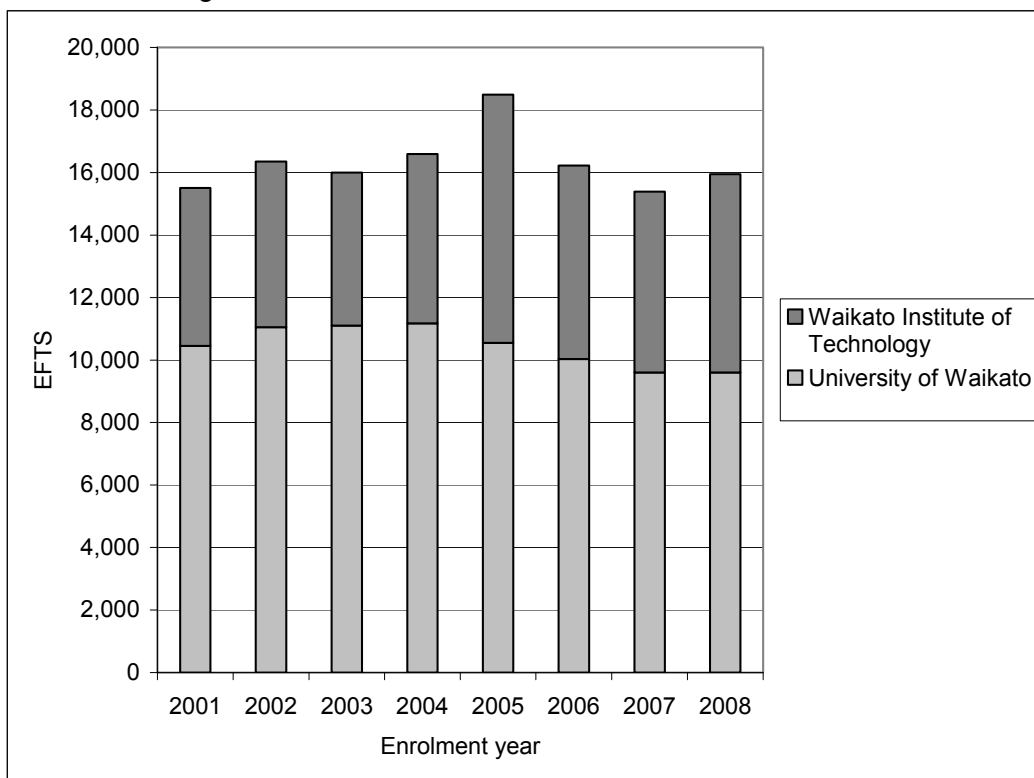
Indicator	State	Trend
3.7.2 Enrolments at tertiary education institutes	☹	⇒

This indicator measures the percentage participation in tertiary education by type of qualification (certificates, diplomas, bachelor and post-graduate degrees). Formal tertiary education is study undertaken at a public or private tertiary education provider that leads to a recognised New Zealand qualification.

The acquisition of a tertiary qualification provides individuals with skills and knowledge that allows them to participate more fully in society and in the economy. It can also provide higher earning opportunities and help address knowledge and skills gaps in the economy.

Tertiary education enrolments in New Zealand fell between 2005 and 2008. Figure 3.7.2 shows that the total number of students increased at both Waikato Institute of Technology (Wintec) and the University of Waikato over the period 2000 to 2005 but has subsequently fallen. In 2008 there were approximately 16,000 students enrolled at both institutes combined. Forthcoming figures for 2009/2010 are likely to be higher, in part due to the effects of the economic recession.

Figure 3.7.2: Domestic and international students enrolled, major regional tertiary institutions in the Waikato Region



Source: Data Management and Analysis Division, Ministry of Education

Notes: EFTS relates to the academic Effective Full-Time Student value of the qualification for the current enrolment year. Data relates to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS. Data excludes all non-formal learning and on-job industry training. Data excludes those Private Training Establishments which neither received tuition subsidies nor were approved for student loans or allowances. Private Training Establishment includes OTEPs. Students who were enrolled in more than one sub-sector have been counted in each sub-sector. Consequently, the sum of each sub-sector may not add to the total number of students. Students who were enrolled in more than one provider have been counted in each provider. Consequently, the sum of each provider may not add to the total number of students. Totals also include those students with unknown values.

## 4. CULTURE AND IDENTITY

Waikato regional communities aspire towards the following in terms of culture and identity:

*“The Waikato region identifies with – and values – its land, air, rivers and waterways, mountains, flora, fauna and its people”.*

For the purpose of this report, culture and identity indicators have been clustered into five themes as follows:

Code	Theme	Community outcomes
4.1	Regional identity and pride	4A We are proud of our region’s distinctive identity, its strong Māoritanga, and its rich and diverse natural and cultural heritage.
4.2	Historic buildings and places	4B Heritage sites and landscapes of significance to whanau, hapū and iwi are preserved and valued. 4C Our historic buildings and places are retained and cared for. New developments are designed to be sensitive to people, places and the environment.
4.3	Culture and recreation	4D All our communities have cultural and recreational events and facilities. We identify with and take part in our communities, building good community spirit.
4.4	Creativity	4E Art, culture and creativity can be a part of everyone’s life. We all have opportunities for creative expression and our creative industries are supported and promoted.

## 4.1 Regional identity and pride

### Community outcome(s):

4A We are proud of our region's distinctive identity, its strong Māoritanga, and its rich and diverse natural and cultural heritage.

### Why is this important?

Community pride is an important element of overall quality of life. It affects the way we perceive our local environment and how we interact with others. Community pride and social connection can also impact on how non-residents perceive the Region.

### What are the indicators?

4.1.1 Residents' rating of their sense of pride in the way their city/town looks and feels

4.1.2 Number of Māori speakers (in Māori and total population)

4.1.3 Proportion of population that speak the 'first language' of their ethnic group

### How are we doing?

- Survey results show that most Waikato residents feel a sense of pride in their district or city.
- The proportion of Waikato Region residents who spoke te reo Māori at the time of the 2006 Census was above the national average (6.2% compared to 4.2%). This is at least partly due to the above average proportion of Māori residents in the Waikato regional population. Within a number of territorial authority areas in the Region, the proportion of Māori language speakers increased between 1996 and 2001 but then fell again between 2001 and 2006. The highest proportions of Māori language speakers in the Region are in the Rotorua District (12.6%), Waitomo District (12.1%) and Waikato District (9.3%). The Waikato Region has the fourth-highest proportion of Māori residents who speak te reo Māori (25.4%) out of all regions in New Zealand, behind Gisborne, Bay of Plenty and Northland. The proportion of Māori who speak te reo Māori is substantially higher for older age groups, however the proportion of Māori aged 50 and over who speak te reo decreased over the period 1996 to 2006.
- The proportion of people who can hold everyday conversations in the first language of their ethnic groups varies widely between ethnic groups, from 16% of Cook Islands Māori to 84% of Koreans. The Waikato Region average was 51.7% in 2006, up slightly from 48.3% in 2001. Within the Region, the proportion of first language speakers ranges from around 30% in the Waitomo and South Waikato districts to a high of 60% in Hamilton City. These differences may be for a range of factors, including the length of time families from specific ethnic groups have been established in New Zealand.

	Indicator	State	Trend
4.1.1	Residents' rating of their sense of pride in the way their city/town looks and feels	☺	?

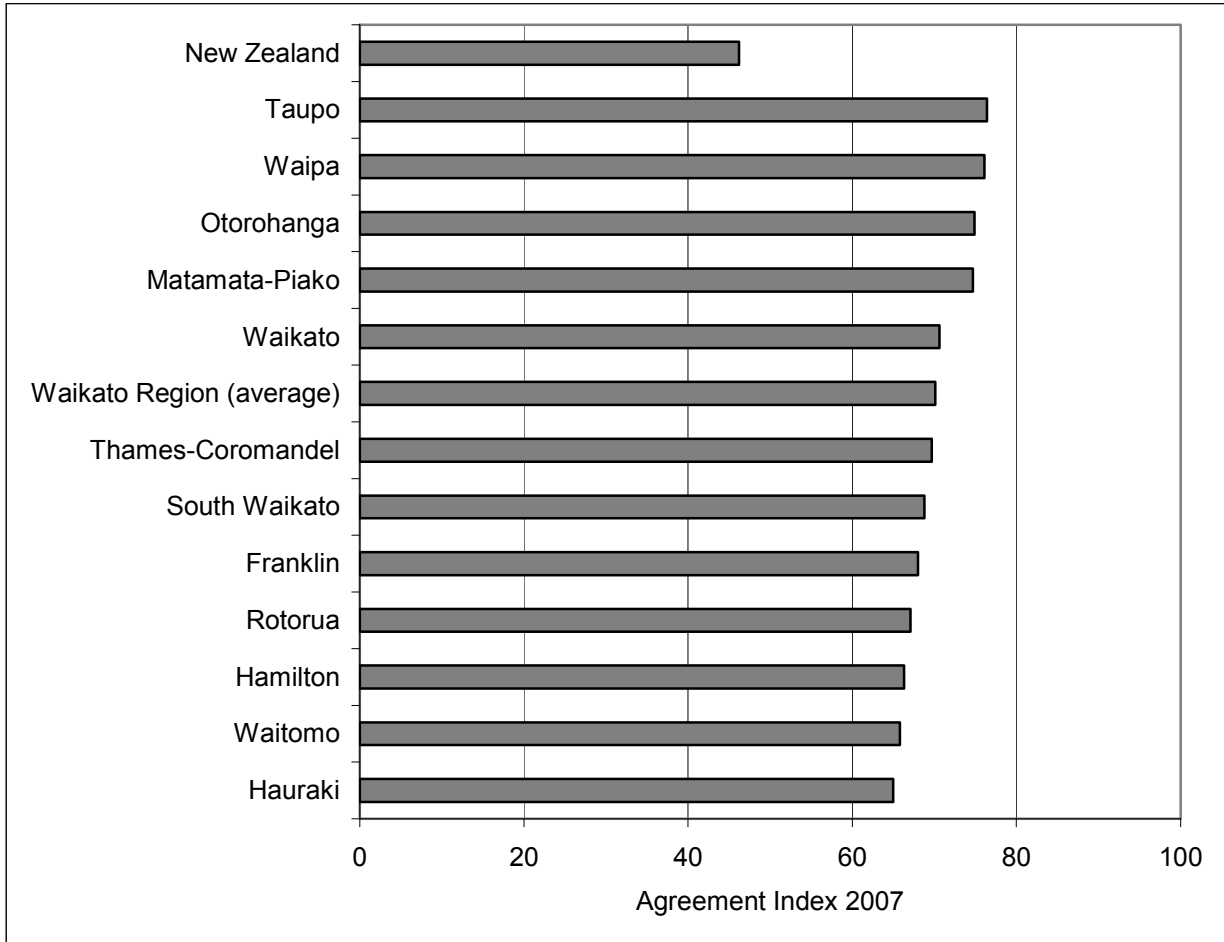
This indicator measures residents' rating (on a five point scale) of their sense of pride in the way their city/town looks and feels.

This indicator acts as a barometer of the way residents in the areas surveyed feel about the various aspects that comprise the built environment and their city/town's liveability.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents were asked: 'Using the scale where 0 = strongly disagree and 10 = strongly agree, how strongly do you agree or disagree with you feel a sense of pride in the way your District looks and feels?' Three quarters of the respondents (78%) agreed with the statement 'You feel a sense of pride in the way your District looks and feels' (scores of 7 – 10). A tenth of the respondents (10%) strongly agreed (Score of 10) while 11% rated this with a score of 9. The mode (most frequent value) was a score of 8 (25%). A tenth of the sample (10%) neither agreed nor disagreed with the statement 'You feel a sense of pride in the way your District looks and feels' (Score 5). Only a few respondents (10%) disagreed with the statement 'You feel a sense of pride in the way your District looks and feels' (Scores 0 – 4). The Agreement Index (AI score) (a weighted score across the Agreement scale) for 'You feel a sense of pride in the way your District looks and feels' was 70.1 points, a result that implies most respondents feel a sense of pride in their District.

There was some variation in the level of agreement with the statement 'You feel a sense of pride in the way your District looks and feels' based on where the respondent was from. The majority of the respondents from each area agreed with the statement 'You feel a sense of pride in the way your District looks and feels' but those from Otorohanga were most likely to strongly agree, while Waipa and Matamata-Piako were most likely to agree. Those from Hauraki were significantly more likely to strongly disagree (3%) versus 0.9% overall. The Agreement Index for the statement 'You feel a sense of pride in the way your District looks and feels' varied from 65.0 points in Hauraki to 76.4 points in Taupo.

Figure 4.1.1: Respondents' sense of pride in the way their district looks and feels – Waikato territorial authority areas and New Zealand average 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2006

Note: The Agreement Index for New Zealand was calculated as a weighted average index from a five-point scale. Results for New Zealand come from a different source than the other results and may be influenced by methodological differences. For these reasons, comparisons with the New Zealand figures should be interpreted cautiously.

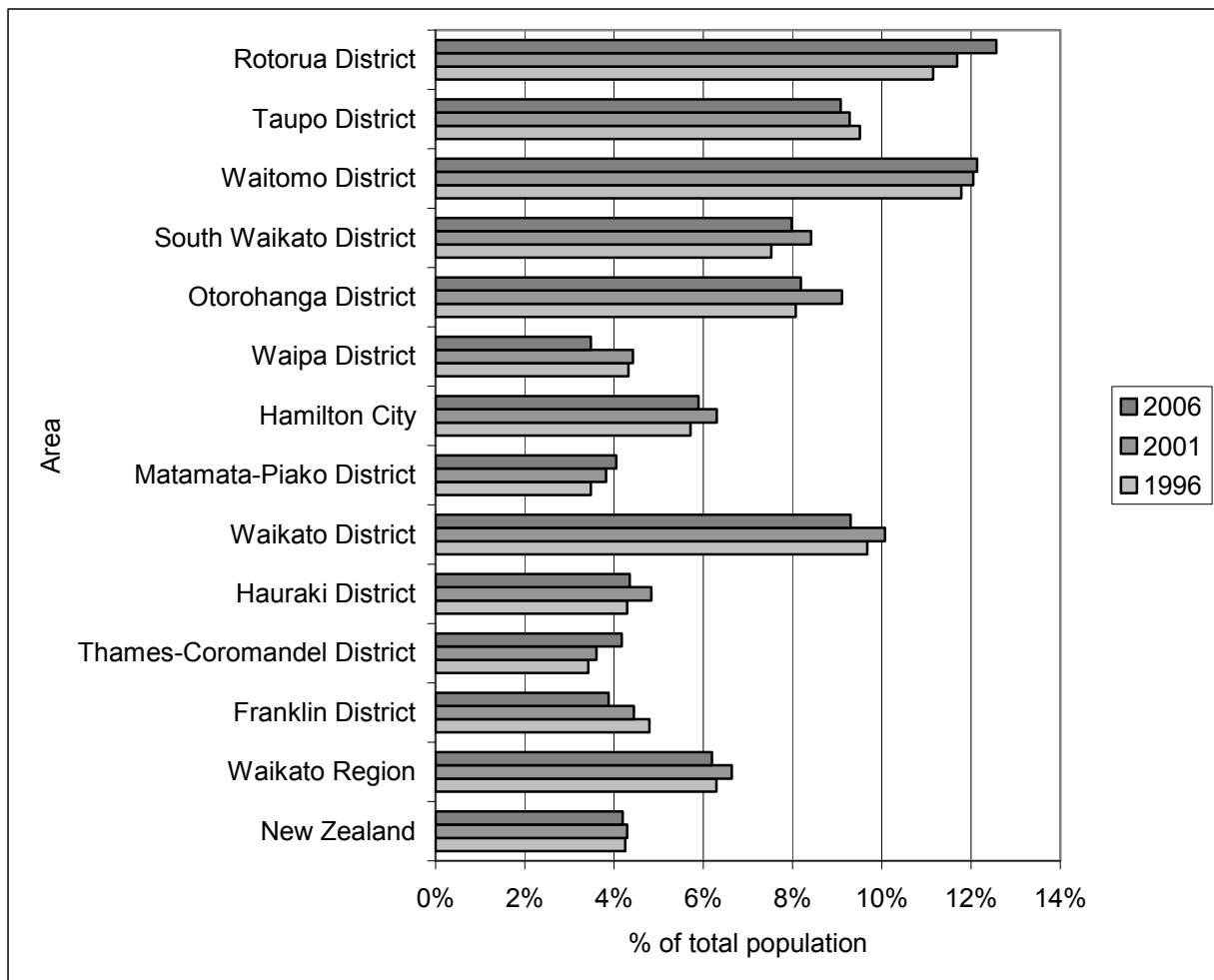
Indicator	State	Trend
4.1.2 Number of Māori speakers (in Māori and total population)	☹	⇒

This indicator measures how many people can speak and understand the spoken Māori language, in the Māori population and usually resident population.

The number of Māori language speakers reflects understanding of the importance of New Zealand’s cultural heritage.

Figure 4.1.2a shows that the proportion of Waikato Region residents who spoke te reo Māori at the time of the 2006 Census was above the national average (6.2% compared to 4.2%). This is at least partly due to the above average proportion of Māori residents in the Waikato regional population. Within a number of territorial authority areas in the Region, the proportion of Māori language speakers increased between 1996 and 2001 but then fell again between 2001 and 2006. The highest proportions of Māori language speakers in the Region are in the Rotorua District (12.6%), Waitomo District (12.1%) and Waikato District (9.3%). Table 4.1.2b shows that the Waikato Region has the fourth-highest proportion of Māori residents who speak te reo Māori (25.4%) out of all regions in New Zealand, behind Gisborne, Bay of Plenty and Northland. Figure 4.1.2c illustrates that the proportion of Māori who speak te reo Māori is substantially higher for older age groups, and that the proportion of Māori aged 50 and over who speak te reo decreased over the period 1996 to 2006.

Figure 4.1.2a: Language spoken (Māori), usually resident population - New Zealand, Waikato Region and territorial authorities



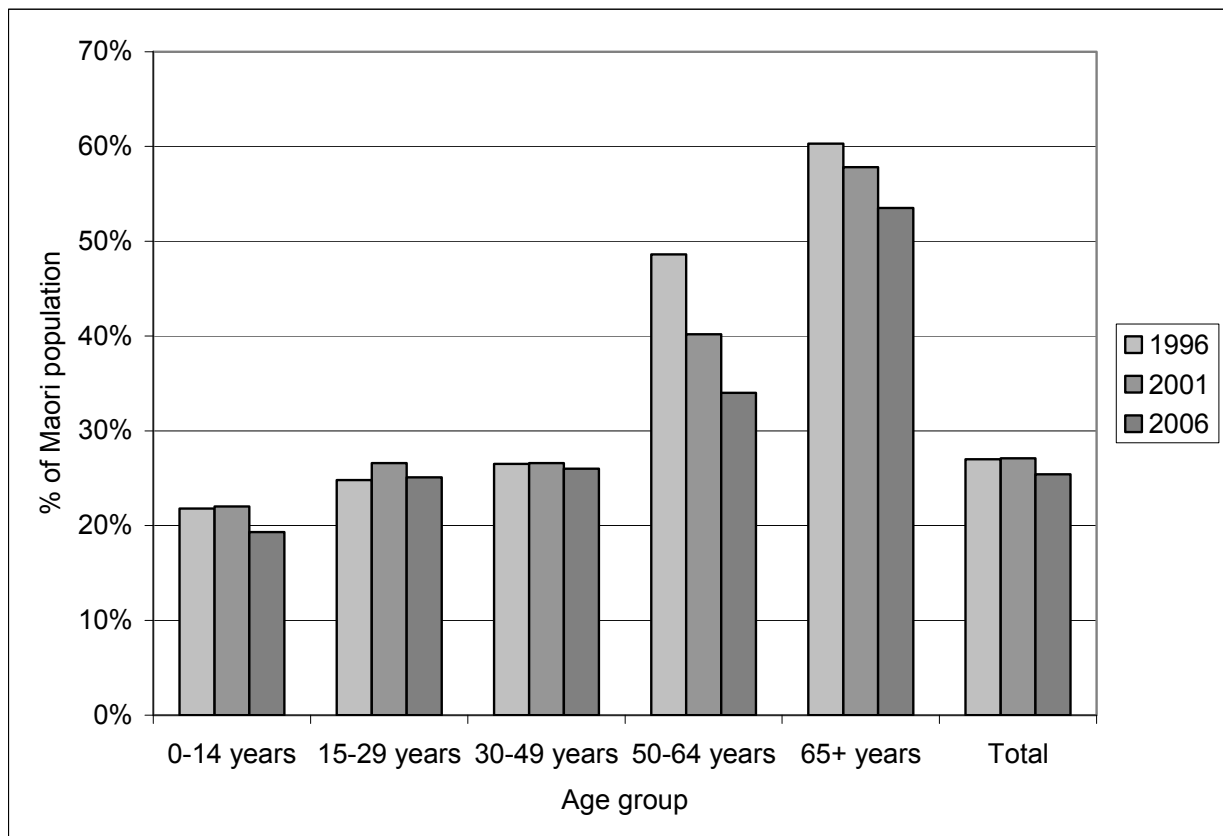
Source: Statistics New Zealand Census

Table 4.1.2b: Language spoken (Māori) for the Māori ethnic group - Waikato Region and New Zealand

Region	1996	2001	2006
Northland	29.4%	29.6%	27.9%
Auckland	20.5%	20.7%	19.8%
Waikato	27.0%	27.1%	25.4%
Bay of Plenty	31.8%	31.4%	30.3%
Gisborne	34.4%	34.1%	31.8%
Hawke's Bay	27.1%	26.7%	25.3%
Taranaki	23.9%	23.5%	20.4%
Manawatu-Wanganui	25.2%	24.9%	23.8%
Wellington	24.1%	24.3%	22.6%
Tasman	14.8%	16.3%	14.7%
Nelson	16.8%	19.8%	18.4%
Marlborough	16.0%	16.8%	15.6%
West Coast	13.8%	14.4%	12.4%
Canterbury	16.8%	18.0%	16.3%
Otago	15.5%	17.1%	15.5%
Southland	17.6%	18.7%	16.4%

Source: Statistics New Zealand Census/MSD Social Report

Figure 4.1.2c: Māori language speakers as proportion of Māori population, by age - Waikato Region



Source: Statistics New Zealand Census/MSD Social Report

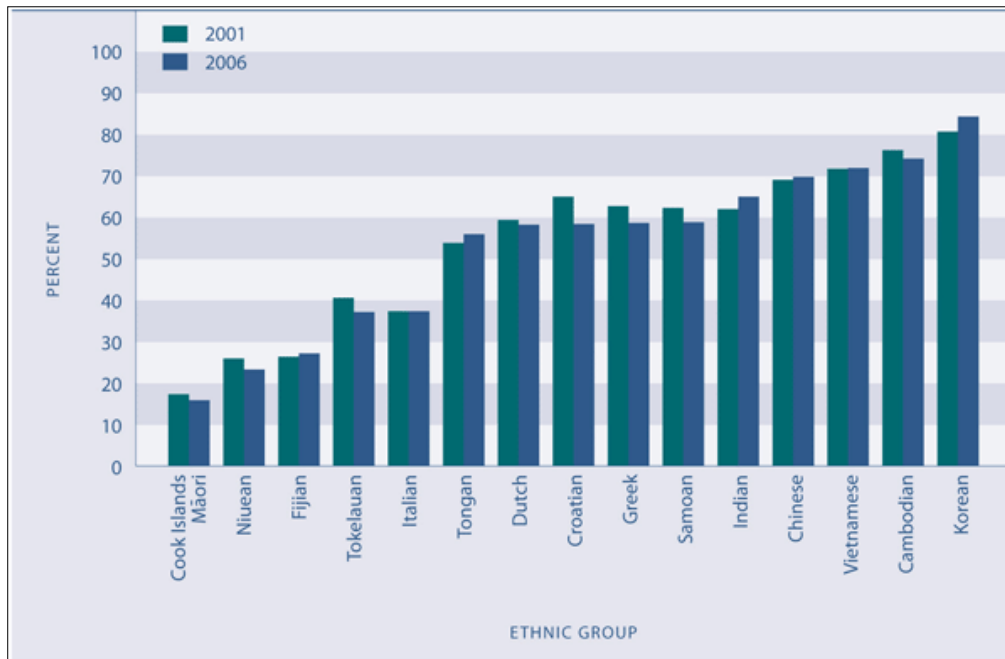
	Indicator	State	Trend
4.1.3	Proportion of population that speak the 'first language' of their ethnic group	☹	?

