Waikato Regional Council Technical Report 2013/27

Waikato regional MARCO indicators

Data analysis report 2013

www.waikatoregion.govt.nz
ISSN 2230-4355 (Print)
ISSN 2230-4363 (Online)

Waikato
REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

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July 2013

Document #: 2819245

Approved for release by:
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CONTENTS

ACKNOWLEDGEMENTS

Feedback on this Progress Report Update was provided by team members of MARCO and staff from Waikato Regional Council, particularly Beat Huser. Funding for this report came from Waikato Regional Council. Additional background acknowledgements are contained in earlier reports.

MARCO's motivation for updating this report is to ensure the most recent community progress data is available to territorial authorities and Waikato Regional Council to support general decision making. Much of the contents from earlier 2007-2012 annual update reports have been retained, with changes resulting only from more recent data, information and feedback.

Since the 2009 update, regional and local data has become increasingly accessible to planners through MARCO's web-based data discovery tool. This report and the associated data and metadata spreadsheet are also available online at: www.choosingfutures.co.nz/Publications.

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FURTHER INFORMATION

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EXECUTIVE SUMMARY

Introduction

The purpose of this 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, updating information from previous annual reports. Differences between the 2012 and 2013 reports are summarised in Appendix One.

Of the 75 indicators in the monitoring set, 25 were updated as part of this 2013 report. Some additional contextual information was also sourced for other indicators. Many of the remaining indicators relied on the Waikato Regional Perception Survey, New Zealand Census and MSD Social Report, none of which were updated over the past year:

- The cycle for the MARCO Waikato Regional Perception Survey is triennial (i.e. 2007 and 2010). Results from the 2010 survey were previously incorporated. MARCO's annual Work Programme 2012-13 includes planning toward the third triennial MARCO Perception Survey scheduled for June/July 2013.
- The five-yearly national Census was not held in March 2011 as scheduled due to the February 2011 Christchurch earthquake and resulting national state of emergency. The most recent Census was held in March 2013. Results are scheduled to be released from December 2013.
- The MSD Social Report was published annually from 2001 to 2010, but may now only be scheduled for triennial or less frequent updates.
- In addition, Hamilton City Council was a non-participant in the most recent wave of the Quality of Life Survey.

This report identifies states and trends in the Waikato regional MARCO indicators at the regional level. Monitoring progress toward local and iwi outcomes is not addressed by this report; however some tables and graphs as well as the Appendices and supplementary online data provide information at the territorial authority level.

A key change during the years prior to this report is that Franklin District was disestablished on 31 October 2010 and divided between the new Auckland Council and the Waikato and Hauraki districts. For the purpose of this report, Franklin District data has been compiled and reported up to and including 2010 only. An exception is that commercial accommodation tourism data continues to be reported on the basis of accommodation providers that were within the boundaries of the former Franklin District.

Legislative changes and policy responses

A more significant key change has been the Local Government Amendment Act 2010, which repealed sections 91 and 92 of the 2002 Act (ie, councils' obligation to identify, monitor and report on community outcomes). These and other amendments stemmed from proposals by the Local Government Minister to rationalise the 2002 Act, known as the 'Improving Local Government Transparency, Accountability and Fiscal Management' (TAFM) changes[1].

Consultation undertaken by WRC in late 2011 confirmed that local councils within the Region have scaled down and re-focused their monitoring and reporting activities. Councils' monitoring and reporting programmes are now linked more closely with council performance than with community progress, and community outcomes reporting is largely restricted to Annual Reports (although a range of other community and environmental well-being reports may still be regularly published by some councils).

[1] Further amendments in December 2012 (the Local Government Act 2002 Amendment Act 2012) changed the purpose of local government and also changed reference to the term *"well-being"* throughout the LGA2002 (substituted by *"interests of people and communities"*).

WRC also consulted territorial authorities on options for the 2012 update report. The options included an update based on the existing 75 indicators (status quo), update based on an expanded set of indicators, or postponement/discontinuation of the reporting programme. In view of the value of the information and councils' past investment in establishing the MARCO programme, and given that the updates were being fully funded by WRC, a decision was made to proceed on the basis of the core set of 75 indicators.

Also as a result of TAFM, WRC adopted four new Community Outcomes: community partnerships, environmental quality, safe and resilient communities and regional economy. The 38 original regional community outcome statements were renamed 'community aspirations' and those relevant to WRC's functions (17 of the 38) are included under the four new Community Outcomes. These changes are reflected in WRC's corporate publications but the previous regime of Community Outcomes remains unchanged within this update report.

In parallel with this annual MARCO update report, and building on the current 75 MARCO indicators discussed here, WRC also initiated a desktop review project to provide recommendations for the development of a monitoring and reporting programme to track progress on key economic, environmental and social/cultural aspects of regional wellbeing (Genuine Progress Index). Decisions by WRC based on these recommendations may have implications for the MARCO programme going forward.

Key results – 2013 data update

- Historical trend data shows a decline in river water quality. Waikato Regional Council's long-term records of river water quality indicate increases in observed nitrogen concentrations in some Waikato River locations, probably resulting from intensification of land use within the catchment. Across the region as a whole, in some rivers and streams increases in concentrations of total nitrogen, nitrate, phosphorus, E. coli and enterococci and a decrease in dissolved oxygen are observed (Waikato Regional Council Technical Report 2013/20 – forthcoming).

- Estimates from New Zealand's annual Greenhouse Gas Inventory for the period 1990-2011 show an increase of 22.1% in national greenhouse gas emissions, including relatively rapid growth in emission levels since 2009. Although regional data is not available, it is likely the Waikato Region contributed substantially to this increase. Emission sources that contributed most to the national increase in total emissions include dairy enteric fermentation (methane emissions produced from ruminant livestock), road transport and agricultural soils.

- Most economic indicators were improving steadily over the long-term and then dropped during the 2008-09 global financial crisis. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. Unemployment has risen and there has been a general decline in the rate of building consents issued since mid 2007. Other signs of the lingering effects of the GFC include a slump in real median weekly earnings for those in paid employment and regional business and employee counts. The number of visitor nights for the Region also dropped during 2008 but appears to have recovered.

Overview of long term progress

Note: In the context of this report, 'long term' refers broadly to a period of at least 5-10 years or more.

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 river water quality for both ecological health and recreational purposes (particularly in the Hauraki area and lower Waikato River catchment), energy conservation to help address climate change, and urban air quality to improve people's health. Farming has continued to intensify over the past few decades, resulting in increased levels of nitrogen flowing into the Waikato River and other rivers and streams.

2. Quality of Life

Waikato regional communities have an increasing life expectancy, growing 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. 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 by Waikato young people (girls in particular) that they get enough time with at least one parent most of the time.

3. Sustainable Economy

Most economic indicators were improving steadily over the long-term and then dropped during the 2008-09 global financial crisis. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. GDP growth estimates remain low for both the Waikato Region and New Zealand overall. Unemployment has risen since 2006 and there has been a decline in the rate of building consents issued since mid 2007. Other signs of a stagnant economy include a slump in real median weekly earnings for those in paid employment and decline in regional business and employee counts since 2008.

4. Culture and Identity

There is relatively little information available for monitoring cultural wellbeing and strength of identity in the Region, but there are some positive indicators. For example, the number of Māori language speakers has been steadily increasing. The recently passed Waikato River Settlement Act 2010 may promote increased monitoring and reporting of cultural 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 generally declining in the Region, as it has been throughout New Zealand over much of the past two decades.

States and trends

Highlights:

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

- 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.
- Improvements in educational participation and attainment.

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

- Continue to investigate ways to reduce the levels of nitrogen and phosphorus 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.
- Tackle persistent socio-economic disparities throughout the Region, particularly for Māori.

States and trends in relation to each of the Waikato regional MARCO 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 (compared to other regions or New Zealand as a whole), and the long-term trend shows a deterioration in water quality (specifically for the period 1992 to 2011).

Results:

Code	Indicator	State	Trend
1.	Sustainable Environment		
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	😐	⇨
1.3.1	Coastal water quality for recreation	😐	⇨
1.1.4	Lakes water quality for contact recreation[2]	😐	⇨
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	😐	⇩
1.1.3	Lakes water quality for ecological health	😐	⇨
1.1.6	Urban air quality	☹	⇨
1.1.2	River water quality for recreation	☹	⇨
1.5.2	Greenhouse gas emissions	☹	⇩
2.	Quality of Life		
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	😐	⇧
2.2.2	Educational attainment of the adult population	😐	⇧
2.1.2	Social deprivation index	😐	⇨
2.1.3	Avoidable mortality and hospitalisation rates	😐	⇨
2.4.3	Road traffic crashes and casualties	😐	⇨

[2] For Lake Taupo the state for indicator 1.1.4 is "excellent", while for the shallow lakes it is "poor".

Code	Indicator	State	Trend
2.6.1	Participation in sport and active leisure	😐	⇨
2.7.1	Participation in social networks and groups	😐	⇨
2.5.1	Unpaid work	😐	⇨
2.4.1	Criminal victimisation rates	😐	⇨
2.3.3	Home ownership rate	😐	⇩
2.7.2	Contact between young people and their parents	😐	⇩
2.3.1	Rent to income ratio	😐	?
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	😐	?
3.	Sustainable Economy		
3.2.2	Unemployment rate	😐	⇨
3.7.1	Total research funding	😐	⇧
3.5.1	Regional GDP contributed by primary industries	😐	⇧
3.6.4	Employment in the tourism industry	😐	⇨
3.2.4	Number of businesses and employees by industry	😐	⇨
3.2.3	Median weekly earnings for those in paid employment	😐	⇨
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)	😐	?
3.6.2	International visitors	😐	?
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	☹	⇨
4.	Culture and Identity		
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	😐	⇧

Code	Indicator	State	Trend
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	☹	?
5.	Participation and Equity		
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	😐	?

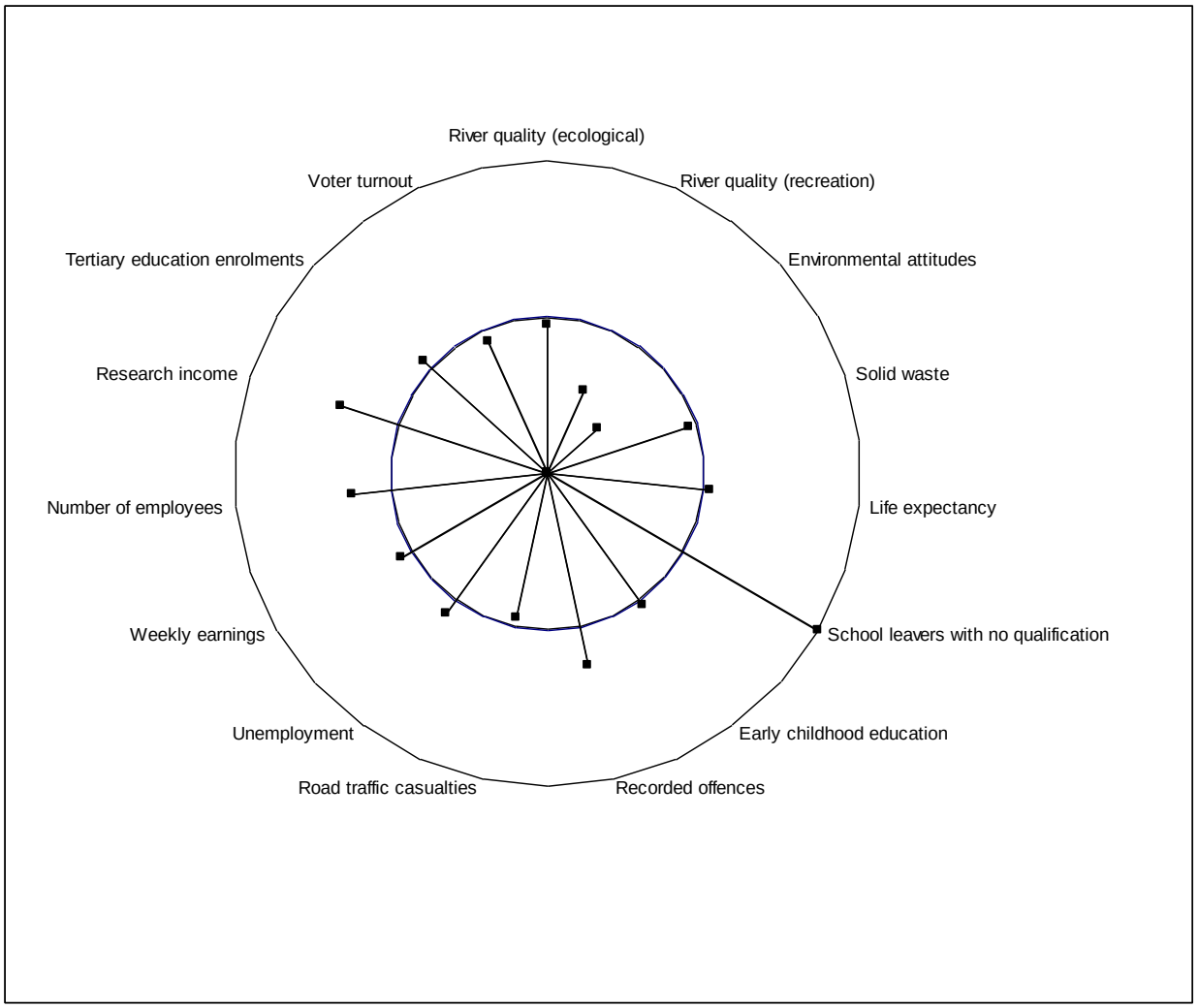
Circles of well-being:

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 late 2000s/early 2010s. Where a spoke extends outside the circle it means community wellbeing has improved. Where a spoke falls within the circle, community wellbeing has declined.

Figure 1 illustrates that between the periods 1996-2005 and 2007-2012 there were substantial net improvements in a range of social and economic indicators, including increased levels of education, reduced unemployment and higher average income. This was despite an extended economic slump due to the 2008-09 global financial crisis. Indicators that deteriorated over this period were primarily environmental in nature, including river water quality and surveyed environmental attitudes. A significant trend not shown on the diagram, due to the absence of regional data, is that greenhouse gas emissions were approximately 22% higher in 2011 than they were in 1990. Note that this diagram will be expanded when the latest Census results next become available.

Figure 1: Waikato Region well-being trends 1996-2005 to 2007-2012

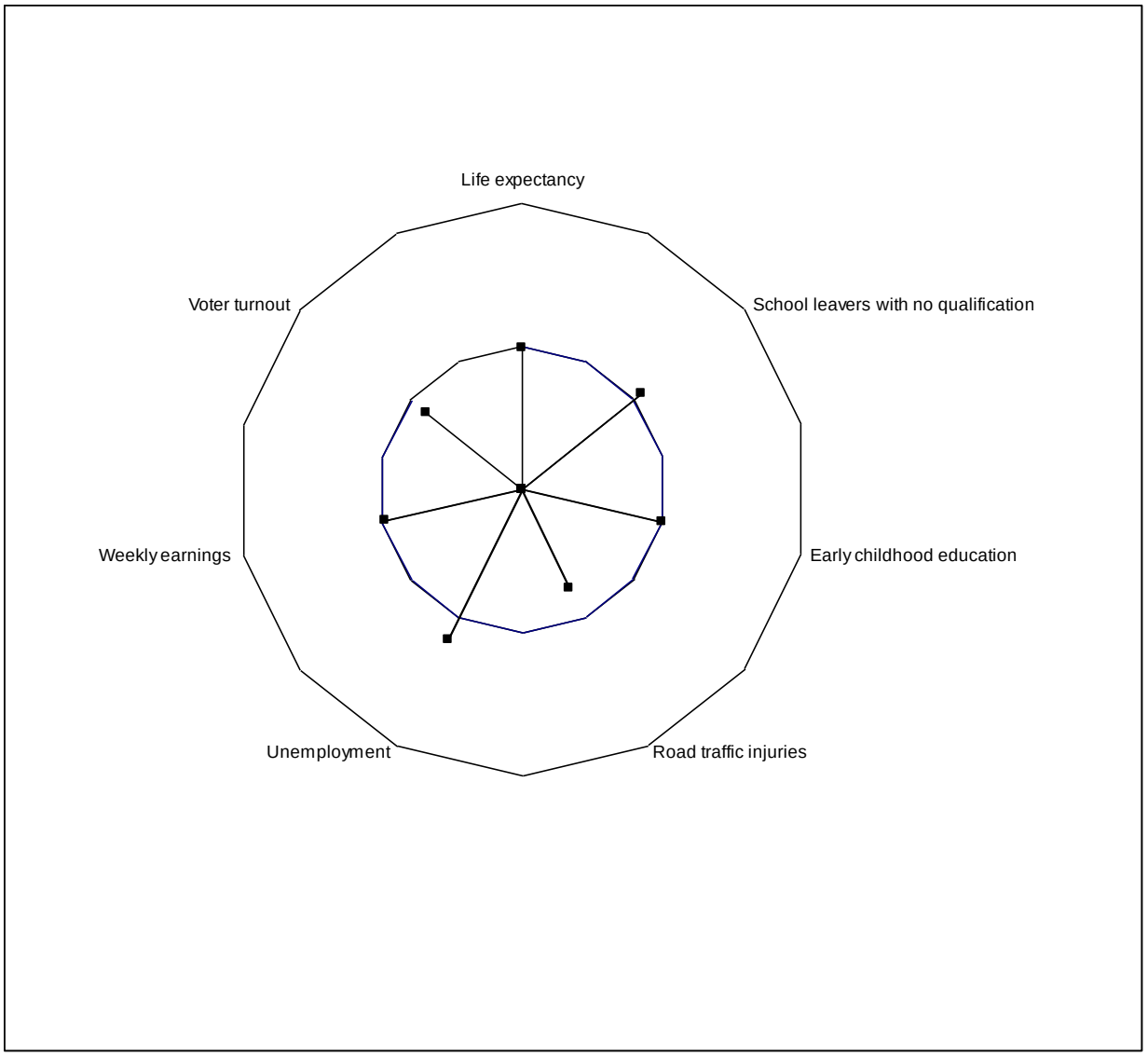


Source: Waikato regional MARCO data
Note: Indicator selection was based on the availability of reliable Waikato Region time series data from approximately 1996-2005 to approximately 2007-2012.

Comparisons of the Waikato Region to New Zealand average figures for specific key indicators in the late 2000s/early 2010s are shown in Figure 2. In this case the circle in the middle represents national average wellbeing in the late 2000s/early 2010s. 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. Results for road traffic injuries and voter turnout are all slightly worse when compared with national data. Note that this diagram will be expanded when the latest Census results next become available.

Figure 2: Waikato Region compared to New Zealand, late 2000s/early 2010s

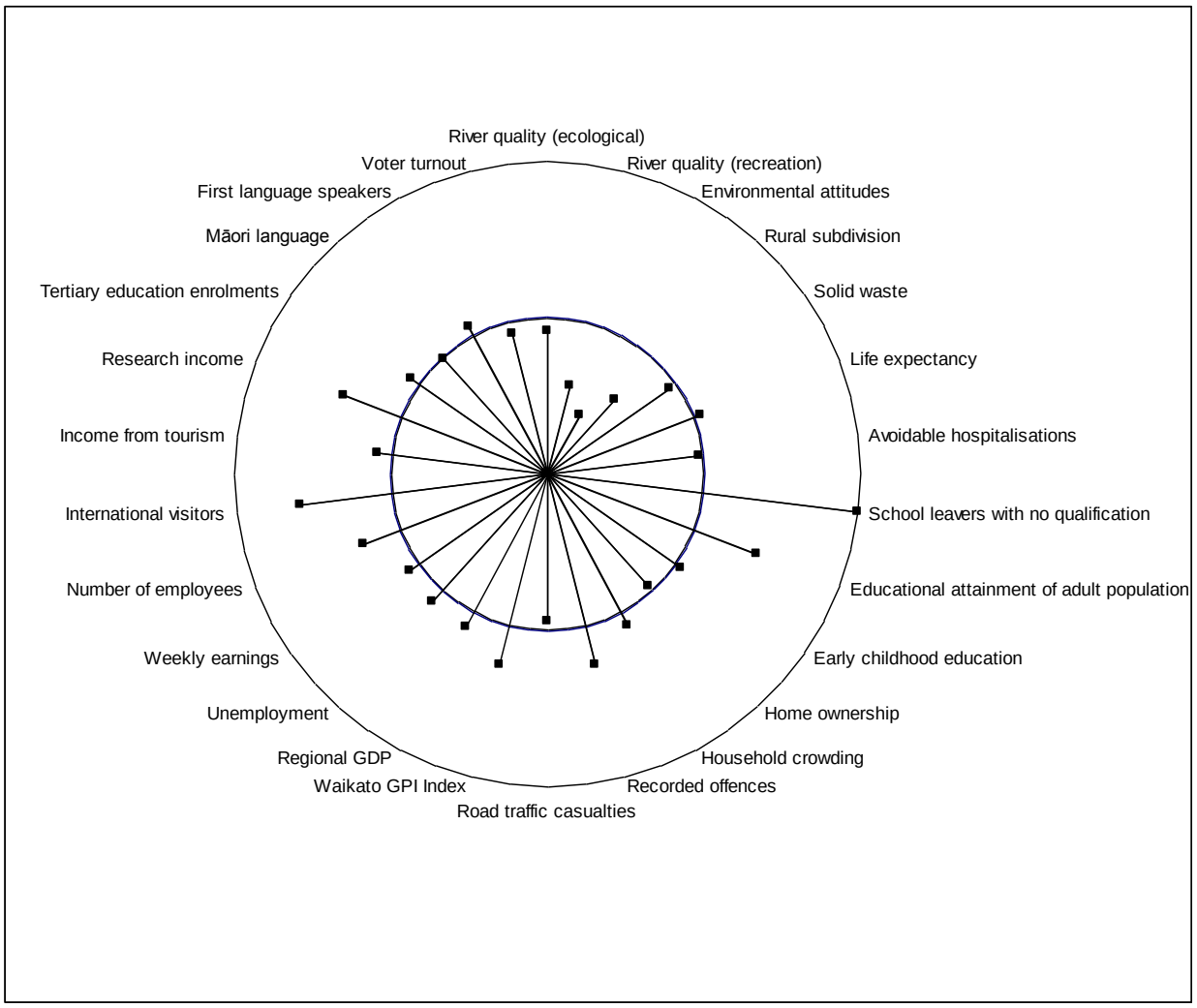


Source: Waikato regional MARCO data
Note: Indicator selection was based on the availability of comparative data at the national level.

Circles of well-being (including 2006 latest data):

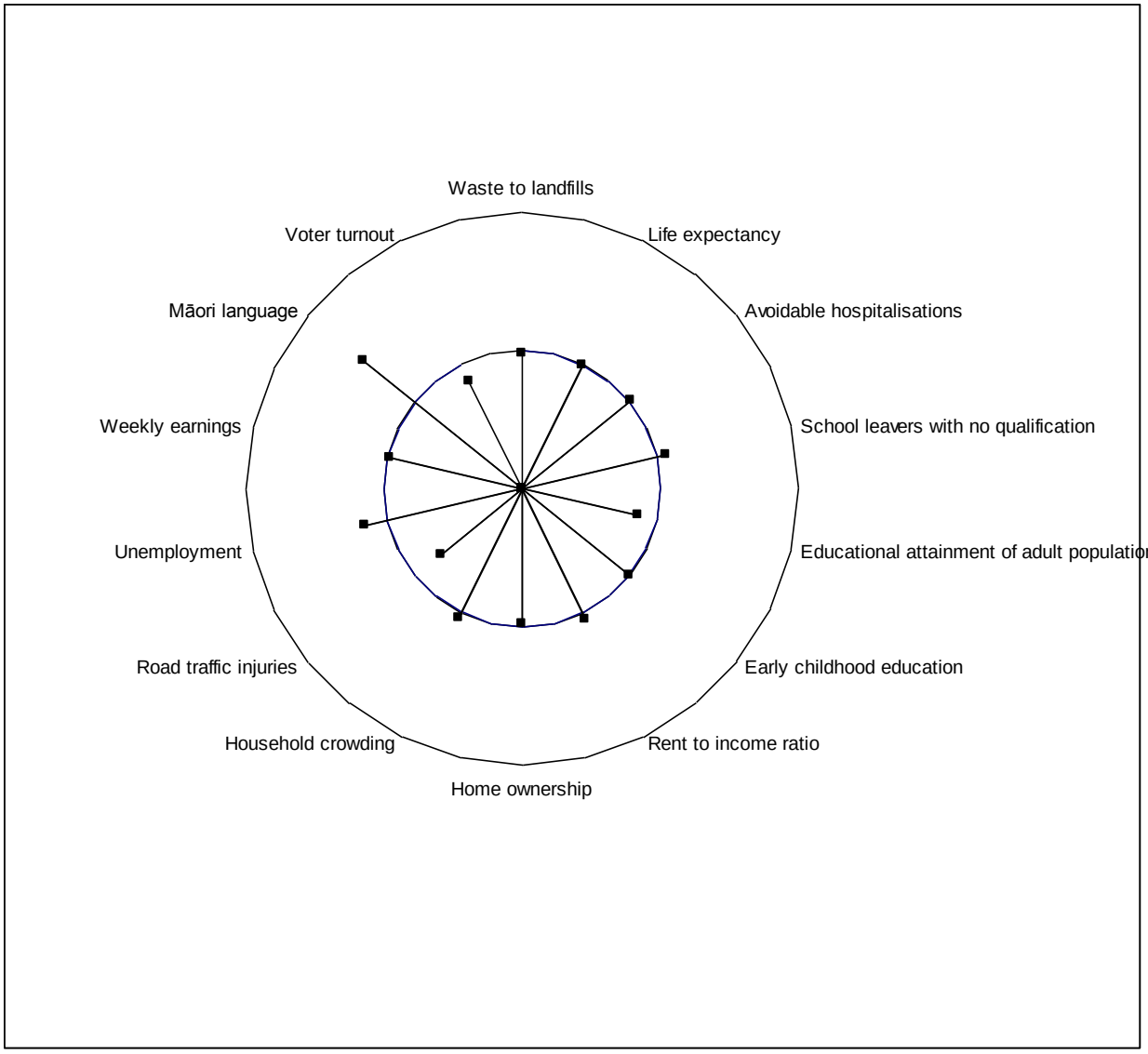
Note that the circles of well-being above have excluded a substantial number of potential indicators due to a prolonged period without data updates. This is particularly the case for 2006 Census data but also for a small number of other indicators. This will be remedied next year, at which point there will be a substantial number of additional spokes. The graphs below include 2006 Census data and other items previously reported. Care should be undertaken in interpreting these graphs due to the wide variation in timing for different observations.

Figure 3: Waikato Region well-being trends 1996-2005 to 2006-2012



Source: Waikato regional MARCO data
Note: Indicator selection was based on the availability of reliable Waikato Region time series data from approximately 1996-2005 to approximately 2006-2012.

Figure 4: Waikato Region compared to New Zealand, mid-late 2000s/early 2010s



Source: Waikato regional MARCO 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. Natural resources and the services they provide are vital for the regional economy and the wellbeing of people and communities.

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 Waikato Regional Council 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 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). This is mainly because of the greater intensity of land use in the lowland parts of the Region. Monitoring of regional rivers over the past 20 years shows mixed results. Overall, 17 per cent of water quality measures improved at individual sites, and 37 per cent deteriorated.[3] The records of temperature, dissolved oxygen, biological oxygen demand, dissolved colour, arsenic and enterococci have generally remained stable. Trends show an improvement in Chlorophyll a overall, with less algae in the river. But water clarity has shown an overall decline, with a rate of change of about 1 per cent per year from 1995 to 2011. Levels of total nitrogen 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 agricultural land use has continued to intensify. 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 water quality for contact recreation is good in some parts of the Region (eg, the upper Waikato River and tributaries of Lake Taupo). However, in the lowland areas river water quality is not satisfactory (eg, 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. Waikato Regional Council's long-term records of river water quality indicate increases in observed nitrogen concentrations in some Waikato River locations, probably resulting from intensification of land use within the catchment (Waikato Regional Council Technical Report 2013/20 – forthcoming).

The Waikato Region's shallow lakes are generally nutrient enriched as assessed by Waikato Regional Council, resulting in a relatively high trophic state and low oxygen levels. The trophic state of most lakes remained unchanged or deteriorated between 1995 and 2010. Water quality for ecology in Lake Taupo remains largely satisfactory to excellent.

Water quality for contact recreation such as swimming is satisfactory to excellent in Lake

[3] These figures are currently being updated (Waikato Regional Council Technical Report 2013/20 – forthcoming).

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 specific dates (depending on the state of local air quality)[4]. Of the urban areas monitored, Tokoroa exhibits 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. Some 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.

During 2009/10, a Waikato Regional Landscape Assessment was commissioned by Waikato Regional Council. This shows that the Waikato Region has a number of historically and aesthetically important landscape assets, providing a baseline for future monitoring and management of landscapes within the Region.

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 Waikato Regional Council 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

[4] 2011 Amendment to the National Environmental Standards for Air Quality: http://www.mfe.govt.nz/laws/standards/air-quality/review/index.html

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

The main sources of energy in the Waikato Region are electricity, coal, wood, natural gas, petrol, diesel and other oil products. Around 57,246 terajoules (TJ) of energy were used in the Region during 2007, mainly by industry (59%), commercial and private transportation (30%) and households (11%). Average energy use per person was 123 gigajoules (GJ) for the Waikato region and 144 GJ for the Hamilton city area. About 21 per cent of the total energy consumed came from renewable sources.

The Waikato Region produces approximately 20% of New Zealand's total greenhouse gas emissions. According to latest national-level results, New Zealand's total greenhouse gas emissions in 2011 were 22.1% higher than in 1990. There has been a relatively rapid increase in national annual net emissions since 2009.

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

According to data presented in a 2013 Waste Stocktake report, it is estimated that 226,887 tonnes of waste are disposed of to landfill annually from the Waikato Region, along with more than twice as much being disposed of to other land disposal sites (eg, cleanfill and industrial fills). The quantity of waste being disposed from the Waikato and Bay of Plenty regions combined appears essentially unchanged over the period 2006 to 2012.

Dry recyclables/commodities, including kerbside recycling (both by councils and privately), drop-off points at transfer stations and recycling depots, and commodities collected from commercial premises are estimated at 0.133 tonnes per person within the Waikato and Bay of Plenty regions combined. Taking into account available data on other diverted materials in the Waikato and Bay of Plenty and regions, it appears the total quantity of diverted materials is of a similar order of magnitude to the quantity of waste disposed to landfill.

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, 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 fallen dramatically over the past few years at both the regional and national level.

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.

Health

Life expectancy in the Region is similar to the national average of 79 years for males and 83 years for females. Gains in life expectancy since the mid-1980s can be attributed to better living standards and improved health care. There remain marked differences in life expectancy between different ethnic groups, with the life expectancy for Māori at around 7.3 years less than non-Māori, however the gap continues to narrow over time.

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 results from the MARCO Waikato Regional Perception Survey 2010, the majority of regional residents (88%) are happy with their quality of life. The 'Happiness Index' (a weighted score across the quality of life scale) was 82.0 points for the Waikato Region overall, with some variation between territorial authority areas.

Respondents to the MARCO Waikato Regional Perception Survey 2010 were also 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'. One fifth of the sample (19.7%) 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, on lower incomes, of Māori descent, and who rated their overall quality of life at a score of between 0 and 6 (with 10 being maximum score). The main reported barriers were cost (7%) and availability (5%).

Education

The proportion of school leavers with no formal qualification has fallen apparently dramatically over the past few years at the regional and national level. There were 5,734 school leavers in the Waikato Region in 2011, of whom 319 (5.6%) left school with little or no formal attainment. The comparative figure for 2003 was around 20%. 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 but the 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. More frequent sample data to 2009 confirms the regional trend above, and shows the proportion of Waikato Region adults with at least upper secondary school level education is slightly behind the national average.

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 administrational data currently available for monitoring Adult and Community Education (ACE). At the national level, Government funding for ACE was reduced in 2009. Respondents to the MARCO Waikato Regional Perception Survey 2010 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.

There was a regional average of 80.7 points on the Agreement Index in the MARCO Waikato Regional Perception Survey 2010 for respondents who were satisfied that their jobs were making good use of their skills, training and experience. This was similar to the 2007 results.

Housing

The rent to income ratio in the Waikato Region increased from 19.9% in 1991 to 26.6% in 2001. 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.

On average, households in the Waikato Region spend around 16% of their household expenditure on housing costs (not including household utilities). This is similar to the national average and around two percentage points lower than Auckland.

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 MARCO Waikato Regional Perception Survey 2010 showed that the majority of respondents (72%) were satisfied with 'proximity to schools' but this dropped to only 47% for 'proximity to other educational facilities'. Thames-Coromandel and Franklin 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

There is currently no criminal victimisation survey data available at the Waikato regional level. However, at the national level, approximately 36% of New Zealand adults aged 15 and over experienced some form of victimisation in 2009, which was similar to results from the 2006 national survey. Where changes did occur, they were typically small and signalled a reduction in the extent and impact of crime on victims. A rough proxy for regional victimisation rates, the number of recorded offences in the Waikato Police District generally increased over the period 2004 to 2012 although this is partly attributed to increased reporting of family violence. The most substantial percentage increases were in violence-related categories.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 Waikato Region results were comparable to national results for all New Zealanders. The sub-regional results vary by location but it seems that Thames-Coromandel and Otorohanga are perceived as the safest places by residents.