First language is the term used to describe a non-English language associated with a given ethnic group. Due to some ethnic groups having a large number of first languages, for example Chinese and Indian, some ethnic groups have more than one first language. This indicator looks at the number of Census respondents who can have “a conversation about every day things” in the language that is clearly associated with their ethnicity.

Language is an important part of an ethnic group’s cultural identity. It is embedded with the values, beliefs and norms of the groups who use it. For many migrants, maintaining one’s first language and passing it on to the next generation is perceived as important to both cultural and personal well-being. As a result of both global migration and declining indigenous populations, many of the world’s diverse languages face declining use or extinction. In New Zealand, some Pacific populations now exceed those of their country of origin.

In 2006 at the national level, the proportion of people who could hold everyday conversations in the first language of their ethnic groups varied widely between ethnic groups, from 16% of Cook Islands Māori to 84% of Koreans. Between 2001 and 2006, most ethnic groups experienced little change in the proportion of people who could speak their first language, although there were slight increases for Tongan, Indian and Korean ethnic groups and slight decreases for most Pacific and European ethnic groups (refer Figure 4.1.3a). The Waikato Region average was 51.7% in 2006, up slightly from 48.3% in 2001 (refer Figure 4.1.3b). Within the Region, the proportion of first language speakers ranges from around 30% in the Waitomo and South Waikato districts to a high of 60% in Hamilton City (refer Figure 4.1.3c). These differences may be for a range of factors, including the length of time families from specific ethnic groups have been established in New Zealand.

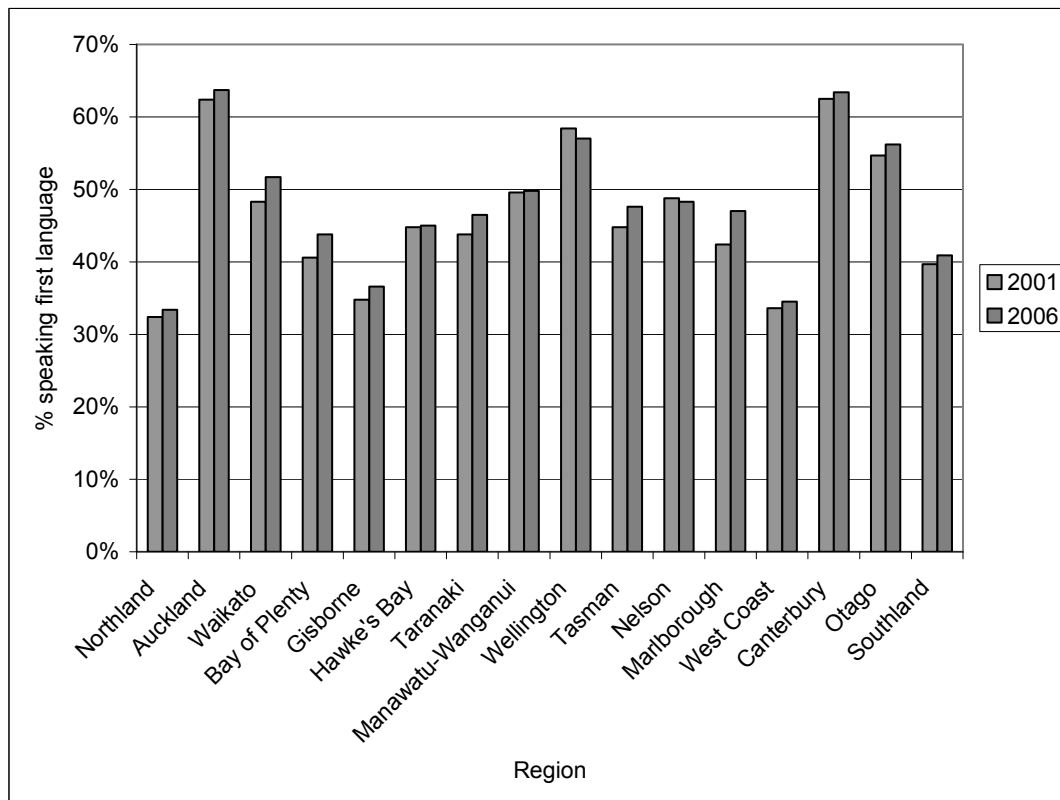
Figure 4.1.3a: Proportion of people speaking the first language of their ethnic group – whole of New Zealand 2001 and 2006



Source: Statistics New Zealand Census /MSD Social Report

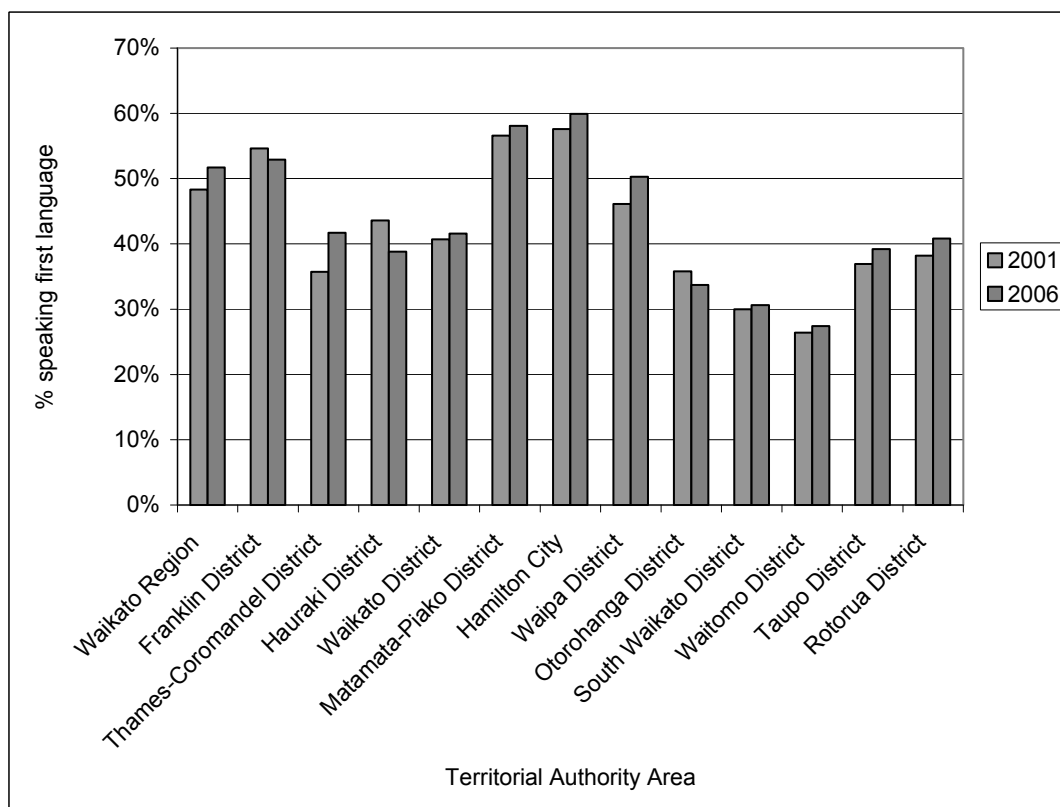
Note: Totals refer to combined selected ethnic groups

Figure 4.1.3b: Proportion of people who can speak a 'first language' (excluding English) of their ethnic group, for ethnic groups (other than Māori) – New Zealand regions 2001 and 2006



Source: Statistics New Zealand Census/MSD Social Report

Figure 4.1.3c: Proportion of people who can speak a 'first language' (excluding English) of their ethnic group, for ethnic groups (other than Māori) – Waikato Region and territorial authority areas 2001 and 2006



Source: Statistics New Zealand Census/MSD Social Report

## 4.2 Historic buildings and places

### Community outcome(s):

4B Heritage sites and landscapes of significance to whanau, hapū and iwi are preserved and valued.

4C Our historic buildings and places are retained and cared for. New developments are designed to be sensitive to people, places and the environment.

### Why is this important?

The Waikato Region's history is a fundamental aspect of its image and identity. Waikato regional communities, particularly iwi/Māori, see a need to protect and preserve the Region's rich stories and treasures. Heritage is important not only for Waikato people's sense of identity but also as a potential tourism drawcard in the future. The recently passed Waikato River Settlement Act 2010 should strengthen the monitoring and reporting of cultural data and indicators.

### What are the indicators?

4.2.1 Number of buildings and places listed on the Historic Places Trust register

4.2.2 Number and proportion of heritage buildings demolished or removed from heritage records

4.2.3 Design of new developments

### How are we doing?

- There were 484 buildings and places listed on the Historic Places Trust Register in Waikato Region territorial authority areas as at April 2010, compared with 474 in April 2009 (excluding wāhi tapu sites). The main difference is an increase in Category II historic places, including Lake House in Hamilton and the Water Tower in Cambridge.
- As at April 2010, approximately 60 Category 2 buildings and/or sites had been removed from the Historic Places Trust Register. Category 2 places are "of historical or cultural heritage significance or value". Detail on buildings removed as opposed to sites is not available. There is also no readily available information on why a record is removed, for example due to demolition or another reason.
- According to survey results, more than half of the Region's residents agree that new developments and subdivisions are sustainably designed, but a substantial proportion of other residents are in disagreement with this statement.

Indicator	State	Trend
4.2.1 Number of buildings and places listed on the Historic Places Trust register	☹	↑

This indicator measures the number of buildings and places listed on the Historic Places Trust Register in each territorial authority area.

The indicator comprises a count of buildings, structures and areas of land notable for their importance in New Zealand’s history, and for their historic, cultural, spiritual, aesthetic, social or architectural value. They may be privately or publicly owned and are not necessarily open to the public. The Register of Historic Places, Historic Areas, Wahi Tapu and Wahi Tapu Areas is the national schedule of New Zealand’s treasured heritage places. It is established under the Historic Places Act 1993, and compiled by the New Zealand Historic Places Trust. The Trust’s Register is designed to inform property owners and the public about New Zealand’s heritage places and to assist protection of these places under the Resource Management Act 1991. Councils are required to have regard to the Register when developing Regional and District Plans, and Councils are required to notify the Trust as an affected party to resource consent applications that affect registered places.

Table 4.2.1 shows there were 484 buildings and places listed on the Historic Places Trust online register in Waikato Region territorial authority areas as at April 2010. This compares with 474 that were counted on the online register in April 2009. The main difference is an increase in Category II historic places, most notably in Hamilton City over the past year (including Category II status for a house at 102 Lake Crescent). Another recent addition to the register was the Water Tower in Cambridge.

*Table 4.2.1: Buildings and sites registered on the Historic Places Trust Register as at April 2010 by territorial authority*

Territorial authority	Category 1 Historic Place	Category 2 Historic Place	Historic Area	Total
Franklin District	2	10	0	12
Waikato District	8	37	1	46
Otorohanga District	0	14	1	15
Waitomo District	2	14	0	16
Waipa District	7	59	0	66
Thames-Coromandel District	11	160	1	172
Hauraki District	7	19	2	28
Matamata-Piako District	7	40	1	48
South Waikato District	2	23	0	25
Hamilton City	7	31	1	39
Rotorua District	3	11	0	14
Taupo District	0	3	0	3
Total	56	421	7	484

Source: New Zealand Historic Places Trust

Note: Excludes wāhi tapu sites (not available on the online Register).

Indicator	State	Trend
4.2.2 Number and proportion of heritage buildings demolished or removed from heritage records	☹	⇒

This indicator measures the number of historic buildings removed from the Historic Places Trust Register. Registration does not necessarily mean that a place is protected. Protection of historic places is generally through the policies and rules in the District Plan.

The New Zealand Historic Places Trust can only provide information on the number of records removed from the Register. Detail on buildings removed as opposed to sites is not available. There is also no readily available information on why a record is removed, for example due to demolition or another reason.

Table 4.2.2 shows that, as at May 2006, 57 Category 2 buildings and/or sites had been removed from the Historic Places Trust Register. Category 2 places are "of historical or cultural heritage significance or value". A further search of the Historic Places Trust website in May 2008 revealed that five less Category 2 buildings and/or sites were recorded in Waikato Region territorial authority areas than the previous search in May 2006. No further reductions were recorded as at April 2010.

*Table 4.2.2: Number of historic places removed from the Historic Places Trust Register as at 29 May 2006 by territorial authority*

Removed Registrations	Total	Category 1 Historic Place	Category 2 Historic Place
Franklin District	1	0	1
Waikato District	11	0	11
Otorohanga District	2	0	2
Waitomo District	3	0	3
Waipa District	5	0	5
Thames-Coromandel District	16	0	16
Hauraki District	8	0	8
Matamata-Piako District	4	0	4
South Waikato District	1	0	1
Hamilton City	5	0	5
Rotorua District	1	0	1
Taupo District	0	0	0
Total	57	0	57

Source: New Zealand Historic Places Trust

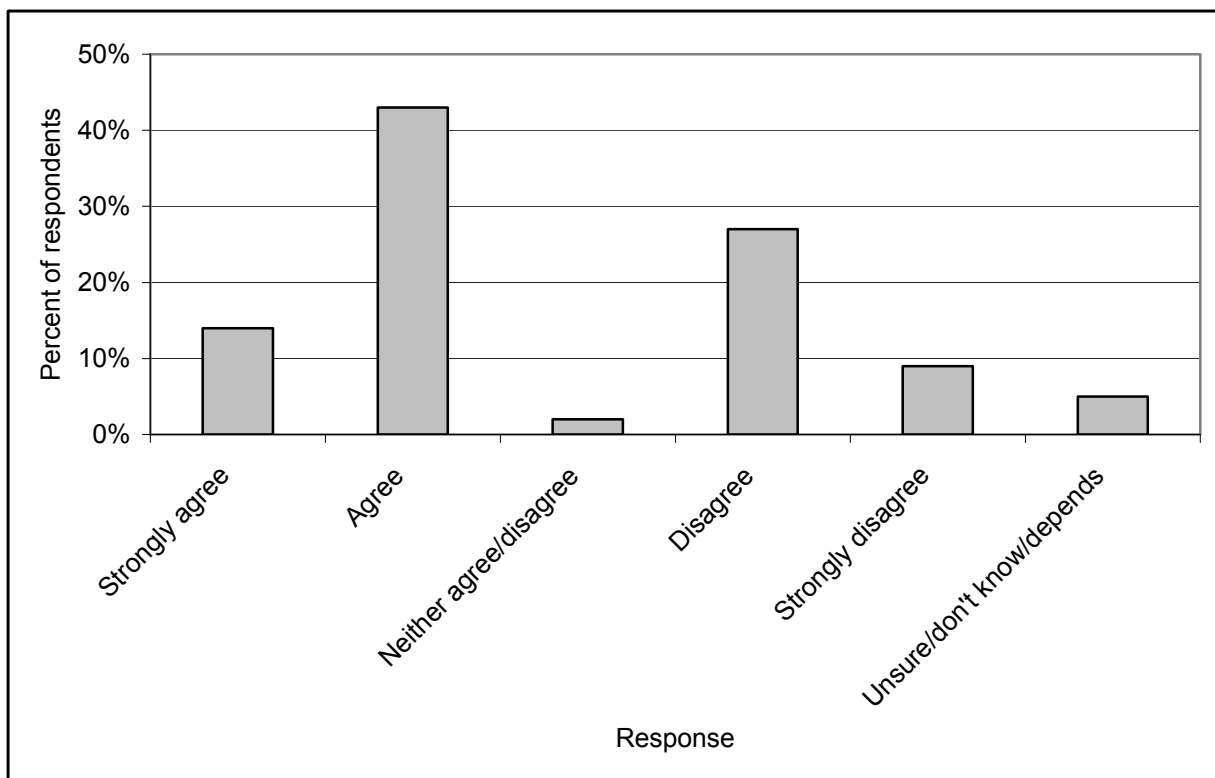
Indicator	State	Trend
4.2.3 Design of new developments	☹	?

This indicator measures whether respondents to the Environment Waikato Environmental Awareness, Attitudes and Actions Survey feel that sustainable design of new developments and subdivisions has become better, become worse or stayed the same in the last few years at the regional, district, rural and urban levels. “Sustainably designed” is defined as “they blend into the area and take account of the environment and people’s needs.”

The community generally wants new developments to be sensitive to people, places and the environment. New subdivisions and development are built for the long term and hence need to be carefully planned to meet current and likely future needs. The public increasingly demand higher standards for urban design that reflect the life style and culture of local communities, use good environmental practice and blend in with the surroundings.

Respondents to EW’s 2006 Environmental Awareness, Attitudes and Actions Survey were asked whether they agreed or disagreed with the statement that “new developments and subdivisions are designed so that they blend into the area and take account of the environment and people’s needs”. Results show that more than half of the respondents (57%) agreed that new developments and subdivisions are sustainably designed (14% strongly agree, 43% agree). In contrast, more than a third of respondents (36%) either strongly disagreed (9%) or disagreed (27%) with this statement.

Figure 4.2.3: Sustainable design of new developments – Waikato Region respondents 2006



Source: Environment Waikato 2006 Environmental Awareness, Attitudes and Actions Survey

## 4.3 Culture and recreation

### Community outcome(s):

4D All our communities have cultural and recreational events and facilities. We identify with and take part in our communities, building good community spirit.

### Why is this important?

Arts and cultural activities are an important part of community identity. People participate in arts and cultural activities for a wide variety of reasons including enjoyment, personal growth and development, to socialise and to pass on cultural traditions.

### What are the indicators?

4.3.1 Residents' satisfaction with cultural facilities provided

4.3.2 Participation in cultural and arts activities

4.3.3 Proportion of council's spending on cultural activities and events

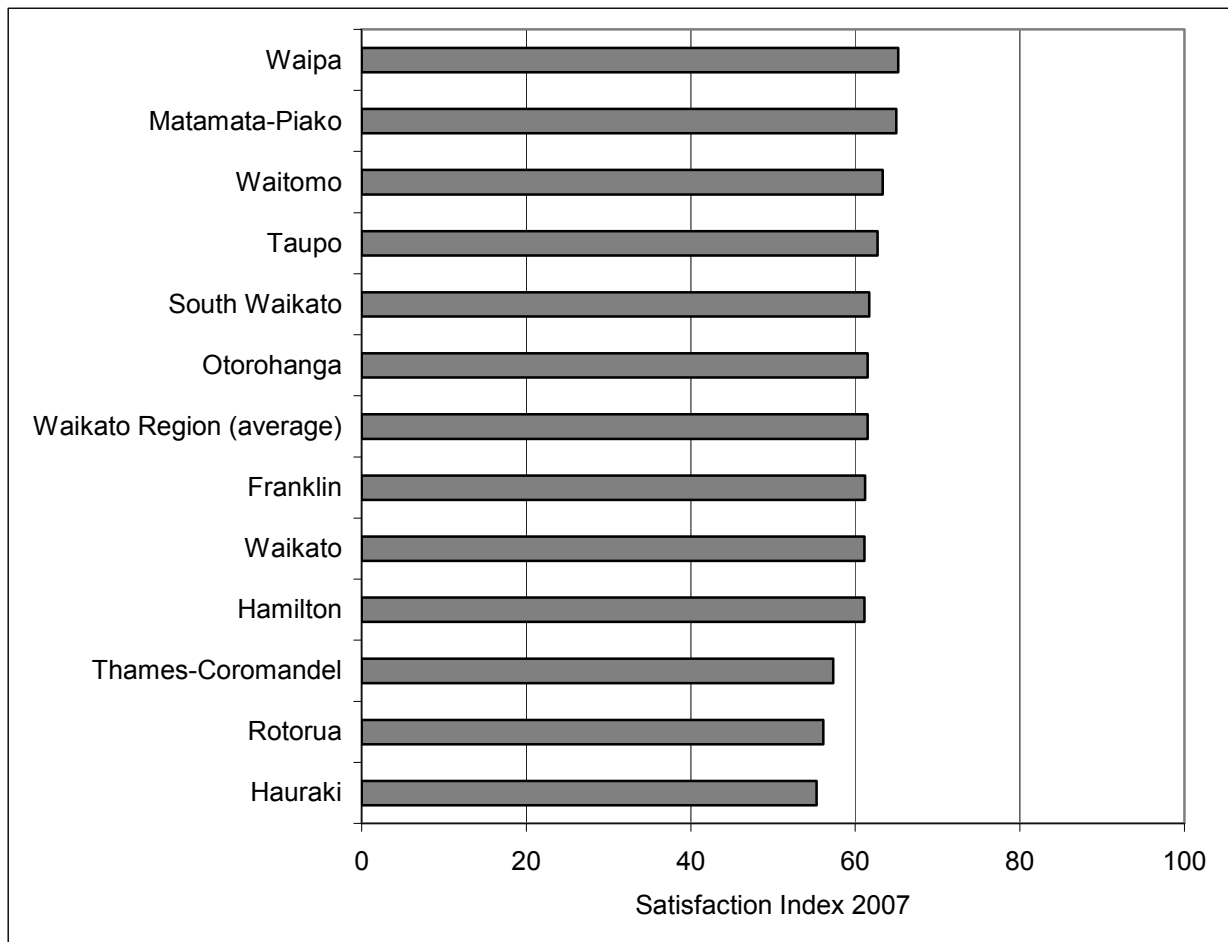
### How are we doing?

- Survey results from 2007 show that an estimated 41% of regional residents were satisfied with the cultural facilities and opportunities provided in their area. This reflects in a Satisfaction Index (weighted average score) of 61.5 points for 'cultural facilities and opportunities provided in your area'. The scores vary only a small amount by location within the Region.
- At present there is only national-level data available on people's participation in cultural and arts activities. However there are plans at the local and regional level to collect similar survey data. At the national level the most frequently cited cultural activities in the four weeks prior to the survey were purchasing books, visiting public libraries and purchasing music. The most frequently cited cultural activities in the 12 months prior to the survey were art galleries/museums, popular live music and purchasing handmade craft.
- Indicative national data compiled from territorial authority annual reports show that council spending on cultural activities has generally increased in recent years, particularly in relation to the provision of library services. Robust local and regional data is not currently available.

Indicator	State	Trend
4.3.1 Residents' satisfaction with cultural facilities provided	☹	?

Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents were asked: 'Thinking about the community you live in and the infrastructure available and using the scale where 0 is very dissatisfied to 10 being very satisfied, how satisfied are you with the cultural facilities and opportunities provided in your area' An estimated 41% of regional residents were satisfied with the cultural facilities and opportunities provided in their area. This reflects in a Satisfaction Index (weighted average score) of 61.5 points for 'cultural facilities and opportunities provided in your area'. The scores vary only a small amount by location within the Region (refer Figure 4.3.1).

Figure 4.3.1: Respondents' satisfaction with cultural facilities and opportunities in their area – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

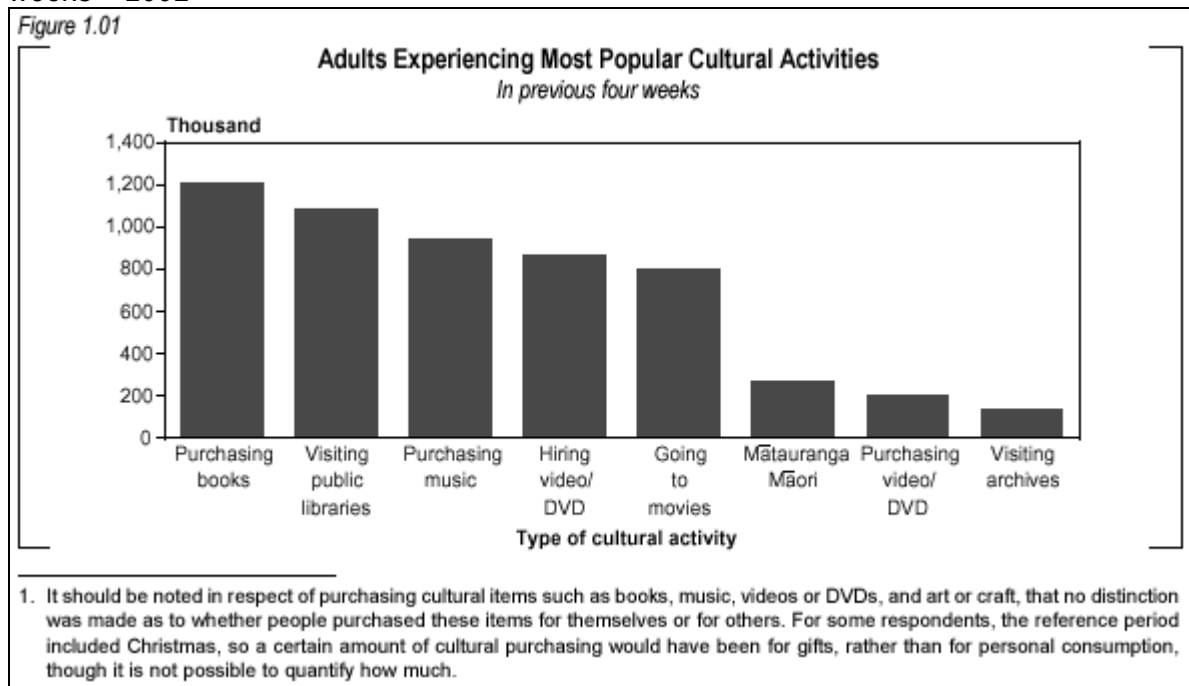
Indicator	State	Trend
4.3.2 Participation in cultural and arts activities	☹	?

This indicator measures the number of people participating in a range of cultural activities during a set reference period.

Increasing recognition is being given to the importance of cultural activities in the daily lives of New Zealanders. Our sense of nationhood and identity is dependent to a significant extent on our experience of New Zealand culture and heritage – a matter of increasing relevance in an ever-globalising world. A developed culture, an appreciation of the unique aspects of our culture – particularly Māori culture – and a strong cultural identity contribute positively to matters as diverse as economic growth, social cohesion, the acceptance and encouragement of diversity, creative thinking in a range of fields, and the imbuing of self-confidence in people. Intrinsic value is also derived from cultural experiences, with their power to stimulate and enlighten us.

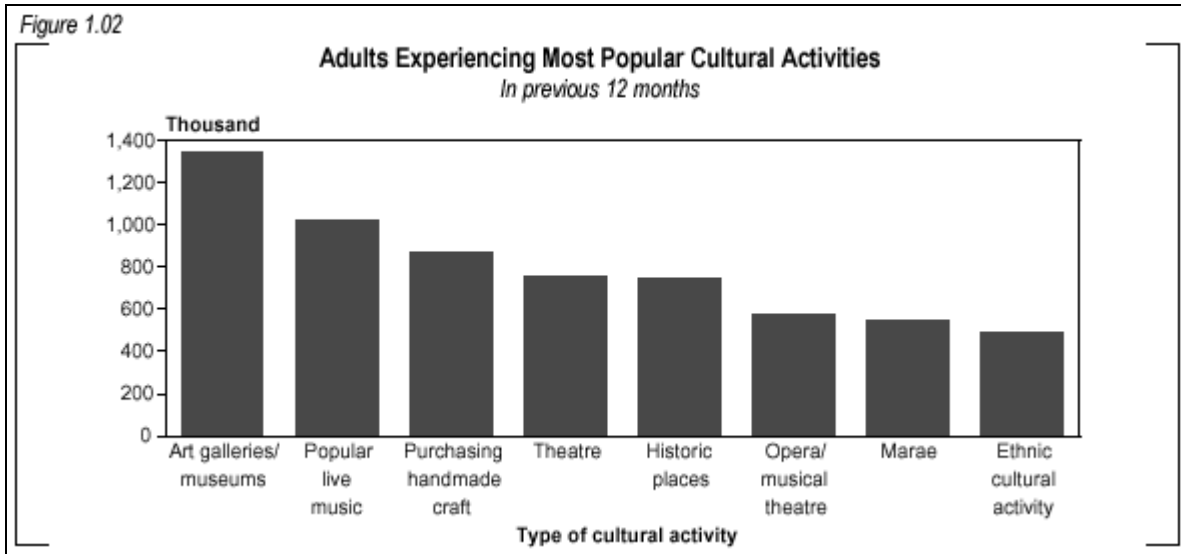
This indicator was measured in a one-off national survey and there are currently no plans to repeat it. However there are plans at the local and regional level to collect similar survey data. Figure 4.3.2a shows that at the national level the most frequently cited cultural activities in the four weeks prior to the survey were purchasing books, visiting public libraries and purchasing music. Figure 4.3.2b shows that at the national level the most frequently cited cultural activities in the 12 months prior to the survey were art galleries/museums, popular live music and purchasing handmade craft.

Figure 4.3.2a: Number of adults experiencing most popular cultural activities in previous four weeks – 2002



Source: Statistics New Zealand: Cultural Experiences Survey 2002

Figure 4.3.2b: Number of adults experiencing most popular cultural activities in previous 12 months – 2002



Source: Statistics New Zealand: Cultural Experiences Survey 2002

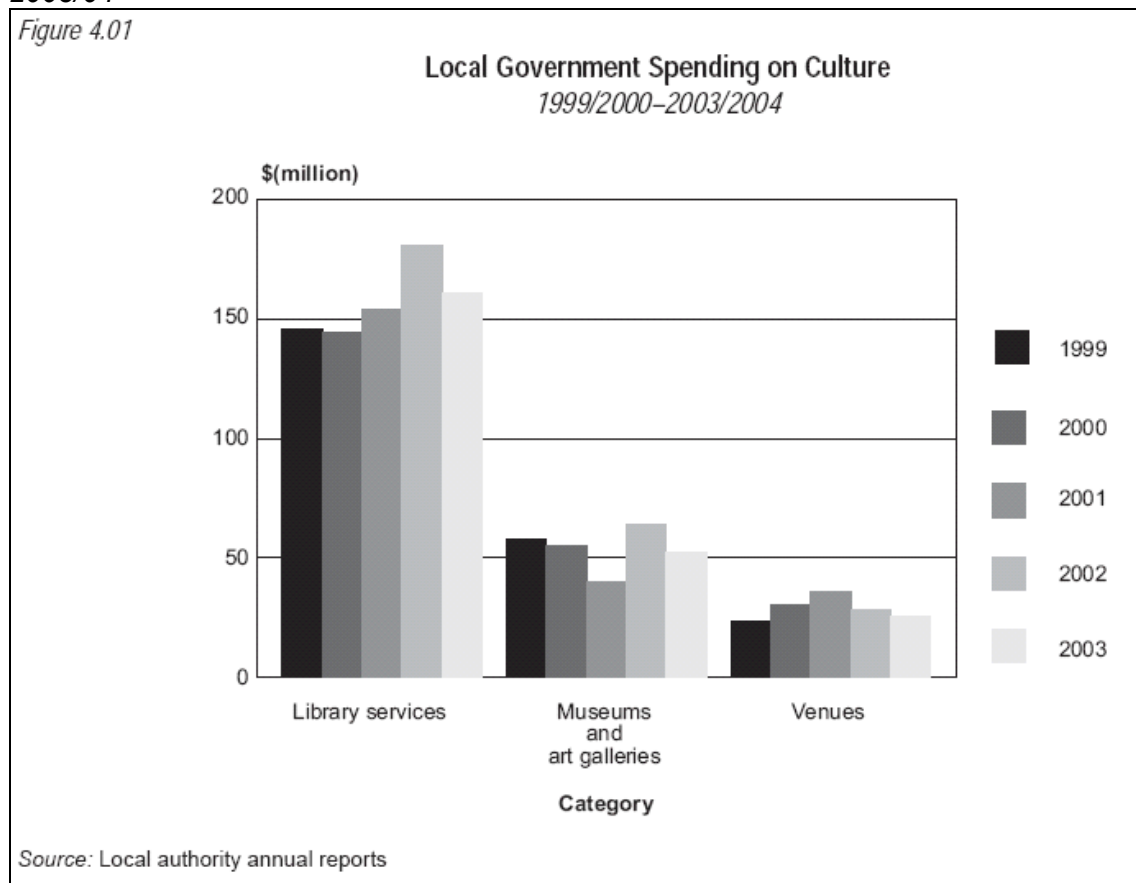
Indicator	State	Trend
4.3.3 Proportion of council's spending on cultural activities and events	☹	↑

This indicator measures all reported local government spending, both capital and output, on public libraries, venues (excluding community halls), and museums and art galleries.

Council expenditure provides a further measure of people's engagement with culture by showing the total expenditure councils are prepared to spend on cultural goods and services, and how this compares with other types of expenditure.

Indicative national data compiled from territorial authority annual reports (refer Figures 4.3.3a to 4.3.3d) show that council spending on cultural activities has generally increased in recent years, particularly in relation to the provision of library services. Robust local and regional data is not currently available.

Figure 4.3.3a: Local government spending on culture across New Zealand – 1999/2000 to 2003/04



Source: Statistics New Zealand: Local Government Spending on Culture 2000-2004

Figure 4.3.3b: Local government total and per capita spending on public libraries 2003/2004

Table 4.01

**Local Government Total and Per Capita Spending on Public Libraries  
2003/2004**

Council	2001 Census usually resident population	Spending on public libraries	
		\$(million)	\$(per capita)
Wellington	167,190	14.9	89
Invercargill	50,118	3.6	73
Christchurch	324,300	23.3	72
New Plymouth	66,573	4.8	72
Kapiti Coast	42,543	3.0	70
Dunedin	118,038	8.0	68
North Shore	185,262	12.4	67
Auckland	380,157	25.2	66
Hamilton	116,223	7.0	61
Manukau	284,001	16.5	58
Tauranga	91,836	5.0	55
Porirua	47,295	2.6	55
Upper Hutt	36,684	2.0	54
Hutt	95,106	5.1	53
Napier	55,137	2.8	51
Whangarei	68,478	2.9	42
Waitakere	168,465	6.8	41
Hastings	68,757	2.7	40
Rodney	77,385	2.0	26

Source: 2001 Census and local authority annual reports

Source: Statistics New Zealand: Local Government Spending on Culture 2000-2004

Figure 4.3.3c: Local government spending on museums and galleries – 1999/2000 to 2003/2004

Table 4.02

**Local Government Spending on Museums and Galleries  
1999/2000–2003/2004**

Council	1999/2000	2000/01	2001/02	2002/03	2003/04
	\$ (million)				
Auckland	12.8	16.0	13.9	17.3	19.0
Dunedin	3.8	3.8	3.9	4.2	7.9
Wellington	8.3	-	4.8	4.8	5.0
Christchurch	2.4	3.0	3.2	4.8	7.4
Hamilton	3.6	3.0	3.3	3.7	3.7
Palmerston North	5.1	3.4	3.3	2.8	-
Rotorua	1.8	-	2.7	2.4	6.8
Hutt	2.0	-	1.9	2.0	1.7
Porirua	1.5	2.0	2.3	1.7	-
Wanganui	1.2	1.2	1.3	1.2	-

Source: Local authority annual reports

Source: Statistics New Zealand: Local Government Spending on Culture 2000-2004

Figure 4.3.3d: Local government spending on venues – 1999/2000 to 2003/2004

Table 4.04

**Local Government Spending on Venues**  
1999/2000–2003/2004

Council	1999/2000	2000/01	2001/02	2002/03	2003/04
	\$(million)				
Auckland	7.84	13.21	21.20	16.82	22.68
Hamilton	1.00	-	-	1.79	2.03
Tauranga	0.93	1.01	1.21	1.38	0.00
Palmerston North	1.30	1.58	1.49	-	26.00
New Plymouth	-	2.25	-	-	-
Upper Hutt	-	-	0.51	-	1.65
Wellington Region	-	2.08	-	-	-
North Shore	1.34	-	-	-	-

Source: Local authority annual reports

Source: Statistics New Zealand: Local Government Spending on Culture 2000-2004

## 4.4 Creativity

### Community outcome(s):

4E Art, culture and creativity can be a part of everyone's life. We all have opportunities for creative expression and our creative industries are supported and promoted.

### Why is this important?

Arts and cultural activities are an important part of community identity. People participate in arts and cultural activities for a wide variety of reasons including enjoyment, personal growth and development, to socialise and to pass on cultural traditions. Creative pursuits can have a very positive influence on social and personal development. The arts industry also provides income and employment for many people.

### What are the indicators?

#### 4.4.1 People employed in the cultural sector

### How are we doing?

- Indicative data at the national level shows that more than 100,000 people in New Zealand are engaged in cultural employment. Cultural employment appears to be growing faster than overall employment. Local and regional data sets are not currently available but are likely to reflect the national trend.

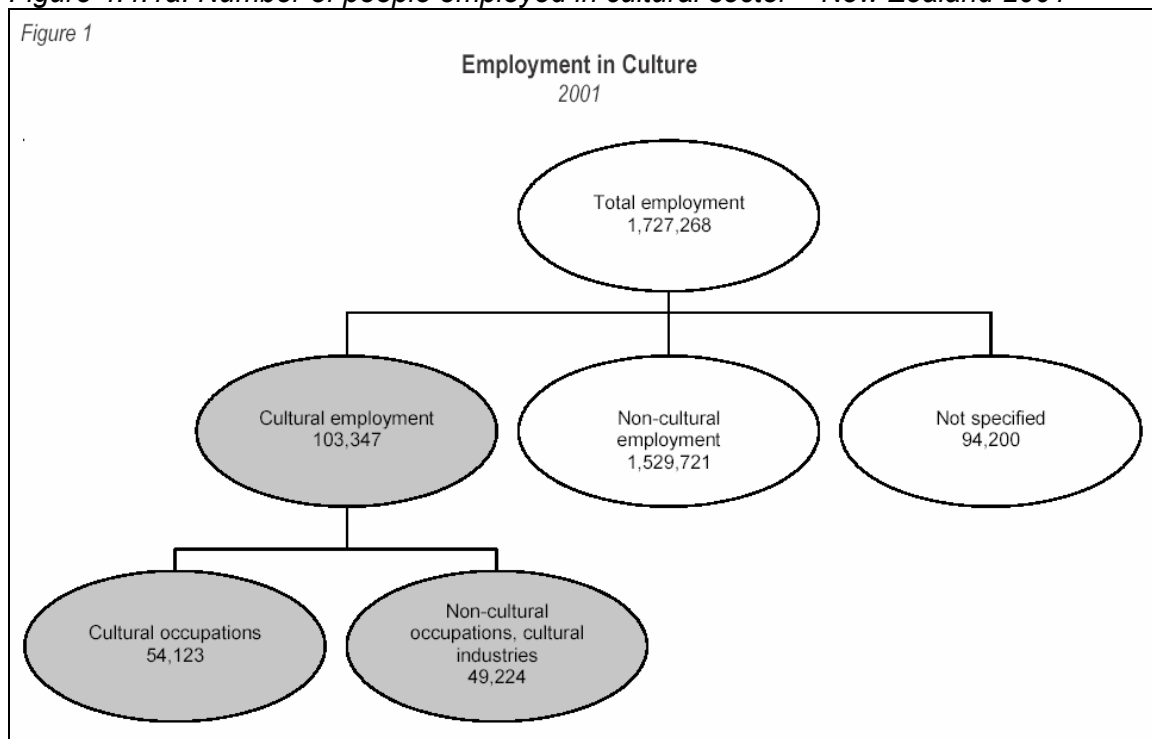
Indicator	State	Trend
4.4.1 People employed in the cultural sector	☹	↑

This indicator measures the number of people in paid employment in the cultural sector, including people in cultural occupations and people in non-cultural occupations working in the cultural industry across New Zealand. Note that paid employment in the cultural sector can be divided into two overlapping categories: (1) Employment in cultural occupations, that is, people who directly create cultural goods or services as defined by the New Zealand Framework for Cultural Statistics 1995, and (2) Those who are employed in cultural industries but are not directly engaged in the creation of cultural goods and services such as those in supporting occupations, for example accountants, cleaners or administrators.

Arts and cultural activities are an integral part of our lives and help to define who we are as New Zealanders. People participate in the arts for a wide variety of reasons: for enjoyment and entertainment, for personal growth and development, as a means of expression, to learn new skills and meet new people, to pass on cultural traditions, and to earn an income.

Indicative data at the national level show that more than 100,000 people in New Zealand are engaged in cultural employment. Cultural employment appears to be growing faster than overall employment. Local and regional data is not currently available but is likely to reflect the national trend.

Figure 4.4.1a: Number of people employed in cultural sector – New Zealand 2001



Source: Statistics New Zealand: Employment in the Cultural Sector 2005

**Table 4.4.1b: Number of people employed in cultural sector – change over time between 1991 and 2001 – New Zealand**

	1991	Change (percent)	1996	Change (percent)	2001	Total change 1991-2001
Cultural occupations	35,745	27	45,465	19	54,123	51
Cultural industries	*		69,138	14	78,858	
Total cultural employment	*		88,638	17	103,347	
Total New Zealand employment	1,400,400	16	1,630,812	6	1,727,268	23

\* Data not available due to changes in the classification.