Deaths and injuries from motor vehicle crashes have declined substantially since 1986. However, over the shorter-term, the rate of motor vehicle deaths and injuries per 100,000 population on Waikato Region roads has risen slightly since 2001. This is at least partly because of better recording of traffic incidents by Police. Casualty rates are relatively higher in rural areas, particularly those with state highway corridors, due to the increased speed of vehicles involved.

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 MARCO Waikato Regional Perception Survey 2010 commissioned by MARCO and Choosing Futures Waikato, where an average 87% 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 and New Zealand as a whole. Of the total Hamilton respondents during the 2010 Quality of Life Survey, 21% said they relate mostly to people with same interests, culture or beliefs, 15% said they relate mostly to people living in the same area, and 63% said it was a mixture of both. According to the 2010 survey results, the most common social networks to which New Zealand residents belong, apart from family, are work or school (57%), online communities such as Facebook and Twitter (50%), and hobby or interest groups (34%). The profile for Hamilton City is similar to the national average. Notable over the period 2008 to 2010 was a rapid rise in the proportion of people belonging to online communities and interest groups.

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?

Most economic indicators were improving steadily over the long-term and then dropped during the 2008-09 global financial crisis. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. Unemployment has risen since 2006 and there has been a decline in the rate of building consents issued since mid 2007. Other signs of the lingering effects of the global financial crisis include a slump in real median weekly earnings for those in paid employment and a decline in regional business and employee counts since 2008. The number of visitor nights for the Region also dropped during 2008 but appears to have recovered.

Sustainable development

Initial estimates of Genuine Progress Indicators (GPI) for New Zealand and the Waikato Region have been undertaken in 2009/10. For the period 1990 to 2006, the Waikato Region GPI grew by an annual average rate of 1.42% compared to the region's GDP which grew by an annual average rate of 2.29%. A related indicator is that of '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. It 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 estimates by Statistics New Zealand, the Waikato Region contributed approximately $16.2 billion or 8.5% of national GDP in 2010. Based on the National Bank's Regional Economic Activity Index, the Waikato Region has tended to slightly outperform national average economic growth over much the period since the late 1980s. Following a relatively lengthy period of sustained growth, the rate of economic growth entered a recessionary period during 2008-2009. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. As at September 2011, annual average percent growth in economic activity was estimated at 0.1% for the Waikato Region and 0.6% for New Zealand.

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 8.6% in the March 2012 quarter. Latest figures reflect a general economic slow-down during the period 2008-2012.

Real median weekly income in the Waikato Region is similar to the national average, with a value of $552 as at June 2011. After adjusting for inflation, median weekly income in the Waikato Region has increased by about 36% since 1998, however this follows a slump associated with the global financial crisis and resulting recession. The median weekly income for males in the Region as at June 2011 was $700 and for females $433. The disparity between male and female median weekly incomes increased significantly over the period 1998 to 2005 and has since fluctuated between $250-300 per week. There are also persistent disparities between ethnic groups, with Māori and Pacific Peoples earning a lower median weekly income than the European/Pākehā ethnic group.

The number of business units in the Waikato Region increased from 43,352 in 2000 to 50,764 in 2012, though the number has been shrinking over the last few years. The rate of growth in the number of business units in the Region has been slightly slower than the national average over this period. There is a similar pattern for employee counts, with the number of employees in the Region increasing from 132,790 in 2000 to 166,770 in 2012. For the Waikato Region, the employee count grew 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 service oriented industries are focused around Hamilton City.

Since mid-2007 there has been a general decline in the trend for the number of new housing units. According to Statistics New Zealand figures, for the Waikato Region there were 1,717 building consents issued in the year to February 2012, increasing to 1,865 for the year to February 2013.

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 2010, the Waikato Region contributed approximately 8.5% of national GDP. Of this, approximately 11.3% ($1.8 billion) was agricultural production. The proportion contributed by agriculture has increased since 2007 when it was 8.3%. The Waikato Region accounted for 20% of the national agriculture industry in 2010, the highest of any region, including 25% of New Zealand's dairy industry.

Tourism

An estimated 4.5 million guest nights were recorded in commercial accommodation in the Waikato Region in the year to February 2013, including guest nights in Rotorua. The Waikato Region contributes approximately 9% of New Zealand's overall guest nights in commercial accommodation (excluding the Rotorua area). In February 2013 compared with February 2012, total monthly guest nights in New Zealand increased 1.5% to 3.26 million.

For the year ended December 2012 there were 2.565 million international visitor arrivals to New Zealand, down 1.4% 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 $1.40 billion was spent by international and domestic visitors in the Waikato Region during 2009, up from $1.27 billion in 2004. The former Ministry of Tourism projected that by 2016 total visitor expenditure in the Region will rise to an estimated $1.604 million. However, significant changes to the global economy over the past few years mean that these forecasts need to be treated with caution.

At the national level, an estimated 6.2% of full-time equivalent employees were directly engaged in producing goods and services purchased by tourists in 2012. No known data is available at the regional level for this indicator.

Research and innovation

Total research and development expenditure in New Zealand for 2012 was estimated at around $2.6 billion. This compares with $1.11 billion in 1998, an increase of 70% on an inflation-adjusted basis over a fourteen year period. R&D expenditure increased as a percentage of overall national GDP over the period 1998 to 2012. R&D expenditure was 1.27% of GDP in the 2012 reference year compared with 1.09% in 1998. Despite these increases, New Zealand's total R&D expenditure continues to be relatively low compared with other countries in the OECD. Australia's R&D expenditure made up 2.20% of GDP in 2010, and the OECD average was 2.38% for 2010. Research income by the University of Waikato increased by around 39% in real terms over the period 2002 to 2012. Research income contributed approximately 13.3% of total revenues for the University of Waikato in 2012.

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 2001 to 2005 but has subsequently been lower. In 2011 there were approximately 16,500 effective full-time

students (EFTS 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. There are some positive indicators: for example the number of Māori language speakers has been steadily increasing. The recently passed Waikato River Settlement Act 2010 may promote the monitoring and reporting of cultural 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 535 buildings and places listed on the Historic Places Trust Register in Waikato Region territorial authority areas as at April 2013, compared with 474 that were counted on the online register in May 2008.

As at May 2006, 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". No comparable quantitative data has subsequently been requested. The New Zealand Historic Places Trust website now includes a section called ‘Heritage Lost’. This allows the reader to explore stories about various registered heritage places that have been lost due to development, fires, neglect, storms and other natural disasters.

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

In 2010, survey results showed a Waikato regional Satisfaction Index of 62.2 points for 'cultural facilities and opportunities provided in your area'. This was similar to the 2007 survey results.

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 generally increased over the period 1999/00 to 2003/04, 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 around 127,000 people in New Zealand were engaged in cultural employment in 2006. 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

Voter turnout in local authority elections peaked in 1989 and then steadily declined, with the exception of the 1998 elections, dropping to 44% in 2007 (a level comparable with pre-1989 election turnout). However, there was an increase in voter turnout for the most recent 2010 local authority elections. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. Voter turnout for national general elections has also been declining in the long-term, reaching a low in 2002 for New Zealand overall, rebounding for the 2005 and 2008 elections and then reaching a new record low in 2011. Only 68% of those eligible to cast a ballot actually did so.

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. Data is not yet available for this item for 2010. There has been a long run increase in the proportion of female elected members in elected positions in New Zealand, but this stabilised at around 30 per cent since the late 1990s. Many of the territorial authorities in the Waikato Region have a relatively high proportion of female elected members, ranging from 50% in the South Waikato District to a low of 13% in the Thames-Coromandel District, reflecting a similar pattern to the 2004 and 2007 local body election results.

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 MARCO report update is to help:

- Understand and learn about key components of regional wellbeing and progress.
- 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 MARCO 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:

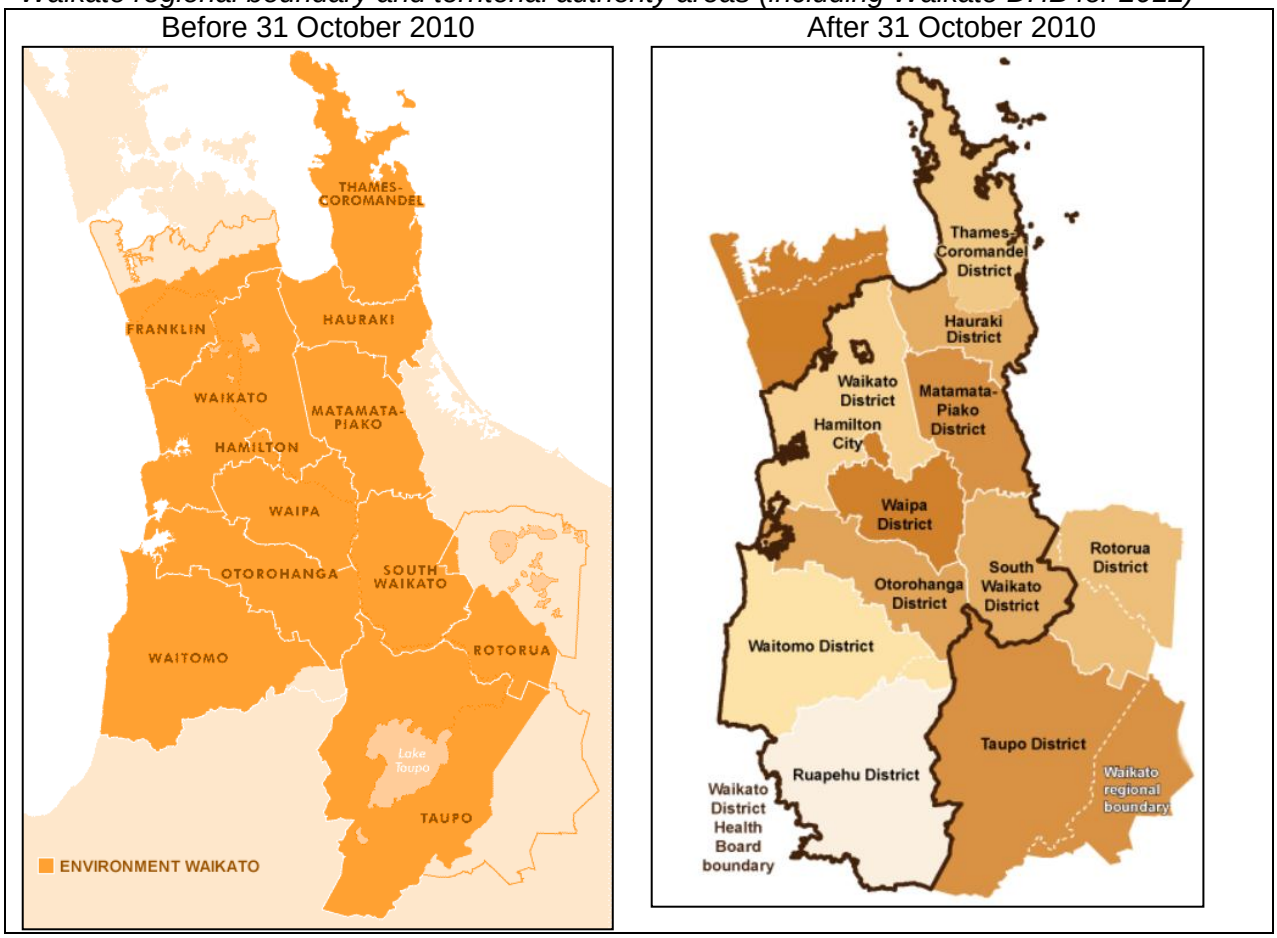
- MARCO group (Monitoring and Reporting Community Outcomes) – Waikato Regional Community Outcomes Progress Report 2008, 2009, 2010, 2011 and 2012; Data Analysis Report 2007; Benchmark Data Report 2006; Trends Report 2006; Resource Kit for Integrated Monitoring and Reporting 2005.
- Waikato Regional Council – Long Term Plan (LTP) 2012-2022.
- Choosing Futures Waikato – Regional Community Outcomes, December 2009.

Summary notes on differences between this 2013 update report and the 2012 report are contained in Appendix One ("2013 update notes").

WAIKATO REGIONAL COMMUNITY OUTCOMES

In 2005, the then 12 territorial authorities of the Waikato Region, together with Waikato Regional Council, jointly coordinated a process to identify regional-level community outcomes. The regional community outcomes process (called Choosing Futures Waikato) was a joint initiative of the district councils of Franklin, Hauraki, Matamata-Piako, Otorohanga, Rotorua, South Waikato, Taupo, Thames-Coromandel, Waikato, Waipa and Waitomo, Waikato Regional Council and Hamilton City Council.[5]

Waikato regional boundary and territorial authority areas (including Waikato DHB for 2012)



Source: www.choosingfutures.co.nz (previous and 2012 version of homepage map)

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.

Subsequent legislative changes (Local Government Act 2002 Amendment Act 2010) have changed the definition of community outcomes from "the outcomes for that district or region that are identified as priorities" to "the outcomes that a local authority aims to achieve in order to promote the social, economic, environmental, and cultural well-being of its district or region".

[5] Franklin District was disestablished on 31 October 2010 and divided between the new Auckland Council (approximately 40% of land area) and the Waikato and Hauraki districts (approximately 60%). However, for the purpose of this report, Franklin District data has been compiled and reported up to and including 2010 data.

The Amendment also repealed the requirement for councils to identify and report separately against community outcomes (now part of the Long Term Plan and Annual Report process). In view of these changes, Waikato Regional Council (WRC) adopted four new Community Outcomes: community partnerships, environmental quality, safe and resilient communities and regional economy. The 38 original regional community outcome statements were renamed 'community aspirations' and those relevant to WRC's functions (17 of the 38) are included under the four new Community Outcomes.

Note, that further amendments in December 2012 (the Local Government Act 2002 Amendment Act 2012) changed the purpose of local government and also changed reference to the term *"well-being"* throughout the LGA2002 (substituted by *"interests of people and communities"*).

The Waikato regional 'community aspirations' (still known as 'community outcomes' for the purpose of this report) are grouped under five themes[6]:

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.

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.

[6] Waikato Regional Council 2012-2022 Long Term Plan: http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Long-Term-Council-Community-Plan-Annual-Plan-and-Annual-Report/2012-2022-Long-Term-Plan/

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.

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.

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' over a period of several years, 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. Local authorities in the Waikato Region (including Waikato Regional Council) along with Waikato District Health Board and other key stakeholders worked 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) developed 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).

Review of the Waikato regional indicators

In March 2010 the MARCO team discussed a process for undertaking a review of the regional indicators set. 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.

Consultation was undertaken by Waikato Regional Council with territorial authorities during late 2011 to solicit feedback on a range of options. In view of the value of the information and councils' past investment in establishing the MARCO programme, and given that Waikato Regional Council was prepared to fund the 2012 update, a decision was made to proceed on the basis of the core set of 75 indicators.

Local and iwi community outcomes

Monitoring progress towards local outcomes 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 monitoring is contained in the MARCO Resource Kit for Integrated Monitoring and Reporting (refer to the www.choosingfutures.co.nz website). Note that this information is now less relevant due to legislative changes arising from the TAFM initiative.

WRC Strategic direction monitoring and reporting

In parallel with this annual MARCO update report, WRC also commissioned a desktop review project to provide independent recommendations for the development of a new monitoring and reporting programme to track progress on WRC's Strategic Directions (adopted in March 2011 for the period 2010-2013). Decisions by WRC based on these recommendations may have implications for the MARCO programme going forward.

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: • Self-reported environmental actions • Greenhouse gas emissions • NZDep deprivation index scores • Avoidable mortality and avoidable hospitalisations • Early childhood education • Number of business enterprises and employees

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). 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). 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.

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 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). This is mainly because of the greater intensity of land use in the lowland parts of the Region. Monitoring of regional rivers over the past 20 years shows mixed results. Overall, 17 per cent of water quality measures improved at individual sites, and 37 per cent deteriorated.[7] The records of temperature, dissolved oxygen, biological oxygen demand, dissolved colour, arsenic and enterococci have generally remained stable. Trends show an improvement in Chlorophyll a overall, with less algae in the river. But water clarity has shown an overall decline, with a rate of change of about 1 per cent per year from 1995 to 2011. Levels of total nitrogen 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 agricultural land use has continued to intensify. 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 water quality for contact recreation is good in some parts of the Region (eg, the upper Waikato River and tributaries of Lake Taupo). However in the lowland areas river water quality is not satisfactory (eg, Hauraki and the lowland tributaries of the Waikato

[7] These figures are currently being updated (Waikato Regional Council Technical Report 2013/20 – forthcoming).

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. Waikato Regional Council's long-term records of river water quality indicate increases in observed nitrogen concentrations in some Waikato River locations, probably resulting from intensification of land use within the catchment (Waikato Regional Council Technical Report 2013/20 – forthcoming).

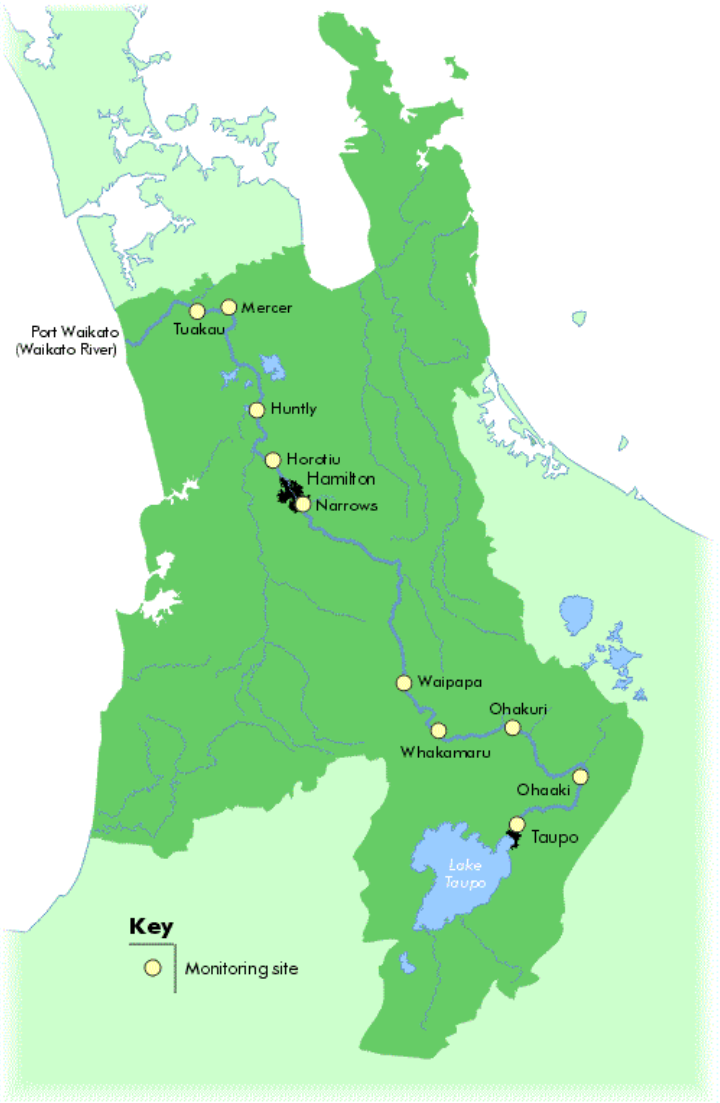
- The Waikato Region's shallow lakes are generally nutrient enriched as assessed by Waikato Regional Council, resulting in a relatively high trophic state and low oxygen levels. The trophic state of most lakes remained unchanged or deteriorated between 1995 and 2010. Water quality for ecology in Lake Taupo remains largely satisfactory to excellent. Water clarity has begun to deteriorate again in Lake Taupo in recent years, nitrogen levels continue a trend towards being only satisfactory relative to Waikato Regional Council's standards, and the latest measure of VHOD (oxygen depletion) showed approximately 60% of samples being unsatisfactory.
- 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 exhibits 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. Some 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 under development by Waikato Regional Council.
- During 2009/10, a Waikato Regional Landscape Assessment was commissioned by Waikato Regional Council. This shows that the Waikato Region has a number of historically and aesthetically important landscape assets, providing a baseline for future monitoring and management of landscapes within the Region.
- 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 in. Waikato Regional Council describes the average 'pass rate' for seven water quality measures: dissolved oxygen; pH; turbidity; ammonia; temperature; nitrogen; and phosphorus.

Waikato Regional Council 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



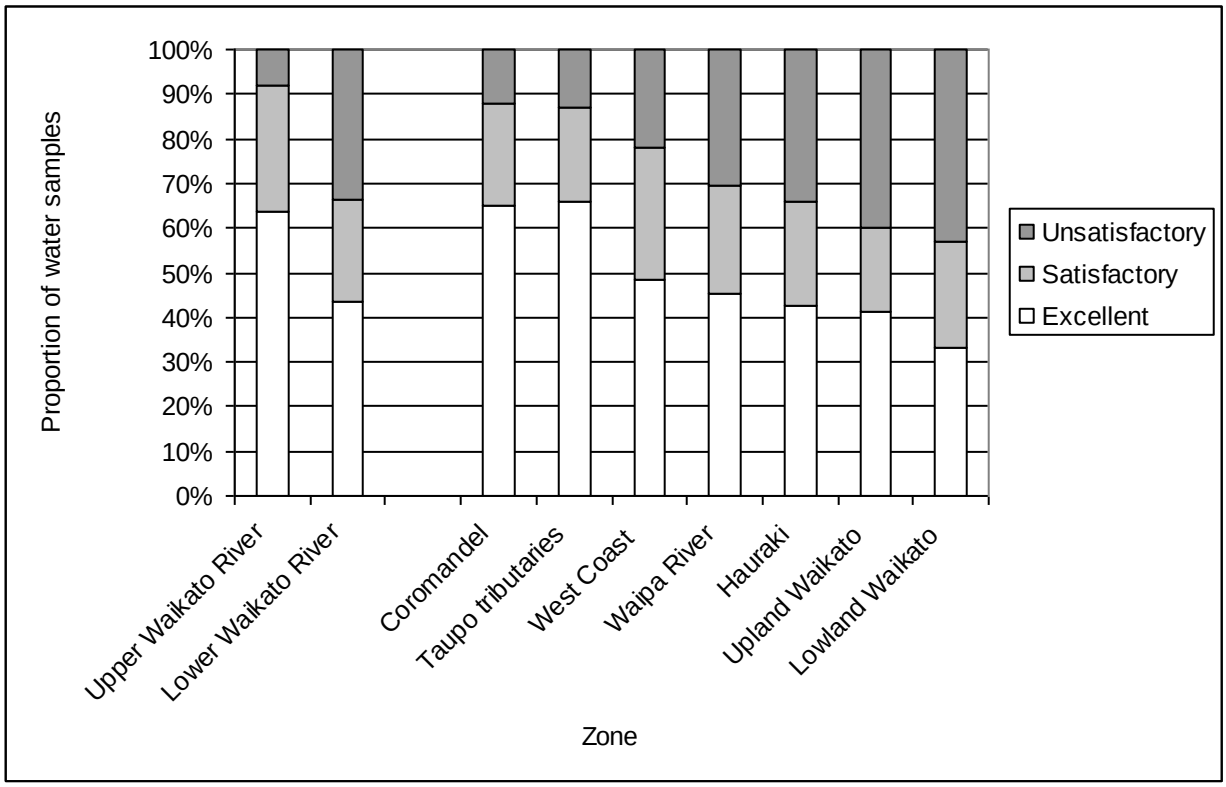
Source: Waikato Regional Council (http://www.waikatoregion.govt.nz/Environment/Natural-resources/Water/Rivers/Waikato-River/map/)

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'.

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). 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 trends for monitoring sites on the Waikato River during the 20-year period between 1992 and 2011. Overall, 17 per cent of water quality measures improved at individual sites, and 37 per cent deteriorated. The records of temperature, dissolved oxygen, biological oxygen demand, dissolved colour, arsenic and enterococci have generally remained stable. Trends show an improvement in Chlorophyll a overall, with less algae in the river. But water clarity has shown an overall decline, with a rate of change of about 1 per cent per year from 1995 to 2011. Levels of total nitrogen 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 agricultural land use has continued to intensify. 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 2008-2012 which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for ecological water quality in Waikato rivers and streams



Source: Waikato Regional Council

Figure 1.1.1c: Water quality trends in the Waikato River between 1992 and 2011

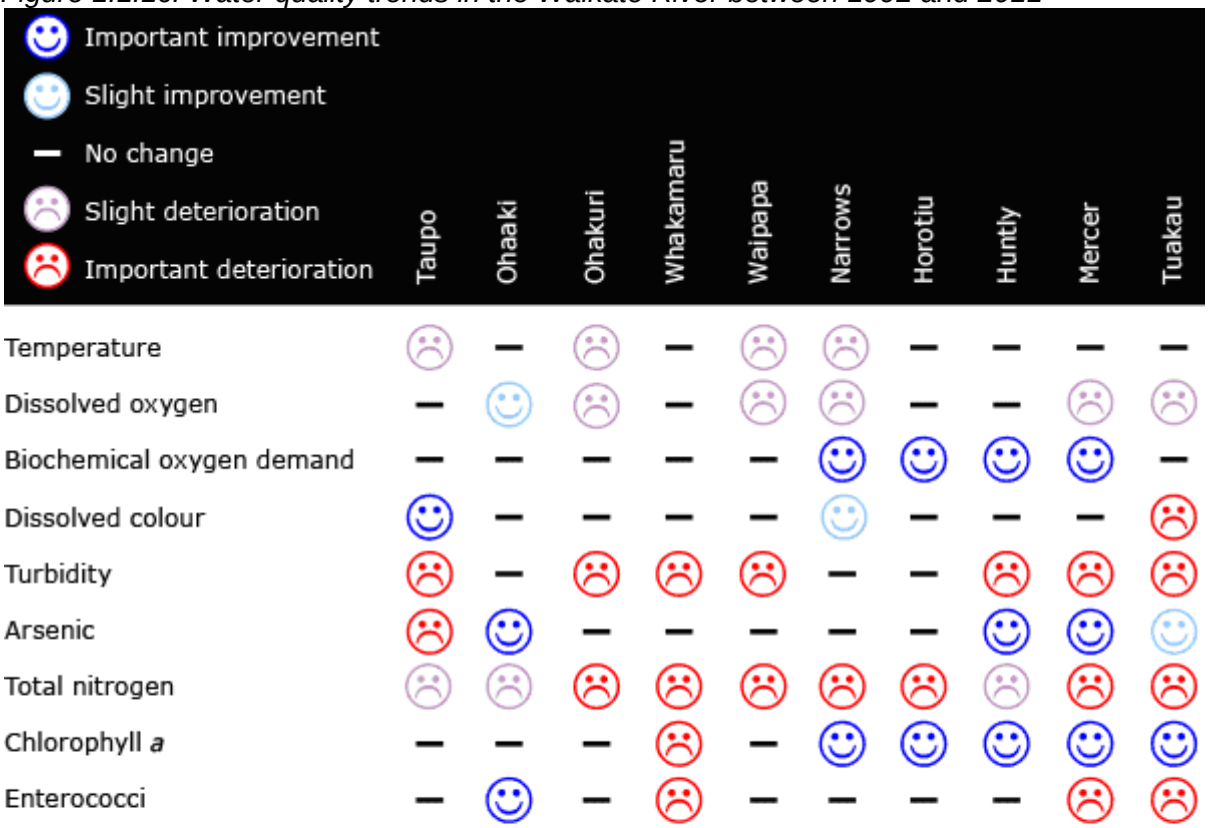


Table 1: Water quality trends in the Waikato River between 1992 and 2011
(based on methods in Environment Waikato Technical Report 2008/33)

Turbidity is for the period from 1995 to 1998. Results for total nitrogen and total phosphorus at Taupō are from NIWA's site at Reids Farm.

Flow-adjusted data, n ≤ 240
LOWESS span 30%
Seasonal Kendall slope and test
Significance: p < 5%

Source: Waikato Regional Council

Note: Excludes total phosphorus due to concerns over possible analytical issue with the underlying measure.

	Indicator	State	Trend
1.1.2	River water quality for recreation	☹	⇨

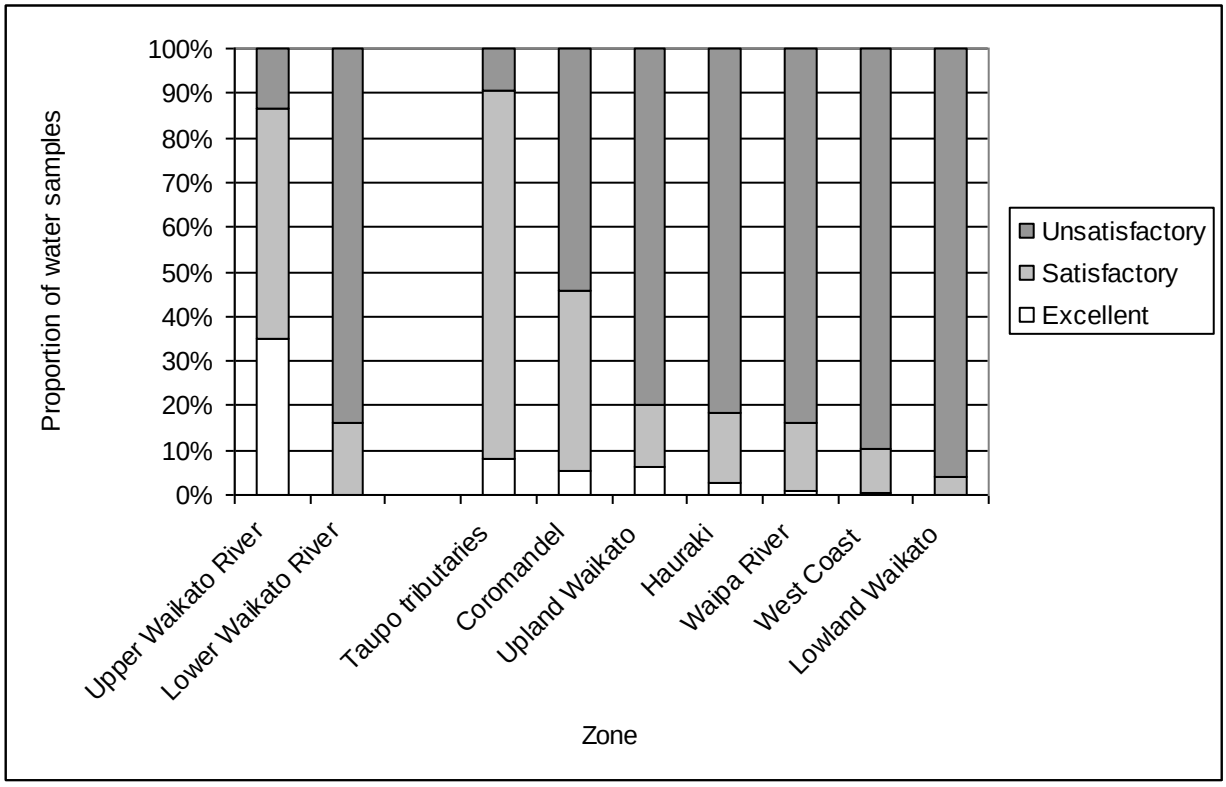
This indicator measures the faecal bacteria and water clarity in our rivers and streams. It is measured as an average 'pass rate' for two water quality measures: water clarity at baseflow; and *Escherichia Coli (E.coli)* – single sample.

Waikato Regional Council 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, Waikato Regional Council 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 (eg, the upper Waikato River and tributaries of Lake Taupo). However, in the lowland areas river water quality is not satisfactory (eg, 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. Waikato Regional Council 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.

In 2008, Waikato Regional Council published its most recent report on Trends in River Water Quality in the Waikato Region 1987-2007. This indicated increases in observed nitrate and total phosphorus concentrations in some Waikato River water quality records, probably resulting from intensification of land use within the catchment. A total of 1,373 water quality records from the other rivers and streams were also considered. Significant trends were found in 43% of these. An updated review of water quality trends is currently underway (Waikato Regional Council Technical Report 2013/20 – forthcoming).

Figure 1.1.2a: Proportion of all samples collected during 2008-2012 which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for recreation in Waikato rivers and streams



Source: Waikato Regional Council

	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.

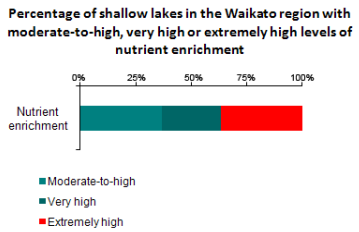
Lakes are valued for their unique genetic diversity, cultural and spiritual importance, scientific interest, recreational use and intrinsic values. Many of the shallow lakes in the Waikato Region are valuable refuges for unique plant and animal species. Lake Taupo is nationally recognised as a symbol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

The Waikato region's shallow lakes are generally nutrient enriched. They have high levels of nutrients such as phosphorus and nitrogen. The amount of nutrients entering a lake from its catchment mainly determines its trophic state. Nutrient enrichment results in poor water quality and a high trophic state.

Most of the 19 shallow lakes monitored are highly to extremely nutrient enriched (a trophic status of eutrophic, supertrophic or hypertrophic). They have high nutrient levels and poor water clarity. In contrast, lakes with low-to-moderate nutrient levels and clear water are classed as oligotrophic or mesotrophic. Increasing nutrient enrichment or 'eutrophication', results from runoff and leaching of contaminants such as effluent, fertiliser and sediment from land use in a lake's catchment. Nutrients can also be recycled from the bottom sediments of shallow lakes, adding to the levels found in the overlying water. Farmland now surrounds most shallow lakes in the region.

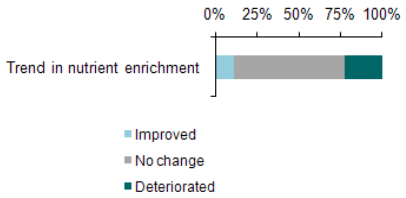
The upper graph shows how many of a group of 19 shallow lakes are currently found in each nutrient enrichment category. For nine of these lakes, there is enough information to measure changes in water quality over time. The lower graph shows the proportion of the lakes that have improved (nutrient levels have decreased), have not changed or have deteriorated (nutrient levels have increased) in their level of nutrient enrichment. For most lakes there has been no significant change.

Figure 1.1.3a: Percentage of shallow lakes in the Waikato Region with moderate-to-high, very high or extremely high levels of nutrient enrichment, 2010



Source: Waikato Regional Council

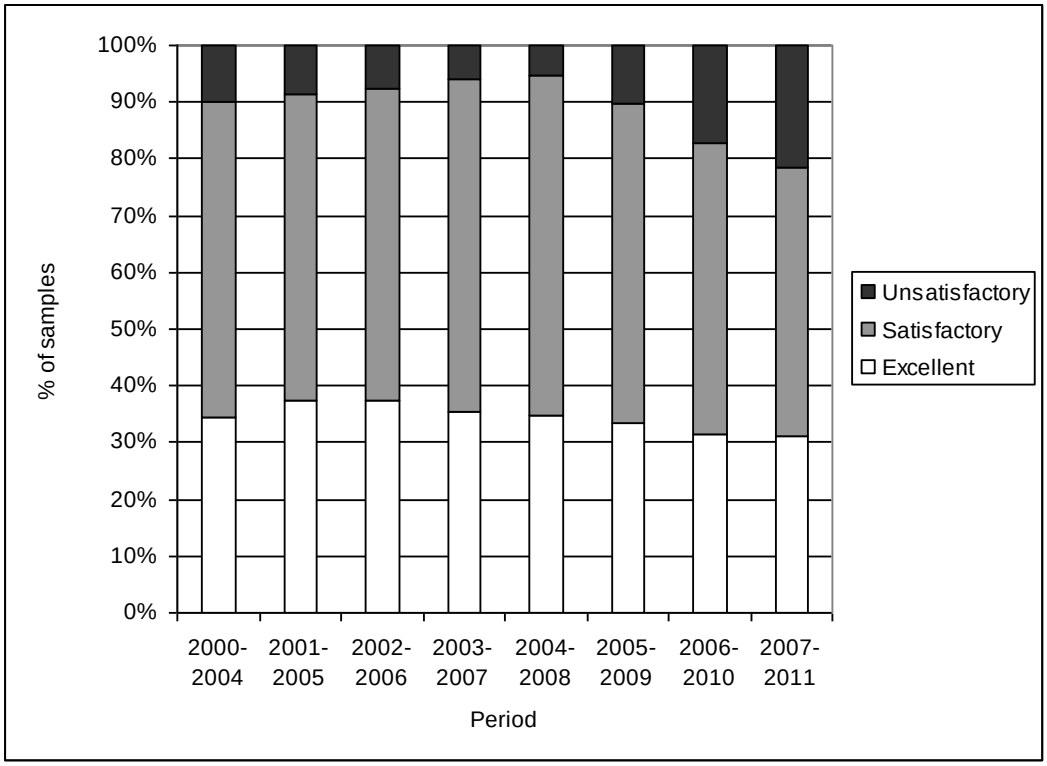
Figure 1.1.3b: Changes in the nutrient enrichment status of shallow lakes in the Waikato Region 1995-2010



Source: Waikato Regional Council

Figure 1.1.3c shows that water quality for ecology in Lake Taupo remains largely satisfactory to excellent. Tables 1.1.3c to 1.1.3f show that water clarity has begun to deteriorate again in Lake Taupo in recent years, nitrogen levels continue a trend towards being only satisfactory relative to Waikato Regional Council's standards, and the latest measure of VHOD (oxygen depletion) showed approximately 60% of samples being unsatisfactory.

Figure 1.1.3c: Proportion of all samples collected between 2000 and 2011 (shown as 5-year moving average) which met 'excellent', 'satisfactory' and 'unsatisfactory' standards for ecological health in Lake Taupo



Source: Waikato Regional Council

Table 1.1.3c: Proportion of all samples collected between 1996 and 2011 (shown as 5 year moving average) which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for Secchi depth (water clarity) in Lake Taupo

	Standard	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11
Excellent	>15	29.6%	33.8%	38.0%	42.3%	48.8%	52.9%	58.1%	60.2%	60.9%	62.0%	59.3%	56.4%
Satisfactory	12-to-15	59.2%	54.4%	47.9%	47.4%	42.5%	38.4%	36.0%	35.2%	34.8%	34.8%	33.0%	35.1%
Unsatisfactory	<12	11.3%	11.8%	14.1%	10.3%	8.8%	8.8%	5.8%	4.5%	4.3%	3.3%	7.7%	8.5%

Source: Waikato Regional Council time series data spreadsheet for Lake Taupo ecological health indicator

Table 1.1.3d: Proportion of all samples collected between 1996 and 2011 (shown as 5 year moving average) which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for chlorophyll in Lake Taupo

	Standard	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11
Excellent	<0.7	39.4%	30.4%	24.3%	22.4%	24.4%	29.4%	25.0%	30.7%	34.8%	35.9%	31.9%	39.4%
Satisfactory	0.7-to-1.4	46.5%	47.8%	50.0%	46.1%	46.2%	45.9%	51.2%	50.0%	48.9%	46.7%	48.4%	43.6%
Unsatisfactory	>1.4	14.1%	21.7%	25.7%	31.6%	29.5%	24.7%	23.8%	19.3%	16.3%	17.4%	19.8%	17.0%

Source: Waikato Regional Council time series data spreadsheet for Lake Taupo ecological health indicator

Table 1.1.3e: Proportion of all samples collected between 1996 and 2011 (shown as 5 year moving average) which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for total nitrogen in Lake Taupo

	Standard	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11
Excellent	<70	38.3%	50.8%	58.6%	63.2%	65.4%	67.1%	66.7%	51.1%	43.5%	35.9%	34.1%	28.7%
Satisfactory	70-to-140	61.7%	49.2%	40.0%	35.5%	33.3%	31.8%	32.1%	48.9%	56.5%	64.1%	64.8%	70.2%
Unsatisfactory	>140	0.0%	0.0%	1.4%	1.3%	1.3%	1.2%	1.2%	0.0%	0.0%	0%	1.1%	1.1%

Source: Waikato Regional Council time series data spreadsheet for Lake Taupo ecological health indicator

Table 1.1.3f: Proportion of all samples collected between 1996 and 2011 (shown as 5 year moving average) which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for oxygen depletion in Lake Taupo

	Standard	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11
Excellent	<5	40%	40%	40%	20%	0%	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Satisfactory	5-to-15	60%	60%	60%	80%	100%	100%	100.0%	100.0%	100.0%	80.0%	60.0%	40.0%
Unsatisfactory	>15	0%	0%	0%	0%	0%	0%	0.0%	0.0%	0.0%	20.0%	40.0%	60.0%

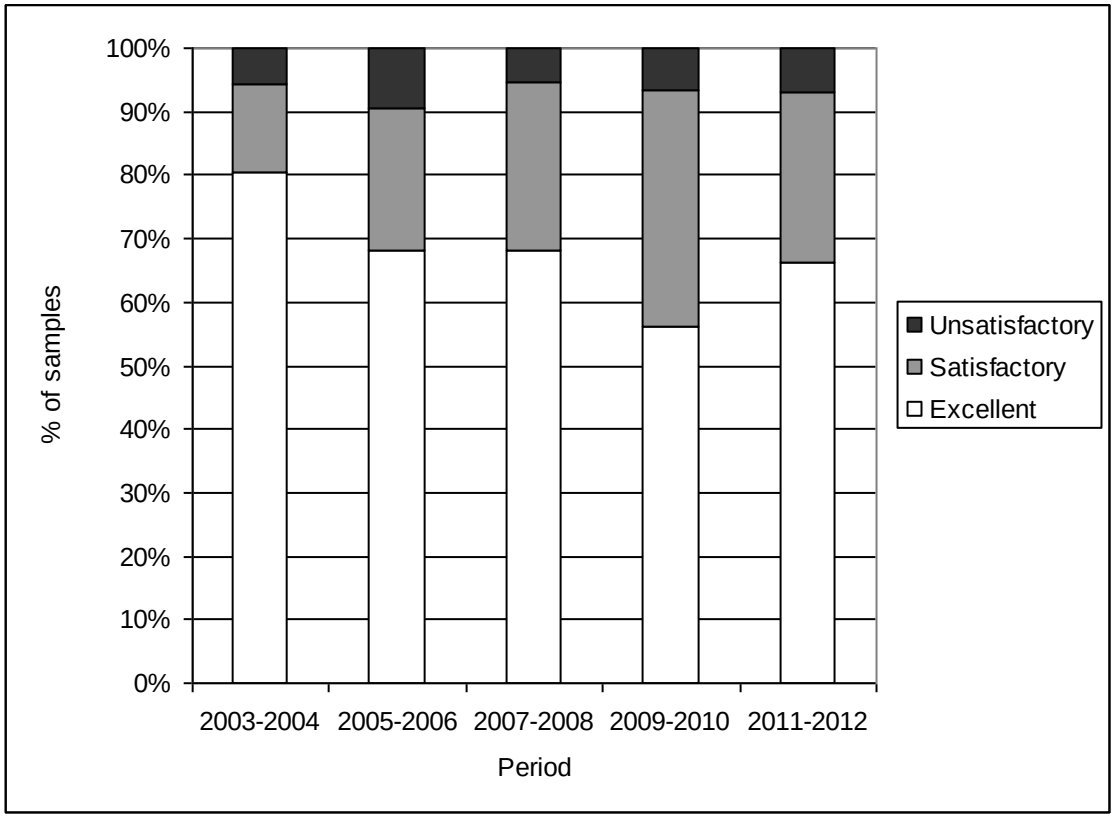
Source: Waikato Regional Council time series data spreadsheet for Lake Taupo ecological health indicator

	Indicator	State	Trend
1.1.4	Lakes water quality for contact recreation[8]	😐	⇨

This indicator measures the levels of faecal bacteria at 12 bathing beaches around the edge of Lake Taupo, which shows us whether the water quality is suitable for contact recreation. There are no specific measurements taken to monitor shallow lakes (peat lakes) water quality for recreation. 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.

Waikato Regional Council monitors water quality in Lake Taupo 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).
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).

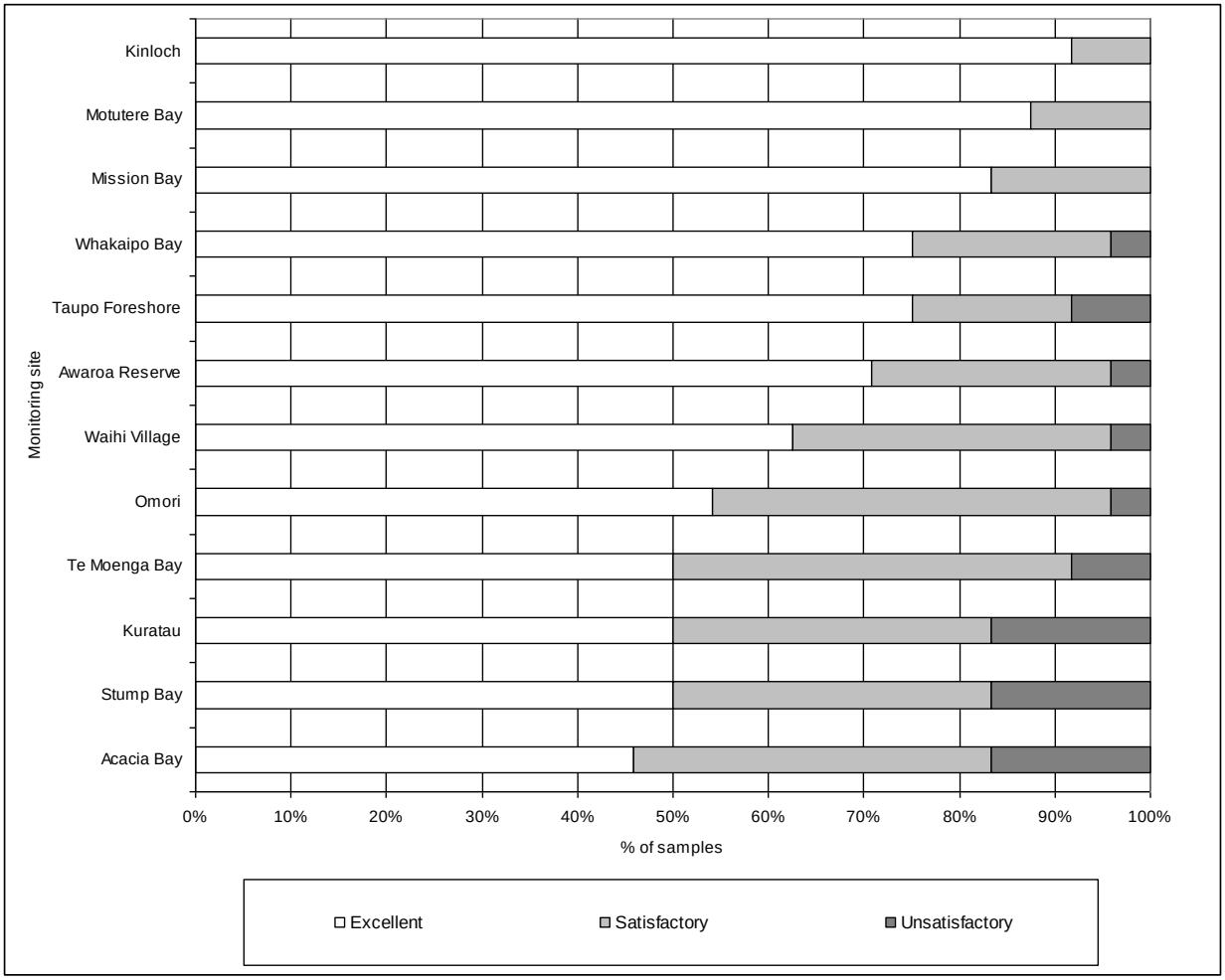
Figure 1.1.4a: Proportion of summer samples which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for contact recreation in Lake Taupo



Source: Waikato Regional Council data spreadsheets for Lake Taupo swimming data

[8] For Lake Taupo the state for this indicator is "excellent", while for the shallow lakes it is "poor".

Figure 1.1.4b: Contact recreation site scores, Lake Taupo water quality 2011-2012



Source: Waikato Regional Council data spreadsheets for Lake Taupo swimming data

	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).

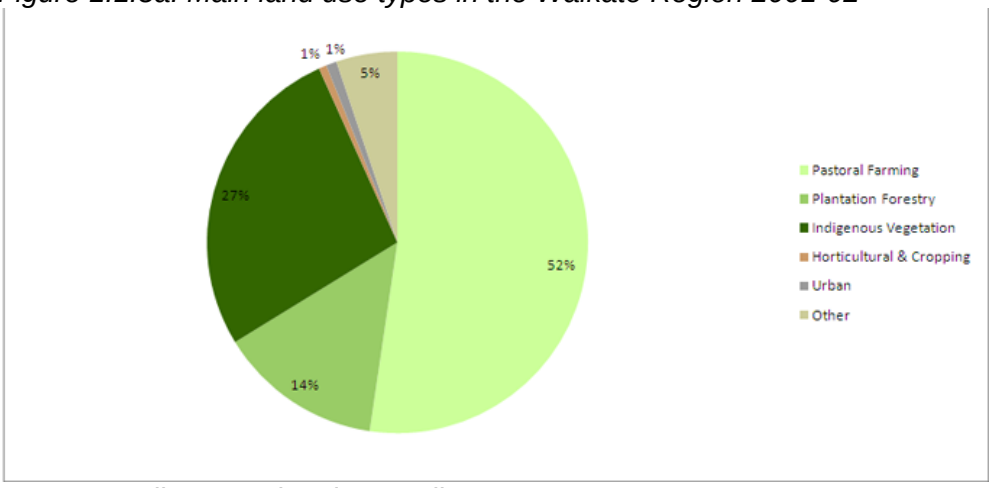
According to 2001-02 data on Waikato Regional Council's website (accessed 14 April 2013), the main land use types in the Waikato Region are pastoral farming (52%), indigenous vegetation (27%), plantation forestry (14%), urban areas (1%) and horticulture and cropping (less than 1%). Refer to Indicator 1.1.10 (extent of native vegetation) for further information.

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).

More up to date data from the latest June 2012 Statistics New Zealand/ Ministry of Agriculture and Forestry's Agricultural Production Statistics shows that (refer Table 1.1.5c):

- Dairy cattle numbers were slightly more than 1.8 million (up 10% from 2002 levels).
- Sheep numbers were slightly less than 1.8 million (down 31%).
- Beef cattle numbers were 506,000 (down 24%).
- Deer numbers were 81,000 (down 43%).

Figure 1.1.5a: Main land use types in the Waikato Region 2001-02



Source: Waikato Regional Council

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

Table 1.1.5c: Selected livestock numbers – Waikato Region

	2002	2007	2008	2009	2010	2011	2012
Sheep	2,592,000	2,660,000	2,169,000	2,102,000	1,982,000	1,838,000	1,777,000
Dairy cattle	1,663,000	1,669,000	1,717,000	1,787,000	1,758,000	1,796,000	1,832,000
Beef cattle	667,000	677,000	576,000	598,000	535,000	515,000	506,000
Deer	143,000	117,000	92,000	98,000	84,000	77,000	81,000

Source: Statistics New Zealand Agricultural Production Statistics

	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_{10} particles, which are particles smaller than 10 microns (there are 1000 microns in 1 millimetre).

PM_{10} 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_{10} also affects air by reducing visibility. Less visibility reduces safety, reduces views and could affect tourism.

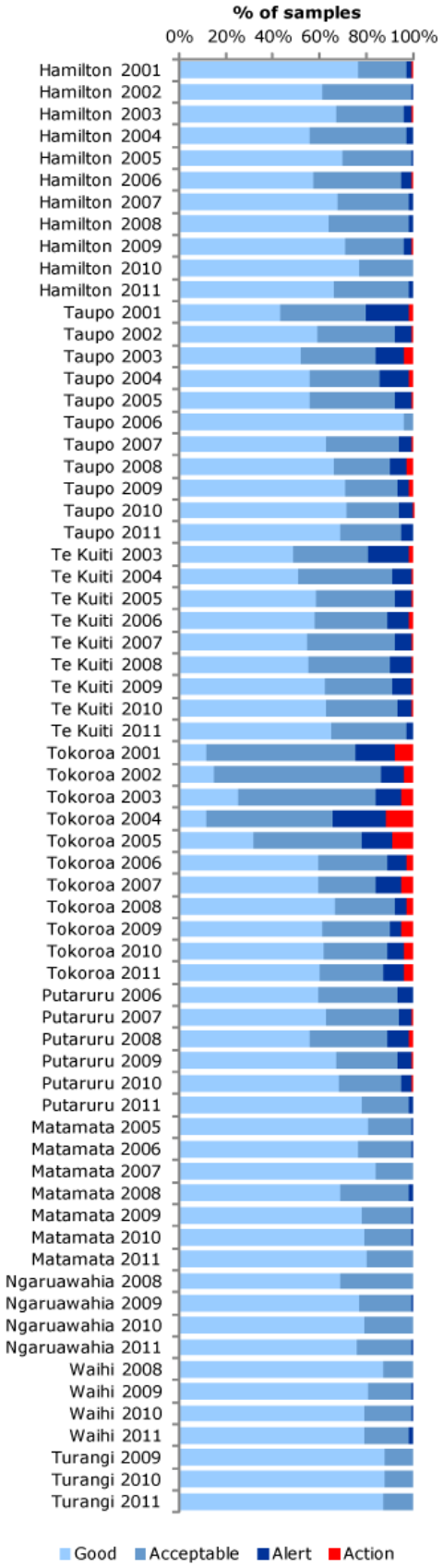
Waikato Regional Council uses a scale of Good, Acceptable, Alert or Action to compare PM_{10} over 24 hour averages against regional guidelines. The regional guideline for PM_{10} levels is 50 $\mu g/m^3$ for a 24 hour period. The ranges for the scale are: Good: value between 0 and 16.5 $\mu g/m_3$ for a 24 hour period; Acceptable: value between 16.5 and 33 $\mu g/m^3$ for a 24 hour period; Alert: value between 33 and 50 $\mu g/m^3$ for a 24 hour period; Action: value about 50 $\mu g/m^3$ 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_{10} levels are good or acceptable most of the time but for a few days each year, levels approach or go beyond the National Environmental Standard or regional guidelines. This happens mostly in winter during calm periods. Of the urban areas monitored, Tokoroa exhibits the largest number of exceedances per annum, though both exhibited downward trends. According to Waikato Regional Council air scientists, the majority of PM_{10} 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_{10} of 50 $\mu g/m^3$ for a 24 hour period. The standard allows one breach of 50 $\mu g/m^3$ 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. These National Environmental Standards were amended in 2011[9].

Waikato Regional Council recently expanded its PM_{10} monitoring programme to include Ngaruawahia, Waihi and Turangi. The PM_{10} monitoring network is increasing at a rate of approximately 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 Waikato Regional Council's annual budgets.

[9] 2011 Amendment to the National Environmental Standards for Air Quality: http://www.mfe.govt.nz/laws/standards/air-quality/review/index.html

Figure 1.1.6a: Percentage of air samples meeting "good", "acceptable" or "alert" PM_{10} levels relative to guidelines, Waikato urban areas 1998 to 2010



Source: Waikato Regional Council

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

Year	Hamilton	Taupo	Te Kuiti	Tokoroa	Putaruru	Matamata	Ngaruawahia	Waihi	Turangi
1998	0		0						
1999	0								
2000	0								
2001	3	7		24					
2002	0	6		15					
2003	3	12	4	10					
2004	1	6	5	41					
2005	0	3	2	33		0			
2006	2	15	7	9	0	0			
2007	0	6	4	11	3	0			
2008	0	12	3	12	4	0	0	0	
2009	3	7	4	17	2	1	0	0	0
2010	0	1	3	16	2	0	1	0	0
2011	1	1	1	16	1	0	0	0	0

Source: Waikato Regional Council

	Indicator	State	Trend
1.1.7	Groundwater availability and use	😐	?

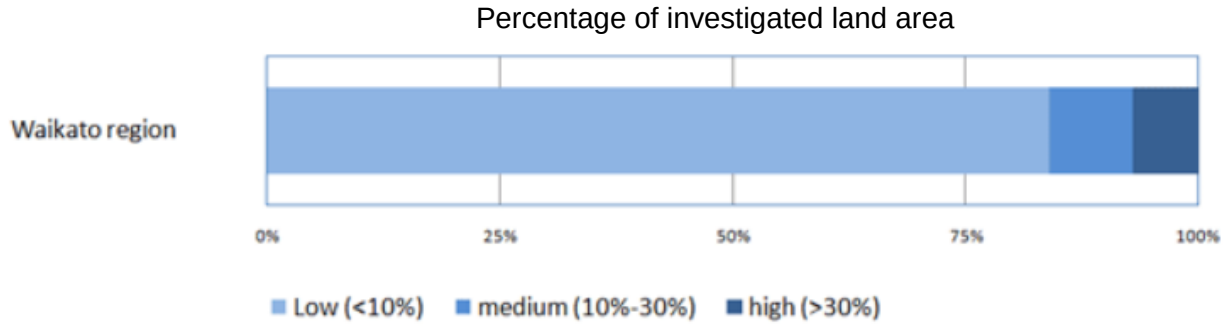
Groundwater makes up about 90% of the Waikato Region's freshwater resource, and is used for drinking, industry, agriculture and horticulture. This indicator measures the amount of groundwater that is available for use in the Region. It monitors the amount of 'stress' groundwater resources are under in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

Waikato Regional Council 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. Some 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: Waikato Regional Council
Note: Data collected from 1988 to 2011

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

Main areas investigated	Smaller sub-areas investigated	Low (<10%)	Medium (10%-30%)	High (>30%)	Area km2
Western Region		17.83%			4266.0
Taupo		11.37%			2720.0
	Taupo Township			0.05%	12.6
	Northern Bays	0.45%			107.0
Waipa		10.44%			2498.0
	North Waipa	1.67%			400.0
Hauraki Plains		15.06%			3605.0
South Waikato		17.47%			4180.0
	Reporoa			0.12%	28.7
	Tokoroa			0.66%	157.5
	Putaruru			0.09%	21.0
Lower Waikato	South of Taupiri		5.01%		1198.0
	North of Taupiri	7.59%			1816.0
Pukekohe/Pukekawa**			1.45%		348.1
	Pukekohe Basalt/Kaawa			0.36%	85.8
	Waiuku		0.61%		147.0
	Pukekawa		0.31%		73.2
	Onewhero		0.17%		41.1
Coromandel		8.65%			2071.0
	Waihi Basin			0.57%	136.0
	Whiritoa			<0.01%	0.9
	Whangamata Moana Point			0.01%	3.1
	Hahei			<0.01%	0.4
	Cooks Beach			<0.01%	0.9
	Whangapoua			<0.01%	0.4
	Kuaotunu West			<0.01%	0.2
	Thames	0.01%			2.5
	Whangamata Township		0.01%		2.5
	Pauanui	0.01%			2.3
	Matarangi		0.01%		3.4
	Whitianga		0.01%		1.9
	Total	**90.5%**	**7.6%**	**1.9%**	**23930.5**

Source: Waikato Regional Council

	Indicator	State	Trend
1.1.8	Surface water availability and use	😐	?

This indicator is currently under development by Waikato Regional Council 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 Waikato Regional Council.

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

Landscapes and heritage areas are valuable for a number of reasons including tourism, other business and development activities, recreation and aesthetic benefits. Hence, outstanding natural features need to be managed so their values are preserved, protected and enhanced.

There is no agreed methodology for this indicator, but initial work has begun. During 2009/10, a Waikato Regional Landscape Assessment was commissioned by Waikato Regional Council. The resulting assessment report was compiled by a partnership of environmental consultancy firms. The overall objective was to provide robust information about regional landscape features as part of a review of the Regional Policy Statement (RPS). The assessment provides a significant resource to the Regional Council and others involved with resource management and landscape issues in the Waikato Region. It will assist local authorities, through the RPS, to meet requirements of the Resource Management Act (RMA) 1991 with respect to regional landscape and natural character values. It also provides a baseline for future monitoring and management of landscapes within the Region.

The Waikato Region has a number of historically and aesthetically important landscape assets. Specific key landscape features as at 2010 were identified and rated across a range of attributes using a low-medium-high scale. The key landscapes are listed in Figures 1.1.9a, 1.1.9b and 1.1.9c. These are classified as either:

- Outstanding Natural Features and Landscapes (ONFL) – More than seven 'high' ratings on the assessment attributes, particularly on memorability and vividness.
- High Value Amenity Natural Features and Landscapes (HVANFL) – Up to seven 'high' ratings on the attributes, with a larger number of 'moderate' and 'low' ratings.
- Significant Natural Landscape Features (SNLF) – Between three and seven 'high' ratings but lower scores on aesthetic values such as vividness and memorability. Generally small features, part of bigger landscapes.

Figure 1.1.9a: Summary Table: Outstanding Natural Features and Landscapes (ONFL)

	Aesthetic Values					Physical Attributes				Associations					Totals		
Attributes → / ONFL ↓	Memorability	Vividness	Expressiveness	Cohesion	Eminence	Geology	Topography	Ecology	Dynamic Change	Historical Associations	Value to Tangata Whenua	Recreation Values	Shared/Recognised Values	Natural Character	High	Medium	Low
1. Tongariro National Park	H	H	H	H	H	H	H	H	H	H	H	H	H	H	14	0	0
2. Kaimanawa Mountains	M	H	H	H	M	H	H	H	M	M	H	M	M	H	8	6	0
3. Northern Herangi Range	H	M	H	H	H	M	H	H	M	M	M	M	L	H	7	6	1
4. Mount Karioi	H	H	H	H	H	H	M	H	M	H	H	M	M	H	10	4	0
5. Coromandel Range and Moehau Range	H	H	H	H	H	H	H	M	M	H	H	H	H	H	12	2	0
6. Maungatautari	H	M	H	M	H	H	H	H	M	H	H	M	H	H	10	4	0
7. Pirongia	H	H	H	M	H	H	H	M	M	H	H	M	H	H	10	4	0
8. Kaimai Range	H	H	H	H	H	H	H	M	M	H	H	M	H	H	11	3	0
9. Lake Taupo	H	H	H	M	H	H	M	M	H	H	H	H	H	M	10	3	1
Coastal Areas Coromandel 10/1 Cathedral Cove, Shakespeare Cliff, Cook Bluff, coastline south of Hahei	H	H	H	H	H	H	M	M	H	H	H	H	H	M	11	3	0
10/2 Northern tip of Coromandel Peninsula and western slopes of Moehau Range down to the coast	H	M	H	H	H	M	M	M	H	H	Φ	H	H	M	8	5	Φ
10/3 Tuateawa	H	H	H	M	H	H	H	M	H	H	H	M	M	H	10	4	0

Key
H High
M Medium
L Low
Φ No information available

Source: Waikato Regional Landscape Assessment, Waikato Regional Council Technical Report 2010/12, p 92.

Figure 1.1.9b: High Value Amenity Natural Features and Landscapes (HVANFL)

	Aesthetic Values					Physical Attributes				Associations					Totals			
Attributes → / HVANFL ↓	Memorability	Vividness	Expressiveness	Cohesion	Eminence	Geology	Topography	Ecology	Dynamic Change	Historical Associations	Value to Tangata Whenua	Recreation Values	Shared/Recognised Values	Natural Character	High	Medium	Low	No info available
1. Hakarimata Range and Mount Taupiri	M	M	M	H	M	M	M	M	H	H	H	L	M	M	4	9	1	0
2. Herangi Range - South	M	M	M	H	M	M	H	M	L	Φ	Φ	M	Φ	H	3	7	1	3
3. Rangitoto Range	M	L	L	M	L	H	H	M	M	Φ	Φ	Φ	Φ	M	2	5	3	4
4. Kuharua, Kakaramea, Lake Rotoaira and Pihanga	M	M	H	H	M	H	H	M	H	M	H	M	M	H	7	7	0	0
5. Pureora	M	M	M	H	M	M	M	L	M	H	H	M	M	H	4	9	1	0
6. Titiraupenga	M	H	M	H	M	H	H	L	L	H	H	M	M	H	7	5	2	0
7. Tauhara	H	H	H	M	M	H	M	L	L	H	H	M	H	M	7	5	2	0
8. Te Hoe	M	L	M	M	M	M	M	H	L	Φ	Φ	Φ	Φ	H	2	6	2	4
9. Paeroa Range	M	M	M	L	M	M	H	L	L	Φ	Φ	M	L	M	1	7	4	2
10. Kaahu and Whakaahu	H	H	M	M	H	H	H	L	L	H	H	L	M	M	7	4	3	0
11. Waikato River and Reservoirs	M	M	H	M	L	M	M	L	H	H	H	M	H	M	5	7	2	0
12. Kaimai Range - South	M	M	H	H	M	H	H	M	H	H	M	M	M	H	7	7	0	0
13. Western Coastline – river mouths, harbours and islands	M	M	H	H	M	L	H	M	H	H	H	M	M	H	7	6	1	0
14. Eastern Coastline – river mouths, harbours and islands	H	H	M	M	M	M	M	M	H	H	H	H	H	M	7	7	0	0
15. Horohoro Cliffs	H	H	H	M	M	H	H	M	M	H	H	M	M	M	7	7	0	0

Source: Waikato Regional Landscape Assessment, Waikato Regional Council Technical Report 2010/12, p 93.