Source: Statistics New Zealand: Employment in the Cultural Sector 2005

**Table 4.4.1c: People employed in cultural occupations by key employment indicators (ethnicity, gender, qualifications, income) – New Zealand 2001**

	Cultural occupations	Total employment
People employed (numbers)	54,123	1,727,268
Change from 1996 (%)	19	6
Ethnic groups (% of total ethnicities reported)		
European	85	80
Māori	8	10
Pacific peoples	3	4
Asian	3	5
Other	1	<1
Women (% of people employed)		
Percent engaged part-time	58	47
Percent post-school qualified	29	23
Percent under 40 years of age	62	39
Percent under 40 years of age	50	50
Median personal income (\$ per annum)	26,300	27,700
Percent receiving \$50,001 and over per annum	14	17
Percent receiving \$20,000 and under per annum	37	34

Source: Statistics New Zealand: Employment in the Cultural Sector 2005

## 5. PARTICIPATION AND EQUITY

Waikato regional communities aspire towards the following in terms of participation and equity:

*“The Waikato region builds strong informed communities and has a culture that encourages people and communities to play their part”.*

For the purpose of this report, participation and equity indicators have been clustered into three themes as follows:

Code	Theme	Community outcomes
5.1	Civic participation	<p>5A All our people and communities can participate in decision-making. We are educated, informed and have the resources we need to take responsibility for our own futures.</p> <p>5B Iwi, hapū and Māori work together with central government, local government and community organisations in mutually beneficial partnerships.</p> <p>5C Our communities understand partnerships under the Treaty of Waitangi and representation and processes for these partnerships have integrity.</p> <p>5D The unique status of tangata whenua is respected and reflected in community processes.</p> <p>5E Māori have the opportunity to participate in community development and decision-making at marae, hapū and iwi levels.</p>
5.2	Cultural well-being	<p>5F We are knowledgeable about and show respect for the many and diverse cultures of the people who live here.</p>

## 5.1 Civic participation

### Community outcome(s):

5A All our people and communities can participate in decision-making. We are educated, informed and have the resources we need to take responsibility for our own futures.

5B Iwi, hapū and Māori work together with central government, local government and community organisations in mutually beneficial partnerships.

5C Our communities understand partnerships under the Treaty of Waitangi and representation and processes for these partnerships have integrity.

5D The unique status of tangata whenua is respected and reflected in community processes.

5E Māori have the opportunity to participate in community development and decision-making at marae, hapū and iwi levels.

### Why is this important?

Local and central government agencies have obligations to consult with communities on matters of public interest. This means exploring new ways of consultation and engagement that are appropriate for different settings. Civic participation by individuals is a reflection of the level of interest and understanding of political processes and decisions.

### What are the indicators?

5.1.1 Percentage of voter turnout at local and general elections

5.1.2 Degree of representation by tangata whenua and minority groups on governance and decision-making bodies

5.1.3 Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making

### How are we doing?

- For almost all local authorities in New Zealand and the Waikato Region, voter turnout in the 2007 local authority elections was the lowest since 1989. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. In the Waikato Region in 2007, the highest voter turnouts were in the Thames-Coromandel, Taupo and Hauraki districts (49%-53%). Compared to the 2004 election results, voter turnout dropped considerably for the Waitomo and Otorohanga districts in 2007 (approximately 15 percentage points each). Voter turnout for national general elections has also been declining in the long-term, reaching a low of 73% in 2002 for New Zealand overall.
- The percentage of Māori elected members in local government across New Zealand increased substantially from 2.5% in 1992 to 6.0% in 1998 but subsequently declined to approximately 4.8% in 2007. In the 2007 elections, the Waikato Region continued to have a relatively high proportion of female elected members in local government, with 42% of regional council elected members being female. The proportion of female elected members of city and district councils ranged from a high of 70% in the South Waikato District to a low of 0% in the Thames-Coromandel District, reflecting a similar pattern to the 2004 local body elections.
- Survey results show that a substantial number of residents throughout the Region would like more of a say in what their Council does.

Indicator	State	Trend
5.1.1 Percentage of voter turnout at local and general elections	☹	↓

This indicator measures the proportion of all enrolled electors (both resident and ratepayer) who cast a vote in the most recent local body elections, and the proportion of persons aged 18 or over usually resident in General electorates (voting-age population) who cast a vote in General electorates in the most recent general election. Note that the total number of persons aged 18 or over usually resident in General electorates includes persons enrolled in Māori electorates (7.1% of the total population aged 18 or over).

Voter turnout rates are a measure of political participation. They can be seen as an indicator of the extent to which citizens are a part of the political process, and the confidence the population has in, and the importance they attach to, political institutions.

Tables 5.1.1a and 5.1.1b show that for almost all local authorities in New Zealand and the Waikato Region, voter turnout in the 2007 local authority elections was the lowest since 1989. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. In the Waikato Region in 2007, the highest voter turnouts were in the Thames-Coromandel, Taupo and Hauraki districts (49%-53%). Compared to the 2004 election results, voter turnout dropped considerably for the Waitomo and Otorohanga districts in 2007 (approximately 15 percentage points each). Voter turnout for national general elections has also been declining in the long-term, reaching a low of 73% in 2002 for New Zealand overall (refer Figure 5.1.1c) and an estimated 68% for voters in the Waikato Region. Voter turnout for the eligible national population in 2008 was 76%, a slight decline from 77% in 2005. There are few discernible differences in voter turnout rates between rural and urban voters, although non-voting tends to be lowest in provincial cities.

*Table 5.1.1a: Proportion of all enrolled electors (both resident and ratepayer) who cast a vote in local authority elections – New Zealand regions*

Region	1989	1992	1995	1998	2001	2004	2007
Northland	66%	59%	56%	60%	45%	49%	51%
Auckland	40%	44%	34%	46%	43%	42%	38%
Waikato	57%	54%	53%	57%	49%	45%	37%
Bay of Plenty	61%	61%	54%	54%	52%	45%	44%
Gisborne	74%	72%	61%	67%	63%	52%	52%
Hawke's Bay	60%	57%	58%	56%	55%	47%	45%
Taranaki	69%	62%	57%	61%	61%	55%	52%
Manawatu-Wanganui	63%	54%	58%	53%	53%	54%	51%
Wellington	52%	50%	51%	52%	50%	43%	43%
Tasman	75%	67%	64%	63%	59%	52%	55%
Nelson	66%	70%	56%	56%	53%	48%	51%
Marlborough	72%	65%	66%	68%	66%	62%	52%
West Coast	74%	70%	70%	72%	79%	68%	57%
Canterbury	64%	54%	51%	56%	52%	43%	44%
Otago	69%	58%	57%	66%	61%	56%	49%
Southland	71%	65%	64%	68%	59%	56%	51%

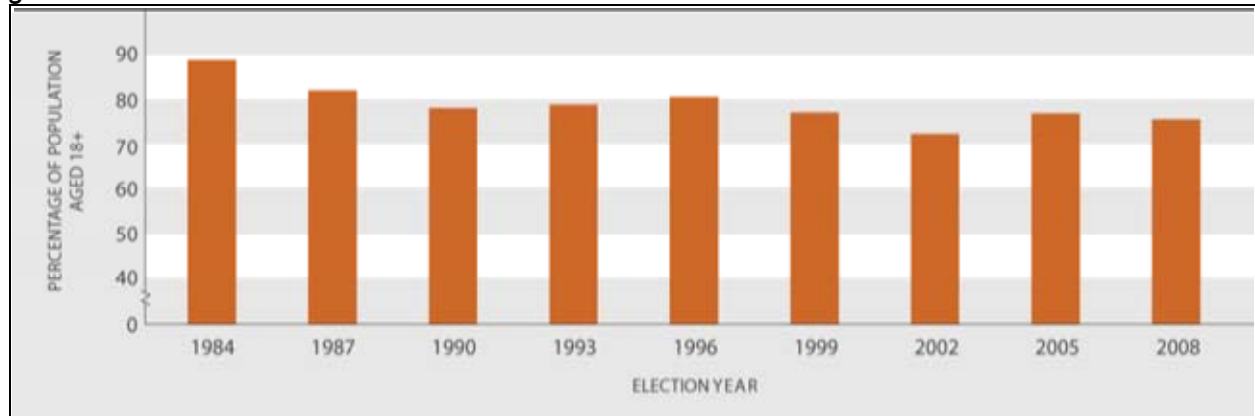
Source: Department of Internal Affairs/Ministry of Social Development

Table 5.1.1b: Proportion of all enrolled electors (both resident and ratepayer) who cast a vote in local authority elections – Waikato Region territorial authorities

Territorial authority	1989	1992	1995	1998	2001	2004	2007
Franklin District	59%	54%	47%	49%	49%	46%	35%
Thames-Coromandel District	83%	68%	63%	87%	61%	56%	53%
Hauraki District	65%	59%	59%	64%	63%	53%	49%
Waikato District	61%	53%	54%	52%	51%	42%	35%
Matamata-Piako District	65%	51%	54%	61%	52%	42%	42%
Hamilton City	58%	52%	50%	54%	47%	45%	35%
Waipa District	57%	49%	53%	49%	50%	42%	34%
Otorohanga District	69%	56%	71%	62%	51%	55%	40%
South Waikato District	67%	45%	43%	54%	44%	41%	39%
Waitomo District	62%	54%	65%	64%	61%	56%	40%
Taupo District	70%	62%	62%	65%	60%	53%	50%
Rotorua District	60%	60%	52%	51%	49%	49%	44%

Source: Department of Internal Affairs/Ministry of Social Development

Figure 5.1.1c: Proportion of estimated voting-age population who cast votes in New Zealand general elections



Source: Department of Internal Affairs/Ministry of Social Development

Note: 1984, 2005 and 2008 figures calculated by the Ministry of Social Development

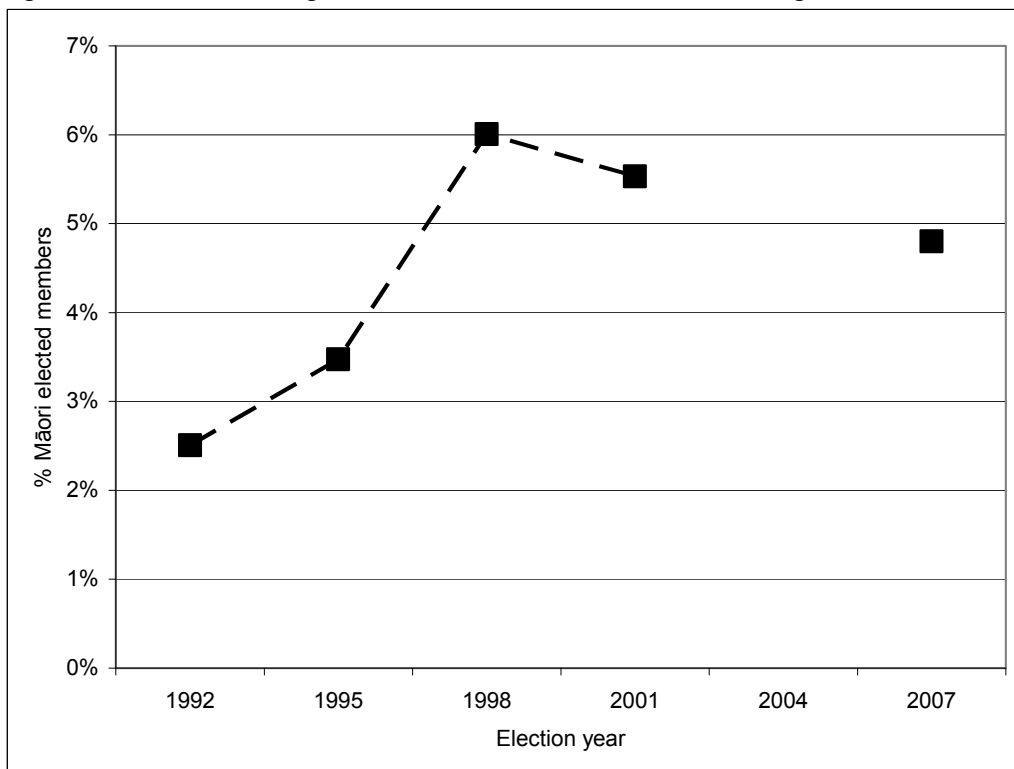
	Indicator	State	Trend
5.1.2	Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	☹	⇒

This indicator measures the proportion of female elected members of the regional, city or district council in the most recent elections, and the proportion of Māori elected members in local government.

Evidence suggests over-representation on governance and decision-making bodies by people who identify with the New Zealand European ethnic group, with correspondingly poor representation by women, minority ethnic groups and young people. This may have an impact on the ability of those bodies to understand and advocate for these population groups, and on the perceived relevance of these bodies to such communities. Specific groups or sectors of the community may not feel they are being heard or their concerns addressed. Alienation from local decision-making process can have adverse repercussions for social connectedness in cities, districts and regions.

Figure 5.1.2a shows that the percentage of Māori elected members in local government across New Zealand increased substantially from 2.5% in 1992 to 6.0% in 1998 but subsequently declined to approximately 4.8% in 2007. Figure 5.1.2b shows that in the 2007 elections, the Waikato Region continued to have a relatively high proportion of female elected members in local government, with 42% of regional council elected members being female. The proportion of female elected members of city and district councils ranged from a high of 70% in the South Waikato District to a low of 0% in the Thames-Coromandel District (refer Table 5.1.2c), reflecting a similar pattern to the 2004 local body elections.

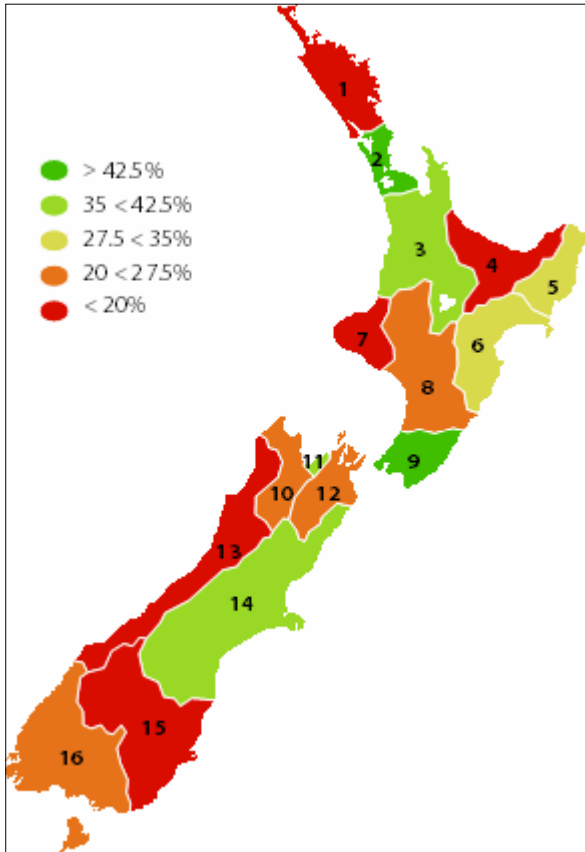
Figure 5.1.2a: Percentage of Māori elected members in local government across New Zealand



Source: Local Government New Zealand

Notes: (a) Data unavailable on Māori representation in local government at the regional or territorial authority level. (b) Data for 2004 are unavailable. (c) 2007 results (and possibly earlier) include both 'NZ Maori' and NZ European/NZ Maori' category responses.

Figure 5.1.2b: Proportion of female elected members of regional councils in local authority elections 2007



Waikato Region = 42%

Source: Department of Internal Affairs/Ministry of Social Development

Table 5.1.2c: Proportion of female elected members of city or district councils in local body elections by territorial authority

Territorial authority	2001	2004	2007
Franklin District	21%	40%	25%
Thames-Coromandel District	44%	13%	0%
Hauraki District	31%	23%	23%
Waikato District	15%	15%	15%
Matamata-Piako District	27%	27%	36%
Hamilton City	23%	38%	50%
Waipa District	25%	25%	17%
Otorohanga District	50%	43%	29%
South Waikato District	38%	50%	70%
Waitomo District	40%	33%	50%
Taupo District	45%	33%	40%
Rotorua District	17%	25%	50%

Source: Department of Internal Affairs/Ministry of Social Development

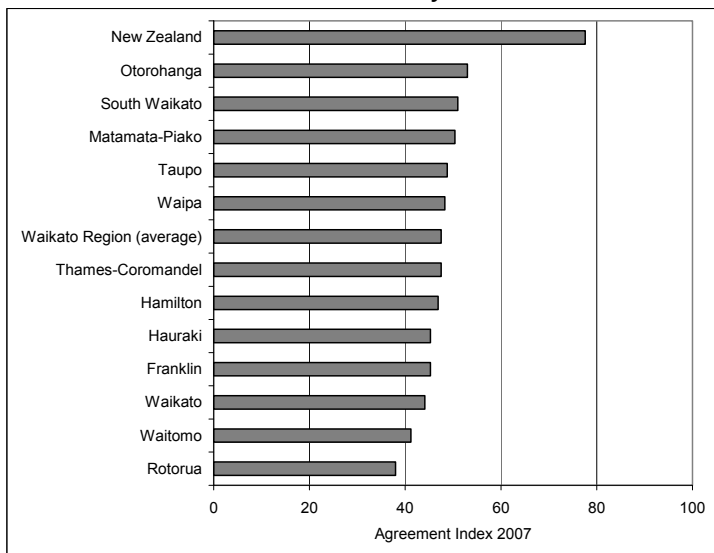
Indicator	State	Trend
5.1.3 Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	☺	?

This indicator measures residents' rating of agreement with the statement "I would like to have more of a say in what the council does", and their perceptions of how much influence the public has on the decisions that councils make. NB. The 2001 Quality of Life survey also measured residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making, but this is no longer included in more recent surveys.

The community generally wants to have a say in what council does, particularly on major matters of public importance. Community involvement is critical for an effective local government. Resident perception of council provisions of opportunities for involvement in decision-making is a good measure of how adequate councils' processes are for community involvement.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents were asked: 'We are interested in understanding your views on the role of your local Council. For each of the following statements can you please tell if you agree or disagree using the scale where 0 = Strongly Disagree and 10 is Strongly Agree.' From the resulting percentages, an Agreement Index (weighted average score) was calculated. Figure 5.1.3 shows that there is a range of levels of agreement throughout the Region for this item. Generally speaking, a substantial number of residents throughout the Region feel they would like more of a say in what their Council does. Note that the results for New Zealand overall as shown in Figure 5.1.3 come from a different source than the other results and may be influenced by methodological differences. For these reasons, comparisons with the New Zealand figures should be interpreted cautiously.

Figure 5.1.3: Respondents' level of agreement that they have enough say in what their Council does – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2006

Note: The Agreement Index for New Zealand was calculated as a weighted average index from a five-point scale. Results for New Zealand come from a different source than the other results and may be influenced by methodological differences. For these reasons, comparisons with the New Zealand figures should be interpreted cautiously.

## 5.2 Cultural well-being

### Community outcome(s):

5F We are knowledgeable about and show respect for the many and diverse cultures of the people who live here.

### Why is this important?

Culture refers to the customs, practices, languages, values and world views that define social groups such as those based on ethnicity or family ties. Cultural identity is important for people's overall sense of identity and how they relate to others.

### What are the indicators?

5.2.1 Percentage of residents perceiving that cultural diversity makes their region/city/town a better place to live

### How are we doing?

- Most people in the Waikato Region agree with the statement 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here'. A slightly smaller proportion agree that 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here'. Many survey respondents said that they there feel are no cultural problems and people are accepted as part of the community. However a relatively small proportion of respondents felt that different cultures were not welcomed by the community, while a few had issues with other races or chose not to mix.

	Indicator	State	Trend
5.2.1	Percentage of residents perceiving that cultural diversity makes their region/city/town a better place to live	☺	?

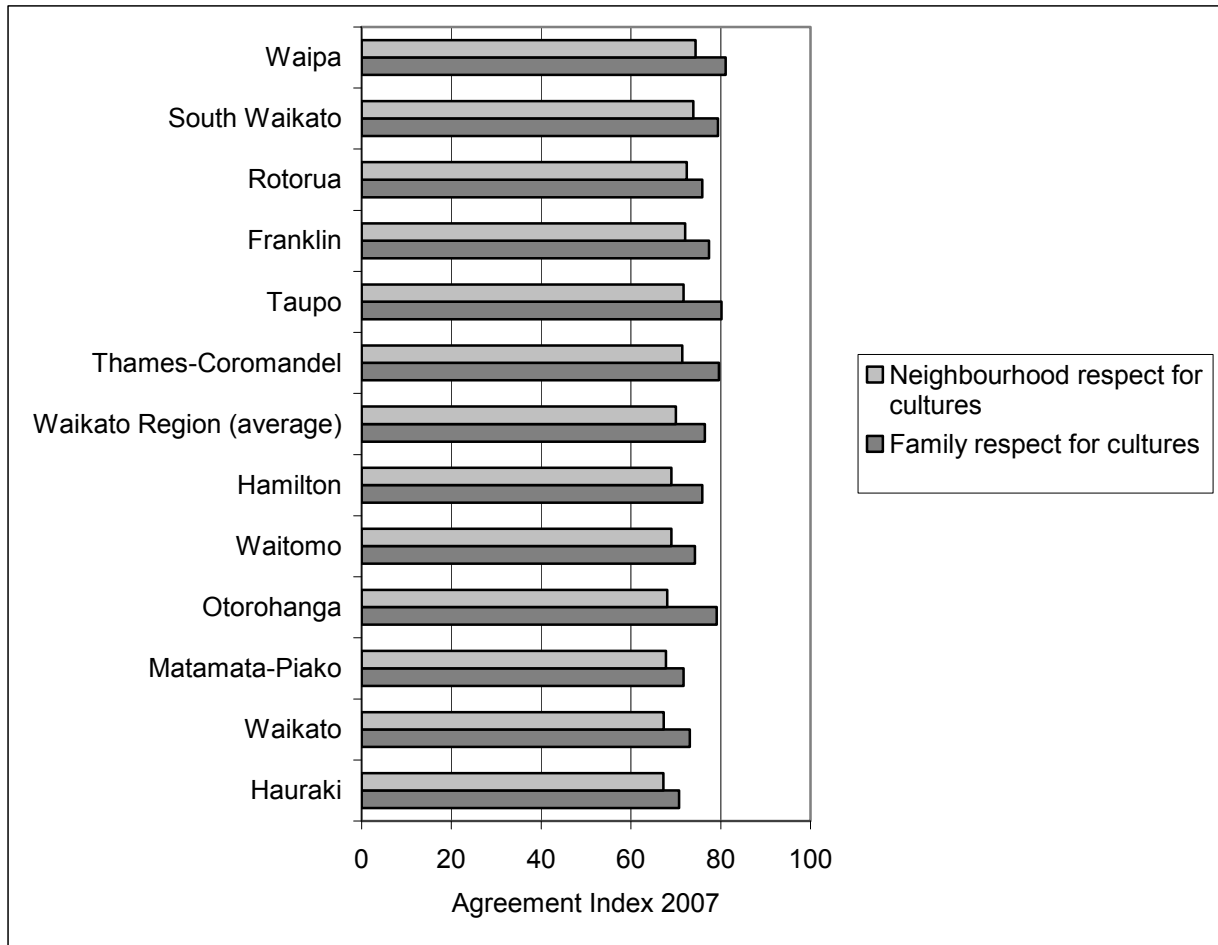
This indicator measures residents' views about whether cultural diversity makes their region/city/town a better or worse place to live.

Cities are home for an increasing number of people with diverse lifestyles and cultures from different countries. This diversity impacts on how we communicate with different population groups, how they are made to feel part of the city and the quality of life they enjoy.

Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 Waikato Community Outcomes Survey commissioned by MARCO and Choosing Futures Waikato. Respondents were asked: 'New Zealand is becoming home for an increasing number of people from different countries with different lifestyles and cultures. Using the scale where 0 = strongly disagree and 10 = strongly agree, how strongly do you agree or disagree with <statement>?' Four fifths of the respondents (82%) agreed (Scores 6 – 10) with the statement 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here' and only 5% disagreed with this (Scores 0 – 4). Two thirds of the sample (67%) agreed (Scores 6 – 10) with the statement 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here' and 7% disagreed (Scores 0 – 4). This reflects in the Agreement Index which is 76.5 for the statement 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here' versus 70.0 for the statement 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here'. The Agreement Index for the Participation and Equity factors varies by location but all areas tend to agree that their family is doing a better job than their community in showing respect for the many and diverse cultures of the people who live here.

Respondents who rated either of these questions with scores that reflected strong agreement (Scores 7 – 10) or disagreement (scores 0 – 3) were asked 'For what reasons do you say that?' This question was asked as an open question with the answers grouped together for analysis purposes. The main positive comments evolved around feeling there were no cultural problems and that people were accepted as part of the community (42.0%). Others commented that they have few other ethnicities in their town, (6.7%), or said they were foreign themselves and had no problems. Some respondents felt that different cultures were not welcomed by the community (8%) while a few (2%) had issues with other races or choose not to mix (1.4%). A small number of respondents said they were foreign themselves and had some problems (0.2%).

Figure 5.2.1: Perceptions of cultural diversity – Waikato territorial authority areas 2007



Source: 2007 Waikato Community Outcomes Survey (International Research Consultants Ltd/MARCO)

## WHERE TO FROM HERE

The Brief for this 2010 project was to update data and metadata spreadsheets for monitoring progress toward Waikato Regional Community Outcomes, based on the existing set of indicators – including data collection and analysis at the territorial authority level where available. Project outputs included:

- Updated spreadsheet supplied by EW with data and graphs (EW Docs #1467850).
- Update any relevant report cards on the Choosing Futures Waikato website using Episerver CMS, see <http://www.choosingfutures.co.nz/MARCO-indicators/>. (Note: This included updating of district-level report cards for a number of indicators – text, graphs and tables – as well as updates of regional report cards. Details of how the 2010 data update was incorporated into the Choosing Futures Waikato website are contained in a separate report prepared by the consultants for Environment Waikato staff).
- Updated Data Analysis Report 2010 (refer [www.choosingfutures.co.nz/Publications](http://www.choosingfutures.co.nz/Publications)).
- Documentation of changes/differences from Data Analysis Report 2009 (refer Appendix One of this report).

*A desktop review ('mapping exercise') of the indicator set was undertaken in July 2008. Key recommendations were to omit six existing indicators due to lack of local relevance and add 42 more commonly sought indicators. The expanded set would therefore include 111 indicators. These amendments have not been incorporated into this current report but may be undertaken as a separate project during 2010/11.*

The Waikato Regional Community Outcomes are broader than council activities or local issues. They encompass the overall social, economic, environmental and cultural well-being of the Waikato Region. The regional community outcomes complement local community outcomes identified within each local authority area. Their purpose is to help guide regional community stakeholders in planning and monitoring regional community well-being.

As part of the ongoing development of the Waikato Regional Community Outcomes monitoring programme, MARCO and the Community Outcomes Project Team will continue refining and developing the data analysis in this report, to support strategic thinking and planning within the Region.

## FURTHER INFORMATION

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For information about local community outcomes processes, refer to the 'your area' section of the Choosing Futures Waikato website or contact your local council.

## Appendix One: 2010 update notes

This report updates a May 2009 report titled “Waikato Regional Community Outcomes Progress Report – Update 2009”. Differences between the two reports are summarised as follows.

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
Full document	✓	<p>More consistent use of % symbol (rather than ‘percent ‘ or ‘per cent’ in some cases throughout earlier update documents).</p> <p>Tables converted to arial narrow font. Table headings shaded light yellow instead of light grey (for added visual appeal when read in colour).</p> <p>Of the 75 indicators in the monitoring set, 22 were updated as part of this 2010 report.</p>	
Title Page	✓		
Headers	✓		
Contents page	✓		
Acknowledgements	✓		
Disclaimer	x		
Further information	✓	Changed from Regional Co-ordinator, Choosing Futures Waikato to Dr Beat Huser, Environment Waikato.	
Executive summary	✓	<p>References to LGA requirements have been omitted to allow for forthcoming changes due to the TAFM proposals (ie, retraction of sections 91 and 92).</p> <p>Takes account of latest data. Key changes relate to economic data (particularly in relation to the 2008/09 recession). Also adverse trends identified in relation to people’s environmental attitudes (latest regional survey results) and contact between young people and their parents (latest national/regional survey results). Positive trend identified in relation to the number of buildings and places listed on the Historic Places Trust register.</p>	
States and Trends	✓	<p>Internal hyperlinks checked and updated in spreadsheet.</p> <p>Takes account of latest data.</p> <p>Results table updated.</p> <p>Circles of well-being updated.</p> <p>Summary text updated.</p> <p>Key changes to ‘state’ circle include:</p> <ul style="list-style-type: none"> <li>– Update to school leavers with no qualification (2008).</li> <li>– Update to early childhood education participation rate (2008).</li> <li>– Update to road traffic injuries per 100,000 population (2008).</li> <li>– Update to median weekly income (2009).</li> </ul> <p>Key changes to the ‘trend’ circle include:</p> <ul style="list-style-type: none"> <li>– Update to river water quality (ecological) (2004-2008 data).</li> <li>– Update to river water quality (recreation) (2004-2008 data).</li> </ul>	

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		<ul style="list-style-type: none"> <li>– Update to environmental attitudes (2008 survey results).</li> <li>– Update to school leavers with no qualification (2008) and spoke constrained to upper limit of 2 due to apparent very large improvement.</li> <li>– Update to early childhood education participation rate (2008).</li> <li>– Updated to recorded offences (proxy for criminal victimisation) (2009).</li> <li>– Update to road traffic casualties data (2008).</li> <li>– Update to real median weekly income (2009).</li> <li>– Update to number of employees (2009).</li> <li>– Update to research income, University of Waikato (2008). Also, time series adjusted to account for CPI inflation.</li> <li>– Update to tertiary education enrolments (2008) and revision of historic figure to ensure consistency.</li> </ul>	
Introduction	✓	<p>Minor text updates.</p> <p>References to LGA requirements have been omitted to allow for forthcoming changes due to the TAFM proposals (ie, retraction of sections 91 and 92).</p>	
Waikato Regional Community Outcomes	×		
Monitoring and Reporting Community Outcomes	✓	<p>Minor text updates.</p> <p>References to LGA requirements have been altered to allow for forthcoming changes due to the TAFM proposals (ie, retraction of sections 91 and 92).</p> <p>A new subsection has been added re 'Review of the Waikato regional indicators', summarising decisions made at the 23 March 2010 MARCO meeting.</p>	
How To Read This Report	×		
Indicator summary/introductory sections	✓	Takes account of latest data. Key changes relate to economic data (particularly in relation to the 2008/09 recession). Also adverse trends identified in relation to people's environmental attitudes (latest regional survey results) and contact between young people and their parents (latest national/regional survey results). Positive trend identified in relation to the number of buildings and places listed on the Historic Places Trust register.	
<b>1. Sustainable Environment</b>			
1.1.1 River water quality for ecological health	✓	<p>Spreadsheet hyperlinks checked (EW website) including river monitoring map.</p> <p>Trend continues to show a down arrow, based primarily on Figure 1.1.1d ( trends for monitoring sites on the Waikato River over the period 1989 to 2008) – levels of both total phosphorus and nitrate increased at several sites along the river, probably as a result of land use changes over recent decades. Pressures from wastewaters have</p>	2004-2008

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		generally decreased over the past 20 years, but farming has continued to intensify.	
1.1.2 River water quality for recreation	✓	Spreadsheet hyperlinks checked (EW website). Data updated to 2008.	2004-2008
1.1.3 Lakes water quality for ecological health	✓	Spreadsheet hyperlinks checked (EW website). Data for shallow lakes remains unchanged (1988-2001). Updated data available for Lake Taupo (2004-2008).	2004-2008
1.1.4 Lakes water quality for contact recreation	✓	Spreadsheet hyperlinks checked (EW website). Data updated to 2009-2010. Note: The number of sampling sites was smaller in 2009-2010 than in previous periods.	2009-10
1.1.5 Land use	✓	Spreadsheet hyperlinks checked (EW website and MAF website) and one link omitted (due to Stats NZ re-designed website).  Little trend data yet available. No new data presented.  Note has been re-written as follows: 'This indicator is under development (Envirolink Tools Land Use Database Project 2010/11, led by Daniel Rutledge, LCR)'.	2007/1994-1996
1.1.6 Urban air quality	✓	Spreadsheet hyperlinks checked (EW website). No new data since 2007.  Minor addition to interpretive text: 'Note that Environment Waikato is expanding its PM10 monitoring programme to include Ngaruawahia, Waihi and Turangi by 2011. The PM10 monitoring network is increasing at a rate of one new location per year until adequate coverage is achieved for all non-complying airsheds. This programme may be subject to change following confirmation of Environment Waikato's annual budgets.'	2007
1.1.7 Groundwater availability and use	×	Spreadsheet hyperlinks checked (EW website).  No new results are expected to be available on EW website until 2010/11.	1988-2002
1.1.8 Surface water availability and use	×	Data gap remains.  No results are expected to be available on EW website until 2014/15.	N/A
1.1.9 Protection of natural heritage and landscapes	×	Data gap remains.	N/A
1.1.10 Extent of native vegetation	×	Spreadsheet hyperlinks checked (EW website).	1996

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		No new data available.	
1.1.11 Protected native vegetation areas	x	<p>Spreadsheet hyperlink updated to MfE biodiversity page.</p> <p>Data gap has been filled. Trend symbol updated to ⇨.</p> <p>Note has been re-written as follows: 'Most legally protected land is part of the public conservation lands that cover large tracts of native forest and alpine areas. DoC is responsible for preserving and protecting these areas, including managing threats from invasive pests and diseases. By October 2007, 8.43 million hectares of land were legally protected for conservation purposes throughout New Zealand. This includes public conservation lands managed by DoC and councils, and private land protected under covenants by the QEII National Trust and Ngā Whenua Rāhui. Ngā Whenua Rāhui is a contestable fund that was established in 1991 to promote the voluntary protection of native ecosystems on Māori-owned land. In 2006, about 146,800 hectares of native ecosystems had been protected through this fund.</p> <p>As of July 2009, 8.76 million ha of New Zealand's land (33.4%) was legally protected for the primary purpose of conserving biodiversity. Legally protected public conservation land accounted for 8.53 million ha of this and private conservation land accounted for 238,300 ha. Between 2006 and 2009, legally protected conservation land in New Zealand increased by 408,800 ha or 4.9%. About three-quarters of this increase was from land acquired and protected through the High Country Tenure Review (ie, predominantly in the Canterbury and Otago regions). Between 2006 and 2009, the legally protected area of the most threatened environments (ie, National Priority 1 environments) increased by 3,300 ha or 3.4%. Out of all the OECD countries, New Zealand has the highest proportion of its land area protected for conservation purposes.</p> <p>A regional breakdown of legally protected areas is available on the MfE website (refer <a href="http://www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html">www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html</a>). This shows that, as of July 2009, 401,300 ha of land in the Waikato Region (17.0%) was legally protected for the primary purpose of conserving biodiversity. Between 2006 and 2009, legally protected conservation land in the Waikato Region increased by 1,400 ha or 0.4%.</p>	2009
1.2.1 People's environmental attitudes	✓	<p>Spreadsheet hyperlinks checked (EW website).</p> <p>Data updated to 2008.</p> <p>Trend symbol changed from ? to ⇩. This reflects a decline in the proportion of survey respondents</p>	2008

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		with a pro-ecological attitude on the NEP scale over the period 2000-2004-2008.	
1.2.2 People's personal environmental actions	×	Spreadsheet hyperlinks checked (EW website).  No new results available on EW website (Environmental Awareness, Attitudes and Actions Survey). The next survey is planned for 2013/14.	2006
1.3.1 Coastal water quality for recreation	×	Spreadsheet hyperlinks checked (EW website).  No new data available.  Note: This indicator has not yet been added to the 'trend' circle of well-being, however with a time series stretching from approximately 2002 to 2008 there is sufficient data to consider this in the next iteration.	2008-09
1.3.2 Public access to coast (coastline ownership)	✓	Spreadsheet hyperlinks checked (EW website).  No new results available on EW website. However, additional interpretive text has been added as follows: 'Coastal land use such as residential subdivision is intensifying. The proportion of publicly owned coastal land reflects the amount of possible public access to the coast. Where roadways are directly adjacent to the coast, public access is likely to be available. Of the total length of coastline in the Waikato Region (1,175 km), 19% along the West coast is in public ownership, 22% on the west Coromandel and 65% along the east Coromandel. Coastline with road frontage makes up 5% of the total coastline along the West Coast, 26% along the west Coromandel and 6% of east Coromandel'.	2002
1.4.1 Rural subdivision	×	Spreadsheet hyperlinks checked (EW website).  No new data available. Updates coincide with five-yearly Census results. a	2006
1.4.2 Stock density	×	Spreadsheet hyperlinks checked (EW website).  No new data available. Next update scheduled for 2014/15.	2008
1.5.1 Total energy consumption	×	Spreadsheet hyperlinks checked (EW website).  No new results available on EW website.  According to metadata on the EW website: 'The Regional Energy Survey will be repeated every four years. This indicator will be updated in 2007'. However, no new data appears to be available.	2003
1.5.2 Greenhouse gas emissions	×	No new results appear to be available on NIWA website.  NIWA has re-designed its website. Pages relating to the Inventory of New Zealand Greenhouse Gas Emissions 2001 (ie, database of greenhouse gases	2001

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		emissions for all TLAs) do not appear to have been included in the re-designed website.  Recommend that MARCO contact NIWA to discuss the status of the Inventory of New Zealand Greenhouse Gas Emissions.	
1.5.3 Energy efficiency	×	Spreadsheet hyperlinks checked (EW website).  No new results available on EW website.  According to metadata on the EW website: 'The Regional Energy Survey will be repeated every four years. This indicator will be updated in 2007'. However, no new data appears to be available.	2003
1.6.1 Waste to landfills	✓	Spreadsheet hyperlinks checked (EW website) including contact details.  No new data. However, additional interpretive text added: 'Alternative studies by Waste Not Consulting during 2006/07 estimated that Hauraki District produced 445kg of waste to landfill per capita per annum compared to 523kg for the Matamata-Piako District'.	2005
1.6.2 Proportion of recycling	×	Spreadsheet hyperlinks updated (MfE website).  No new data.	2005-06
<b>2. Quality of Life</b>			
2.1.1 Life expectancy at birth	×	Spreadsheet hyperlinks updated (Stats NZ website).  No new data available.	2005-07
2.1.2 Social deprivation index	×	Spreadsheet hyperlinks updated (Wellington School of Medicine and Ministry of Health websites).  No new data available.	2006
2.1.3 Avoidable mortality and hospitalisation rates	×	Spreadsheet hyperlinks checked and updated (Waikato DHB Health Needs Assessment and Ministry of Health online data collections).  No new data available.  Recommend that MARCO contact Waikato DHB to see if there is any more recent data available on avoidable mortality and hospitalisation rates.	2003
2.1.4 Overall quality of life	×	MARCO baseline survey results only.  No new data available until mid-late 2010.	2007
2.1.5 Barriers to accessing General Practitioners (GPs)	×	MARCO baseline survey results only.  No new data available until mid-late 2010.	2007
2.2.1 School leavers with no formal	✓	Hyperlinks checked (Education Counts website).	2008

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
qualification		Data updated to 2008.	
2.2.2 Educational attainment of the adult population	×	No new results (Census data).	2006
2.2.3 Participation in early childhood education	✓	<p>Metadata and hyperlinks checked (MSD Social Report website).</p> <p>Data updated to 2008, including territorial authority-level data in Appendix.</p> <p>Note that some of the data appears to have been retrospectively revised since the last report update. For consistency, all historical figures (2001-2007) have been updated from the MSD Social Report website. Specific changes are: (a) national and regional data for 'apparent' participation rate now relates to 3 and 4-year-olds combined (not 3 and 4 year-olds separately), and (b) TLA stats for 'apparent' participation rate have all been adjusted downwards to match MSD revised series (refer Appendix Table 2.2.3a).</p>	2008
2.2.4 Adult and community education	✓	<p>TEC website searched for any new statistical developments, but none found.</p> <p>Additional interpretive text added as follows: 'ACE is supported by, and delivered through, a range of community organisations, including other tertiary education providers such as Literacy Aotearoa and the Rural Education Activities Programme. Funding for ACE is also available to schools and tertiary education institutions. There were 140,000 enrolments in school-based adult and community education in 2008. Tertiary education institutions have also been able to run ACE programmes with support from government funding. In 2008, ACE programmes were provided by eight universities, 19 institutes of technology and polytechnics and two wānanga, and attracted an estimated 83,300 learners. In the May 2009 Budget the national funding for ACE was cut from \$16 million to \$3 million, with the Government saying it paid for too many hobby courses. Education Minister Anne Tolley said that due to the economic recession the Government was focusing on foundation skills such as literacy, numeracy and language courses'.</p>	2007
2.2.5 Work opportunities matching skills	×	<p>MARCO baseline survey results only.</p> <p>No new data available until mid-late 2010.</p>	2007
2.3.1 Rent to income ratio	×	<p>Hyperlink omitted (Stats NZ website – link no longer valid on re-designed site).</p> <p>No new data on Statistics NZ website.</p> <p>Updated figures are yet to be sourced. Data on median weekly rent is freely available from the 2006 Census. However the denominator (median annual income for households paying rent) may</p>	2001

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		<p>require a special data extraction. Comparable 2006 data could potentially be sourced from Statistics New Zealand for a fee.</p> <p>Recommend that MARCO contact Stats NZ to discuss the purchase of a consistent 1991-2006 time series for rent-to-income ratio for NZ, Waikato Region and TLAs.</p> <p>Note that there is biennial data for 'Housing Cost to Income Ratio' available on the Stats NZ website, but this has only been estimated at a national level.</p>	
2.3.2 Housing affordability	×	<p>Regional information is only available by special request, as survey numbers in the Household Economic Survey are generally too low.</p> <p>Available survey data for the Auckland/upper North Island region was updated in the 2009 report.</p> <p>Recommend that MARCO contact Stats NZ to discuss a special data request to estimate a consistent 2001-2008 time series for housing costs as a proportion of household income (from the Household Economic Survey) for NZ, Waikato Region and TLAs.</p>	2008
2.3.3 Home ownership rate	×	<p>No new results (Census data).</p> <p>Hyperlink updated (Stats NZ website).</p>	2006
2.3.4 Household crowding (Canadian Crowding Index)	×	<p>No new results (Census data).</p> <p>Hyperlink updated (Stats NZ website).</p>	2006
2.3.5 Proximity to work, study and recreation	×	<p>MARCO baseline survey results only.</p> <p>No new data available until mid-late 2010.</p>	2007
2.4.1 Criminal victimisation rates	✓	<p>No additional survey data available on criminal victimisation rates. However, the interpretive text was expanded as follows: 'Interviews for the most recent New Zealand Crime and Safety Survey began in August 2009. Findings are expected to be published in June 2010'.</p> <p>Hyperlinks updated (re-designed Stats NZ website).</p> <p>Latest available data on recorded offences has been updated to 2009.</p>	2009
2.4.2 Perceptions of safety	×	<p>MARCO baseline survey results only.</p> <p>No new data available until mid-late 2010.</p>	2007
2.4.3 Road traffic crashes and casualties	✓	<p>Data updated to 2008.</p> <p>Hyperlinks checked.</p>	2008
2.5.1 Unpaid work	×	<p>No new results (Census data).</p>	2006