Figure 1.1.9c: Significant Natural Landscape Features (SNLF)

	Aesthetic Values					Physical Attributes				Associations					Totals			
Attributes → / SNLF ↓	Memorability	Vividness	Expressiveness	Cohesion	Eminence	Geology	Topography	Ecology	Dynamic Change	Historical Associations	Value to Tangata Whenua	Recreation Values	Shared/Recognised Values	Natural Character	High	Medium	Low	No info available
1. Whangamarino, Kopuatai and Torehape wetlands	M	L	M	M	L	L	M	H	L	H	M	M	M	H	3	7	4	0
2. Miranda shell banks and chenier plain	M	M	H	M	M	M	M	H	M	H	Φ	M	H	H	5	8	Φ	1
3. Huka Falls and Aratiatia Rapids	H	H	H	M	M	H	M	L	M	H	M	H	M	M	7	6	1	0
4. Limestone bluffs, outcrops and caves in the Waitomo area	M	M	H	M	M	H	H	M	M	M	M	M	M	M	3	11	0	0
5. Geothermal Features	Values vary for each geothermal feature – Natural character values for each feature are identified in the background data of the GIS Maps.																	

Key
H High
M Medium
L Low
Φ No information available

Source: Waikato Regional Landscape Assessment, Waikato Regional Council Technical Report 2010/12, p 93.

	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 Ministry for the Environment intends to update its Land Cover Database every five years but has yet to do so.

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.

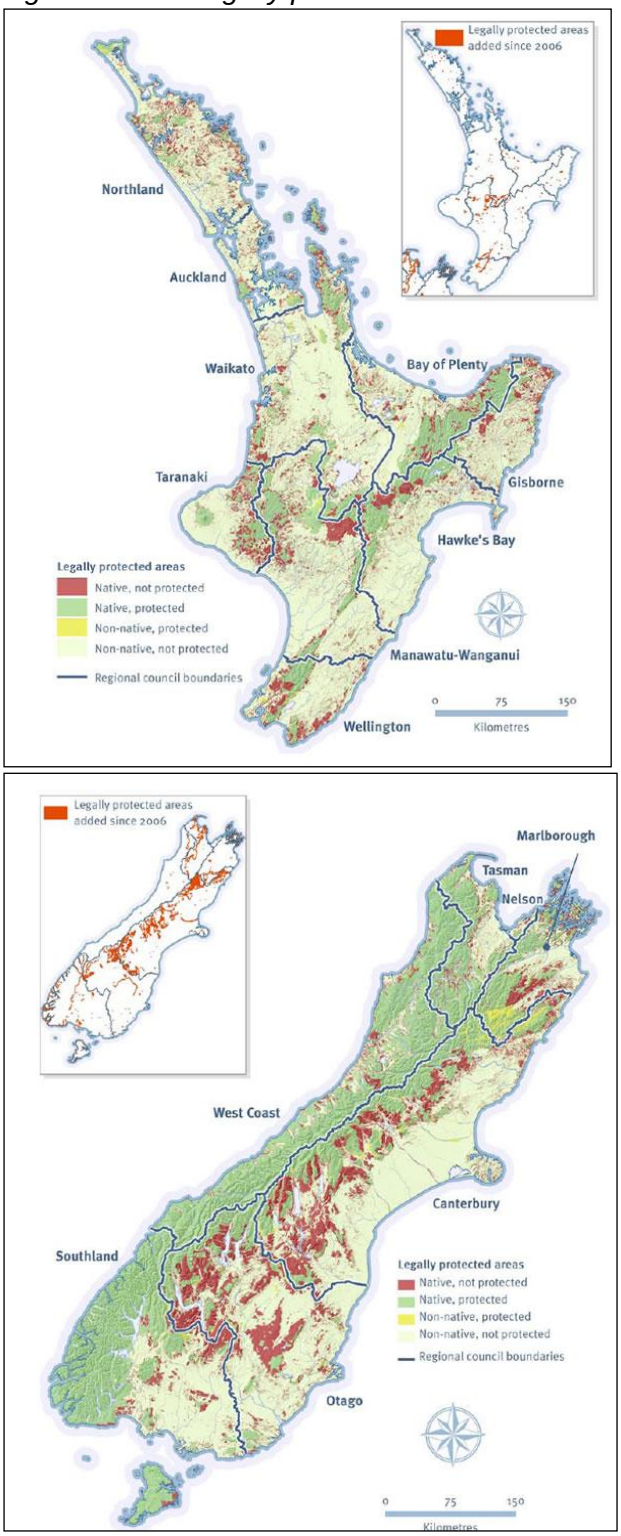
The native flora of New Zealand is unique, having evolved in isolation for millions of years. It is important to know how much of this native flora is protected in order to maintain it in a sustainable manner.

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 at 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). This shows that, 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%.

Figure 1.1.11: Legally protected areas – New Zealand, 2009



Source: 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%
North Island - Total	**11,279,400**	**2,193,400**	**2,215,100**	**21,700**	**1.0%**	**19.6%**
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%
South Island - Total	**14,936,400**	**6,160,900**	**6,548,000**	**387,100**	**6.3%**	**43.8%**
New Zealand - Total	**26,215,800**	**8,354,300**	**8,763,100**	**408,800**	**4.9%**	**33.4%**

Source: Adapted from data in Figure 3 of 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 Waikato Regional Council 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.

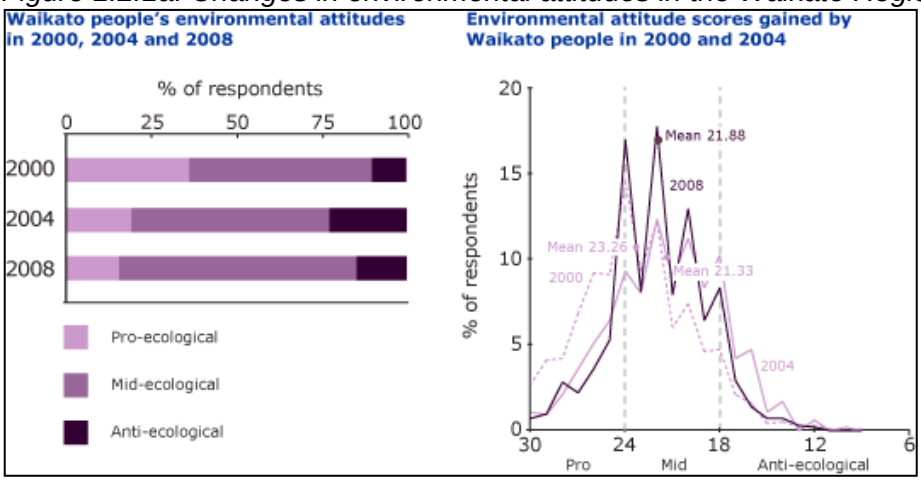
It is important to understand how positive or negative people's attitudes are towards protecting the environment. It is also useful to know if people are aware of how their actions can affect aspects of the environment. This can help councils find out how much support people have for proposed actions, 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: Waikato Regional Council NEP Surveys 2000, 2004 and 2008

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

	Percentage of respondents		
Area	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: Waikato Regional Council NEP Survey 2008

	Indicator	State	Trend
1.2.2	People's personal environmental actions	😐	⇧

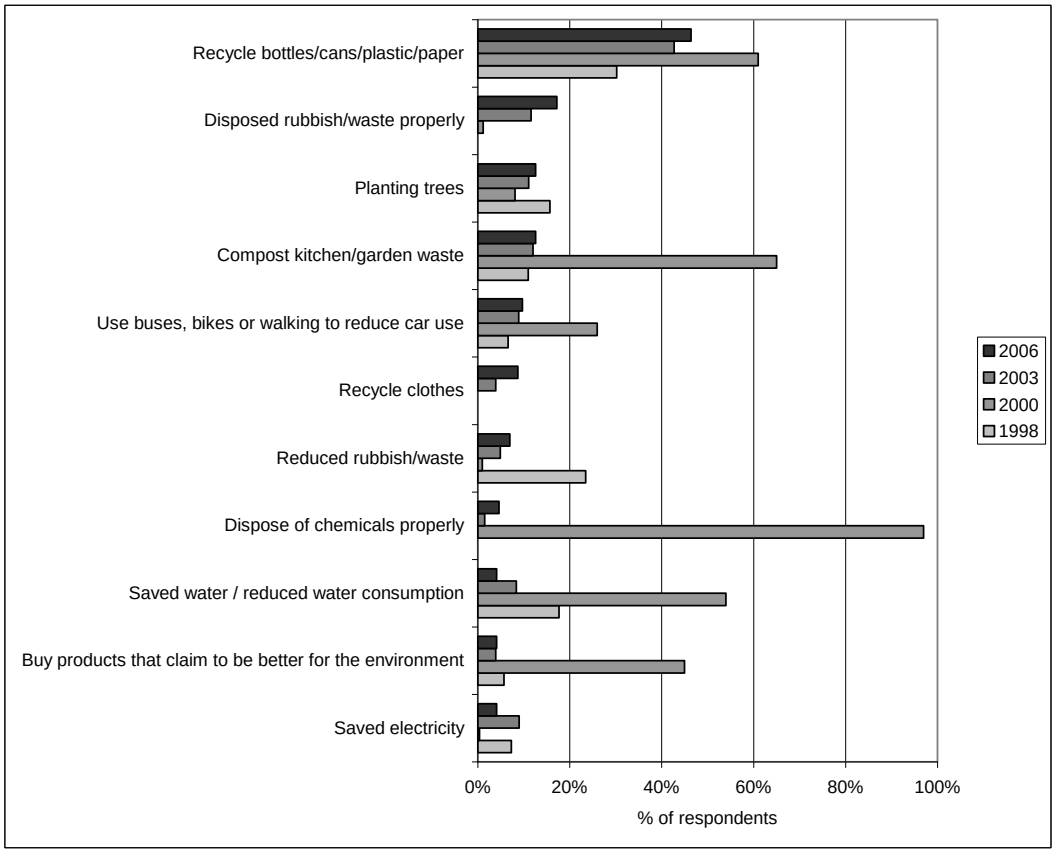
This indicator monitors people's personal actions towards protecting the environment (types and frequency of activities), and people's reasons for not making personal efforts to protect the environment.

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, Waikato Regional Council 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 Waikato Regional Council, 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: Waikato Regional Council: 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.

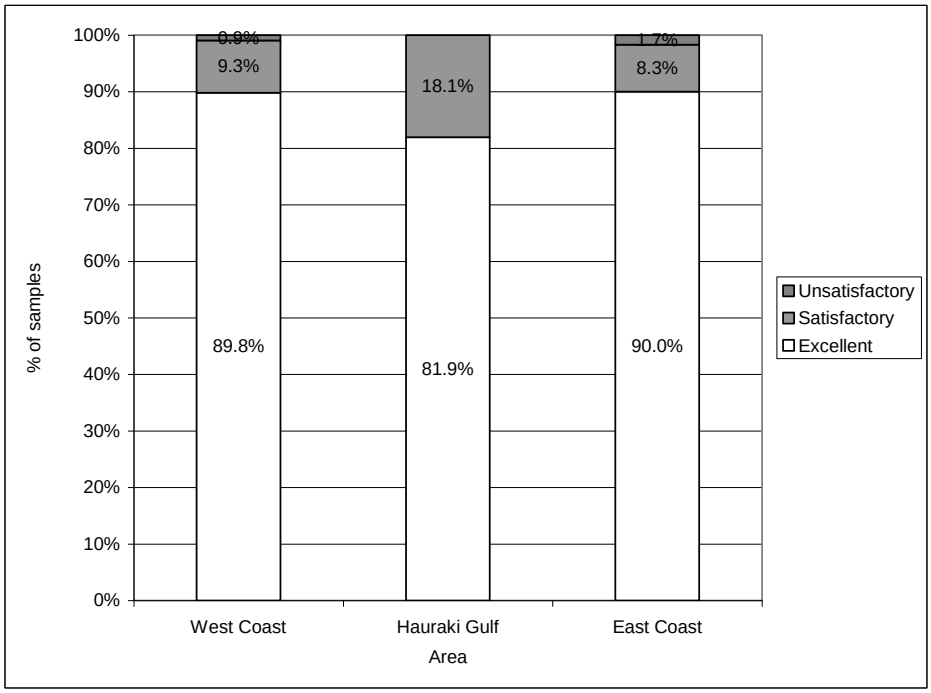
	Indicator	State	Trend
1.3.1	Coastal water quality for recreation	😐	⇨

This indicator measures water quality of coasts in terms of enterococci (faecal bacteria) levels. Waikato Regional Council 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.

Waikato Regional Council routinely monitors enterococci (bacteria) levels at 25 coastal swimming beaches. The most recent survey period was 2008-09 for West Coast beaches and 2007-08 for Coromandel Peninsula beaches[10]. At each monitoring site, Waikato Regional Council determines the proportion of samples which meet Waikato Regional Council'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.

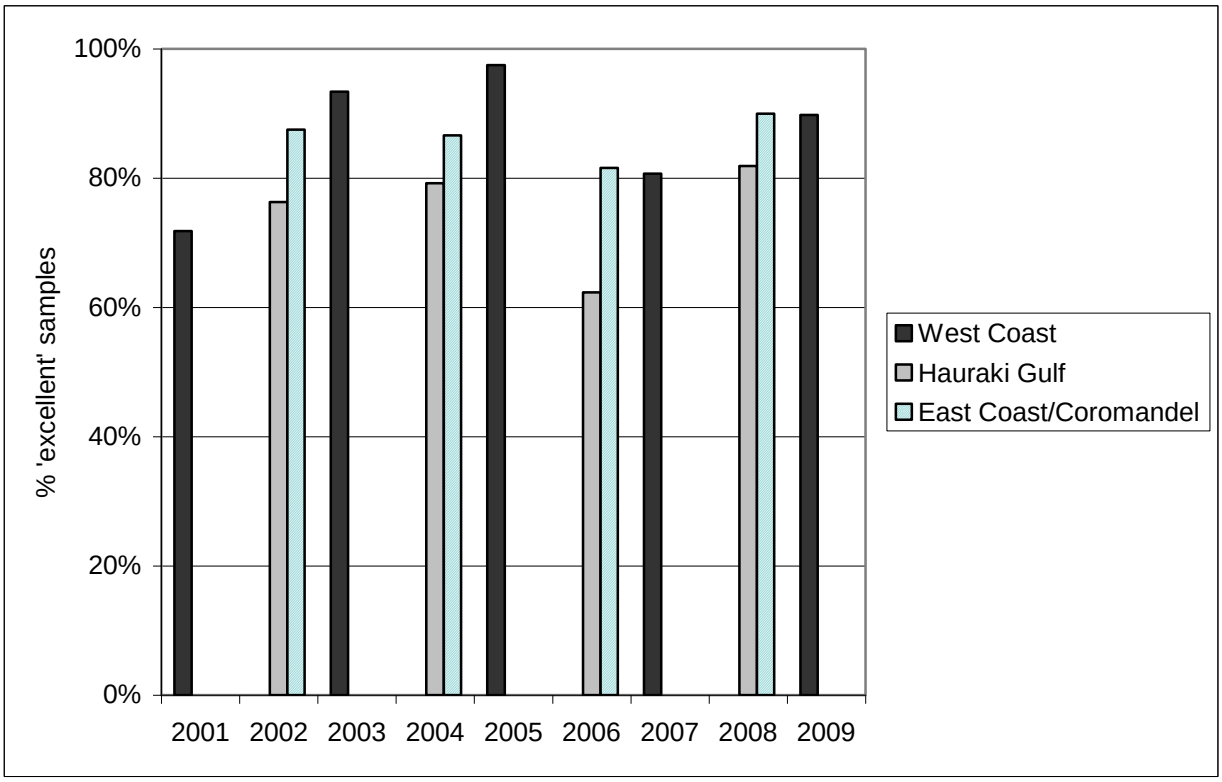
Figure 1.3.1a: Proportion of samples collected during 2008-09 (west coast) and 2007-08 (Coromandel Peninsula and Hauraki Gulf) which met the 'excellent', 'satisfactory' and 'unsatisfactory' standards for contact recreation on the coast – Waikato Region



Source: Waikato Regional Council

[10] WRC has discontinued monitoring of coastal beaches (Long Term Plan 2012-22). Previous monitoring results at Coromandel and West Coast beaches all indicate excellent water quality which is unlikely to change.

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: Waikato Regional Council 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 Waikato Regional Council.

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

Coastline ownership is used here as a proxy for public access to coast. 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 and east Coromandel. Results are presented as privately owned, publicly owned or road edge (where public access is likely to be available).

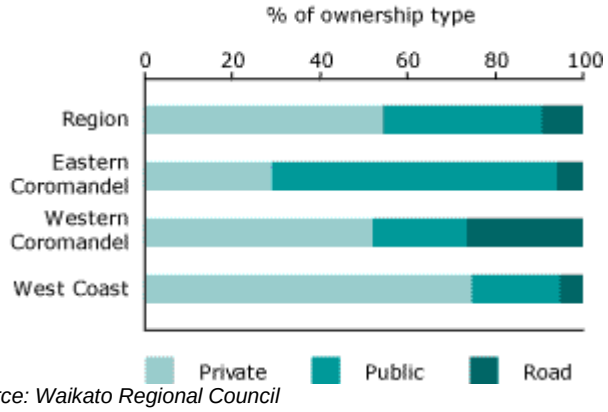
Public access to beaches and the marine environment is largely dependent on the existence of publicly owned land immediately adjacent to the coast. Public access is highlighted as a matter of national importance in the New Zealand Coastal Policy Statement (NZCPS). Land close to the coast is steadily increasing in value, and as a result, the use of coastal land is intensifying, particularly in terms of residential subdivision and commercial development. Where coastal land is developed intensively, the environment is altered permanently, particularly in terms of natural character and habitat. Where coastal development is undertaken without due regard for shoreline change and associated hazards, natural character, public access and the amenity value of the beach are often compromised by structures placed to protect private property.

The maintenance and enhancement of public access is an important responsibility of regional and district authorities. Access within the Coastal Marine Area (CMA) is largely dependent on available access to the coast. In New Zealand, no common law right of access exists over privately occupied land, including land titles that extend down to Mean High Water Spring (MHWS). Public access therefore relies on the provision of public areas such as access strips, walkways, reserves and conservation areas, or agreements with landowners. The proportion of publicly owned land, adjacent to the coast, reflects the possible amount of public access in an area or region. Where roadways are directly adjacent to the coast, public access is likely to be available.

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: Total coastline by ownership status, Waikato Region 2002



Source: Waikato Regional Council

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.

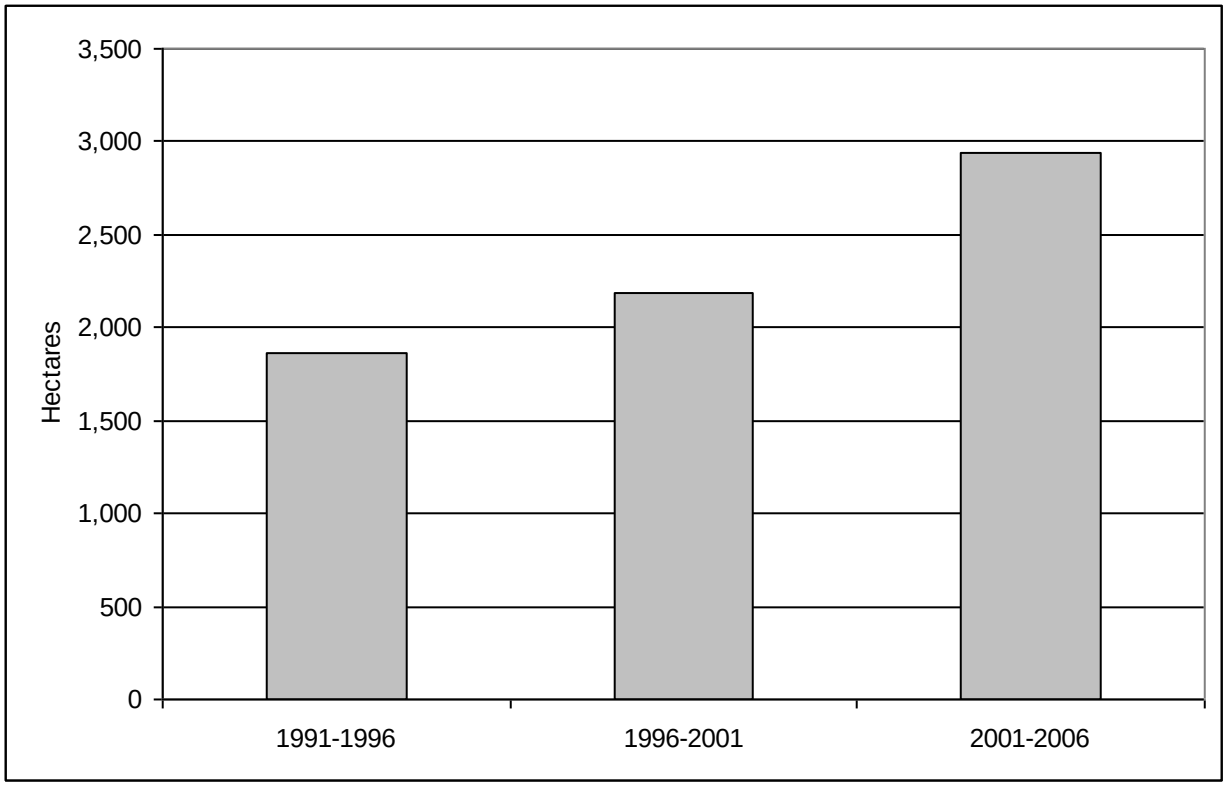
Monitoring rural subdivision provides information used by territorial authorities, land developers and communities about increasing land pressures. This information can indicate: the area and productive capability of land removed from large-scale agricultural enterprises; increased pressure on the environment 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, Waikato Regional Council 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.

Waikato Regional Council 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/Waikato Regional Council

Table 1.4.1b: Summary of intensified rural land in the Waikato Region 1991–1996 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	130	0	88	0	221
Hauraki District	0	0	6	0	0	6
Matamata-Piako District	0	0	0	0	92	92
Otorohanga District	0	0	0	0	0	0
Rotorua District	0	0	0	0	0	0
South Waikato District	0	0	0	0	0	0
Taupo District	0	0	20	100	58	177
Thames-Coromandel District	0	27	12	117	290	446
Waikato District	283	93	0	9	148	533
Waipa District	95	132	32	0	21	280
Waitomo District	0	0	0	0	0	0
TOTAL	381	424	94	354	610	1,864

Source: Statistics New Zealand/Waikato Regional Council

Table 1.4.1c: Summary of intensified rural land in the Waikato Region 1996–2001 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	0	0	0	0	0
Hamilton City	0	271	0	49	2	322
Hauraki District	0	0	0	0	0	0
Matamata-Piako District	26	90	24	0	0	141
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	6	73	64	144
Thames-Coromandel District	0	0	0	21	446	467
Waikato District	125	35	80	0	9	249
Waipa District	0	0	0	8	0	8
Waitomo District	0	0	0	0	0	0
TOTAL	151	396	111	151	522	1,332

Source: Statistics New Zealand/Waikato Regional Council

Note: 2006 data at the territorial authority level were not available on the WRC 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. Waikato Regional Council 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.

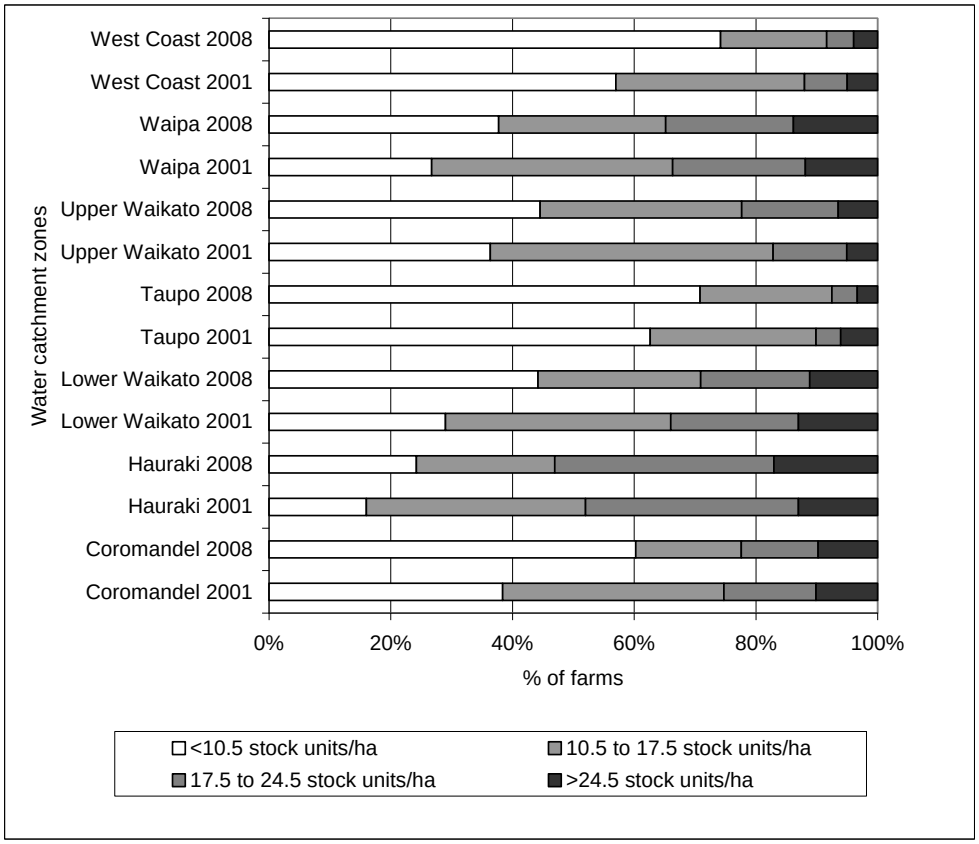
Waikato Regional Council uses stock density to indicate where there are current and possible future pressures on the environment from livestock farming. High stock densities can lead to negative effects on local water quality, stream banks and soil, particularly in areas where waterways are not fenced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

The Ministry for the Environment intends to update its Land Cover Database every five years. Waikato Regional Council's monitoring of pastoral areas depends on the release of the updated LCDB by the Ministry for the Environment.

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/Waikato Regional Council
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?

- The main sources of energy in the Waikato Region are electricity, coal, wood, natural gas, petrol, diesel and other oil products. Around 57,246 terajoules (TJ) of energy were used in the Region during 2007, mainly by industry (59%), commercial and private transportation (30%) and households (11%). Average energy use per person was 123 gigajoules (GJ) for the Waikato region and 144 GJ for the Hamilton city area. About 21 per cent of the total energy consumed came from renewable sources.
- The Waikato Region produces approximately 20% of New Zealand's total greenhouse gas emissions. According to latest national-level results, New Zealand's total greenhouse gas emissions in 2011 were 22.1% higher than in 1990. There has been a relatively rapid increase in national annual net emissions since 2009.
- 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.

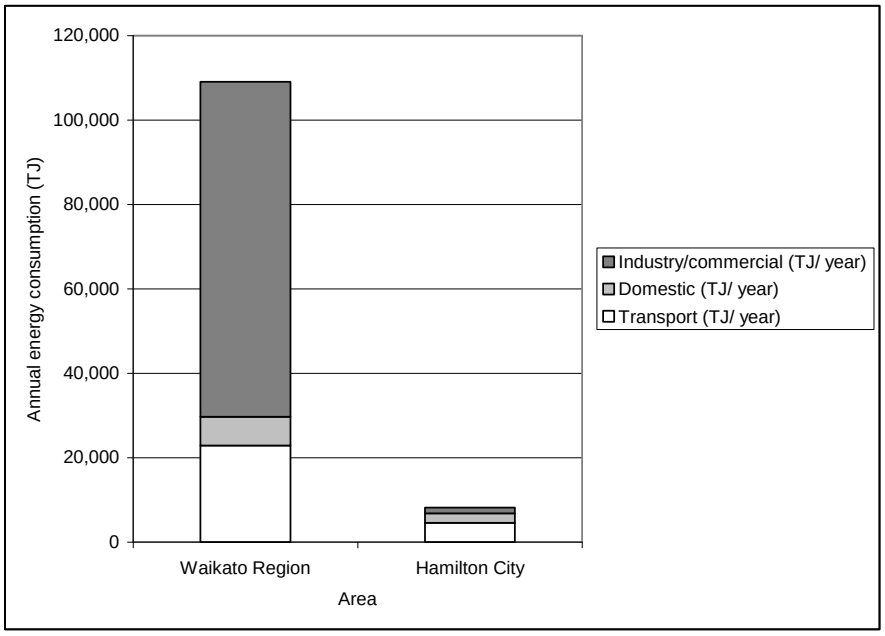
Energy consumption is part of our everyday lives and is vital to industry and the economy of the country. Energy production can be from renewable or non-renewable sources. Inefficiency in energy production or consumption can mean that non-renewable sources are used quicker than required and pollution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

An initial energy survey for the Waikato region was conducted in 2003. Energy consumption is now measured by the Energy Efficiency and Conservation Authority (EECA) and provided in the form of an Energy End Use database. The database describes New Zealand's energy use in considerable detail, exploring energy use split by 11 fuels, 32 sectors, 20 end uses, 25 technologies, and by all local authority geographical areas. It is a top-down estimation of more detailed information – essentially an allocation of energy use to different sectors, regions, end-uses, technologies, and fuels based on known information about the distribution of sectors, what energy they use, and how they use it. EECA published 2007 data from the Energy End Use Database in 2009.

The main sources of energy in the Waikato Region are electricity, coal, wood, natural gas, petrol, diesel and other oil products. The region has developed economic strengths in electricity generation including geothermal and hydro energy.

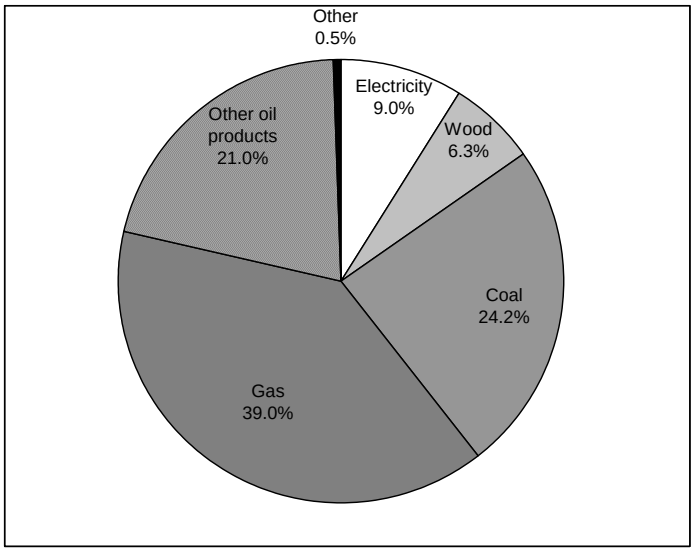
Around 57,246 terajoules (TJ) of energy were used in the Region during 2007, mainly by industry (59% of total), commercial and private transportation (30%) and households (11%). Figure 1.5.1c shows the annual amount of energy consumed (TJ/year) by transport, domestic users and industries/commercial establishments in the Waikato region in 2007. The average energy use per person was 123 gigajoules (GJ) for the Waikato region and 144 GJ for the Hamilton city area. About 21 per cent of the total energy consumed came from renewable sources.

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



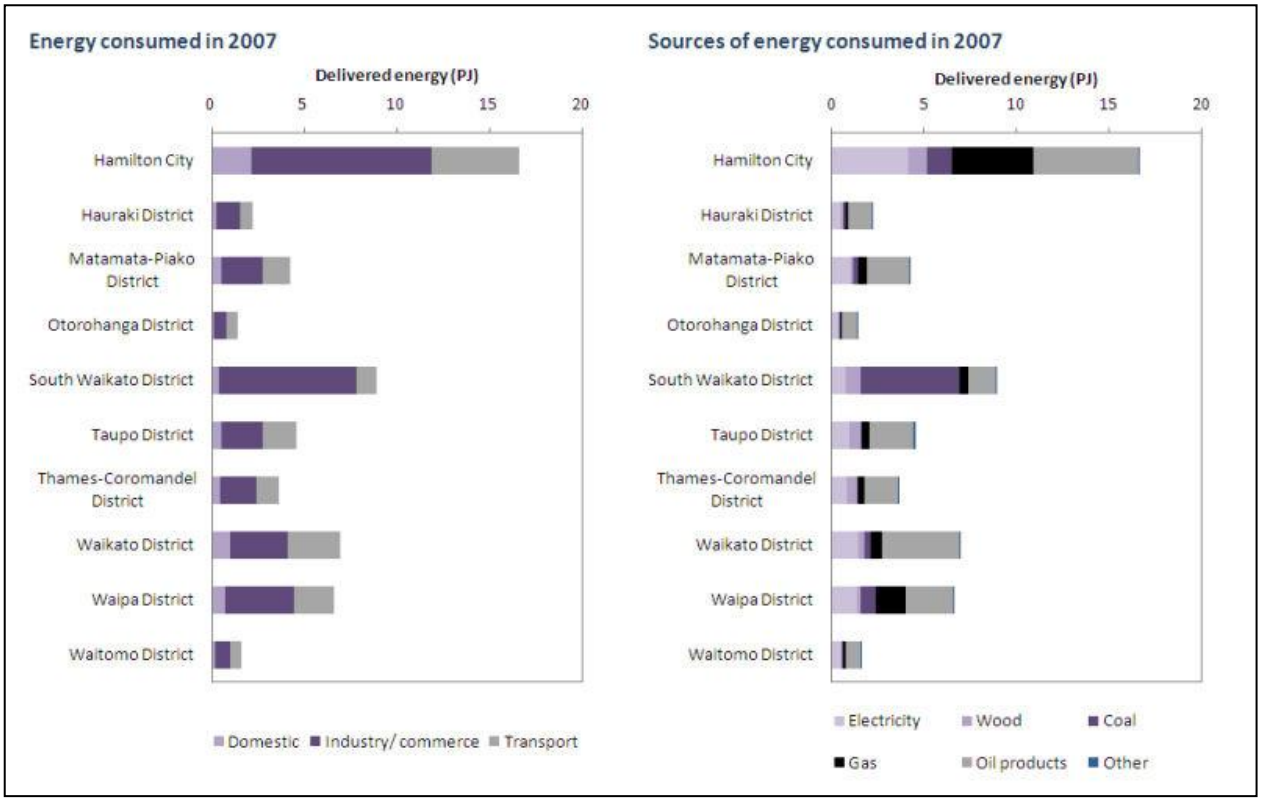
Source: Waikato Regional Council: Regional Energy Survey

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



Source: Waikato Regional Council: Regional Energy Survey

Figure 1.5.1c: Annual energy consumption 2007 by sector and source, Waikato territorial authorities



Source: EECA Energy End Use database

	Indicator	State	Trend
1.5.2	Greenhouse gas emissions	☹	⇩

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_2), methane (CH_4) and nitrous oxide (N_2O). 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. In May 2013, global atmospheric concentrations of CO_2 reached a 'milestone' of 400 parts per million, up from around 300 ppm in the 1950s.

The Inventory of New Zealand Greenhouse Gas Emissions 2001 involved compiling a database of greenhouse gases emissions for all Territorial Local Authorities (TLA) in New Zealand. Data were compiled on six greenhouse gases as recommended by the Intergovernmental Panel on Climate Change (1996) – Carbon Dioxide (CO_2), Nitrous Oxide (N_2O), Methane (CH_4), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur Hexafluoride (SF_6). 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, as at 2001, estimated greenhouse gas emissions in the Waikato Region were 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_2O (40.7% of total emissions), CO_2 (35.7%) and CH_4 (23.4%). Overall the 12 territorial authority areas in the Waikato Region (as at 2001) produced 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_4 from the digestion process of farm stock, especially cattle. Refer to the Appendices for more detailed TLA level data.

It is unclear whether or not further regional or territorial authority data will be available going forward. However, the key national-level source of data on greenhouse gas emissions – New Zealand's annual Greenhouse Gas Inventory – regularly measures progress against New Zealand's obligations under the Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC). Latest information for the period 1990–2011 (submitted April 2013) shows that:

- In 1990, New Zealand's total greenhouse gas emissions were 59,643.1 Gg (Gigagrams) carbon dioxide equivalent (CO2-e). In 2011, total greenhouse gas emissions had increased by 13,191.9 Gg CO2-e (i.e. 22.1%) to 72,834.9 Gg CO2-e (Figure 1.5.2c).

Between 1990 and 2009, the average annual growth in total emissions was 1.0 per cent per year.

- The four emission sources that contributed the most to this increase in total emissions were dairy enteric fermentation (methane emissions produced from ruminant livestock), road transport, agricultural soils, and consumption of halocarbons and SF6.

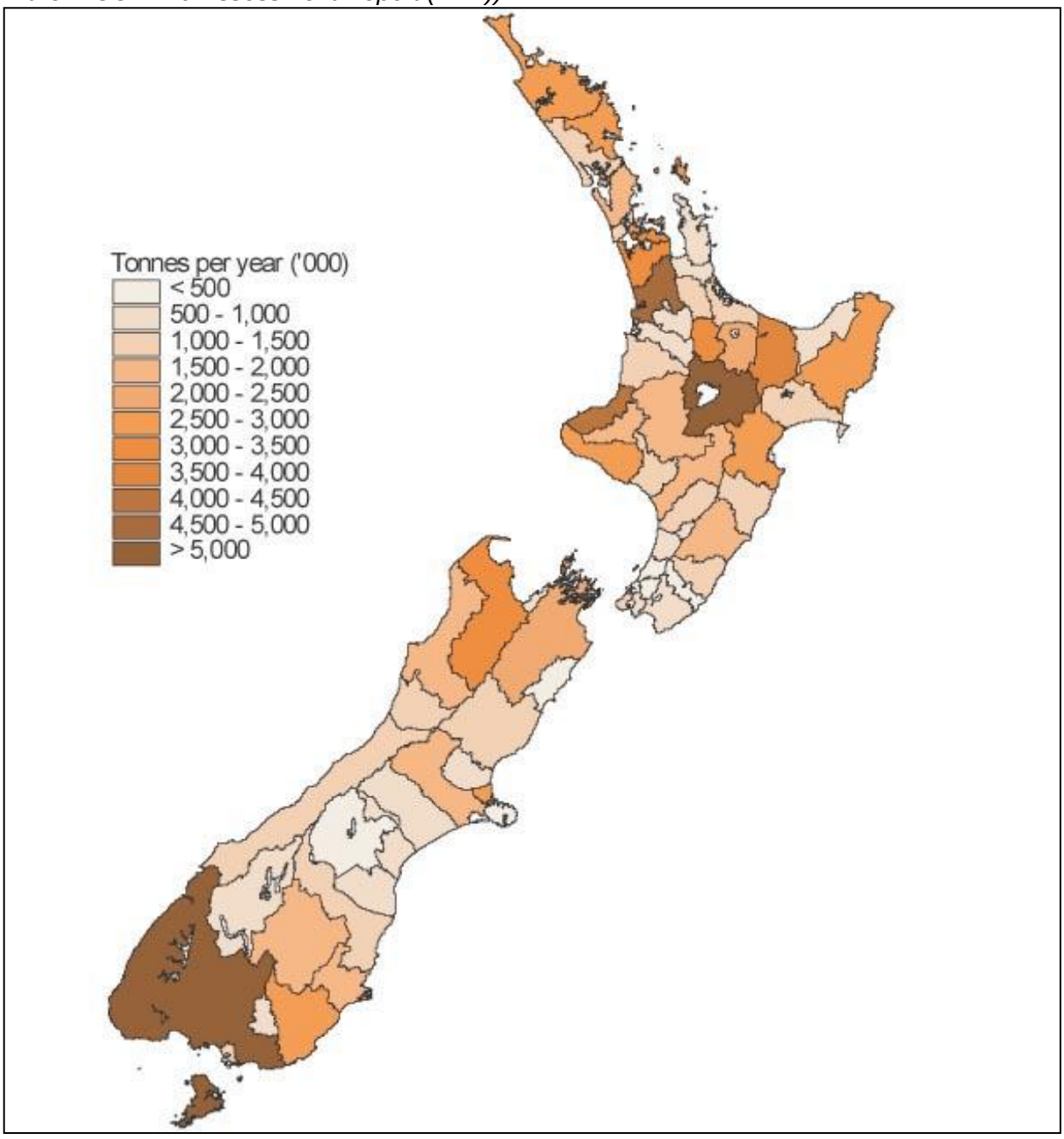
Between 2010 and 2011, New Zealand's total greenhouse gas emissions increased by 987.2 Gg CO2-e (1.4 per cent). The size of the overall increase is small because, although emissions from the industrial processes and agriculture sectors rose, there was a decrease in emissions from the energy sector. The decrease in energy emissions is primarily due to a decrease in emissions from electricity generation. The main drivers that led to the decrease in emissions from electricity generation were (1) a reduction in national electricity demand in the wake of the February 2011 Canterbury earthquake, and (2) an increase in electricity supply from wind generation following the commissioning of two new wind farms.

The continued increase in emissions from the consumption in HFCs was the main driver in the rise of emissions from industrial processes. Since 2010, emissions from the consumption of HFCs increased by 807.4 Gg CO2-e (74.9 per cent). This large increase in HFC emissions is mainly due to one supplier changing its buying behaviour and importing a very high amount of HFC-134a in 2011 compared with previous years.

The continued increase in the national dairy cattle population (259,051 or 4.4 per cent over 2010 levels) led to the increase in agricultural emissions of methane and nitrous oxide. The dairy industry is the main user of nitrogen fertiliser in New Zealand, therefore, with a favourable milk price, there was an increase in the volume of nitrogen applied as fertiliser in 2011 (27,303 tonnes nitrogen (N) or 7.6 per cent). This resulted in an additional increase of nitrous oxide emissions.

New Zealand's total emissions trend is different from that of other developed countries. Instead of a predictable increase or decline in emissions, the trend for New Zealand is year-to-year fluctuations. These fluctuations are largely due to two factors. The first is the change in the proportion of non-renewable electricity generation. The second is the effect of droughts on agricultural productivity and livestock numbers, leading to changes in nitrous oxide and methane emissions.

Figure 1.5.2a: Estimated total emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))



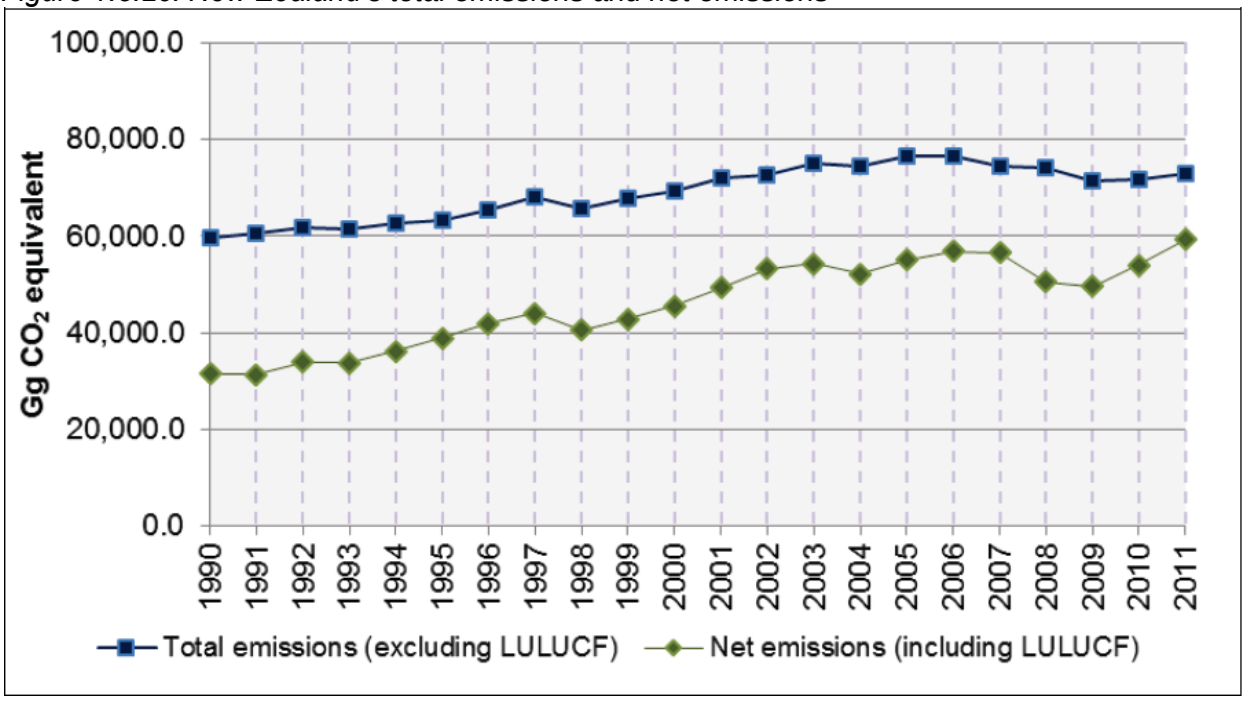
Source: NIWA National Centre for Climate-Energy Solutions

Table 1.5.2b: Estimated total emissions of six greenhouse gases by territorial authority, 2001 (estimates are reported in units of CO_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR)

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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
TOTAL - 12 territorial authorities	8,839,899	5,792,713	10,067,186	52,082	0	3,567	24,755,447
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

Figure 1.5.2c: New Zealand's total emissions and net emissions



Source: MfE, New Zealand's Greenhouse Gas Inventory.
Note: LULUCF = Land use, land-use change and forestry.

	Indicator	State	Trend
1.5.3	Energy efficiency	😐	?

"Energy use relative to economic growth" has been used as proxy indicator for energy efficiency.

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.

Waikato Regional Council 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: Waikato Regional Council

1.6 Solid waste

Community outcome(s):

1l 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?

- According to data presented in a 2013 Waste Stocktake report, it is estimated that 226,887 tonnes of waste are disposed of to landfill annually from the Waikato Region, along with more than twice as much being disposed of to other land disposal sites (eg, cleanfill and industrial fills). The quantity of waste being disposed from the Waikato and Bay of Plenty regions combined appears essentially unchanged over the period 2006 to 2012.
- Dry recyclables/commodities, including kerbside recycling (both by councils and privately), drop-off points at transfer stations and recycling depots, and commodities collected from commercial premises are estimated at 0.133 tonnes per person within the Waikato and Bay of Plenty regions combined. Taking into account available data on other diverted materials in the Waikato and Bay of Plenty and regions, it appears the total quantity of diverted materials is of a similar order of magnitude to the quantity of waste disposed to landfill.

	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 2000 community perceptions survey, 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. 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.

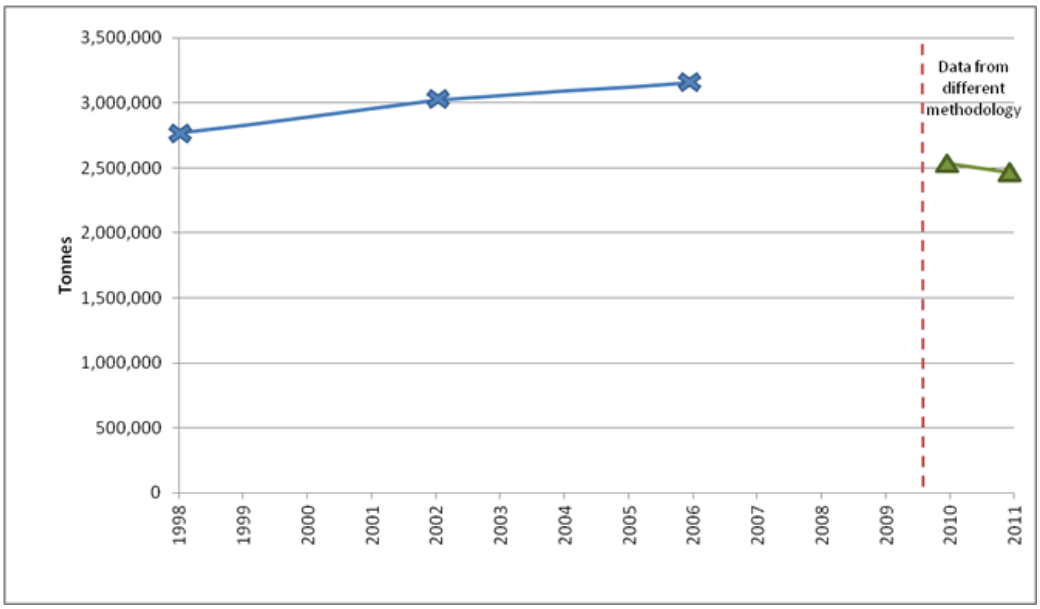
The Waste Minimisation Act 2008 has provided the opportunity to collect national information on waste. The Ministry has developed a waste composition data collection programme. The 2010 and 2011 figures provides a robust indication of disposal of waste to municipal landfills in New Zealand and a good baseline for future comparisons. Latest estimates show that in 2011, approximately 2.5 million tonnes of solid waste was disposed of to municipal landfills in New Zealand, similar to the amount disposed of in 2010 (refer Figure 1.6.1a). Due to improved accuracy of waste disposal information for 2010 and 2011 and high uncertainties for previous estimates, it is not advisable to compare these data and report trends over time. National information on waste disposal to municipal landfills has improved significantly since previous MfE estimates in 2006.

Data on volumes of waste to landfill has historically been low quality and inconsistent for a number of reasons, including commercial sensitivities due to contracting out of waste management services. All of the territorial authorities (TAs) in the Waikato Region have relatively recently completed a waste assessment and adopted a new waste management and minimisation plan (WMMP) as required by the Waste Minimisation Act 2008 (WMA), providing information on the quantities and types of waste materials in council control (where such information is available). However, according to a May 2013 Waste Stocktake report jointly commissioned by Waikato Regional Council and Bay of Plenty, in most cases these assessments do not give full consideration of wastes and diverted materials not directly managed by the TAs (ie, largely excludes private waste management services).

According to data presented in the 2013 Waste Stocktake report, it is estimated that 226,887 tonnes of waste are disposed of to landfill annually from the Waikato Region. As the tonnage data has been taken from a number of different sources, no specific year has been attached to the figure. Of the total amount disposed of to landfill, just over one third (34.8%) was kerbside refuse, 64.0% was general waste (including industrial, commercial & institutional (ICI) and construction & demolition (C&D) waste), while less than 2% was special waste. The figure for special waste, which primarily includes biosolids, is the least reliable, as the smallest dataset was used for its calculation.

In addition to the landfill data above, it has been estimated that 787,000 tonnes of material is disposed of at other land disposal sites annually throughout the Waikato and Bay of Plenty regions combined. This is more than twice as much as is disposed of to landfills in the two regions. Figure 1.6.1c shows the estimated quantities of waste disposed (based on latest available data) compared with estimates from previous stocktake reports (based on 2006 data). Overall estimated quantities appear very similar between the two periods, however the estimates of cleanfill and industrial fills are subject to a significant margin of error, and so the apparent difference between the estimated quantities cannot be taken to be representative of any trend. The quantity of waste being disposed from the Waikato Region appears essentially unchanged over the period 2006 to 2012.

Figure 1.6.1a: Total waste disposed of to municipal landfills in New Zealand, 1998–2006, 2010, 2011



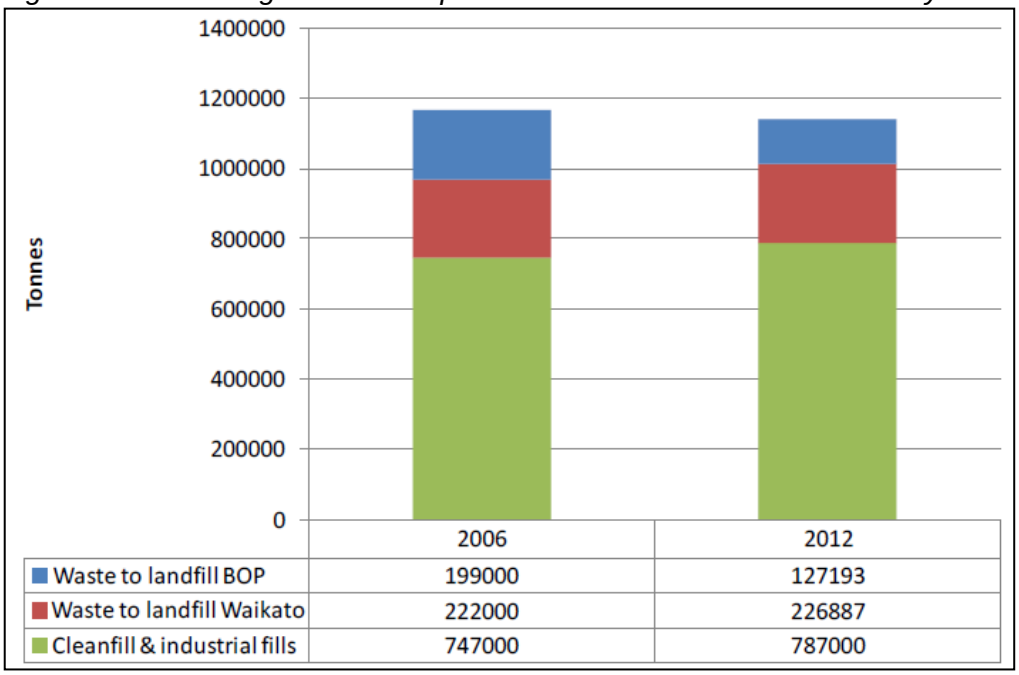
Source: MfE (2012) 'Quantity of solid waste sent to landfill – Indicator update', October 2012.

Table 1.6.1b: Estimated tonnage of waste to landfill in the Waikato Region

Waste stream	Tonnes	Percentage
Kerbside refuse	78,929	34.8%
General waste	145,105	64.0%
Special waste	2,853	1.3%
Total	**226,887**	**100.0%**

Source: Waikato Regional Council and Bay of Plenty Regional Council (2013) 'Bay of Plenty and Waikato Regions Waste Stocktake', prepared by Eunomia Research & Consulting Ltd and Waste Not Consulting Ltd.
Note: General waste includes C&D waste, ICI waste, landscaping waste and residential waste.

Figure 1.6.1c: Changes in waste quantities over time – Waikato and Bay of Plenty regions



Source: Waikato Regional Council and Bay of Plenty Regional Council (2013) 'Bay of Plenty and Waikato Regions Waste Stocktake', prepared by Eunomia Research & Consulting Ltd and Waste Not Consulting Ltd.

	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.

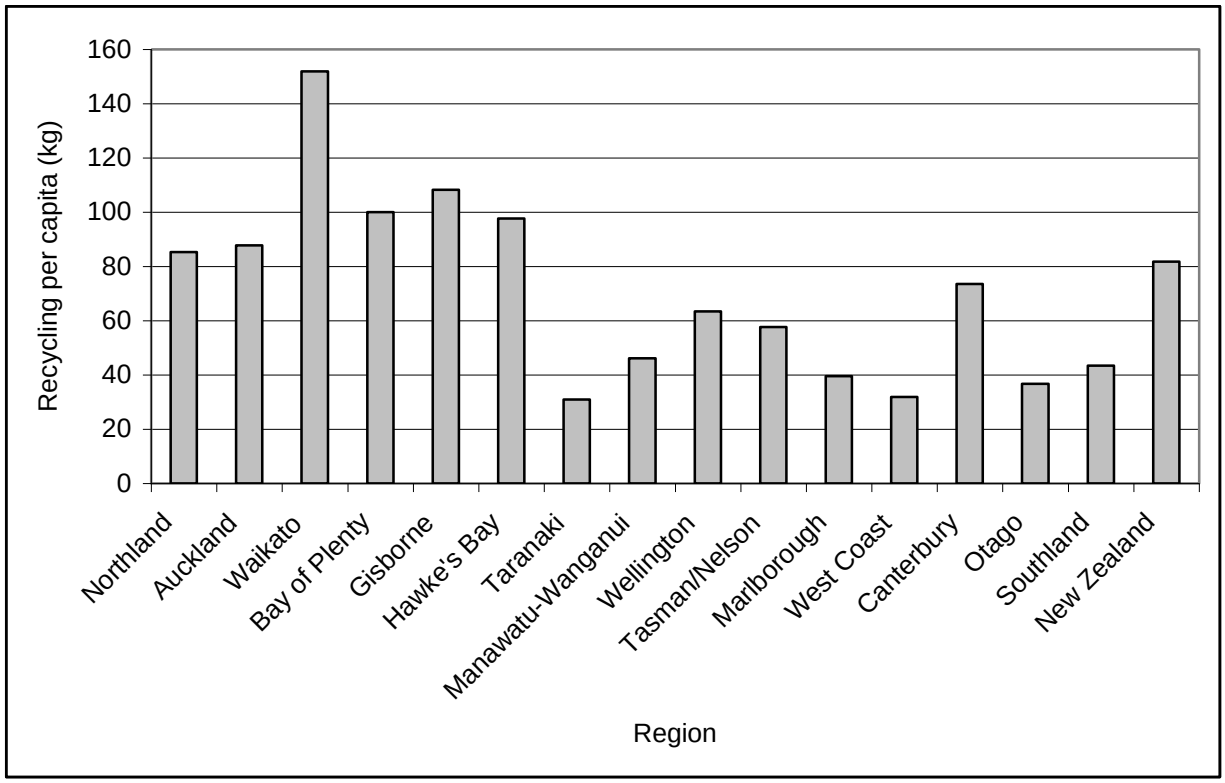
As industrial activities expand and our population increases we are using more resources and generating more waste. However, much of our waste could be: reused – for example, taking old books and toys to the local kindergarten; recycled – for example, cans, paper and some plastics; composted – if organic, 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.

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 1.6.2a 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.

All of the territorial authorities (TAs) in the Waikato Region have relatively recently completed a waste assessment and adopted a new waste management and minimisation plan (WMMP) as required by the Waste Minimisation Act 2008 (WMA), providing information on the quantities and types of waste materials in council control (where such information is available). According to a May 2013 Waste Stocktake report jointly commissioned by Waikato Regional Council and Bay of Plenty, data that quantifies diverted materials is less important than data on waste that is landfilled for strategically planning waste minimisation, however some estimates are available. Dry recyclables/commodities, including kerbside recycling (both by councils and privately), drop-off points at transfer stations and recycling depots, and commodities collected from commercial premises are estimated at 0.133 tonnes per person within the Waikato and Bay of Plenty regions combined (refer Table 1.6.2b). According to the 2013 Waste Stocktake report, the per capita recycling rate is relatively constant throughout the country, and the calculated rate of 0.097 tonnes per person within the Waikato and Bay of Plenty regions is in line with figures from other areas. The per capita recycling rate for commercial recycling varies considerably between communities, depending on the levels and types of economic activity in the area. The calculated rate of 0.036 tonnes per person for the Waikato and Bay of Plenty is consistent with data from similar areas, but markedly lower than a calculated rate for the Auckland Region.

Quantitative data on the diversion of materials other than dry recyclables/commodities is incomplete. According to the 2013 Waste Stocktake report, the data summarised in Table 1.6.2c below does not represent all other diverted materials in the Waikato and Bay of Plenty and regions, and is indicative only of the order of magnitude of the resource recovery industry. Subject to the limitations of available data, the Waste Stocktake report concludes that the total quantity of diverted materials is of a similar order of magnitude to the quantity of waste disposed of to landfill.

Figure 1.6.2a: 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'.

Table 1.6.2b: Dry recyclables/commodities – Waikato and Bay of Plenty regions combined

Dry recyclables/commodities	Tonnes per annum	Tonnes per capita per annum
Kerbside recycling and drop-offs	67,325	0.097
Collections from commercial premises	24,667	0.036
Total	**91,992**	**0.133**

Source: Waikato Regional Council and Bay of Plenty Regional Council (2013) 'Bay of Plenty and Waikato Regions Waste Stocktake', prepared by Eunomia Research & Consulting Ltd and Waste Not Consulting Ltd.

Table 1.6.2c: Other diverted materials – Waikato and Bay of Plenty regions combined

Other diverted materials	Tonnes per annum	Tonnes per capita per annum
Available data only	241,200	0.348

Source: Waikato Regional Council and Bay of Plenty Regional Council (2013) 'Bay of Plenty and Waikato Regions Waste Stocktake', prepared by Eunomia Research & Consulting Ltd and Waste Not Consulting Ltd.

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 79 years for males and 83 years for females. Gains in life expectancy since the mid-1980s can be attributed to better living standards and improved health care. There remain marked differences in life expectancy between different ethnic groups, with the life expectancy for Māori at around 7.3 years less than non-Māori, however the gap continues to narrow over time.
- 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 results from the MARCO Waikato Regional Perception Survey 2010, the majority of regional residents (88%) are happy with their quality of life. The 'Happiness Index' (a weighted score across the quality of life scale) was 82.0 points for the Waikato Region overall, with some variation between territorial authority areas.
- Respondents to the MARCO Waikato Regional Perception Survey 2010 were also 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'. One fifth of the sample (19.7%) 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, on lower incomes, of Māori descent, and who rated their overall quality of life at a score of between 0 and 6. The main reported barriers were cost (7%) and availability (5%).

	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.

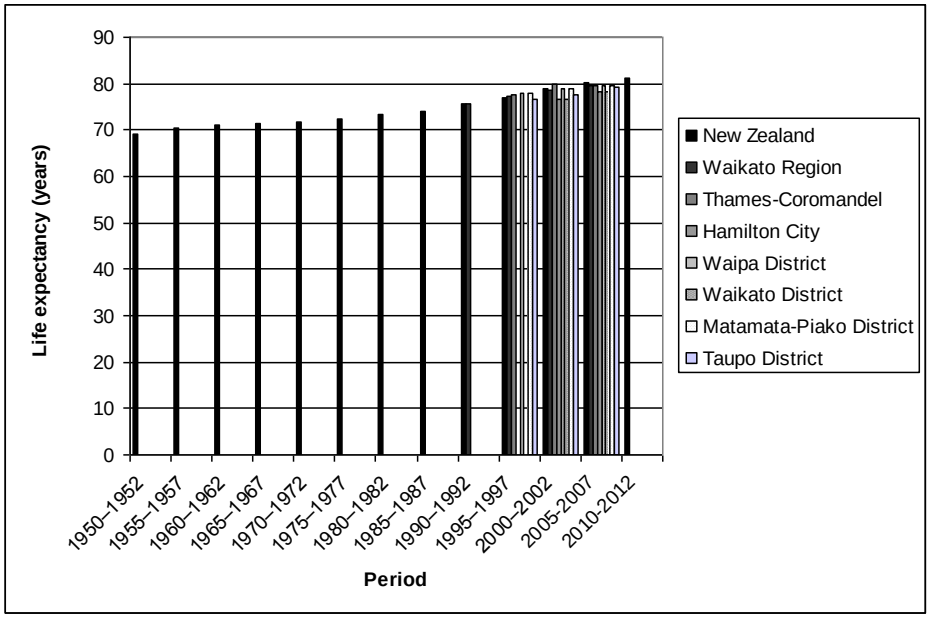
Life expectancy is a key indicator of the general health of the population. Improvements in overall life expectancy reflect improvements in social and economic conditions, lifestyle, access to health services and medical advances.

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.

Interim New Zealand Period Life Tables 2010-12 were released in April 2013. These are labelled 'interim' pending the release of new population estimates following the 2013 Census.

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 2010–2012, life expectancy at birth was 79.3 years for males and 83.0 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, however the gap between Māori and non-Māori life expectancy at birth has narrowed to 7.3 years. This compares with 9.1 years in 1995–97, 8.5 years in 2000–02, and 8.2 years in 2005–07.

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.

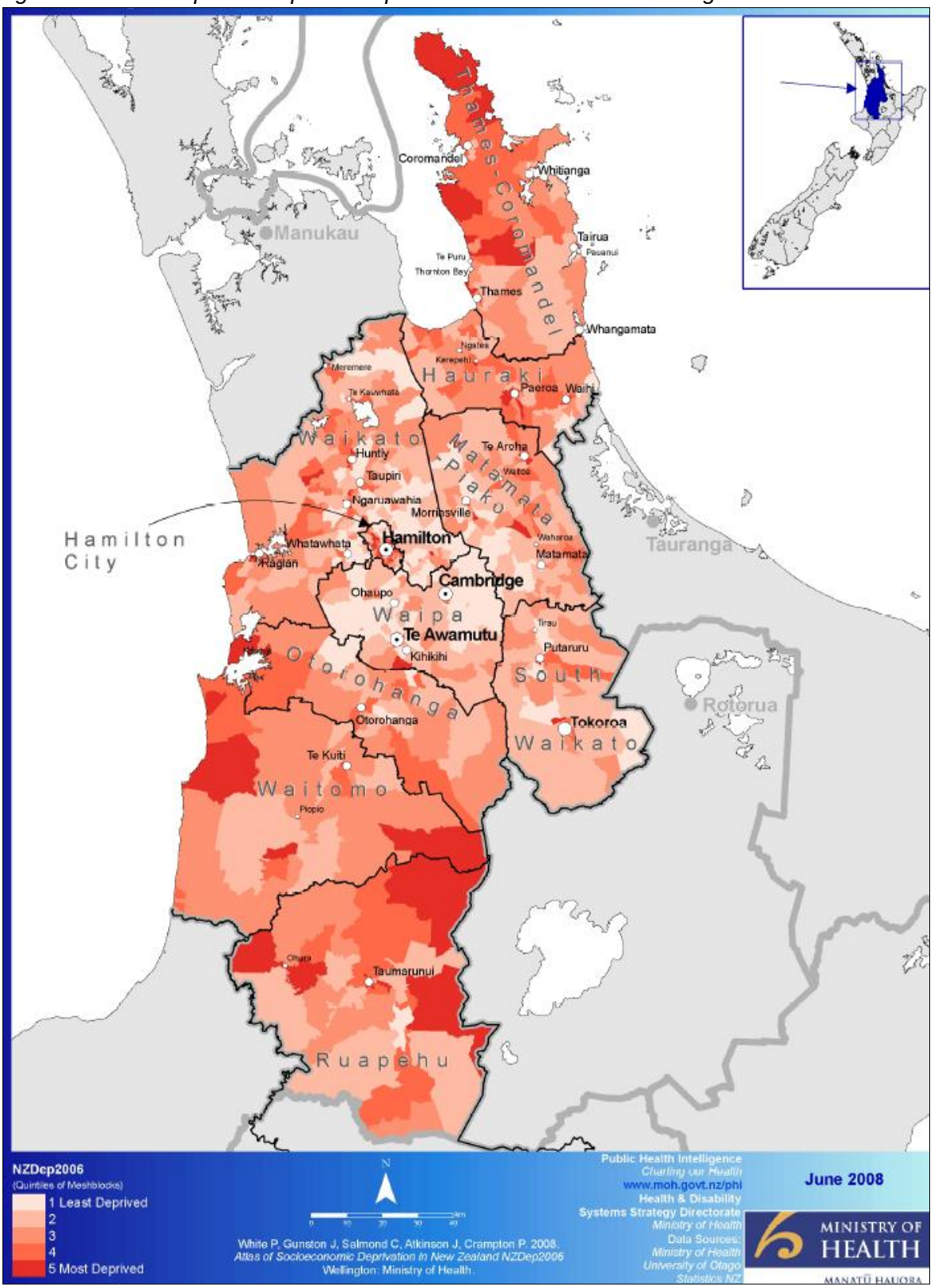
The economic and social circumstances of people impact significantly on their ability to provide for their everyday needs and to participate fully as members of their communities.