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
2.6.1 Participation in sport and active leisure	×	Hyperlink updated (SPARC website).  MARCO baseline survey results only (2007).  No new data available until mid-late 2010.	2007
2.7.1 Participation in social networks and groups	×	Data gap remains at the territorial authority level.  No new Hamilton data available (next QoL Survey scheduled for 2010/11).  Hyperlink checked ( <a href="http://www.qualityoflifeproject.govt.nz">www.qualityoflifeproject.govt.nz</a> ).	2008, Hamilton only
2.7.2 Contact between young people and their parents	✓	Data updated to incorporate findings from the Youth '07 Survey.  Trend symbol changed from ? to ↘. This reflects a decline identified between the 2001 and 2007 surveys.	2007
2.8.1 Youth and older people's engagement in decision-making	×	Data gap remains.	N/A
<b>3. Sustainable Economy</b>			
3.1.1 Genuine Progress Indicator (or Ecological footprint)	✓	Hyperlinks checked (EW website) and added (EERNZ website).  No new results available on EW website.  Interpretive text updated as follows: 'Ecological Economics Research New Zealand (EERNZ), formerly known as the New Zealand Centre for Ecological Economics (NZCEE) at Massey University is developing a GPI for New Zealand in partnership with the Parliamentary Commissioner for the Environment. According to the EERNZ website (accessed 12 April 2010), a GPI has now been developed and is soon to be publicly launched. A regional GPI has already been calculated for the Auckland Region, incorporating information from 20 components ranging from air quality to unemployment. A similar exercise is being undertaken for the Waikato Region (completion date June 2010)'.	2003-04
3.2.1 Regional Gross Domestic Product (GDP)	✓	Hyperlinks updated (re-designed Stats NZ website) and checked (NBNZ website).  No new data available from the initial Stats NZ Regional GDP estimates. Supplementary text: 'Additional data is now also available through regular updates from Environment Waikato's Regional Economic Model. According to the latest results, Waikato Gross Regional Product was \$15.6 billion for the year ended March 2007, and real GRP growth averaged 5% per year between 2004 and 2007. Source: Market Economics (2009) 'Waikato Regional Dynamic Environment and Economy Model' (WRDEEM).'	2009

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		<p>NBNZ quarterly economic index updated to December 2009 (including retrospective changes to the time series). 'The rate of economic growth recently slowed following a relatively lengthy period of sustained growth, and entered a recessionary period during 2008-2009. As at December 2009, annual average percent growth in economic activity was estimated at negative 3.0% for the Waikato Region and negative 1.3% at the national level.'</p> <p>State symbol changed from ☺ to ☹ to reflect the fact that New Zealanders are feeling the effects of economic recession but that living standards are still relatively high (compared to many other countries).</p>	
3.2.2 Unemployment rate	✓	<p>HLFS quarterly estimates updated to December 2009. Note that the time series has been retrospectively revised by Stats NZ, therefore for consistency the entire time-series has been copied from Stats NZ's Infoshare online database. At the same time, the historical series has been extended back to March 1986 (previously only recorded back to March 2002).</p> <p>As a result of the latest data, the State symbol has been updated from ☺ to ☹.</p>	2009
3.2.3 Median weekly income	×	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>National and Waikato regional data updated to 2009 (NZ Income Survey) including retrospective revision of historical data (Stats NZ Table Builder function).</p> <p>Note that the classification for 'other ethnic groups' is reported differently by Stats NZ commencing 2009. Hence, the 'other ethnic groups' median income data columns have been discontinued in the MARCO spreadsheet. There is no substantial loss of information from this omission.</p>	2009
3.2.4 Number of businesses and employees by industry	✓	<p>Hyperlink updated (Stats NZ).</p> <p>Data updated to 2009, including retrospective revision of all historical data.</p> <p>Appendix tables (territorial authority level) also updated.</p>	2009
3.2.5 Building consents	✓	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>Updated to January 2010 data.</p>	2010
3.3.1 Drinking water quality	✓	<p>Hyperlink checked (drinkingwater.org.nz).</p> <p>Some updated data was available. This is shown in a new table: 'Table 3.3.1b: Changes to public health grading for selected community water supplies between 2009 and 2010'.</p>	2010

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		Due to the large proportion of supplies that remain ungraded, the trend symbol remains '?'. No new data available until mid-late 2010.	
3.4.1 Residents' confidence in councils' decision-making	×	MARCO baseline survey results only. No new data available until mid-late 2010.	2007
3.4.2 Residents' satisfaction with councils' approach to planning and providing services	×	Data gap remains.	N/A
3.5.1 Regional GDP contributed by primary industries	✓	Hyperlink updated (re-designed Stats NZ website).  No new data available from the initial Stats NZ Regional GDP estimates.  Replacement text: 'Statistics New Zealand released industry-level GRP estimates for the year ended March 2007, and these were regionalised by Garry MacDonald, Market Economics Limited. According to these results, the Waikato region is still the fourth largest regional economy in New Zealand after Auckland, Wellington and Canterbury. In the year ended March 2007, the Waikato Region contributed 9.1% of national GDP. Of this, approximately 14% (\$2.2 billion) is agricultural production. The proportion contributed by agriculture has increased since 2001, when it was 12.7%. The dairy industry, including dairy farming and manufacturing, grew from 10.8% of GDP in 2001 to 12.7% in 2007.'  Trend symbol updated from ⇨ to ⇩.  Positive trend noted in the Executive Summary.	2003
3.6.1 Visitor nights in commercial accommodation	✓	Hyperlinks updated (re-designed Stats NZ website) and checked (Tourism NZ website).  Data updated to February 2010, including retrospective update of historical data back to January 2000 for most districts and RTOs and for NZ as a whole.	2010
3.6.2 International visitors	✓	Hyperlink checked (Tourism NZ website).  National-level data updated to February 2010. However, regional-level data no longer appears to be available from the IVS. This was also noted in the 2009 Update Report.  Note that the 2008 'Indicators Mapping Report' recommended that this indicator be removed from the MARCO set due to lack of utilisation by TLAs in the Region.	2007
3.6.3 Income from tourism (international and domestic)	×	Hyperlink checked (Tourism NZ website).  Regional expenditure forecasts do not appear to be available anymore at a sub-national level.	2006

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		Recommend that MARCO contact Tourism NZ to discuss a possible request for time series estimates of international and domestic visitor expenditure (including forecasts) for the Waikato, Coromandel and Lake Taupo RTOs.	
3.6.4 Employment in the tourism industry	✓	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>Update to 2009 data included retrospective changes to the time series (2001-2007).</p> <p>Only national-level data is available for this indicator.</p> <p>State symbol changed from ? to ↑ to reflect results of the expanded time series (now covering 2001-2009).</p> <p>Note that the 2008 'Indicators Mapping Report' recommended that this indicator be removed from the MARCO set due to lack of utilisation by TLAs in the Region.</p>	2009
3.7.1 Total research funding	✓	<p>Hyperlinks checked (Stats NZ and University of Waikato).</p> <p>National R&amp;D Survey data updated to 2008, including retrospective update to some of the historical data.</p> <p>University of Waikato research data has been updated from Annual Report for 2008.</p> <p>For this update report, real R&amp;D expenditure (in June 2006 dollars) at the national and regional level has been graphed and reported on rather than gross R&amp;D expenditure. The CPI adjustment becomes increasingly important as a longer time series is built up. Real data is now used in the trend 'circle of well-being' for this indicator rather than nominal data.</p>	2008
3.7.2 Enrolments at tertiary education institutes	✓	<p>Hyperlink checked (Education Counts website).</p> <p>Data updated to 2008, including retrospective update of historical data to ensure consistency in the time series (2001-2007).</p>	2008
<b>4. Culture and Identity</b>			
4.1.1 Residents' rating of their sense of pride in the way their city/town looks and feels	×	No new data (MARCO baseline survey results only).	2007
4.1.2 Number of Māori speakers (in Māori and total population)	×	<p>Hyperlink checked.</p> <p>No new data (Census item).</p>	2006
4.1.3 Proportion of population that speak the 'first language' of their ethnic group	✓	<p>Hyperlink checked.</p> <p>No new data (Census item).</p>	2006
4.2.1 Number of buildings and places	✓	Hyperlink updated (NZHPT website).	2010

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
listed on the Historic Places Trust register		<p>Website search and tally sheet used to update data. Note that the website has been re-designed and the online register is slightly less easy to use than last year (due to a cookies function), but the relevant information can still be extracted in a similar manner. There is also a new 'recent registrations' function which supplements the online register.</p> <p>State symbol changed from ⇨ to ⇩ to reflect results of the expanded time series (now covering 2008-2010 with a degree of certainty).</p>	
4.2.2 Number and proportion of heritage buildings demolished or removed from heritage records	✓	<p>Hyperlink updated (NZHPT website).</p> <p>No changes from previous data (verification only).</p>	2010
4.2.3 Design of new developments	×	<p>Hyperlink checked (EW website).</p> <p>No new results available on EW website (Environmental Awareness, Attitudes and Actions Survey). The latest EAAA survey was scheduled for September 2009, but the results are not yet available online.</p> <p>Note that the 2008 'Indicators Mapping Report' recommended that this indicator be removed from the MARCO set due to lack of utilisation by TLAs in the Region.</p>	2006
4.3.1 Residents' satisfaction with cultural facilities provided	×	No new data (MARCO baseline survey results only).	2007
4.3.2 Participation in cultural and arts activities	×	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>No new data available (NZ Cultural Experiences Survey).</p>	2002
4.3.3 Proportion of council's spending on cultural activities and events	×	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>No new data available from Statistics NZ.</p>	2003/04
4.4.1 People employed in the cultural sector	×	<p>Hyperlink updated (re-designed Stats NZ website).</p> <p>No new data available from Statistics NZ.</p> <p>Data remains available at the national level only.</p>	2001
<b>5. Participation and Equity</b>			
5.1.1 Percentage of voter turnout at local and general elections	✓	<p>Hyperlinks checked (MSD Social Report website and Elections website).</p> <p>No new data for local body election results (latest elections 2007).</p> <p>General election voter turnout stats updated for the national election 2008. No longer reporting this at the Waikato regional level (difficult to calculate and not readily available).</p>	2008

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
5.1.2 Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	×	Hyperlinks checked (LGNZ website and MSD Social Report website).  No new data for local body election results (latest elections 2007).	2007
5.1.3 Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	×	No new data (MARCO baseline survey results only).	2007
5.2.1 Percentage of residents perceiving that cultural diversity makes their region/city/town a better place to live	×	No new data (MARCO baseline survey results only).	2007
Where To From Here	✓	Updated information supplied about the project brief and deliverables, and introductory information about possible amendments to the indicator set in the future.	
Further Information	✓	Changed from Regional Co-ordinator, Choosing Futures Waikato to Dr Beat Huser, Environment Waikato.	
<b>Appendices</b>			
Appendix One: Update notes	×		
Appendix Tables 1.2.2a to 1.2.2m: Top actions people have taken to protect the environment – territorial authorities	×	No new data.	2006
Appendix Tables 1.5.2a to 1.5.2e: Estimated emissions of six greenhouse gases by territorial authority, 2001	×	No new data.	2001
Appendix Table 2.1.2: NZDep2006 scores for Census Area Units and territorial authority areas in the Waikato Region	×	No new data.	2006
Appendix Tables 2.1.3a to 2.1.3f: Avoidable mortality and avoidable hospitalisations – territorial authorities, various time periods	×	No new results available on DHB website (Health Needs Assessment) at the territorial authority level.	2001
Appendix Tables 2.2.3a to 2.2.3b: Year 1 students who have had some Early Childhood Education (ECE) by territorial authority and ethnicity	✓	Data updated to 2008, including retrospective revision of historical data (2001-2007) as per MSD Social Report website data.	2008
Appendix Tables 3.2.4a to 3.2.4b: Employee counts by industry classification (ANZSIC), territorial authority areas	✓	Data updated to 2009.  Note that these tables remain difficult to read given the small font size.	2009

## Appendix Two: Additional data tables

Appendix Table	Description
1.2.2a to 1.2.2l	Top five actions people have taken to protect the environment – territorial authorities 2003
1.5.2a to 1.5.2e	Estimated emissions of six greenhouse gases by territorial authority, 2001
2.1.2	NZDep2006 scores for Census Area Units and territorial authority areas in the Waikato Region
2.1.3a to 2.1.3f	Avoidable mortality and avoidable hospitalisations – territorial authorities, various time periods
2.2.3a to 2.2.3b	Year 1 students who have had some Early Childhood Education (ECE) by ethnicity and territorial authority, 2007
3.2.4a to 3.2.4b	Employee counts and businesses by industry classification (ANZSIC), territorial authority areas

*Appendix Table 1.2.2a: Top actions people have taken to protect the environment – Waikato Region*

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	30.2%	61.0%	42.7%	46.4%
Disposed rubbish/waste properly	0.0%	1.2%	11.6%	17.2%
Compost kitchen/garden waste	11.0%	65.0%	12.0%	12.6%
Planting trees	15.7%	8.1%	11.1%	12.6%
Use buses, bikes or walking to reduce car use	6.6%	26.0%	8.9%	9.7%
Recycle clothes	0.0%	0.0%	3.9%	8.7%
Reduced rubbish/waste	23.5%	1.0%	4.9%	7.0%
Dispose of chemicals properly	0.0%	97.0%	1.5%	4.6%
Saved electricity	7.3%	0.4%	9.0%	4.1%
Buy products that claim to be better for the environment	5.7%	45.0%	3.9%	4.1%
Reduced chemical use	10.9%	3.1%	5.3%	3.9%
Saved water / reduced water consumption	17.7%	54.0%	8.4%	4.1%
Killed Weeds	8.1%	1.6%	5.0%	2.6%
Reduce or don't use/improved efficiency of fireplace for home heating	0.0%	0.2%	0.0%	2.2%
Killed animal pests	4.4%	1.6%	3.7%	2.0%
Don't litter when out and pick up rubbish	0.0%	6.1%	2.8%	1.8%
Bury rubbish/not burn	0.0%	0.1%	0.6%	1.8%
Refused supermarket plastic bags	0.0%	0.1%	1.6%	1.7%
Fenced off native bush/rivers/streams	0.0%	0.6%	2.6%	1.6%
Tidy/clean up property	0.0%	1.8%	1.5%	1.6%
Education and awareness	3.5%	3.9%	2.2%	1.4%
Car tuned regularly/ drive fuel efficient car	0.0%	76.0%	2.0%	1.4%
Grow organically	0.0%	2.1%	1.8%	1.1%
Reuse something yourself instead of disposing of it	0.0%	55.0%	0.0%	1.1%
Feed/protect native birds	0.0%	1.1%	0.3%	1.0%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	1.2%	0.6%	0.9%
Don't smoke	0.0%	1.2%	0.4%	0.5%
Recycle in general	0.0%	2.3%	0.0%	0.5%
Got family into recycling	0.0%	0.1%	1.7%	0.3%
Environmental beautification	1.2%	0.3%	0.5%	0.2%
Other (includes a range of issues mentioned by 1% or less)	3.9%	8.0%	6.5%	9.1%
Don't Know/Unsure	44.9%	1.8%	17.3%	17.4%

Source: *Environment Waikato: Environmental Awareness, Attitudes and Actions Survey*

Appendix Table 1.2.2b: Top actions people have taken to protect the environment – Franklin District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	34.3%	43.2%	42.0%	46.8%
Disposed rubbish/waste properly	0.0%	1.1%	10.0%	15.3%
Compost kitchen/garden waste	2.9%	66.3%	10.0%	11.7%
Use buses, bikes or walking to reduce car use	2.9%	19.0%	4.0%	10.1%
Planting trees	28.6%	14.7%	21.0%	9.3%
Recycle clothes	0.0%	0.0%	2.0%	8.9%
Reduced rubbish/waste	28.6%	0.0%	6.0%	5.0%
Dispose of chemicals properly	0.0%	96.8%	5.0%	4.5%
Education and awareness	0.0%	7.4%	0.0%	3.8%
Buy products that claim to be better for the environment	2.9%	44.6%	6.0%	3.7%
Refused supermarket plastic bags	0.0%	0.0%	0.0%	3.2%
Reduced chemical use	14.3%	5.3%	7.0%	3.1%
Saved water / reduced water consumption	8.6%	65.3%	2.0%	4.4%
Bury rubbish/not burn	0.0%	0.0%	1.0%	3.0%
Reduce or don't use/improved efficiency of fireplace for home heating	0.0%	0.0%	0.0%	1.6%
Killed animal pests	8.6%	2.1%	9.0%	1.6%
Fenced off native bush/rivers/streams	0.0%	1.1%	1.0%	1.6%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	3.2%	2.0%	1.5%
Killed Weeds	14.3%	4.2%	10.0%	1.5%
Grow organically	0.0%	1.1%	2.0%	1.5%
Reuse something yourself instead of disposing of it	0.0%	52.6%	0.0%	1.4%
Look after watercourse / Monitor water quality	0.0%	3.2%	0.0%	1.4%
Don't Know/Unsure	34.3%	1.1%	11.0%	14.7%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2c: Top actions people have taken to protect the environment – Hamilton City

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	26.4%	59.4%	61.9%	57.4%
Disposed rubbish/waste properly	0.0%	1.2%	10.6%	22.8%
Compost kitchen/garden waste	8.5%	55.4%	17.9%	12.2%
Use buses, bikes or walking to reduce car use	7.0%	29.2%	14.2%	12.2%
Planting trees	8.0%	4.1%	7.3%	9.5%
Recycle clothes	0.0%	0.0%	4.6%	8.2%
Reduced rubbish/waste	20.9%	0.5%	3.6%	6.9%
Saved electricity	3.5%	0.5%	10.9%	5.9%
Disposed of chemicals properly	0.0%	95.9%	1.0%	4.6%
Saved water / reduced water consumption	6.0%	47.2%	6.9%	4.6%
Don't litter when out and pick up rubbish	0.0%	7.0%	2.0%	3.7%
Refused plastic bags at supermarket	0.0%	0.2%	2.3%	2.7%
Education and awareness	9.0%	4.9%	2.3%	2.5%
Reduce/don't use/improve efficiency of fireplace for home heating	0.0%	0.5%	0.0%	2.4%
Buy products that claim to be better for the environment	3.5%	44.3%	5.6%	2.3%
Killed Weeds	3.0%	1.5%	5.0%	2.2%
Tidy/clean up property	0.0%	1.5%	0.7%	1.9%
Car tuned regularly/ drive fuel efficient car	0.0%	70.4%	1.3%	1.7%
Killed animal pests	0.5%	0.7%	1.7%	1.3%
Bury rubbish, not burn	0.0%	0.0%	1.0%	1.3%
Grow organically	0.0%	2.2%	2.3%	1.2%
Reuse something yourself instead of disposing of it	0.0%	52.5%	0.3%	1.2%
Got drainage/ improved	0.0%	0.0%	0.0%	1.2%
Feed/protect native birds	0.0%	1.2%	0.0%	1.1%
Recycle in general	0.0%	1.9%	0.0%	1.0%
Got family into recycling	0.0%	0.2%	1.7%	0.4%
Reduced chemical use	6.5%	2.9%	6.0%	0.4%
Other (includes a range of issues mentioned by 1% or less)	2.0%	6.2%	6.8%	10.4%
Don't Know/Unsure	48.8%	1.2%	15.9%	12.1%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2d: Top actions people have taken to protect the environment – Hauraki District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	31.6%	45.1%	33.6%	43.5%
Planting trees	19.0%	9.7%	19.7%	18.5%
Compost kitchen/garden waste	21.5%	72.6%	12.3%	16.7%
Buy products that claim to be better for the environment	15.2%	46.0%	4.1%	9.6%
Use buses, bikes or walking to reduce car use	7.6%	17.7%	3.3%	9.2%
Recycle clothes	0.0%	0.0%	0.8%	7.4%
Reduced rubbish/waste	26.6%	0.9%	4.1%	5.8%
Killed Weeds	11.4%	0.9%	6.6%	4.6%
Disposed of chemicals properly	0.0%	100.0%	1.6%	4.5%
Disposed rubbish/waste properly	0.0%	0.9%	11.5%	4.3%
Killed animal pests	2.5%	1.8%	1.6%	3.3%
Bury rubbish, not burn	0.0%	0.9%	0.0%	3.2%
Saved electricity	10.1%	0.9%	7.4%	3.0%
Reduced chemical use	10.1%	4.4%	6.6%	2.9%
Saved water / reduced water consumption	20.3%	62.8%	3.3%	2.9%
Fenced off native bush/rivers/streams	0.0%	0.9%	4.9%	2.8%
Not eating meat	0.0%	0.0%	0.0%	1.6%
Reduce or don't use/improved efficiency of fireplace for home heating	0.0%	0.0%	0.0%	1.5%
Installed solar water heating	0.0%	0.9%	0.0%	1.4%
Don't Know/Unsure	45.6%	0.0%	16.4%	17.0%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2e: Top actions people have taken to protect the environment – Matamata-Piako District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	21.3%	57.0%	40.0%	54.8%
Recycle clothes	0.0%	0.0%	2.5%	19.5%
Planting trees	7.5%	11.3%	11.3%	11.1%
Disposed rubbish/waste properly	0.0%	1.4%	13.1%	9.0%
Compost kitchen/garden waste	7.5%	63.4%	10.0%	8.6%
Reduced chemical use	6.3%	3.5%	5.6%	8.4%
Disposed of chemicals properly	0.0%	95.8%	2.5%	6.5%
Use buses, bikes or walking to reduce car use	1.3%	17.6%	6.9%	5.0%
Tidy/clean up property	0.0%	1.4%	2.5%	4.7%
Buy products that claim to be better for the environment	1.3%	35.2%	3.1%	4.2%
Saved electricity	1.3%	0.0%	9.4%	4.1%
Reuse something yourself instead of disposing of it	0.0%	41.6%	0.0%	3.9%
Saved water / reduced water consumption	1.3%	56.3%	3.1%	3.0%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	4.9%	4.4%	2.8%
Grow organically	0.0%	3.5%	1.3%	2.7%
Look after watercourse / Monitor water quality	0.0%	2.1%	0.6%	2.7%
Bury rubbish, not burn	0.0%	0.0%	0.0%	2.7%
Killed animal pests	0.0%	0.0%	2.5%	2.6%
Education and awareness	3.8%	4.2%	1.9%	2.6%
Car tuned regularly/ drive fuel efficient car	0.0%	72.5%	1.3%	2.6%
Abide by council rules	0.0%	0.0%	1.3%	2.5%
Reduced rubbish/waste	21.3%	1.4%	4.4%	1.9%
Watch what burn / Burn burnable rubbish	0.0%	0.0%	0.6%	1.9%
Don't light fires	0.0%	0.0%	1.3%	1.4%
Fenced off native bush/rivers/streams	0.0%	2.8%	8.1%	1.3%
Feed/protect native birds	0.0%	2.1%	0.0%	1.3%
Use alternative fuels	0.0%	0.7%	0.0%	1.3%
Installed solar water heating	0.0%	0.0%	0.0%	1.3%
Reduce or don't use/improved efficiency of fireplace for home heating	0.0%	0.0%	0.0%	1.2%
Other (includes a range of issues mentioned by 1% or less)	3.8%	5.6%	2.4%	1.9%
Don't Know/Unsure	52.5%	4.2%	18.8%	2.6%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