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. At 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.

More recent data on mortality has not yet been sourced from the DHB, however media reporting from September 2012 indicates that: "In each of the five years to June last year [2010/11], Waikato was among the three highest DHBs on standardised Health Ministry statistics. And in three of those years, including 2010/11, it was highest. But Waikato's in-hospital standardised mortality rate is coming down, in line with the national trend. In 2010/11, 775 inpatients died. That was a standardised rate of 1.78 per cent of all inpatients – compared with 1.48 per cent for all DHBs – after statistical weightings by the Health Ministry to account

for local differences in population, disease and injury characteristics." (Source: NZ Herald, 19 September 2012, 'Saving Lives: Waikato DHB acts to reduce high death rate').

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

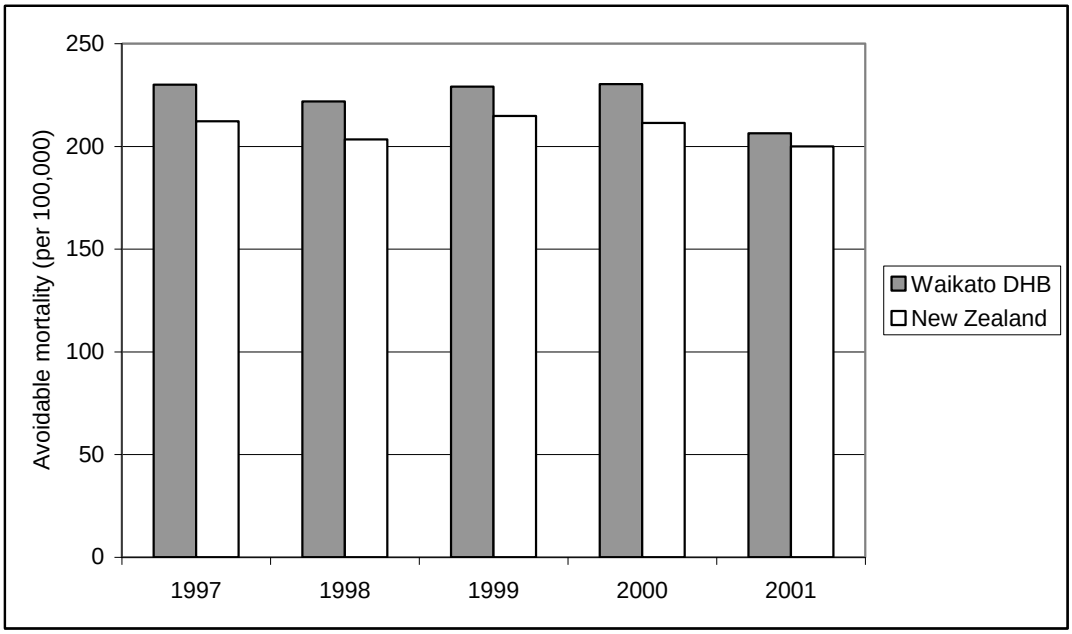
Source: Waikato District Health Board Health Needs Assessment 2008

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

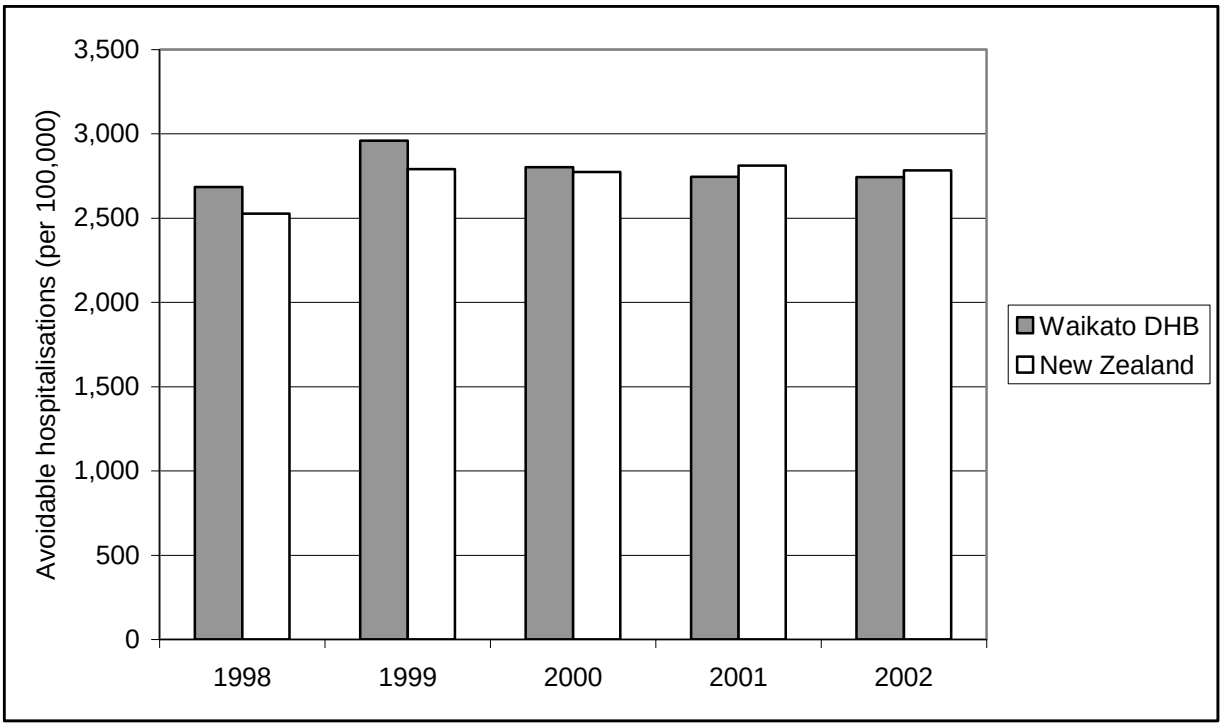
Source: Waikato District Health Board Health Needs Assessment 2008

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



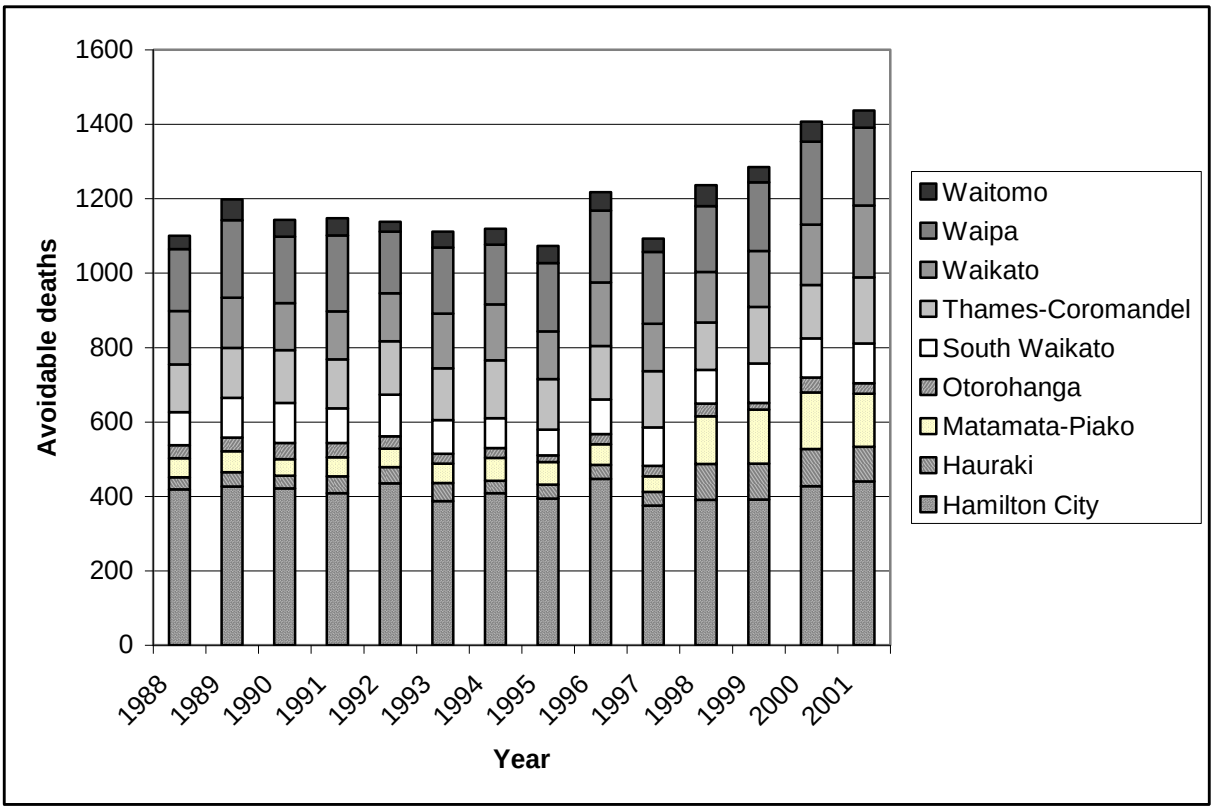
Source: CPHROnline – Centre for Public health Research (http://cphronline.massey.ac.nz/), *accessed April/May 2012).*

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



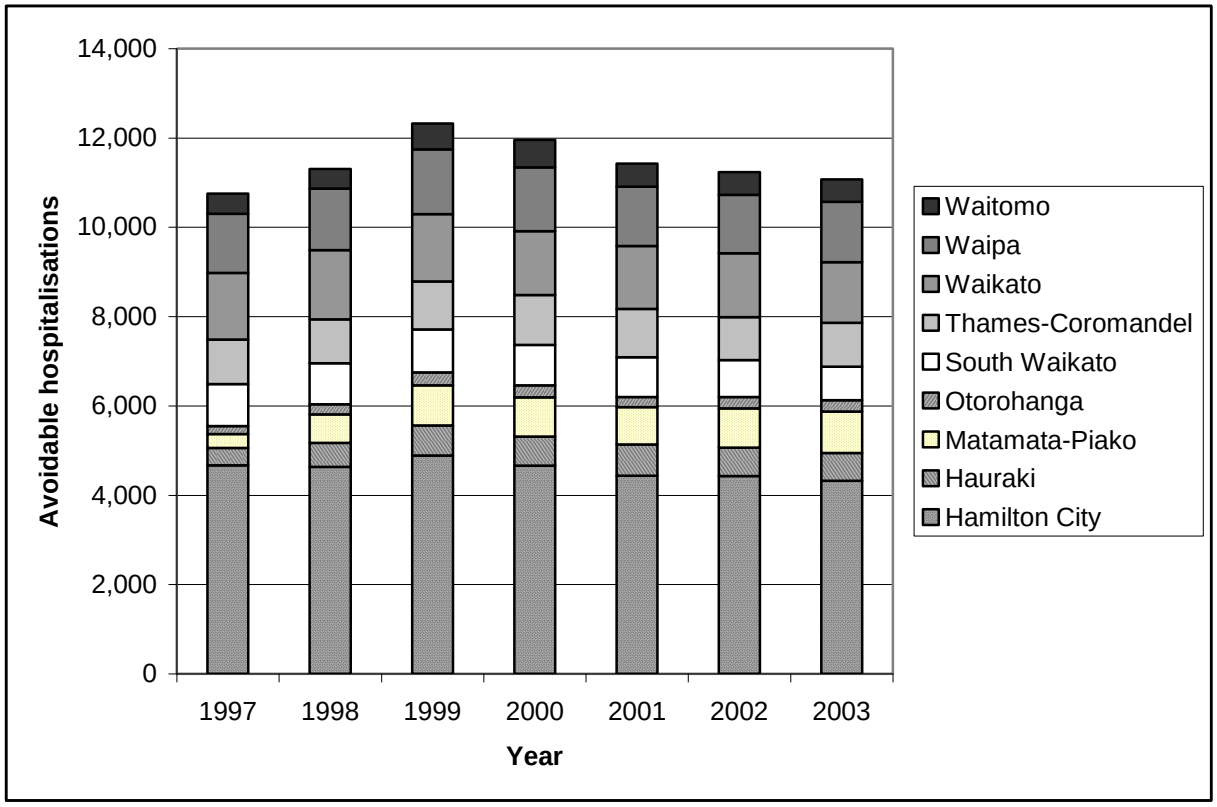
Source: CPHROnline – Centre for Public health Research (http://cphronline.massey.ac.nz/), *accessed April/May 2012).*

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



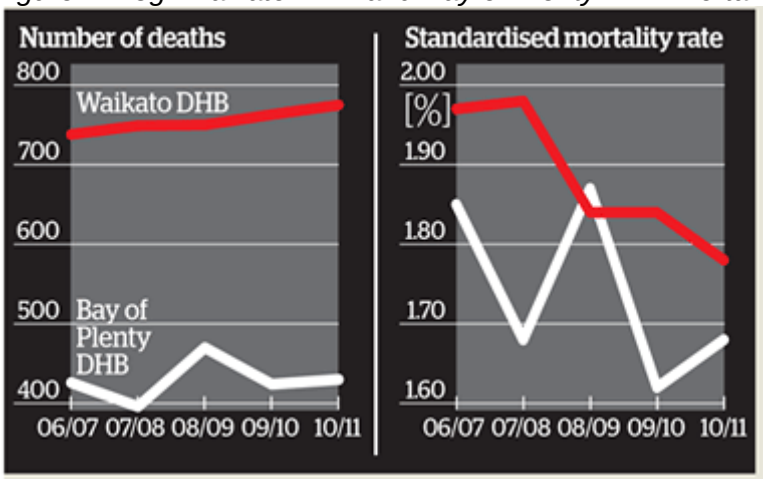
Source: Waikato District Health Board Health Needs Assessment and Analysis

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

Figure 2.1.3g: Waikato DHB and Bay of Plenty DHB mortality rates for 2006-2011



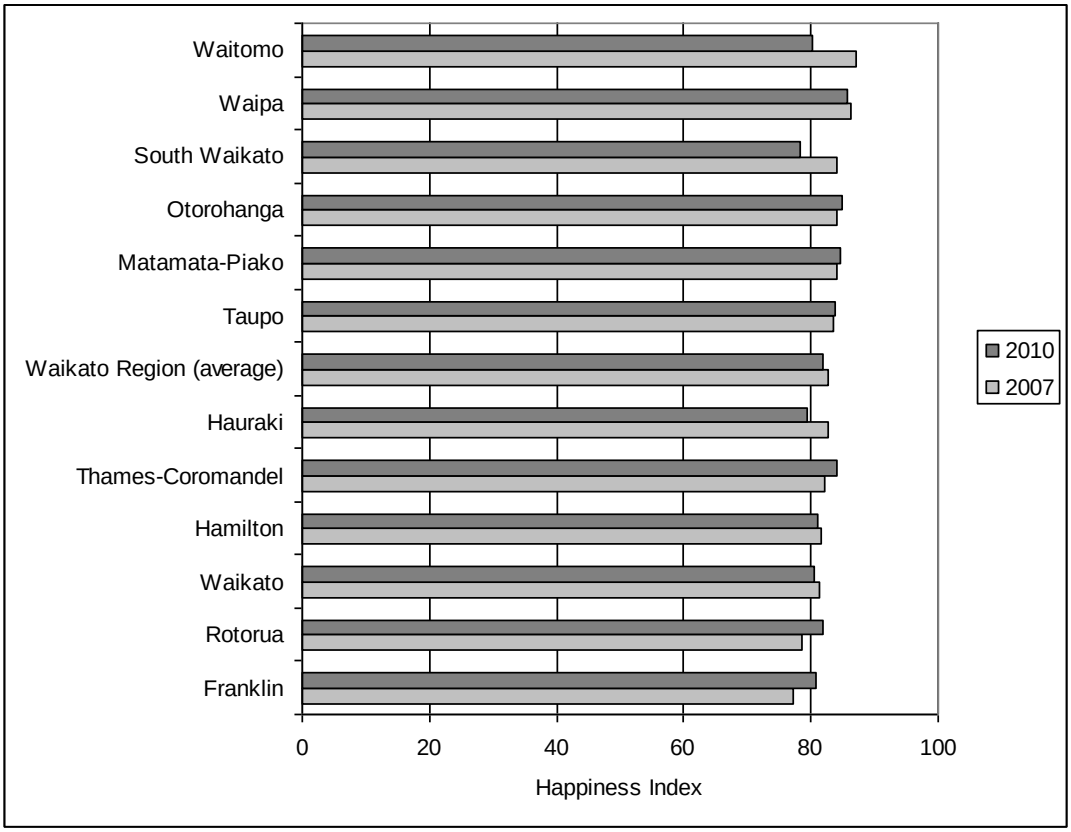
Source: NZ Herald www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10834932

	Indicator	State	Trend
2.1.4	Overall quality of life	😐	?

This indicator measures residents' perception of overall quality of life. 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 MARCO Waikato Regional Perception Survey 2007 commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 (88%) said they were happy with their quality of life (scores of 7 – 10) which was similar to the 2007 results. A fifth of the respondents (22%) rated their overall happiness with a score of 10 while 22% rated this with a score of 9, compared to 27% and 19% respectively in 2007. Only a few respondents (1.2%) were actually unhappy with their quality of life (Scores 0 – 3). The 'Happiness Index' (a weighted score across the quality of life scale) was 82.0 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 Waipa appeared the most happy whereas a higher proportion of those from Waitomo were less happy with their quality of life (refer Figure 2.1.4). In the 2007 results however, Waitomo residents were the most happy thus making this group the one with the largest decrease between surveys of 6.9 along with 6.0 for South Waikato. The largest increase was 3.7 points for Franklin.

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



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

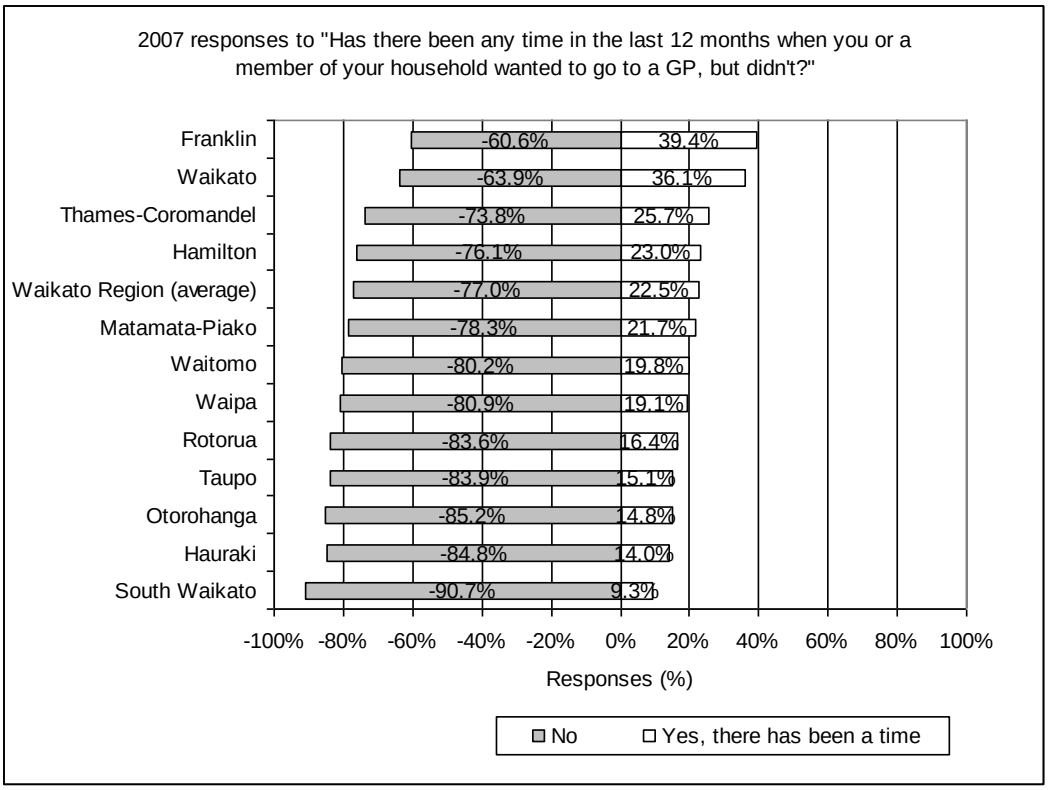
	Indicator	State	Trend
2.1.5	Barriers to accessing General Practitioners (GPs)	😐	?

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 MARCO Waikato Regional Perception Survey 2007 commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

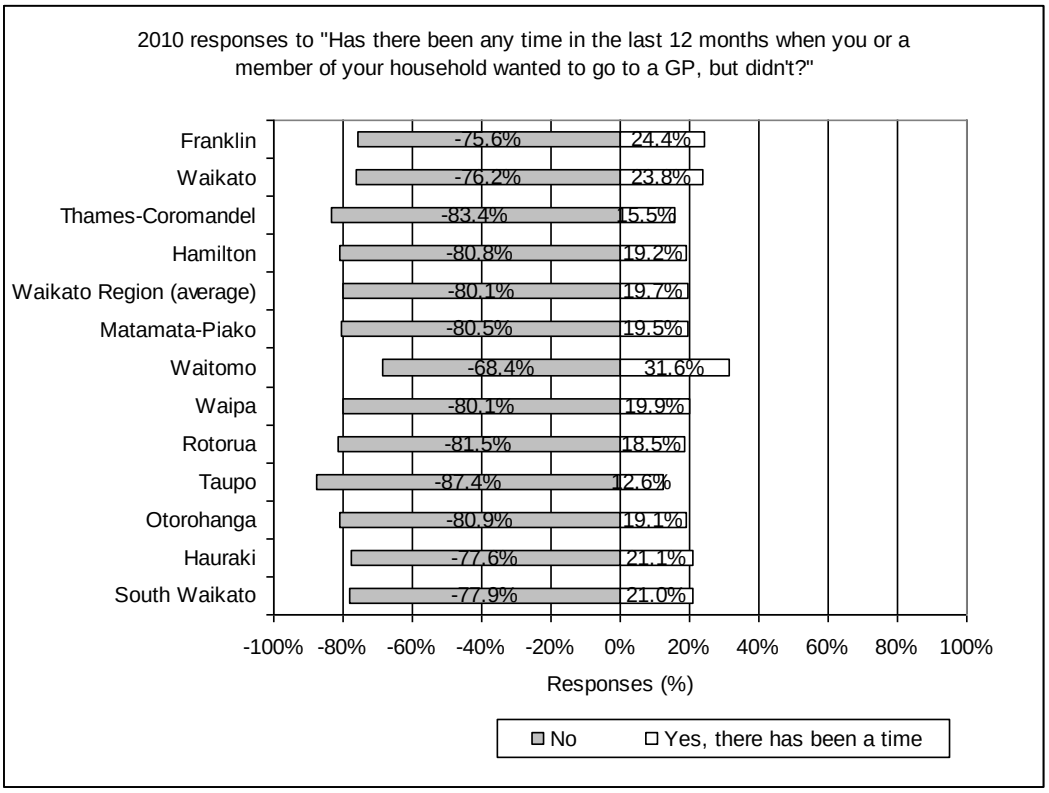
Respondents to the MARCO Waikato Regional Perception Survey 2010 were asked 'Has there been any time in the last 12 months when you or a member of your household wanted to go to a GP, but didn't'. Four fifths (80.1%) of the respondents said there was no time in the last 12 months when they or a member of their household wanted to go to a GP, but didn't. One fifth of the sample (19.7%) 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. The variation between territorial authority areas was smaller than 2007, 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. In 2010, this varied from a low of 12.6% for Taupo to a high of 31.6% in the Waitomo District (refer Figure 2.1.5b). 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, on lower incomes, of Māori descent, and who rated their overall quality of life at a score of between 0 and 6. The main reported barriers were cost (7%) and availability (5%).

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



Source: MARCO Waikato Regional Perception Survey 2010 (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

Figure 2.1.5b: Respondents' rating of barriers to accessing health care – Waikato territorial authority areas 2010



Source: MARCO Waikato Regional Perception Survey 2010 (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

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 with no formal qualification has fallen apparently dramatically over the past few years at the regional and national level. There were 5,734 school leavers in the Waikato Region in 2011, of whom 319 (5.6%) left school with little or no formal attainment. The comparative figure for 2003 was around 20%. 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 but the 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. More frequent sample data to 2009 confirms the regional trend above, and shows the proportion of Waikato Region adults with at least upper secondary school level education is slightly behind the national average.
- 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 administrational data currently available for monitoring Adult and Community Education (ACE). At the national level, Government funding for ACE was reduced in 2009. Respondents to the MARCO Waikato Regional Perception Survey 2010 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.
- There was a regional average of 80.7 points on the Agreement Index in the MARCO Waikato Regional Perception Survey 2010 for respondents who were satisfied that their jobs were making good use of their skills, training and experience. This was similar to the 2007 results.

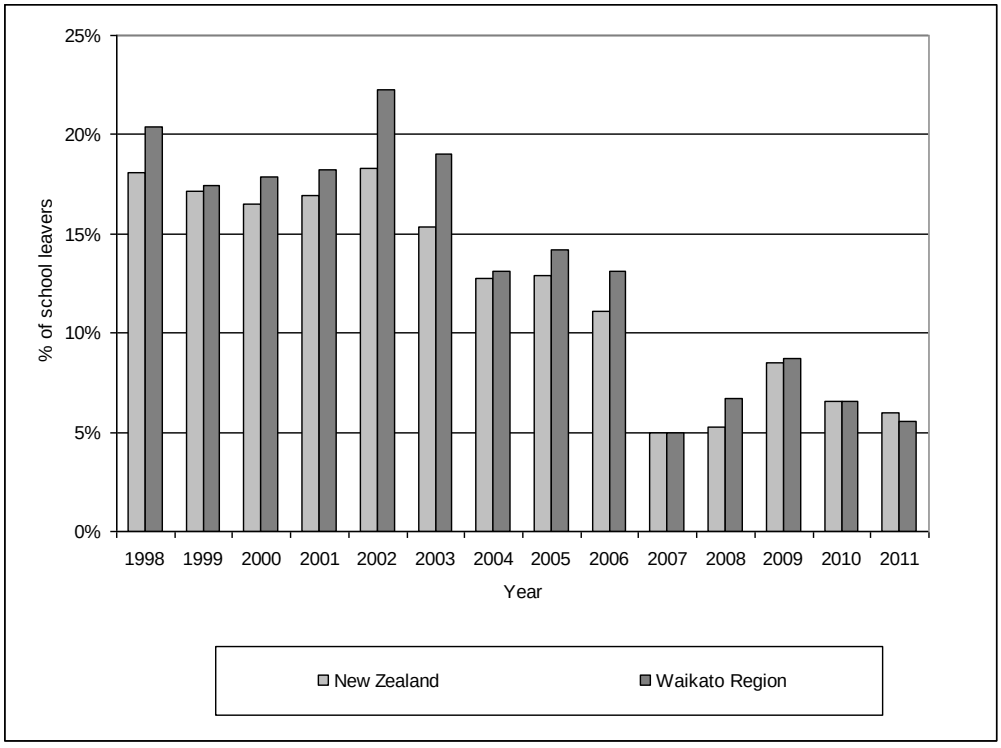
	Indicator	State	Trend
2.2.1	School leavers with no formal qualification	😐	⇧

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 decade at both the regional and national level. This would be true even after factoring in recent changes in the definition of 'school leavers' for data collection purposes. In total, according to the Ministry of Education's ENROL database, there were 5,734 school leavers in the Waikato Region in 2011, of whom 319 (5.6%) left school with little or no formal attainment. The comparative figure for 2003 was around 20%. 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. (b) 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. The 2009 and 2010 data follows a new definition of school leavers, which creates an additional discontinuity.

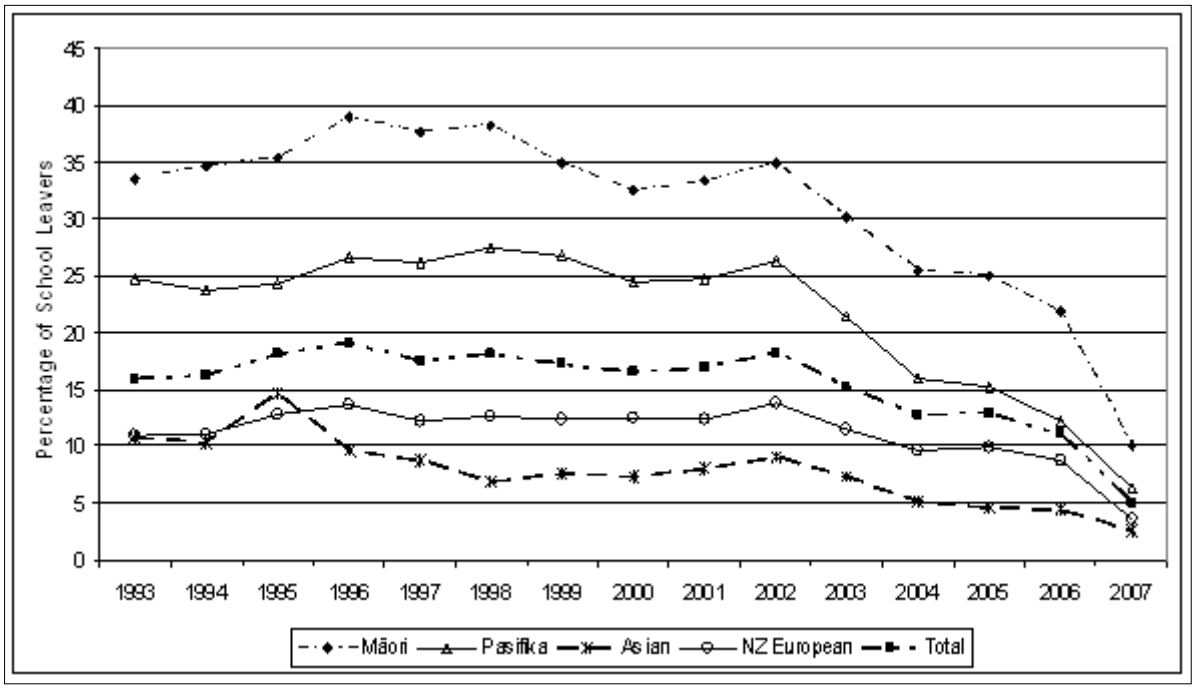
Table 2.2.1b: Percentage of school leavers in the Waikato Region and territorial authorities with no formal qualification

Area	2003	2004	2005	2006	2007	2008	2009	2010	2011
New Zealand	15.3%	12.8%	12.9%	11.1%	4.9%	5.3%	8.5%	6.5%	6.0%
Waikato Region	19.0%	13.1%	14.2%	13.1%	5.0%	6.7%	8.7%	6.6%	5.6%
Franklin District	18.4%	15.5%	11.3%	11.9%	3.6%	6.0%	N/A	N/A	N/A
Thames-Coromandel District	22.0%	19.0%	15.1%	20.2%	5.2%	8.9%	13.4%	6.5%	3.8%
Hauraki District	17.6%	11.4%	15.9%	14.3%	3.3%	5.4%	6.3%	3.0%	5.5%
Waikato District	20.7%	22.2%	23.3%	17.4%	7.8%	7.8%	14.2%	15.3%	9.2%
Matamata-Piako District	19.3%	20.6%	14.7%	14.8%	6.3%	8.5%	8.5%	5.9%	3.0%
Hamilton City	21.1%	10.4%	14.1%	12.2%	5.0%	6.2%	7.3%	6.6%	5.6%
Waipa District	8.4%	9.5%	7.8%	7.3%	3.3%	2.7%	7.3%	2.8%	3.0%
Otorohanga District	29.1%	27.3%	20.0%	12.5%	c	12.0%	11.0%	3.7%	4.9%
South Waikato District	16.4%	17.7%	18.8%	19.1%	6.1%	8.0%	10.4%	8.8%	9.4%
Waitomo District	15.6%	9.4%	14.3%	19.8%	3.0%	12.1%	16.0%	6.1%	4.5%
Taupo District	23.3%	12.0%	11.5%	13.8%	3.5%	9.4%	9.7%	6.4%	7.4%
Rotorua District	19.3%	16.0%	17.8%	13.3%	6.9%	7.8%	9.0%	6.2%	3.9%

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. (c) Starting in 2009 the data follows a new definition of school leavers, which creates an additional discontinuity

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 (downloaded from Education Counts website May 2010)

	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.

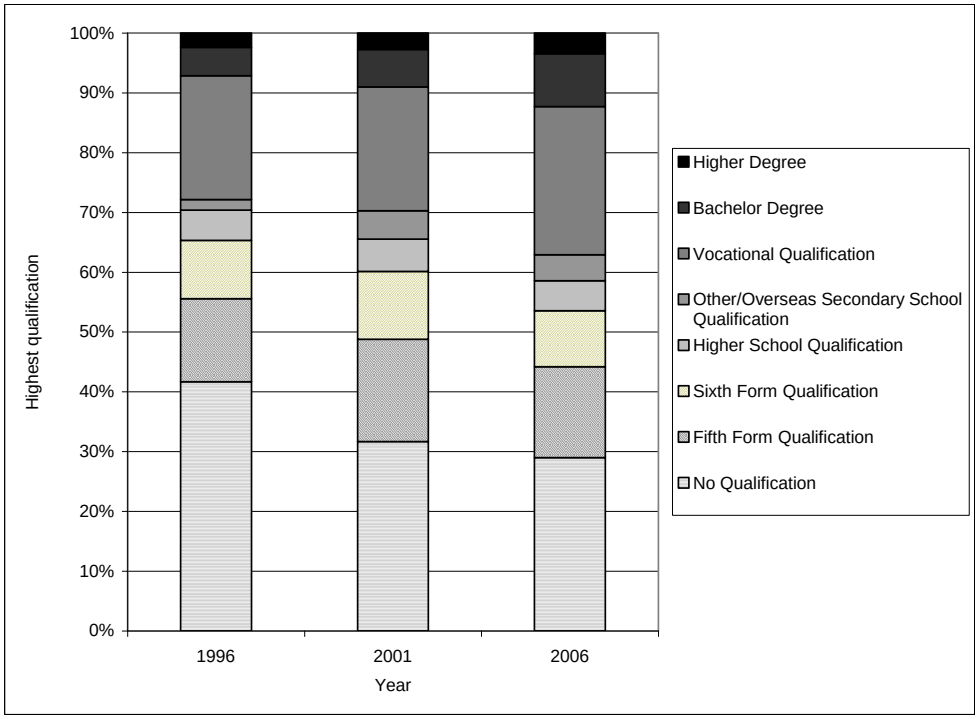
Measuring the qualification levels of a city's population aged 15 years and over helps to identify the job readiness of the future labour force. An educated population adds to the vibrancy and creativity of communities and is needed to remain competitive in the global economy. Higher educational attainment, 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.

More frequent sample data on educational attainment levels of the adult population are available from the Household Labour Force Survey (HLFS) and reported through the MSD Social Report. Amongst other things, the HLFS asks people aged 25-64 years about their level of educational attainment. Based on these results, Figure 2.2.2c and Table 2.2.2d show that the proportion of Waikato Region adults with at least upper secondary school level education increased from 51.1% in 1986 to 75.0% in 2009, which is only slightly behind the national average. Note that 'at least upper secondary school level' includes any formal qualification at NCEA Level 1 (or its predecessor, School Certificate) or higher. Table 2.2.2d also shows that there has been considerable growth in the proportion of people with tertiary qualifications (bachelor's degree or higher) at both the regional and national level.

Data notes: The HLFS data is an annual average rate for December years. Because of small sample sizes, some regions are aggregated to provide more robust data. The data has been revised for all years and will not match previously published figures. The main limitation of regional-level HLFS estimates is the high sampling error, leading to unreliability. Also, young males tend to be under-represented because their high mobility makes them difficult to survey.

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



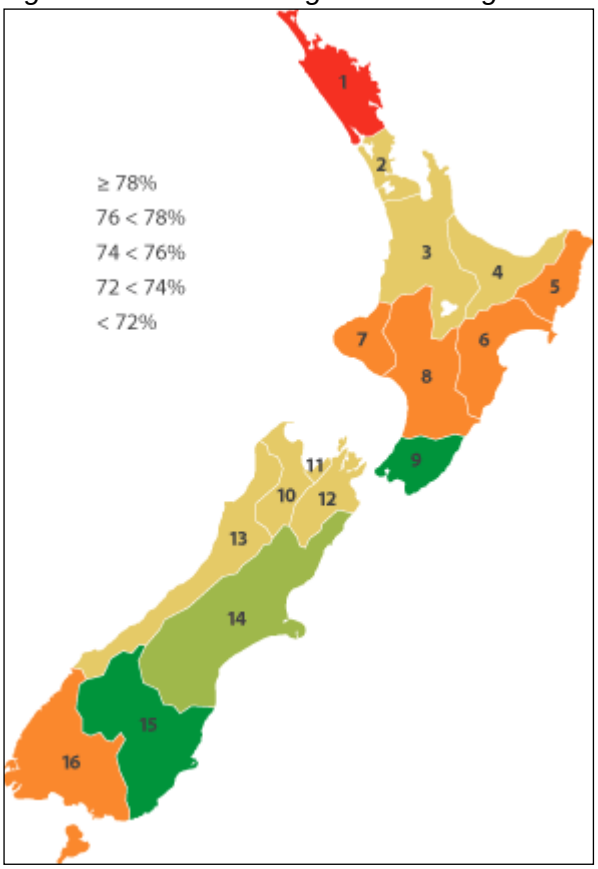
Source: Statistics New Zealand Census
Notes: Denominator excludes "not elsewhere included". Changes to classifications mean that comparisons over time should be treated with some caution. For the purpose of this analysis (1) Fifth Form Qualification = Level 1 Certificate Gained at School; (2) Sixth Form 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".

Figure 2.2.2c: Percentage of adults aged 25-64 years with higher qualifications, selected years



Source: Statistics New Zealand Household Labour Force Survey via MSD Social Report.

Table 2.2.2d: Percentage of adults aged 25-64 years with higher qualifications, selected years

	At least upper secondary		Tertiary (bachelor's degree or higher)	
	Waikato Region	New Zealand	Waikato Region	New Zealand
1986	51.1%	56.4%	3.2%	5.4%
1991	59.2%	62.2%	6.0%	8.2%
1993	63.4%	67.9%	8.3%	10.3%
2001	69.6%	72.4%	9.3%	13.1%
2002	71.5%	72.9%	9.7%	13.9%
2003	73.1%	74.2%	11.9%	15.3%
2004	72.3%	74.8%	12.4%	16.7%
2005	72.8%	75.2%	13.8%	19.0%
2006	72.9%	74.3%	15.8%	19.2%
2007	74.2%	75.7%	17.6%	21.4%
2008	74.2%	75.2%	17.3%	21.2%
2009	75.0%	75.3%	18.3%	22.0%

Source: Statistics New Zealand Household Labour Force Survey via MSD Social Report.
Note: Regional-level sample estimates have high sampling error.

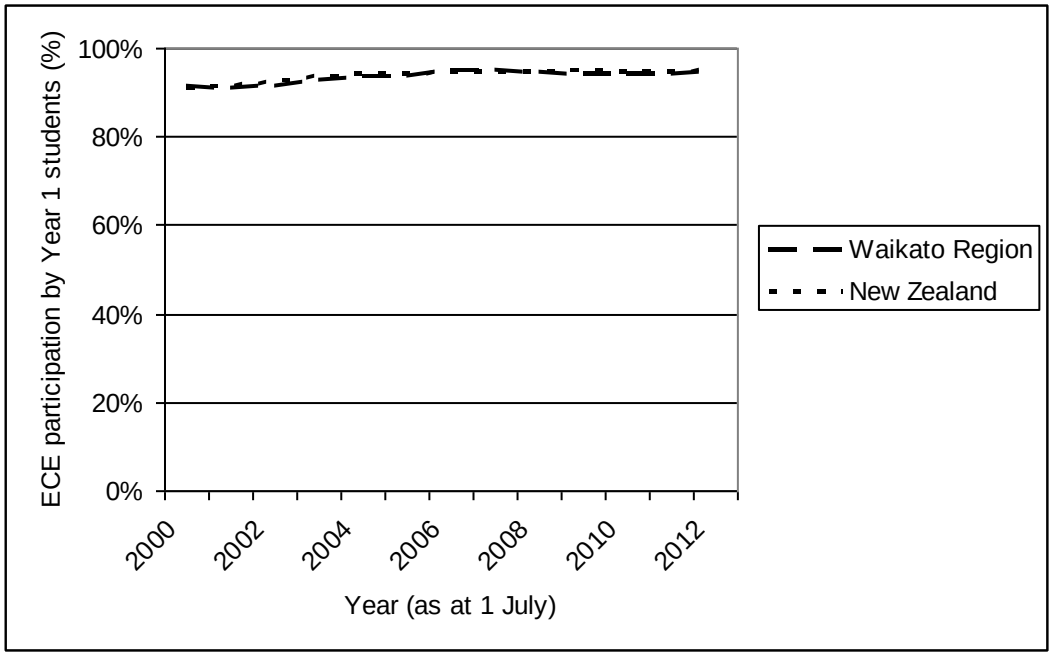
	Indicator	State	Trend
2.2.3	Participation in early childhood education	😐	⇧

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.

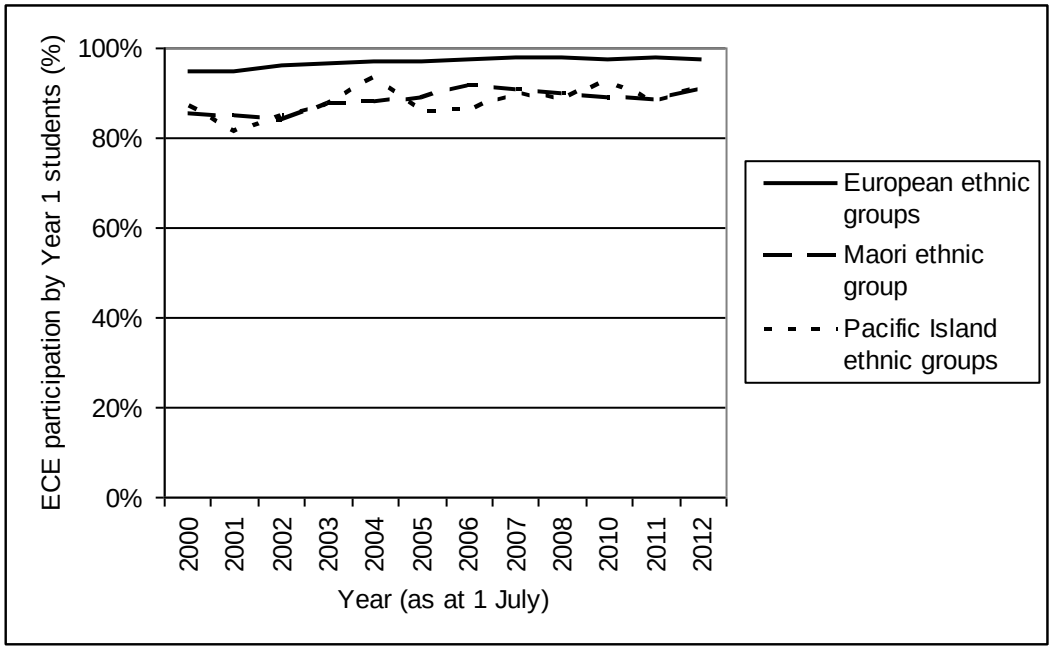
Figures 2.2.3a shows there has been a generally increasing rate of participation by children in Early Childhood Education (ECE) services throughout the Waikato Region. Figure 2.2.3b shows that Māori and Pacific Islands children continue to have lower than average participation rates overall. Additional data at the territorial authority level is included in the Appendices. The highest rates of participation have historically been in Hamilton City, Thames-Coromandel District and Matamata-Piako District. There remained a relatively lower level of ECE participation by Māori children across all territorial authority areas in 2012. Participation by Pacific Islands children is highly variable in percentage terms, due in part to the small numbers of Pacific children in some districts.

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



Source: Ministry of Education/MSD Social Report

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



Source: Ministry of Education/MSD Social Report
Note: 2009 data has not been sourced but is unlikely to add any significant new information to this time series graph.

	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 154,000 enrolments in school-based adult and community education in 2009. Tertiary education institutions have also been able to run ACE programmes with support from government funding. In 2009, ACE programmes were provided in most universities, institutes of technology and polytechnics, and wānanga, and attracted an estimated 82,300 learners. In July 2009 Education Minister Anne Tolley indicated there would be $124 million in government funding toward ACE over the next four years which is about two-thirds of the level of previous funding. The decrease was due to removal for funding of hobby or interest courses and focusing on foundation skills that offer the highest likelihood of helping participants go on to tertiary education or into the workforce such as literacy, numeracy and language courses.

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

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 61.0 points, down from 62.4 points in 2007. Hamilton was rated the highest for this factor with 73.0 points while Franklin was rated the lowest (43.4 points), replacing Thames-Coromandel which was at the bottom of the 2007 rankings.

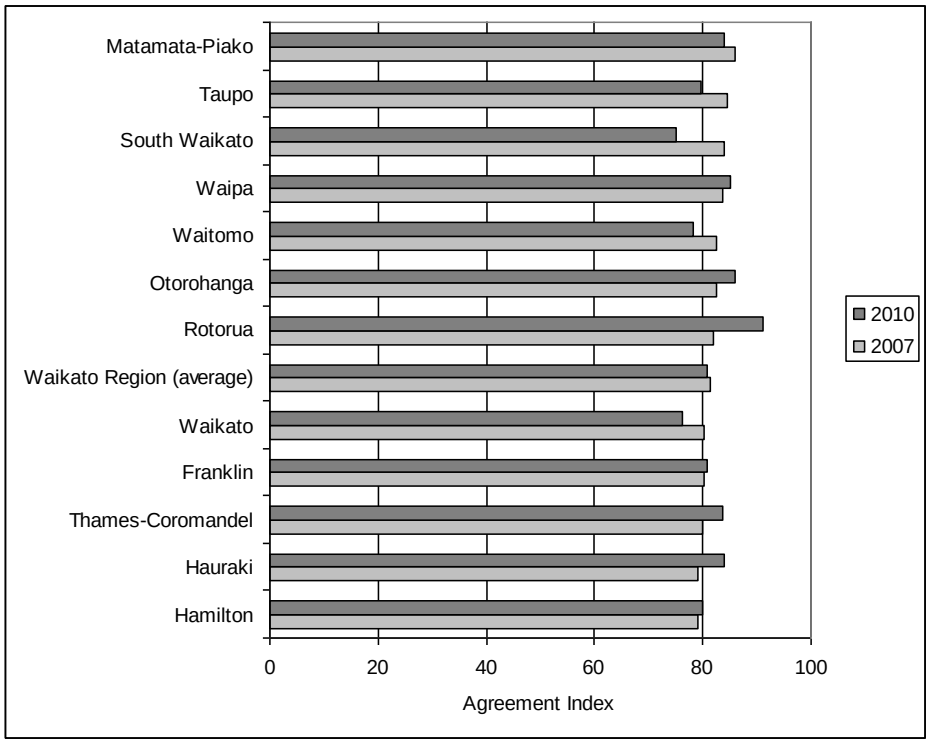
	Indicator	State	Trend
2.2.5	Work opportunities matching skills	😐	?

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 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 quarter of the respondents (24%) did not answer this question, presumably because they were not working. Two thirds of the respondents (66%) agreed with the statement 'Your job makes good use of your skills, training and experience' (scores of 6 – 10). A fifth of the respondents (21%) 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). The same number of respondents 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 80.7, down 0.7 from the 2007 result but still implies most respondents feel their jobs are making good use of their skills, training and experience. There was some variation throughout the Region.

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 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

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. 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.
- On average, households in the Waikato Region spend around 16% of their household expenditure on housing costs (not including household utilities). This is similar to the national average and around two percentage points lower than Auckland.
- 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 MARCO Waikato Regional Perception Survey 2010 showed that the majority of respondents (72%) were satisfied with 'proximity to schools' but this dropped to only 47% for 'proximity to other educational facilities'. Thames-Coromandel and Franklin 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	😐	?

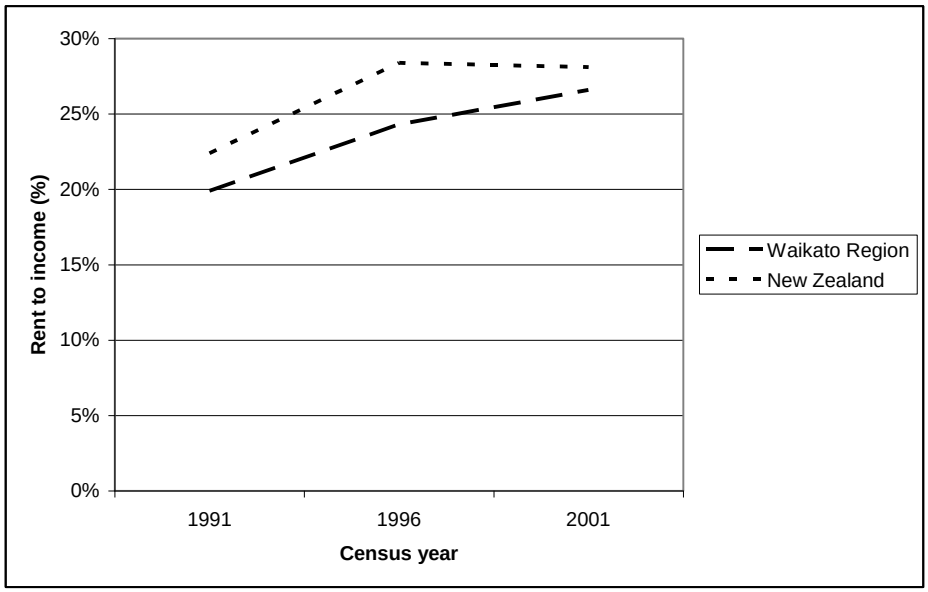
Rent-to-income ratio is calculated as the ratio of the median annual rent paid in each area to the median annual income for households paying rent in that area. Median annual income is derived from responses to the income related questions in the Census of Population and Dwellings.

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 remained 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) would require a specific 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).

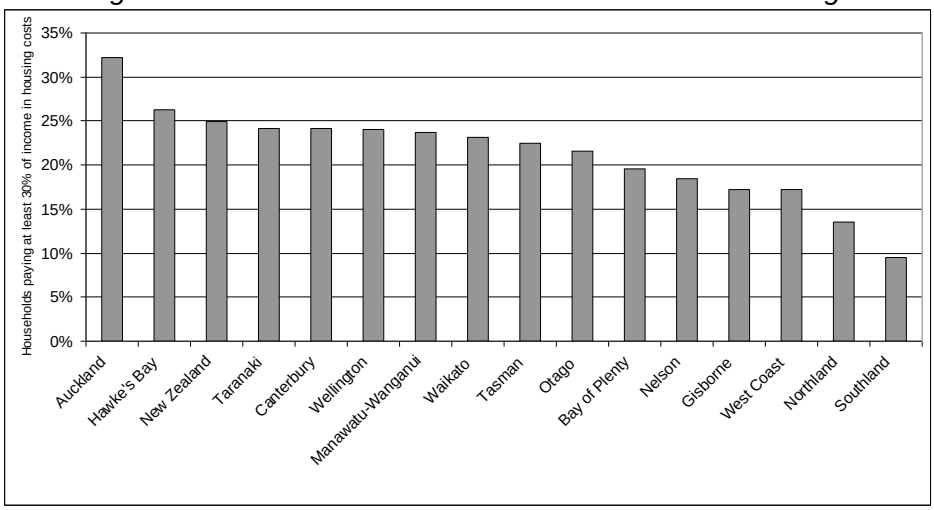
Housing affordability relates to the ability of households to rent or purchase housing in a locality of choice at a reasonable price, the capacity of households to meet ongoing housing costs, and the degree that discretionary income is available to achieve an acceptable standard of living. Affordable 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 in 2000-01 paid 30% or more of their total income towards housing costs compared to the Auckland Region. 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%. 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. Also, the definitions used in calculating the ration of housing costs to household income has changed since these 2000-01 results were reported, as indicated below.

More geographically aggregated results are available online annually for the period since 2007. These show that for the year ended 30 June 2012, households in the Auckland Region spent on average 17.8% of their total net expenditure on housing costs (not including household utilities). This was the highest of the five regions covered by the HES. The 'rest of the North Island' region (incorporating the Waikato Region and other regional council areas) spent on average 16.0% of their total net expenditure on housing costs (not including household utilities). Technical details for the construction of the ratio of housing costs to total household income are available on the Statistics New Zealand Website (Household Economic Survey).

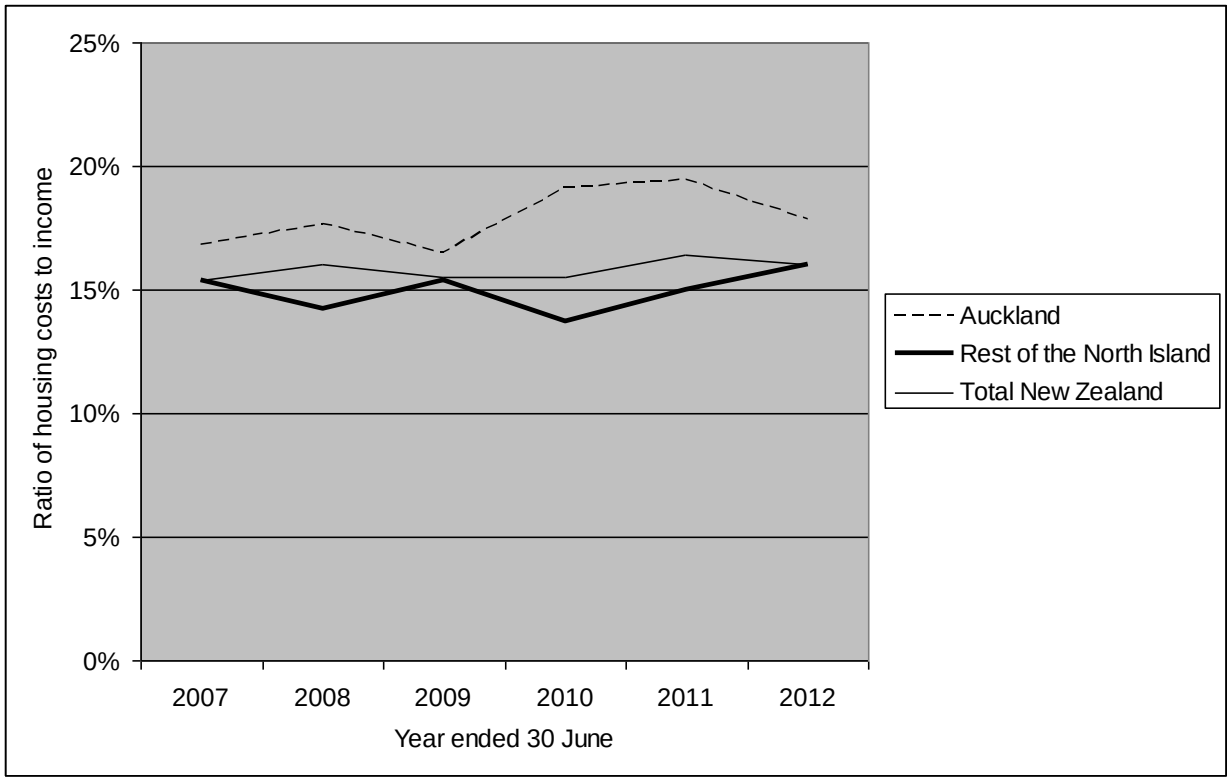
According to the MBIE Regional Economic Activity Report 2013, the Waikato Region currently has an annual average rental cost (nearest $100) of $14,700 compared to $17,900 national average, and the rental share of household income is 18% in the Waikato Region compared to 22% nationally.

Figure 2.3.2a: 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

Figure 2.3.2b: Ratio of housing costs to total household income by HES region



Source: Statistics New Zealand Household Economic Survey

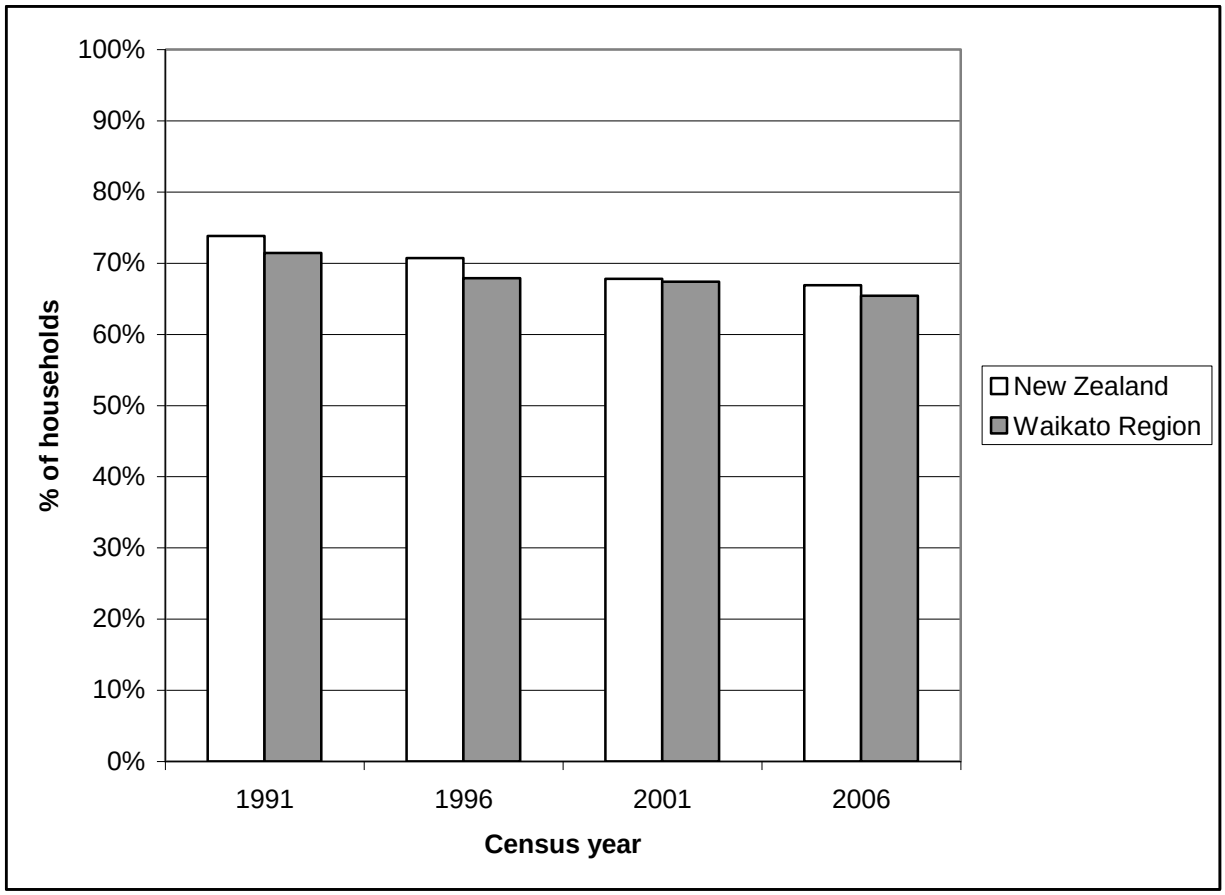
	Indicator	State	Trend
2.3.3	Home ownership rate	😐	⇩

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.

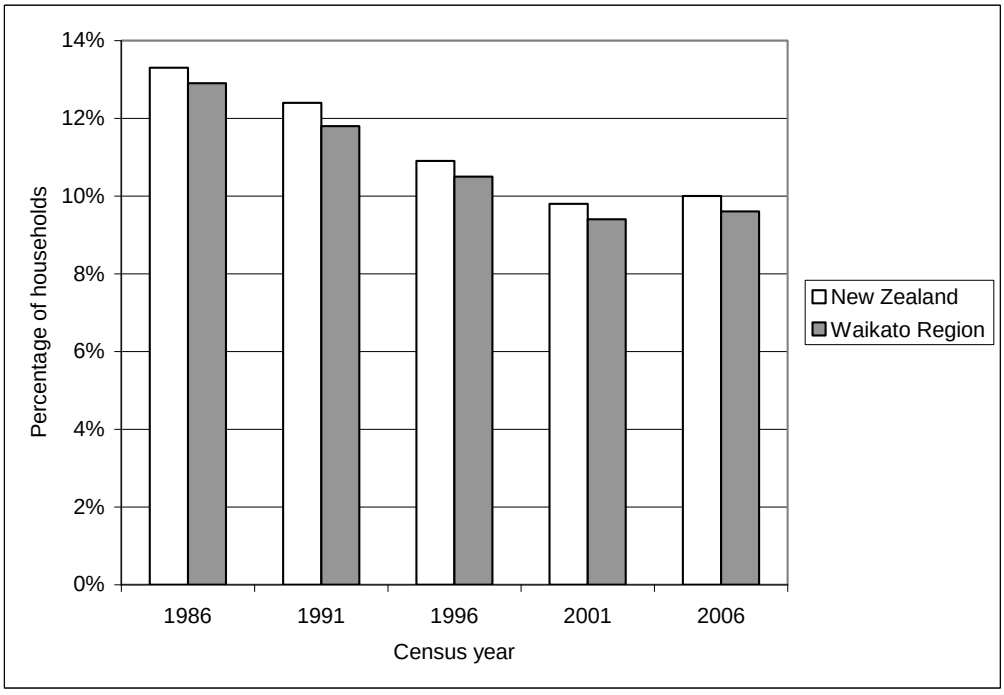
	Indicator	State	Trend
2.3.4	Household crowding (equivalised crowding index)	😐	⇧

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 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



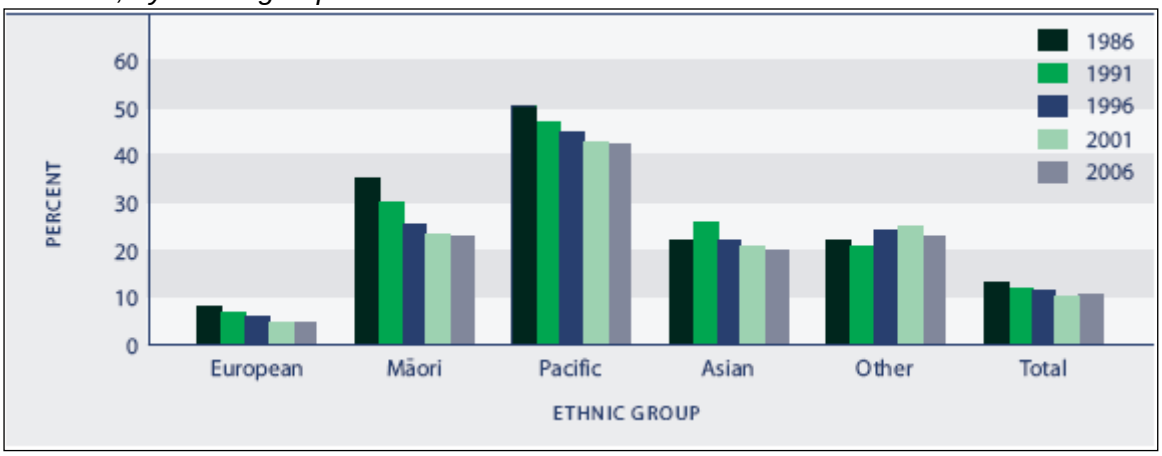
Source: Statistics New Zealand Census/MSD Social Report
Note: The Canadian Crowding Index measures the 'percentage of households with fewer bedrooms than needed'.