*Appendix Table 1.2.2f: Top actions people have taken to protect the environment – Otorohanga District*

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	24.1%	59.1%	29.8%	34.5%
Planting trees	16.5%	21.7%	21.2%	19.0%
Reduced chemical use	7.6%	2.4%	5.8%	12.2%
Fenced off native bush/rivers/streams	0.0%	3.6%	16.3%	8.2%
Buy products that claim to be better for the environment	1.3%	45.8%	1.9%	8.0%
Recycle clothes	0.0%	0.0%	1.0%	7.7%
Saved water / reduced water consumption	3.8%	53.0%	8.7%	7.5%
Disposed rubbish/waste properly	0.0%	1.2%	9.6%	5.8%
Saved electricity	0.0%	0.0%	7.7%	5.4%
Use buses, bikes or walking to reduce car use	3.8%	18.1%	6.7%	5.1%
Compost kitchen/garden waste	6.3%	84.3%	6.7%	5.0%
Disposed of chemicals properly	0.0%	97.6%	0.0%	4.9%
Killed Weeds	2.5%	7.2%	4.8%	4.4%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	8.4%	6.8%	3.0%
Killed animal pests	1.3%	6.0%	7.7%	2.9%
Reduced rubbish/waste	34.2%	4.8%	3.8%	1.9%
Bury rubbish, not burn	0.0%	0.0%	1.0%	1.9%
Reduce or don't use/improved efficiency of fireplace for home heating	0.0%	0.0%	0.0%	1.9%
All that I can do	0.0%	0.0%	0.0%	1.9%
Feed/protect native birds	0.0%	4.8%	1.0%	1.6%
Refused plastic bags at supermarket	0.0%	0.0%	1.0%	1.6%
Use alternative fuels	0.0%	0.0%	1.0%	1.5%
Other (includes a range of issues mentioned by 1% or less)	5.1%	9.6%	4.0%	1.4%
Don't Know	39.2%	1.2%	14.5%	28.8%

*Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey*

**Appendix Table 1.2.2g: Top actions people have taken to protect the environment – Rotorua District**

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	23.8%	28.8%	19.8%	32.6%
Planting trees	23.8%	16.3%	19.8%	12.2%
Use buses, bikes or walking to reduce car use	2.5%	15.0%	0.0%	10.4%
Fenced off native bush/rivers/streams	0.0%	3.8%	12.3%	8.5%
Reduced rubbish/waste	30.0%	0.0%	3.7%	7.1%
Saved water / reduced water consumption	10.0%	53.8%	2.5%	5.2%
Recycle clothes	0.0%	0.0%	1.2%	5.0%
Compost kitchen/garden waste	15.0%	78.8%	8.6%	4.5%
Watch what burn / Burn burnable rubbish	0.0%	1.3%	3.7%	4.5%
Disposed rubbish/waste properly	0.0%	0.0%	12.3%	4.1%
Reuse something yourself instead of disposing of it	0.0%	38.8%	0.0%	4.1%
Buy products that claim to be better for the environment	5.0%	45.0%	2.5%	3.8%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	1.3%	6.2%	8.1%
Abide by council rules	0.0%	0.0%	1.2%	3.1%
Don't smoke	0.0%	0.0%	1.2%	3.1%
Good farming practices	0.0%	0.0%	2.5%	2.8%
Don't litter when out and pick up rubbish	0.0%	0.0%	3.7%	2.7%
Recycle in general	0.0%	0.0%	0.0%	2.4%
Bury rubbish, not burn	0.0%	0.0%	2.5%	2.1%
Reduce/don't use/improve efficiency of fireplace for home heating	0.0%	1.3%	0.0%	2.1%
Got drainage/ improved	0.0%	0.0%	0.0%	2.1%
Killed Weeds	21.3%	1.3%	3.7%	1.9%
Saved electricity	10.0%	0.0%	2.5%	1.9%
Other (includes a range of issues mentioned by 1% or less)	1.3%	6.5%	14.0%	2.7%
Don't Know/Unsure	33.8%	2.5%	18.5%	17.4%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2h: Top actions people have taken to protect the environment – South Waikato District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	40.7%	59.4%	46.5%	35.5%
Compost kitchen/garden waste	18.5%	73.0%	16.9%	14.1%
Disposed rubbish/waste properly	0.0%	2.0%	14.8%	12.6%
Planting trees	6.2%	6.8%	15.5%	12.2%
Reduced rubbish/waste	24.7%	0.0%	3.5%	12.1%
Use buses, bikes or walking to reduce car use	7.4%	24.4%	4.9%	10.4%
Dispose of chemicals properly	0.0%	96.6%	1.4%	6.6%
Buy products that claim to be better for the environment	2.5%	39.9%	4.2%	5.5%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	1.4%	3.5%	5.3%
Fenced off native bush/rivers/streams	0.0%	1.4%	7.0%	4.8%
Recycle clothes	0.0%	0.7%	4.2%	3.0%
Refused plastic bags at supermarket	0.0%	0.0%	0.0%	2.1%
Look after watercourse / Monitor water quality	0.0%	2.7%	0.0%	1.8%
Killed Weeds	2.5%	2.7%	4.9%	1.6%
Don't smoke	0.0%	0.0%	0.0%	1.6%
Reuse something yourself instead of disposing of it	0.0%	56.0%	1.4%	1.4%
Feed/protect native birds	0.0%	0.7%	0.0%	1.4%
Bury rubbish, not burn	0.0%	0.7%	0.0%	1.4%
Reduced chemical use	1.2%	1.4%	6.3%	1.4%
Tidy/clean up property	0.0%	2.7%	2.8%	1.3%
Saved water / reduced water consumption	2.5%	41.2%	2.8%	1.3%
Other (includes a range of issues mentioned by 1% or less)	2.4%	8.9%	9.1%	1.3%
Don't Know / Unsure	44.4%	3.4%	10.6%	19.1%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2i: Top actions people have taken to protect the environment – Taupo District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	22.5%	72.8%	53.4%	42.7%
Disposed rubbish/waste properly	0.0%	3.5%	13.0%	20.8%
Reduced rubbish/waste	13.8%	0.0%	5.6%	11.7%
Recycle clothes	0.0%	0.0%	6.3%	11.2%
Compost kitchen/garden waste	8.8%	61.3%	14.3%	10.8%
Planting trees	11.3%	8.1%	9.3%	9.8%
Reduced chemical use	6.3%	2.3%	4.3%	5.8%
Buy products that claim to be better for the environment	6.3%	45.1%	3.7%	5.4%
Saved water / reduced water consumption	6.3%	47.4%	4.9%	4.2%
Dispose of chemicals properly	0.0%	96.0%	1.9%	3.8%
Killed animal pests	5.0%	2.9%	4.3%	2.9%
Killed Weeds	5.0%	1.7%	3.1%	2.8%
Don't smoke	0.0%	3.5%	0.6%	2.7%
Saved electricity	2.5%	0.0%	8.7%	2.6%
Tidy/clean up property	0.0%	1.7%	1.9%	1.6%
Worm farming	0.0%	0.0%	0.6%	1.4%
Don't litter when out and pick up rubbish	0.0%	10.4%	5.0%	1.3%
Use buses, bikes or walking to reduce car use	5.0%	26.6%	4.3%	1.3%
Car tuned regularly/ drive fuel efficient car	0.0%	81.5%	1.9%	1.3%
Education and awareness	0.0%	2.9%	1.2%	1.2%
Grow organically	0.0%	1.7%	0.0%	1.2%
Other (includes a range of issues mentioned by 1% or less)	2.6%	13.8%	9.0%	6.4%
Don't Know	52.5%	2.9%	18.0%	24.4%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2j: Top actions people have taken to protect the environment – Thames-Coromandel District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	28.4%	70.8%	32.4%	41.1%
Planting trees	11.1%	9.5%	11.3%	24.4%
Compost kitchen/garden waste	4.9%	73.5%	12.7%	14.5%
Disposed rubbish/waste properly	0.0%	1.4%	11.3%	13.7%
Reduced rubbish/waste	9.9%	0.0%	4.2%	13.6%
Reduce/don't use/improve efficiency of fireplace for home heating	0.0%	0.0%	2.1%	9.8%
Use buses, bikes or walking to reduce car use	9.9%	25.8%	7.0%	9.7%
Recycle clothes	0.0%	0.0%	2.8%	8.0%
Killed Weeds	3.7%	3.4%	8.5%	6.6%
Buy products that claim to be better for the environment	1.2%	46.9%	2.1%	5.1%
Saved electricity	3.7%	0.0%	4.9%	4.2%
Saved water / reduced water consumption	7.4%	64.0%	4.2%	4.2%
Don't litter when out and pick up rubbish	0.0%	8.2%	4.9%	4.1%
Reduced chemical use	3.7%	1.4%	4.2%	4.1%
Bury rubbish, not burn	0.0%	0.0%	0.7%	4.1%
Refused plastic bags at supermarket	0.0%	0.0%	1.4%	2.8%
Installed solar heating/power	0.0%	0.0%	0.7%	2.8%
Dispose of chemicals properly	0.0%	95.2%	2.1%	2.7%
Killed animal pests	6.2%	3.4%	7.7%	2.7%
Grow organically	0.0%	1.4%	2.8%	2.6%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	0.0%	2.1%	2.6%
Use alternative fuels	0.0%	0.7%	0.7%	1.5%
Got drainage/ improved	0.0%	0.0%	2.1%	1.5%
Recycling in general	0.0%	0.0%	0.0%	1.5%
Erosion control	0.0%	0.0%	0.0%	1.5%
Watch what burn / Burn burnable rubbish	0.0%	0.7%	0.0%	1.4%
Car tuned regularly/ drive fuel efficient car	0.0%	80.3%	4.2%	1.3%
Feed/protect native birds	0.0%	2.0%	1.4%	1.3%
Fenced off native bush/rivers/streams	0.0%	0.0%	1.4%	1.3%
Look after watercourse / Monitor water quality	0.0%	2.7%	0.7%	1.3%
All that I can do	0.0%	1.4%	0.0%	1.3%
Other (includes a range of issues mentioned by 1% or less)	7.4%	4.2%	7.7%	7.9%
Don't Know	40.7%	3.4%	15.5%	11.5%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2k: Top actions people have taken to protect the environment – Waikato District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	43.8%	60.9%	38.3%	44.4%
Planting trees	42.5%	9.5%	17.0%	15.8%
Disposed rubbish/waste properly	0.0%	1.4%	10.2%	14.6%
Compost kitchen/garden waste	22.5%	73.2%	8.7%	11.2%
Use buses, bikes or walking to reduce car use	11.3%	16.7%	5.3%	11.2%
Reduced chemical use	38.8%	1.4%	5.3%	9.4%
Saved water / reduced water consumption	27.5%	61.4%	4.9%	7.2%
Buy products that claim to be better for the environment	13.8%	52.5%	2.9%	6.9%
Killed Weeds	32.5%	3.4%	4.9%	3.9%
Recycle clothes	0.0%	0.0%	4.9%	3.6%
Saved electricity	32.5%	0.0%	7.8%	3.0%
Dispose of chemicals properly	0.0%	97.8%	1.0%	3.0%
Reduced rubbish/waste	42.5%	0.0%	6.8%	2.7%
Bury rubbish, not burn	0.0%	0.0%	1.0%	2.7%
Refused plastic bags at supermarket	0.0%	0.0%	0.5%	2.3%
Grow organically	0.0%	1.4%	2.4%	1.9%
Car tuned regularly/ drive fuel efficient car	0.0%	66.5%	1.9%	1.9%
Fenced off native bush/rivers/streams	0.0%	0.0%	3.4%	1.8%
Got family into recycling	0.0%	0.0%	0.5%	1.2%
Look after watercourse / Monitor water quality	0.0%	2.7%	0.0%	1.0%
Killed animal pests	13.8%	3.4%	6.8%	0.9%
Tidy/clean up property	0.0%	2.0%	1.9%	0.9%
Abide by council rules	0.0%	0.0%	1.0%	0.9%
Feed/protect native birds	0.0%	2.0%	0.5%	0.9%
Other (includes a range of issues mentioned by 1% or less)	3.8%	7.0%	4.5%	3.7%
Don't Know	37.5%	3.4%	19.4%	1.2%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2l: Top actions people have taken to protect the environment – Waipa District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	32.5%	58.9%	39.8%	38.2%
Disposed rubbish/waste properly	0.0%	0.0%	10.9%	17.8%
Planting trees	18.8%	12.7%	15.4%	14.8%
Recycle clothes	0.0%	0.0%	2.5%	8.4%
Use buses, bikes or walking to reduce car use	8.8%	21.3%	6.0%	6.8%
Compost kitchen/garden waste	8.8%	74.1%	11.9%	5.9%
Reduced rubbish/waste	20.0%	2.5%	7.5%	5.6%
Saved water / reduced water consumption	6.3%	63.4%	2.5%	5.0%
Reduced chemical use	15.0%	5.6%	5.0%	4.8%
Saved electricity	6.3%	0.5%	7.5%	4.1%
Killed animal pests	3.8%	1.0%	2.5%	4.1%
Got drainage/ improved	0.0%	0.0%	1.5%	4.0%
Reduce/don't use/improve efficiency of fireplace for home heating	0.0%	0.0%	0.5%	3.1%
Fenced off native bush/rivers/streams	0.0%	1.0%	4.0%	3.0%
Buy products that claim to be better for the environment	10.0%	46.7%	2.5%	3.0%
Car tuned regularly/ drive fuel efficient car	0.0%	78.6%	2.5%	2.1%
Feed/protect native birds	0.0%	1.5%	0.0%	2.1%
Look after watercourse / Monitor water quality	0.0%	1.0%	0.0%	2.0%
Tidy/clean up property	0.0%	2.0%	1.0%	1.9%
Dispose of chemicals properly	0.0%	95.9%	1.5%	1.8%
Bury rubbish, not burn	0.0%	0.0%	0.5%	1.8%
Reuse something yourself instead of disposing of it	0.0%	60.9%	0.0%	1.2%
Killed Weeds	10.0%	2.5%	5.0%	1.1%
Watch what burn / Burn burnable rubbish	0.0%	0.5%	2.0%	1.0%
Refused plastic bags at supermarket	0.0%	0.0%	3.0%	0.9%
Education and awareness	1.3%	3.6%	3.0%	0.9%
Don't litter when out and pick up rubbish	0.0%	5.6%	1.5%	0.9%
Other (includes a range of issues mentioned by 1% or less)	6.3%	6.0%	5.0%	4.8%
Don't Know	42.5%	3.1%	21.9%	25.4%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

Appendix Table 1.2.2m: Top actions people have taken to protect the environment – Waitomo District

	1998	2000	2003	2006
Recycle bottles/cans/plastic/paper	35.0%	61.9%	31.0%	51.6%
Planting trees	23.8%	22.9%	34.7%	12.9%
Disposed rubbish/waste properly	0.0%	2.9%	13.9%	12.8%
Compost kitchen/garden waste	5.0%	81.0%	5.0%	10.6%
Use buses, bikes or walking to reduce car use	5.0%	19.0%	4.0%	7.2%
Fenced off native bush/rivers/streams	0.0%	6.7%	17.8%	7.1%
Reduced chemical use	6.3%	5.7%	3.0%	6.3%
Watch what burn / Burn burnable rubbish	0.0%	0.0%	0.0%	4.2%
Saved electricity	1.3%	0.0%	3.0%	3.4%
Car tuned regularly/ drive fuel efficient car	0.0%	80.9%	3.0%	3.0%
Buy products that claim to be better for the environment	5.0%	42.9%	2.0%	3.0%
Reduced rubbish/waste	18.8%	0.0%	5.0%	2.7%
Good farming practices	0.0%	3.8%	3.0%	1.4%
Feed/protect native birds	0.0%	3.8%	1.0%	1.4%
Reduced fertiliser & reduce/recycle stock effluent on farms	0.0%	0.0%	8.0%	0.0%
Reduce/don't use/improve efficiency of fireplace for home heating	0.0%	0.0%	1.0%	1.4%
Saved water / reduced water consumption	2.5%	48.5%	2.0%	1.3%
Tidy/clean up property	0.0%	0.0%	1.0%	1.3%
Abide by council rules	0.0%	0.0%	1.0%	1.3%
Other (includes a range of issues mentioned by 1% or less)	5.0%	11.6%	2.0%	6.1%
Don't Know	42.5%	1.0%	11.9%	27.7%

Source: Environment Waikato: Environmental Awareness, Attitudes and Actions Survey

*Appendix Table 1.5.2a: Estimated total agricultural emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))*

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)
Franklin District	11,100	590,717	254,109	0	0	0
Thames-Coromandel District	4,614	98,387	42,342	0	0	0
Hauraki District	5,743	310,774	133,682	0	0	0
Waikato District	16,242	852,062	366,521	0	0	0
Matamata-Piako District	11,512	626,931	269,677	0	0	0
Hamilton City	439	23,981	10,354	0	0	0
Waipa District	8,726	476,683	205,053	0	0	0
Otorohanga District	6,737	349,439	150,312	0	0	0
South Waikato District	14,209	305,440	131,431	0	0	0
Waitomo District	8,502	413,555	177,893	0	0	0
Taupo District	30,532	624,105	268,555	0	0	0
Rotorua District	12,462	411,274	184,159	0	0	0

Source: NIWA National Centre for Climate-Energy Solutions

*Appendix Table 1.5.2b: Estimated total area emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))*

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)
Franklin District	31,478	37,655	1,622	2,059	0	0
Thames-Coromandel District	20,916	18,908	1,122	1,003	0	0
Hauraki District	10,596	12,256	536	668	0	0
Waikato District	24,280	29,046	1,251	1,588	0	0
Matamata-Piako District	17,955	21,479	925	1,174	0	0
Hamilton City	70,012	83,752	3,607	4,579	0	0
Waipa District	24,547	29,365	1,264	1,605	0	0
Otorohanga District	5,655	6,765	291	370	0	0
South Waikato District	14,300	17,106	737	935	0	0
Waitomo District	12,173	7,535	467	377	0	0
Taupo District	44,392	25,500	3,072	1,256	0	0
Rotorua District	39,278	46,987	2,023	2,569	0	0

Source: NIWA National Centre for Climate-Energy Solutions

*Table 1.5.2c: Estimated total industrial emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))*

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)
Franklin District	1,762,047	6,802	1,261	7,231	0	761
Thames-Coromandel District	41,498	3,315	614	502	0	53
Hauraki District	27,632	2,207	409	334	0	35
Waikato District	2,972,878	128,998	5,201	6,996	0	736
Matamata-Piako District	48,579	3,880	719	587	0	62
Hamilton City	189,425	15,130	2,804	2,289	0	241
Waipa District	66,415	5,305	983	803	0	84
Otorohanga District	119,000	1,222	226	6,387	0	672
South Waikato District	1,138,896	6,736	13,967	468	0	49
Waitomo District	15,586	1,245	231	188	0	20
Taupo District	212,756	37,270	769	6,830	0	719
Rotorua District	106,271	8,488	1,573	1,284	0	135

Source: NIWA National Centre for Climate-Energy Solutions

**Table 1.5.2d: Estimated total natural emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))**

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)
Franklin District	23	885	117,597	0	0	0
Thames-Coromandel District	1	2,474	666,824	0	0	0
Hauraki District	31	359	59,809	0	0	0
Waikato District	64	835	204,293	0	0	0
Matamata-Piako District	27	72	42,096	0	0	0
Hamilton City	1	1	442	0	0	0
Waipa District	3	4	24,205	0	0	0
Otorohanga District	1	276	178,307	0	0	0
South Waikato District	6	8	1,563,290	0	0	0
Waitomo District	1	963	397,748	0	0	0
Taupo District	10,193	255	3,752,401	0	0	0
Rotorua District	100,065	138,082	807,462	0	0	0

Source: NIWA National Centre for Climate-Energy Solutions

**Table 1.5.2e: Estimated total transport emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO<sub>2</sub> equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))**

Territorial authority	CO <sub>2</sub> (t/yr)	CH <sub>4</sub> (t/yr)	N <sub>2</sub> O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF <sub>6</sub> (t/yr)
Franklin District	177,689	920	1,429	0	0	0
Thames-Coromandel District	86,623	448	696	0	0	0
Hauraki District	58,240	299	468	0	0	0
Waikato District	139,504	714	1,120	0	0	0
Matamata-Piako District	104,470	530	838	0	0	0
Hamilton City	389,431	2,037	3,134	0	0	0
Waipa District	143,736	728	1,167	0	0	0
Otorohanga District	34,671	170	277	0	0	0
South Waikato District	82,549	421	663	0	0	0
Waitomo District	36,127	223	500	0	0	0
Taupo District	106,355	558	856	0	0	0
Rotorua District	222,705	1,151	1,802	0	0	0

Source: NIWA National Centre for Climate-Energy Solutions

Appendix Table 2.1.2: NZDep2006 scores for Census Area Units and territorial authority areas in the Waikato Region

Source: Wellington School of Medicine/Statistics New Zealand

For meshblock level NZDep data refer to:

<http://www.wnmeds.ac.nz/academic/dph/research/socialindicators.html>.

Key:

- CAU = Census Area Unit
- NZDep = NZ Deprivation Index
- CAU\_num\_2006 = unique identifier for CAU
- CAU\_name\_2006 = CAU name
- CAU\_average\_NZDep2006 = Ordinal score for NZDep (ranges from 1 to 10)

CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
<b>Franklin District</b>		
521111	Paerata-Cape Hill	3
521112	Eden Road-Hill Top	4
521113	Buckland	2
521114	Redoubt	4
521115	Opuawhanga	4
521121	Patumahoe	2
521122	Kingseat	2
521131	Pokeno	3
521132	Hunua	1
521133	Mangatawhiri	5
521151	Awhitu	4
521152	Glenbrook	2
521153	Otaua	2
521160	Bombay	3
521202	Whangapouri Creek	1
521302	Runciman	2
525910	Pukekohe North	9
525921	Pukekohe West	6
525922	Bledisloe Park	5
526101	Waiuku	6
526102	South Waiuku	2
526200	Tuakau	9
526701	Onewhero	5
<b>Thames-Coromandel District</b>		
533000	Whitianga	7
533100	Coromandel	7
533200	Te Rerenga	7
533300	Whangamata	7
533400	Tairua	6
533501	Moanataiari	8
533502	Parawai	7
533602	Pauanui Beach	4
533603	Hikuai	6
533604	Te Puru-Thornton Bay	6
<b>Hauraki District</b>		
533800	Ngatea	6
533901	Hauraki Plains	5
533902	Turua	4
533903	Kerepehi	9

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CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
534200	Ohinemuri	6
534300	Paeroa	9
534400	Waihi	10
<b>Waikato District</b>		
526400	Rotowaro	
526500	Raglan	9
526601	Waikato Western Hills	5
526602	Te Uku	5
526702	Te Akau	5
526900	Te Kauwhata	7
527004	Matangi	1
527111	Whitikahu	3
527112	Taupiri Community	10
527121	Eureka	1
527122	Gordonton	3
527123	Kainui	4
527131	Tamahere-Tauwhare	2
527210	Waerenga	5
527221	Maramarua	5
527222	Meremere	10
527401	Huntly West	10
527402	Huntly East	9
527911	Horotiu	6
527912	Te Kowhai	2
527913	Whatawhata	2
528200	Ngaruawahia	10
<b>Matamata-Piako District</b>		
534500	Tahuroa	4
534602	Waitoa	7
534603	Springdale	5
534604	Waihou-Walton	5
534800	Te Aroha	8
534901	Morrinsville West	8
534902	Morrinsville East	5
535000	Waharoa	10
535220	Okauia	4
535231	Te Poi	4
535242	Hinuera	2
535501	Matamata North	7
535502	Matamata South	7
<b>Hamilton City</b>		
527005	Sylvester	1
527006	Flagstaff	1
527007	Horsham Downs	2
527008	Rototuna	1
527009	Huntington	1
527810	Peacocke	3
527820	Temple View	6
528310	Bryant	6
528320	Pukete	3
528402	Pukete West	5
528403	Te Rapa	8
528405	Burbush	3
528406	Rotokauri	4

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CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
528501	Nawton	7
528503	Crawshaw	10
528504	Grandview	8
528505	Brymer	3
528601	Dinsdale North	4
528602	Dinsdale South	7
528700	Beerescourt	5
528800	Maeroa	8
528900	Frankton Junction	8
529000	Swarbrick	9
529100	Hamilton Lake	6
529200	Melville	8
529300	Glenview	5
529401	Queenwood	5
529402	Chedworth	5
529501	Porritt	9
529502	Insoll	10
529503	Fairview Downs	7
529600	Chartwell	3
529700	Hamilton Central	10
529800	Clarkin	9
529900	Claudelands	8
530000	Enderley	10
530100	Peachgrove	8
530200	Hamilton East	9
530300	Naylor	7
530400	Bader	9
530500	University	8
530600	Silverdale	8
530700	Hillcrest West	7
530800	Riverlea	3
<b>Waipa District</b>		
526603	Te Pahu	2
527132	Hautapu	2
527501	Cambridge North	4
527502	Cambridge West	5
527503	Cambridge Central	7
527504	Leamington West	6
527505	Leamington East	5
527600	Ohaupo	4
527700	Kihikihi	8
527914	Ngahinapouri	1
527915	Lake Cameron	2
527921	Te Rore	1
527922	Pirongia	2
527923	Pokuru	4
527924	Lake Ngaroto	2
527925	Tokanui	9
527931	Pukerimu	3
527932	Kaipaki	3
527934	Rotoorangi	3
527935	Te Rahu	2
527936	Kihikihi Flat	2
527937	Allen Road	3

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CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
528000	Rotongata	4
531001	Te Awamutu West	7
531002	Te Awamutu Central	7
531003	Te Awamutu East	7
531004	Te Awamutu South	8
535241	Karapiro	1
<b>Otorohanga District</b>		
531100	Kawhia Community	10
531200	Otorohanga	9
531301	Otorohanga Rural West	6
531303	Te Kawa	4
531304	Otorohanga Rural East	5
<b>South Waikato District</b>		
535100	Tirau	8
535211	Mangakaretu	7
535212	Kinleith	6
535232	Tapapa	4
535250	Arapuni	4
535261	Lichfield	4
535262	Wawa	4
535310	Paraonui	6
535320	Parkdale	8
535330	Matarawa	9
535340	Stanley Park	10
535350	Tokoroa Central	10
535360	Aotea	9
535370	Strathmore	10
535380	Amisfield	2
535600	Putaruru	9
<b>Waitomo District</b>		
531500	Piopio	8
531600	Taharoa	10
531710	Mahoenui	6
531720	Marokopa	5
531731	Waipa Valley	5
531732	Tiroa	9
531800	Mokauiti	8
532000	Te Kuiti	10
<b>Taupo District</b>		
532200	Omori	6
532502	Kuratau	6
540900	Mangakino	10
541000	Turangi	9
541311	Acacia Bay	2
541312	Wairakei-Aratiatia	9
541313	Maunganamu	6
541315	Taupo East	9
541316	Wharewaka	4
541317	Rangatira Park	2
541318	Rangatira	5
541319	Lakewood	2
541320	Marotiri	5
541332	Oruanui	3
541333	Kinloch	2

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CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
541342	Rangitaiki	10
541343	Iwitahi	7
541501	Rangipo	10
541502	Te More	
541503	Taharua	8
541710	Nukuhau	6
541720	Taupo Central	8
541730	Tauhara	8
541740	Hilltop	4
541750	Waipahihi	2
541760	Richmond Heights	5
<b>Rotorua District</b>		
538601	Ngongotaha North	9
538602	Ngongotaha South	7
538721	Poets Corner	6
538722	Ngapuna	10
538731	Owhata South	6
538732	Lynmore	1
538741	Owhata West	9
538742	Owhata East	8
538811	Hamurana	2
538820	Tikitere	6
538831	Kaingaroa Forest	10
538832	Tarawera	2
538841	Golden Springs	3
538842	Reporoa	7
538850	Ngakuru	3
538861	Arahiwi	3
538863	Waiwhero	5
538864	Mamaku	8
539000	Selwyn Heights	10
539100	Western Heights	10
539200	Fairy Springs	9
539310	Pukehangi North	10
539320	Pukehangi South	6
539400	Mangakakahi	9
539500	Sunnybrook	6
539600	Fordlands	10
539700	Utuhina	8
539800	Pomare	4
539900	Hillcrest	8
540000	Springfield	2
540100	Kawaha Point	6
540200	Koutu	10
540300	Ohinemutu	9
540410	Kuirau	10
540420	Victoria	10
540510	Glenholme East	6
540520	Glenholme West	10
540600	Fenton	9
540700	Whaka	10

**Appendix Table 2.1.3a: Avoidable mortality by territorial authority in the Waikato DHB area 1998-2001 by population estimate (2001)**

Territorial authority	2001 population	Avoidable mortality 1998-2001	% of population
Hamilton City	119,500	2,825	2.4%
Hauraki	17,200	619	3.6%
Matamata-Piako	30,300	945	3.1%
Otorohanga	9,600	208	2.2%
South Waikato	24,200	605	2.5%
Thames-Coromandel	25,800	1,029	4.0%
Waikato	41,300	1,089	2.6%
Waipa	41,400	1,356	3.3%
Waitomo	9,800	310	3.2%

Source: Waikato District Health Board Health Needs Assessment and Analysis

**Appendix Table 2.1.3b: Avoidable hospitalisations by territorial authority in the Waikato DHB area 2000-2003 by population estimate (2001)**

Territorial authority	2001 population	Avoidable hospitalisations 2000-03	% of population
Hamilton City	119,500	22,394	18.7%
Hauraki	17,200	3,417	19.9%
Matamata-Piako	30,300	4,505	14.9%
Otorohanga	9,600	1,220	12.7%
South Waikato	24,200	3,913	16.2%
Thames-Coromandel	25,800	5,621	21.8%
Waikato	41,300	6,736	16.3%
Waipa	41,400	7,054	17.0%
Waitomo	9,800	2,589	26.4%

Source: Waikato District Health Board Health Needs Assessment and Analysis

**Appendix Table 2.1.3c: Avoidable mortality for territorial authorities within the Waikato DHB – 1988-2001**

	Hamilton City	Hauraki	Matamata-Piako	Otorohanga	South Waikato	Thames-Coromandel	Waikato	Waipa	Waitomo
1988	419	32	51	35	89	128	144	166	36
1989	426	39	56	37	107	134	135	208	56
1990	421	34	45	43	108	142	126	179	45
1991	408	46	51	38	93	132	129	204	46
1992	435	43	50	33	112	144	129	165	27
1993	387	49	52	26	91	139	147	178	42
1994	408	34	61	27	80	155	151	160	43
1995	394	37	61	18	69	136	128	184	46
1996	447	37	56	27	93	144	171	193	49
1997	375	37	42	28	103	151	128	193	36
1998	390	97	128	34	91	127	136	177	56
1999	391	97	145	18	106	152	150	185	41
2000	427	100	152	40	105	144	162	223	54
2001	440	93	143	28	107	177	193	210	46

Source: Waikato District Health Board – Avoidable Mortality Factsheet

**Appendix Table 2.1.3d: Avoidable mortality index volume trend (base year 1988) for territorial authorities within the Waikato DHB – 1988-2001**

	Hamilton City	Hauraki	Matamata-Piako	Otorohanga	South Waikato	Thames-Coromandel	Waikato	Waipa	Waitomo
1988	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1989	101.67	121.88	109.80	105.71	120.22	104.69	93.75	125.30	155.56
1990	100.48	106.25	88.24	122.86	121.35	110.94	87.50	107.83	125.00
1991	97.37	143.75	100.00	108.57	104.49	103.13	89.58	122.89	127.78
1992	103.82	134.38	98.04	94.29	125.84	112.50	89.58	99.40	75.00
1993	92.36	153.13	101.96	74.29	102.25	108.59	102.08	107.23	116.67
1994	97.37	106.25	119.61	77.14	89.89	121.09	104.86	96.39	119.44
1995	94.03	115.63	119.61	51.43	77.53	106.25	88.89	110.84	127.78
1996	106.68	115.63	109.80	77.14	104.49	112.50	118.75	116.27	136.11
1997	89.50	115.63	82.35	80.00	115.73	117.97	88.89	116.27	100.00
1998	93.08	303.13	250.98	97.14	102.25	99.22	94.44	106.63	155.56
1999	93.32	303.13	284.31	51.43	119.10	118.75	104.17	111.45	113.89
2000	101.91	312.50	298.04	114.29	117.98	112.50	112.50	134.34	150.00
2001	105.01	290.63	280.39	80.00	120.22	138.28	134.03	126.51	127.78

Source: Waikato District Health Board – Avoidable Mortality Factsheet

**Appendix Table 2.1.3e: Avoidable hospitalisations for territorial authorities within the Waikato DHB – 1997 to 2003**

	Hamilton City	Hauraki	Matamata-Piako	Otorohanga	South Waikato	Thames-Coromandel	Waikato	Waipa	Waitomo
1997	4,670	385	315	178	940	998	1,493	1,321	456
1998	4,632	542	631	232	919	982	1,546	1,380	441
1999	4,886	671	899	290	966	1,077	1,501	1,453	577
2000	4,661	649	880	269	907	1,116	1,430	1,426	617
2001	4,439	695	840	226	888	1,086	1,405	1,331	517
2002	4,427	638	875	255	827	962	1,432	1,309	508
2003	4,321	625	926	255	749	985	1,360	1,351	496

Source: Waikato District Health Board – Avoidable Hospitalisation Factsheet

**Appendix Table 2.1.3f: Avoidable hospitalisation index volume trend (base year 1997) for territorial authorities within the Waikato DHA – 1997 to 2003**

	Hamilton City	Hauraki	Matamata-Piako	Otorohanga	South Waikato	Thames-Coromandel	Waikato	Waipa	Waitomo
1997	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1998	99.19	140.78	200.32	130.34	97.77	98.40	103.55	104.47	96.71
1999	104.63	174.29	285.40	162.92	102.77	107.92	100.54	109.99	126.54
2000	99.81	168.57	279.37	151.12	96.49	111.82	95.78	107.95	135.31
2001	95.05	180.52	266.67	126.97	94.47	108.82	94.11	100.76	113.38
2002	94.80	165.71	277.78	143.26	87.98	96.39	95.91	99.09	111.40
2003	92.53	162.34	293.97	143.26	79.68	98.70	91.09	102.27	108.77

Source: Waikato District Health Board – Avoidable Hospitalisation Factsheet

Appendix Table 2.2.3a: "Apparent" participation rate, 3 and 4 year olds combined (numbers can add to more than 100%)

Territorial Authority	2001	2002	2003	2004	2005	2006	2007	2008
Franklin District	64.3%	68.2%	67.0%	72.3%	74.9%	76.8%	70.2%	75.3%
Thames-Coromandel District	92.9%	95.6%	101.2%	102.8%	109.5%	110.4%	107.9%	97.7%
Hauraki District	75.8%	76.2%	80.9%	79.8%	84.5%	93.0%	91.8%	88.4%
Waikato District	61.2%	59.9%	62.6%	65.5%	68.5%	69.1%	75.9%	75.6%
Matamata-Piako District	89.0%	95.4%	102.5%	98.9%	106.1%	102.0%	100.6%	103.2%
Hamilton City	100.7%	101.8%	104.6%	105.5%	111.2%	108.4%	104.1%	104.9%
Waipa District	90.4%	93.4%	89.0%	92.2%	92.8%	87.8%	93.8%	90.8%
Otorohanga District	51.8%	62.1%	66.8%	67.9%	68.9%	72.0%	69.7%	73.5%
South Waikato District	79.3%	85.3%	84.7%	87.2%	89.4%	84.2%	88.3%	91.3%
Waitomo District	65.0%	74.1%	73.9%	68.3%	67.8%	72.7%	69.0%	58.6%
Taupo District	82.1%	80.7%	82.1%	83.5%	84.4%	86.1%	80.6%	90.6%
Rotorua District	86.7%	88.6%	89.4%	89.2%	89.0%	88.5%	87.2%	88.3%

Source: MSD Social Report: <http://www.socialreport.msd.govt.nz/regional/t-authorities/early-childhood.html>

Appendix Table 2.2.3b: Early childhood attendance by Year 1 students, by ethnic group, 2008

Territorial Authority	European	Maori	Pacific	Asian	Other	Total
Franklin District	98.1%	76.3%	91.7%	91.1%	100.0%	92.1%
Thames-Coromandel District	98.0%	93.3%	66.7%	66.7%	100.0%	95.7%
Hauraki District	99.3%	93.0%	60.0%	100.0%	100.0%	96.6%
Waikato District	97.8%	86.0%	75.0%	95.2%	60.0%	92.7%
Matamata-Piako District	95.8%	87.0%	83.3%	93.8%	83.3%	93.4%
Hamilton City	99.1%	91.3%	97.4%	95.3%	91.0%	95.6%
Waipa District	96.8%	92.8%	83.3%	100.0%	100.0%	95.7%
Otorohanga District	100.0%	87.2%	0.0%	100.0%	100.0%	95.5%
South Waikato District	96.6%	89.0%	86.7%	100.0%	100.0%	91.6%
Waitomo District	95.1%	91.0%	0.0%	0.0%	0.0%	92.0%
Taupo District	98.3%	92.6%	66.7%	100.0%	100.0%	95.7%
Rotorua District	94.8%	86.4%	78.4%	82.1%	91.7%	89.3%

Source: MSD Social Report: <http://www.socialreport.msd.govt.nz/regional/t-authorities/early-childhood.html>

**Appendix Table 3.2.4a: Business geographic units by industry classification (ANZSIC), territorial authority areas 2009**

ANZSIC06	Franklin District	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City	Waipa District	Otorohanga District	Southern District
A Agriculture, Forestry and Fishing	2,521	692	1,019	2,309	2,329	231	2,132	947	1,000
B Mining	11	3	12	28	11	2	8	4	1
C Manufacturing	386	189	107	216	187	772	269	31	1
D Electricity, Gas, Water and Waste Services	30	14	7	17	7	30	24	6	1
E Construction	1,125	697	207	601	359	1,629	723	104	1
F Wholesale Trade	288	82	47	128	110	711	228	34	1
G Retail Trade	401	321	125	180	228	1,177	337	46	1
H Accommodation and Food Services	177	306	81	118	105	546	159	32	1
I Transport, Postal and Warehousing	241	128	78	136	98	383	169	34	1
J Information Media and Telecommunications	30	20	12	20	16	113	16	3	1
K Financial and Insurance Services	418	165	60	200	217	814	256	42	1
L Rental, Hiring and Real Estate Services	1,595	796	393	1,137	1,092	2,745	1,398	413	1
M Professional, Scientific and Technical Services	610	228	88	273	160	1,466	426	48	1
N Administrative and Support Services	255	120	37	92	62	486	140	15	1
O Public Administration and Safety	29	44	27	38	34	112	26	9	1
P Education and Training	131	72	42	119	74	305	112	24	1
Q Health Care and Social Assistance	146	127	56	154	95	843	173	27	1
R Arts and Recreation Services	183	90	42	101	109	217	179	14	1
S Other Services	324	172	87	155	143	737	224	46	1
Total Industry	8,901	4,266	2,527	6,022	5,436	13,319	6,999	1,879	1

Source: Statistics New Zealand Business Tables

Note: ANZSIC = Australian and New Zealand Standard Industrial Classification.

**Appendix Table 3.2.4b: Employee counts by industry classification (ANZSIC), territorial authority areas 2009**

ANZSIC06	Franklin District	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City	Waipa District	Otorohanga District	Southern District
A Agriculture, Forestry and Fishing	2,440	510	750	2,690	2,130	270	2,630	830	1,000
B Mining	160	25	310	580	55	3	40	18	10
C Manufacturing	2,870	1,020	400	1,130	3,790	8,210	1,610	270	1,000
D Electricity, Gas, Water and Waste Services	200	130	12	370	40	480	110	30	10
E Construction	1,490	780	460	970	1,080	5,390	1,070	180	10
F Wholesale Trade	870	260	170	250	450	4,390	690	95	10
G Retail Trade	2,050	1,680	650	510	1,360	8,370	1,730	210	10
H Accommodation and Food Services	1,210	1,280	300	650	460	4,880	1,020	95	10
I Transport, Postal and Warehousing	430	470	150	550	410	1,900	550	170	10
J Information Media and Telecommunications	160	90	35	45	100	1,820	60	9	10
K Financial and Insurance Services	220	150	60	75	220	1,420	210	30	10
L Rental, Hiring and Real Estate Services	240	200	80	160	140	780	190	50	10
M Professional, Scientific and Technical Services	720	260	260	960	570	6,040	990	170	10
N Administrative and Support Services	1,060	130	100	550	190	4,500	210	40	10
O Public Administration and Safety	440	350	160	390	270	4,200	320	600	10
P Education and Training	1,650	750	550	1,130	770	7,290	1,560	210	10
Q Health Care and Social Assistance	1,240	970	730	620	570	10,830	960	90	10
R Arts and Recreation Services	470	230	55	240	310	1,530	510	45	10
S Other Services	660	340	150	290	390	3,230	530	85	10
Total Industry	18,550	9,630	5,390	12,160	13,290	75,520	15,000	3,230	10

Source: Statistics New Zealand Business Tables

Note: ANZSIC = Australian and New Zealand Standard Industrial Classification.