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



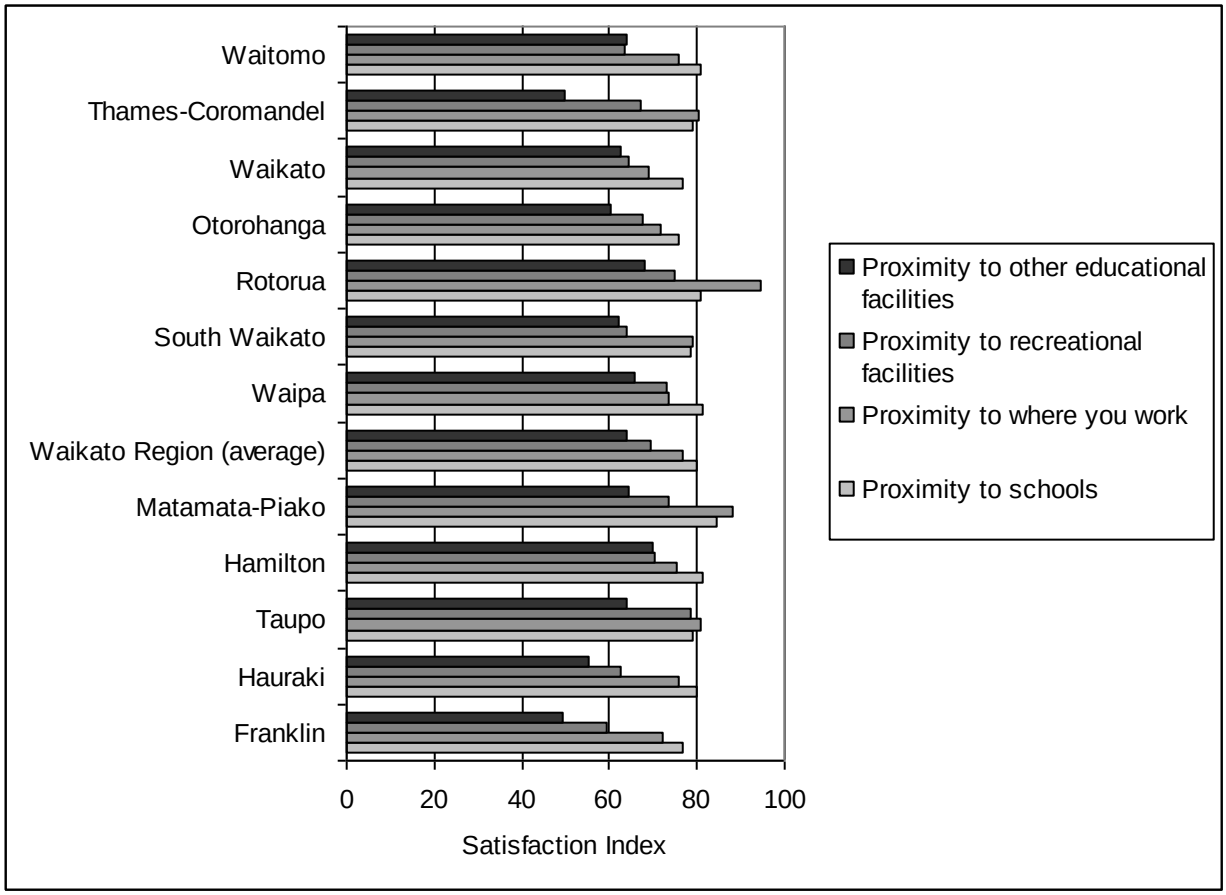
Source: Statistics New Zealand Census/MSD Social Report

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

Baseline data for Waikato regional communities was collected through the 2007 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 (72%) were satisfied with the 'proximity to schools' but this dropped to only 47% for 'proximity to other educational facilities'. This reflects in the CSI (Customer Satisfaction Index) scores which range from 80.0 points for 'proximity to schools' down to 64.1 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 largest increase from 2007 was 0.6 points for 'proximity to other educational facilities' and the largest decrease was 2.0 points for 'proximity to where you work'. The CSI scores vary by location but the variance is greatest for the 'proximity to other educational facilities'. Thames-Coromandel and Franklin respondents were the least satisfied with this factor (CSI scores 43.4 and 46.3 respectively). Those who live in town were more satisfied than those 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 2010



Source: MARCO Waikato Regional Perception Survey 2010 (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

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?

- There is currently no criminal victimisation survey data available at the Waikato regional level. However, at the national level, approximately 36% of New Zealand adults aged 15 and over experienced some form of victimisation in 2009, which was similar to results from the 2006 national survey. Where changes did occur, they were typically small and signalled a reduction in the extent and impact of crime on victims. A rough proxy for regional victimisation rates, the number of recorded offences in the Waikato Police District generally increased over the period 2004 to 2012 although this is partly attributed to increased reporting of family violence. The most substantial percentage increases were in violence-related categories.
- Respondents to the MARCO Waikato Regional Perception Survey 2010 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 Waikato Region results were comparable to national results for all New Zealanders. The sub-regional results vary by location but it seems that Thames-Coromandel and Otorohanga are perceived as the safest places by residents.
- Deaths and injuries from motor vehicle crashes have declined substantially since 1986. However, over the shorter-term, the rate of motor vehicle deaths and injuries per 100,000 population on Waikato Region roads has risen slightly since 2001. This is at least partly because of better recording of traffic incidents by Police. Casualty rates are relatively higher in rural areas, particularly those with state highway corridors, due to the increased speed of vehicles involved.

	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 New Zealand Crime and Safety Survey (NZCASS) 2006 and 2009 reports.

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.

At the present time there is no victimisation survey data available at the Waikato regional level, but data is available at the national level from the New Zealand Crime and Safety Survey. The 2009 survey was designed to allow comparisons to be drawn with 2006 results, although the results cannot be compared to those of previous surveys (1995 and 2001) due to changes in methodology. Details are discussed in the New Zealand Crime and Safety Survey 2009 Technical Report, available on the Ministry of Justice website.

NZCASS survey data from 2006 showed 39% of New Zealand adults aged 15 years and over experienced some form of criminal victimisation during that year. More recent 2009 survey data showed that 36% experienced some form of criminal victimisation. The 2009 NZCASS indicated that, overall, there has been very little change in the level and nature of crime since the 2006 survey. Where changes did occur, they were typically small and signalled a reduction in the extent and impact of crime on victims. Key findings from the 2009 and 2006 surveys are outlined as follows.

Nature and extent of crime

- There was no significant change in the overall amount of crime experienced, reported to the Police, or counted in the official crime statistics.
- The nature of crime in New Zealand remained the same, with assaults and threats continuing to be the most common crimes experienced.
- There was a small drop in the proportion of adults experiencing personal offences, particularly threats and sexual offences, and confrontational crimes by partners.
- The proportion of households experiencing vehicle crimes and the total number of vehicle crimes both declined.

Reporting of crime

- As in the 2006 survey, victims said they reported one-third of the crime they experienced to the Police.
- Theft of, and from, vehicles continued to have the highest level of reporting.
- Sexual offences had the lowest level of reporting to the Police, typically because the matter was considered private and/or the victim felt ashamed or embarrassed.

Concentration of crime

- Crime remained unevenly distributed across the population, with most people (64%) experiencing no crime and six percent of people experiencing 54 percent of crimes.
- The concentration of crime continues to be dependent on the type of offence. Victims of confrontational crimes (including, assaults, threats, and robberies) by their partner or a person well known to them were more likely to report having experienced multiple incidents than victims of property offences, such as burglary and vehicle crime.
- Overall, the profile of those most at risk of victimisation was broadly similar to that found in the 2006 NZCASS. Those most likely to experience crime were younger, from Māori or 'other' ethnic groups, unmarried, more economically vulnerable, living in rented

accommodation, in more economically deprived areas, in sole parent households or households comprised of flatmates or 'other' family combinations, in metropolitan cities (excluding Auckland), and in the upper half of the North Island.

Perceptions of crime, personal safety and victimisation

- Most people did not perceive any crime or disorder problems in their neighbourhood, nor did they believe that crime had increased in the past 12 months.
- Most people felt safe walking alone in their neighbourhood after dark.
- Over half of New Zealand adults reported feeling worried about being in a traffic accident caused by a drunk driver, being burgled, having their car deliberately damaged or broken into, and having their credit cards misused.
- There was considerable overlap between the groups most likely to experience victimisation and those most worried about being victimised.

Perceptions of the criminal justice system

- There was a significant increase in the proportion of people rating the Police positively, and a small increase in the proportion of people who felt judges were performing well.
- There was a small drop in the proportion of people positively rating probation officers and the Prison Service.

Table 2.4.1a: NZCASS estimates of household offences in 2005 and 2008

Household offences	**Number of offences per 100 households in 2005**	**Number of offences per 100 households in 2008**
Burglary	21	21
Household vandalism	15	14
Vehicle vandalism	9	9
Thefts from vehicles/ vehicle interference	8	5*
Thefts from a dwelling	4	5
Other household thefts	2	2
Thefts of vehicles	2	1*
All household offences	**60**	**56**

Source: New Zealand Crime and Safety Survey 2009 Report, Table 3.4.
*Notes: For household offences, offence rates (incidence rates) were derived by dividing the offence estimate by the number of households in New Zealand in 2005 (n = 1,558,299) and in 2008 (n= 1,618,600). * Indicates statistical significance at the 95% confidence level.*

Table 2.4.1b: NZCASS estimates of personal offences in 2005 and 2008

Personal offences	**Number of offences per 100 adults in 2005**	**Number of offences per 100 adults in 2008**
Assaults	22	20
Threats	18	16
Thefts of personal property	4	5
Sexual offences	*6*	*4*
Vandalism to personal property	4	4
Robbery	*1*	2
Thefts from the person	*1*	<1
All personal offences	**56**	**50**

Source: New Zealand Crime and Safety Survey 2009 Report, Table 3.5.
Notes: For personal offences, incidence rates were derived by dividing the offence estimate by the number of people aged 15 or more in New Zealand in 2005 (n= 3,264,620) and in 2008 (n= 3,424,660). Figures in gray italics have a high relative standard error (>20%) and are not statistically reliable.

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 Waikato Regional Council Region). It is important to emphasise that this indicator presents quite different information to victimisation rates, so the two cannot be compared.

Note that a review of crime and justice statistics was published by Statistics New Zealand in 2009. This identified 49 recommendations to fill gaps in the available information about crime and criminal justice. According to the 2011 progress report, three high-priority areas are being developed: (a) New Zealand Police is considering a proposal to implement new statistical reporting capability and new core datasets on victims and offenders, based on administrative data; (b) the justice sector's data warehouse, the Integrated Sector Intelligence System (ISIS) is under development, including adding data from other sectors and making ISIS accessible across the justice sector; (c) the justice sector key performance indicators (KPI) project team is continuing to develop key indicators of offenders across the entire justice system, including development of appropriate, consistent, offender-based counting rules across the justice sector, identifying key offender indicators (from police, courts, and corrections), and assessing the most appropriate reporting methods.

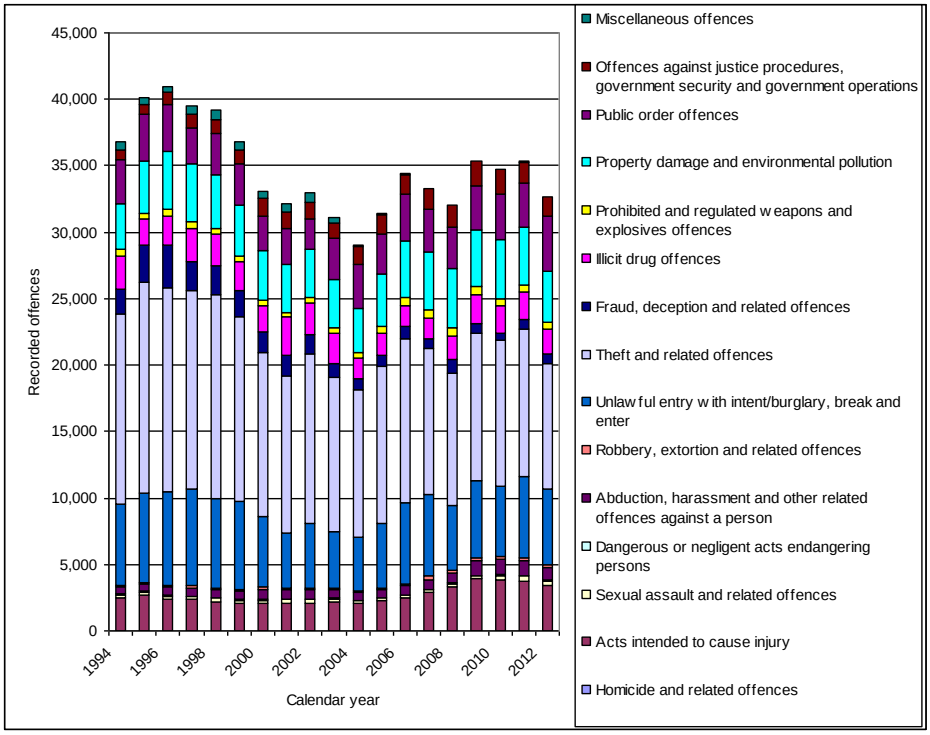
Reported offences data – a proxy for criminal victimisation

Figures 2.4.1c and 2.4.1d show that the number of recorded offences in the Waikato Police District generally reflects the national trend. Over the subsequent period 2004 to 2011 there was an increased frequency of recorded crimes across almost all categories for the Waikato Police District, which was reversed in 2012. While recorded dishonesty offences continue to account for around half of all recorded crime, there have been substantial increases in violence-related categories including:

- Seven homicides and related offences recorded in 2012 (murders, attempted murders and accessory after the fact) compared to two in 2004;
- 72% increase in abduction, harassment and other related offences against a person (from 594 to 1,019);
- 56% increase in sexual assault and related offences (from 190 to 296); and
- 68% increase in acts intended to cause injury (from 2,039 to 3,432).

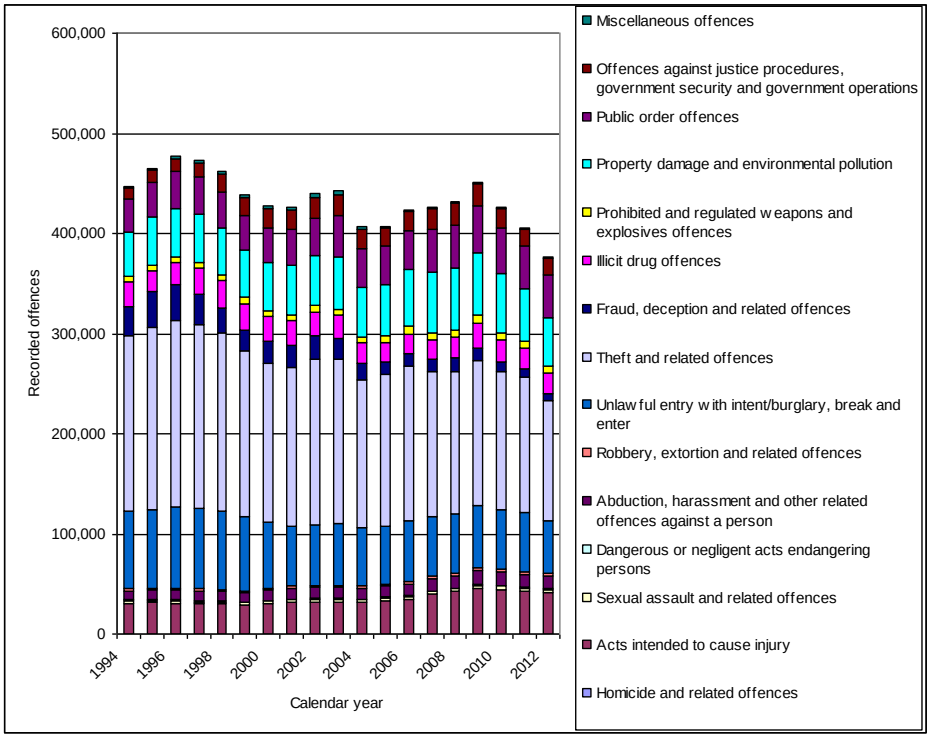
NZ Police attribute much of the growth in recorded interpersonal offences over this period to an increase in the reporting of family violence rather than an actual increase in the level of violence in society. The increases in recorded offences in these categories are consistent with a wider national trend. In recent years Police have implemented a range of policies, procedures and initiatives to respond more effectively to family violence incidents. National publicity and media campaigns to encourage action on family violence have also been in place over this period. Police handling and investigation of sexual offences has also changed in recent years, which together with media publicity may have increased reporting.

Figure 2.4.1c: Recorded offences for Waikato Police District



Source: Statistics New Zealand/Police administrative data
Note: Waikato Police District differs from Waikato Regional Council region, in particular due to exclusion of South Waikato and Rotorua districts (these are within the BOP Police District).

Figure 2.4.1d: Recorded offences for New Zealand



Source: Statistics New Zealand/Police administrative data

	Indicator	State	Trend
2.4.2	Perceptions of safety	😐	?

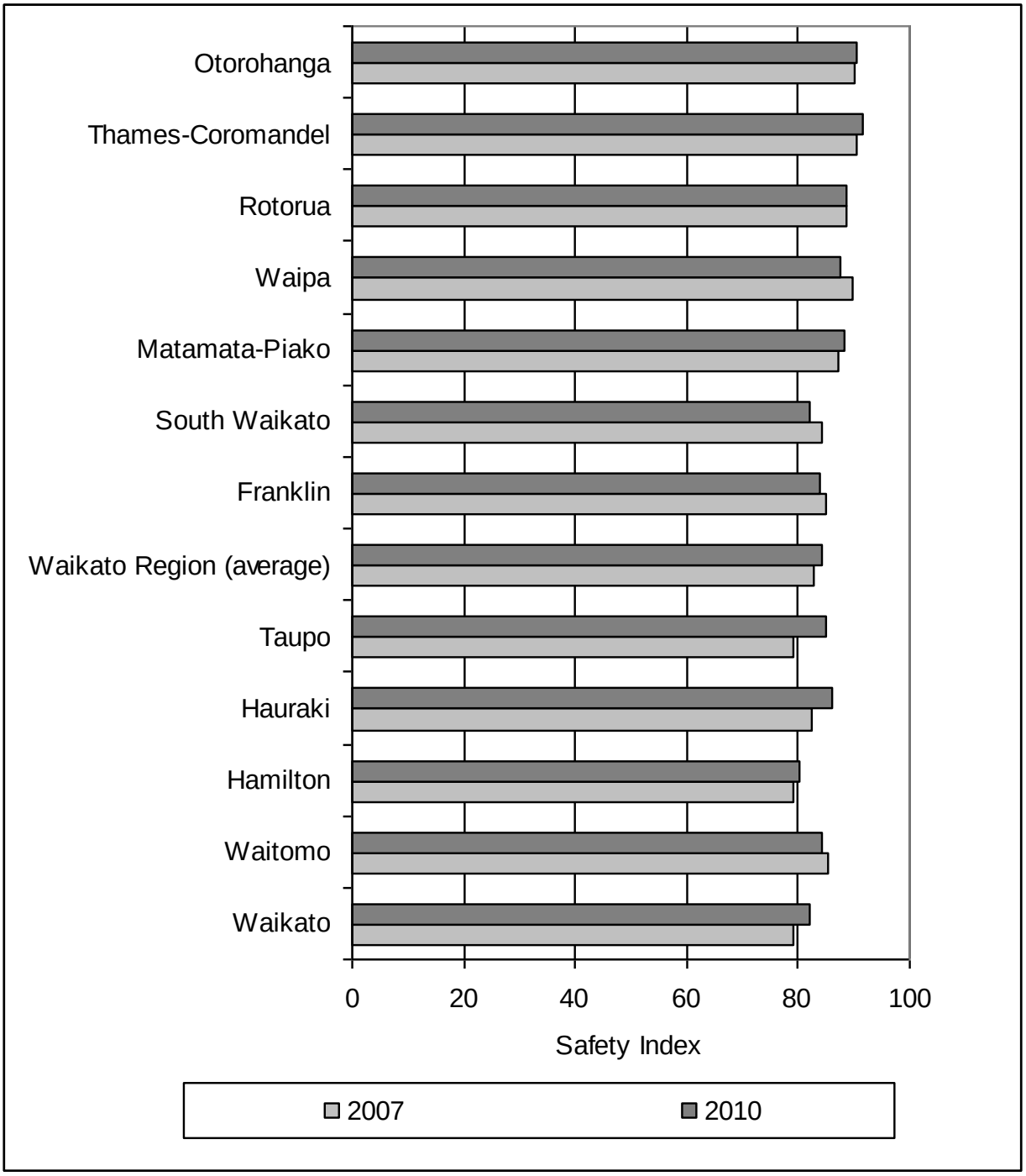
This indicator measures the percentage of residents who felt 'very safe' or 'safe' at home, in their neighbourhood, and in the city centre after dark. Also expressed as 'sense of freedom from crime'. Perceptions of safety impact on the health and well-being of the individual, family and the wider community. 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 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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…. (a) In your community during the daytime; (b) In your community after dark'. The majority of respondents (93%) 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 (64%) felt safe (Scores 6 – 10) with the factor 'Safety in your community after dark' and 21% felt unsafe (Scores 0 – 4). This reflects in the Safeness Index which is 84.1 points for the 'Safety in your community during the daytime' versus 64.1 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. In comparison to the 2007 results, the 'safety in your community during the daytime' factor was up 1.3 points while 'safety in your community after dark was down 0.7 points. The Safeness Index varies by location but Thames-Coromandel and Otorohanga were rated the highest for both factors. Hamilton and South Waikato District were rated the lowest for 'safety in your community after dark' (Index 58.5 and 59.8 respectively). Hamilton was also rated the lowest for the 'safety in your community during the daytime' (Index 80.4). Men felt significantly safer than women with the factor 'safety in your community after dark' although both groups felt much safer during the day.

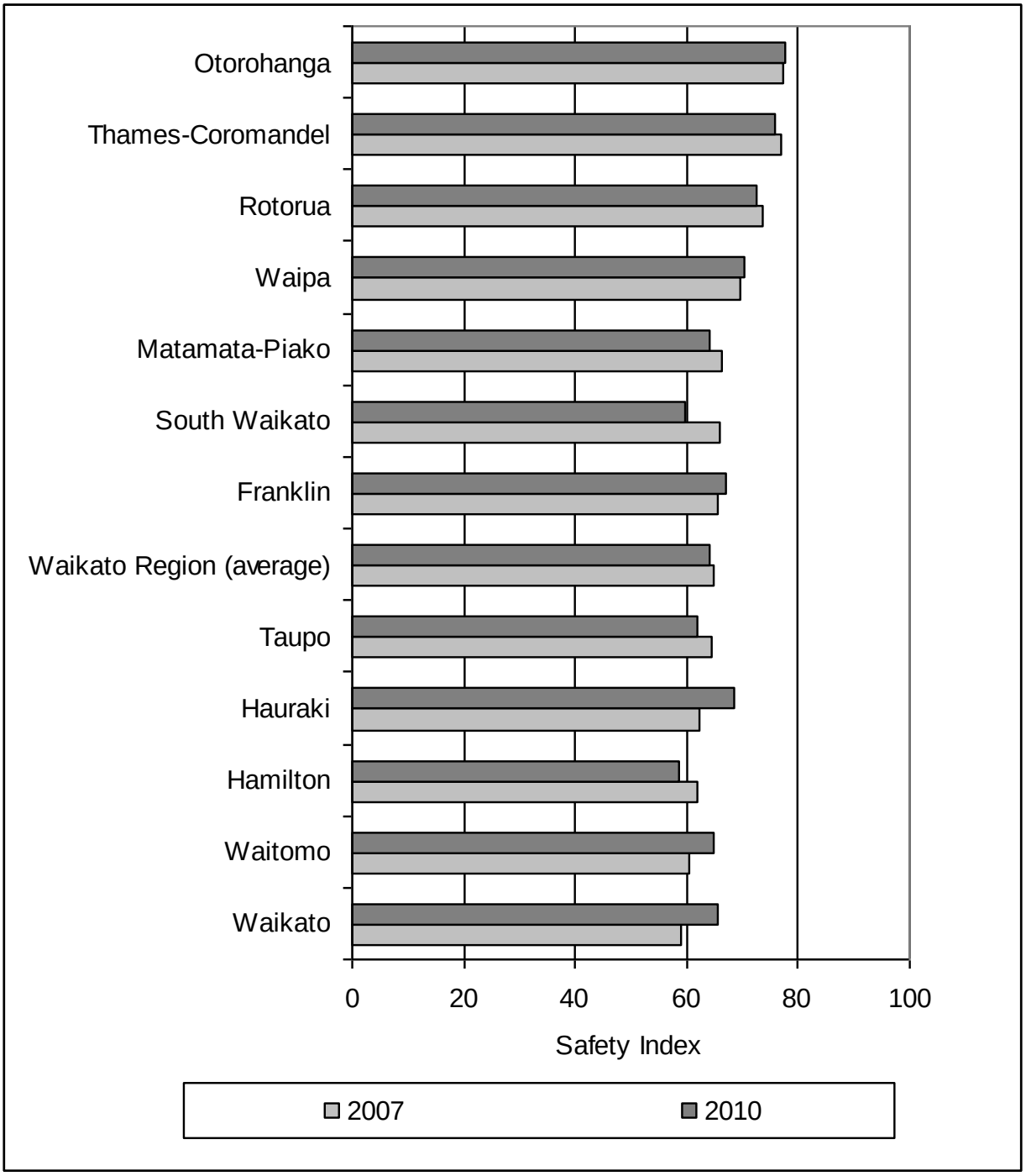
Somewhat comparable national results are available from two sources. Firstly, the 2008 Quality of Life Survey asked a sample of people aged 15 years and over: 'Now thinking about issues of crime and safety, using a four point scale ranging from very unsafe, a bit unsafe, fairly safe to very safe, please tell me how safe or unsafe you would feel in the following situations… (a) In your home during the day; (b) In your home after dark; (c) Walking alone in your neighbourhood after dark; (d) In your city centre during the day; (e) In your city centre after dark'. The results showed that 62.3% of New Zealanders felt safe walking alone in their neighbourhood at night, which is similar to the MARCO Waikato Regional Perception Survey 2010 result. Secondly, the New Zealand Crime and Safety Survey asked a sample of people aged 15 and over: 'How safe do you feel walking alone in your neighbourhood after dark….(a) Very safe; (b) Fairly safe; (c) A bit unsafe; (d) Very unsafe.' The results showed that 65% of New Zealanders said that they felt safe walking alone in their neighbourhood after dark in 2009. This finding was not significantly different to the 2006 NZCASS results, and was similar to the 2008 Quality of Life Survey result.

Figure 2.4.2: Respondents' feeling of safety during the daytime – Waikato territorial authority areas 2007 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

Figure 2.4.2: Respondents' feeling of safety after dark – Waikato territorial authority areas 2007 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

	Indicator	State	Trend
2.4.3	Road traffic crashes and casualties	😐	⇨

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

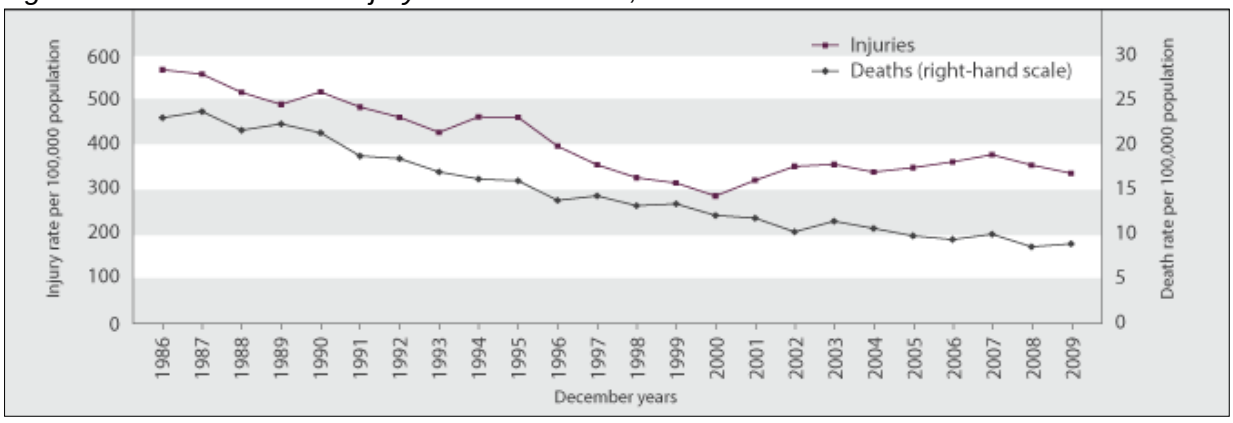
New Zealand is a country reliant on motor vehicles for transport and commerce. In 1951 there was an average of 224 vehicles per 1000 people. By 2000 that figure had risen to 678 vehicles per 1000 people (Statistics New Zealand), together with a significant increase in the overall population. The increasing 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 2010 Social Report (refer Figure 2.4.3a), 384 New Zealanders died as a result of motor vehicle crashes during 2009, a rate of 8.9 deaths per 100,000 population. Provisional data for 2009 shows a further 14,540 people were injured, a rate of 337 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 population, respectively. The number of people killed in motor vehicle crashes was 50% lower in 2009 than it was in 1986. Although the number of people injured has risen since 2000 (partly because of better recording by Police), there were 23% fewer people injured in 2009 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.

Tables 2.4.3b shows that the rate of motor vehicle deaths and injuries per 100,000 population on Waikato Region roads has risen slightly since 2001, reflecting the national trend (ie, partly because of better recording by Police). The rate of motor vehicle deaths and injuries per 100,000 population at the sub-regional level is highly variable from year to year. Casualty rates are relatively higher in rural areas, particularly those with state highway corridors, due to the increased speed of vehicles involved (refer Figure 2.4.3c).

More recent published data on deaths and serious casualties for Waikato territorial authorities is shown in Table 2.4.3d. This reveals soime variation from year to year but no clear trend.

Figure 2.4.3a: Road traffic injury and death rates, 1986-2009 – whole of NZ



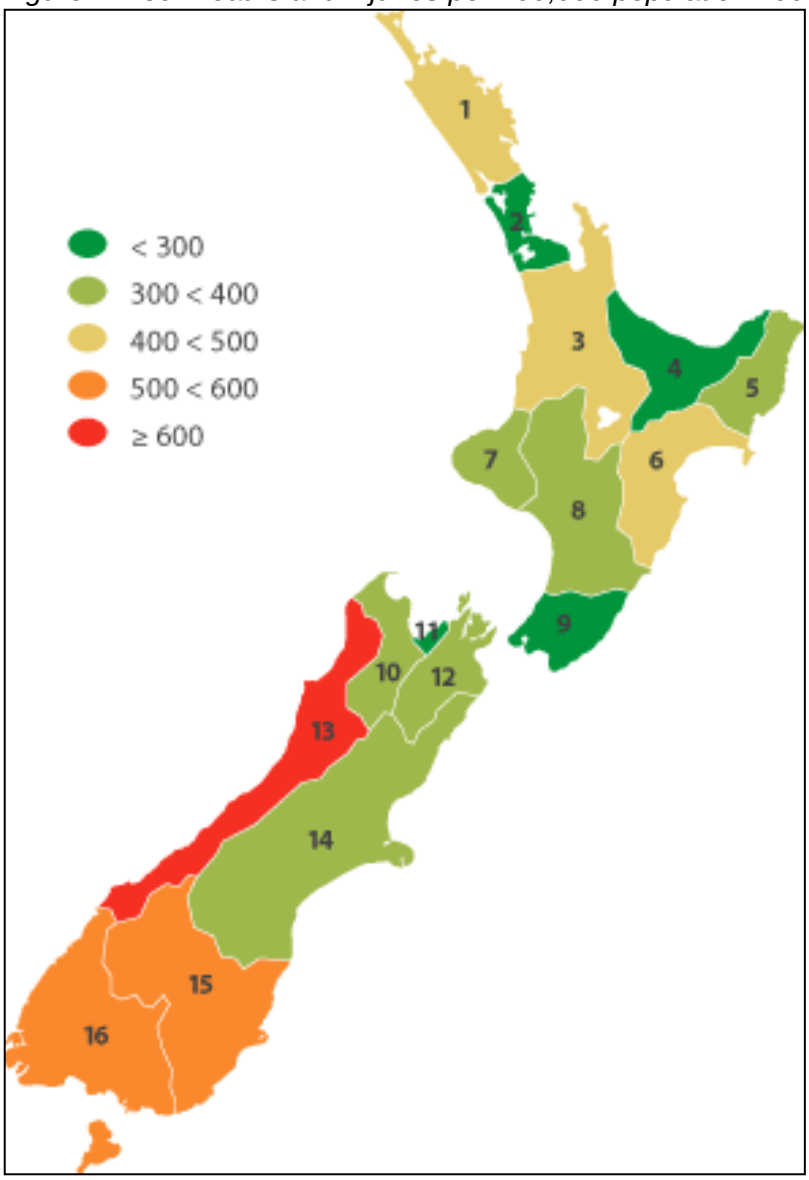
Source: MSD Social Report/ Land Transport New Zealand Crash Analyst System Database

Table 2.4.3b: Deaths and injuries per 100,000 population – New Zealand, Waikato Region and territorial authorities

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Franklin District	362	427	515	501	465	518	379	476	460
Thames-Coromandel District	294	258	350	328	453	485	455	433	388
Hauraki District	504	665	624	852	800	559	646	525	669
Waikato District	624	626	755	693	646	652	663	547	634
Matamata-Piako District	390	421	366	396	472	436	417	672	396
Hamilton City	273	297	301	273	252	263	353	333	286
Waipa District	383	400	377	458	430	436	346	383	395
Otorohanga District	493	469	713	622	570	837	627	629	368
South Waikato District	535	601	648	515	537	413	555	465	491
Waitomo District	888	764	1,000	921	1,103	975	1,094	604	956
Taupo District	600	454	583	548	537	639	621	572	732
Rotorua District	315	341	416	389	365	373	388	374	299
Waikato Region	428	432	468	465	457	453	481	464	456
New Zealand	333	364	370	353	362	376	389	364	346

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

Figure 2.4.3c: Deaths and injuries per 100,000 population 2009



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

Table 2.4.3d: Deaths and serious casulaties – Waikato territorial authorities

	2008	2009	2010	2011	2012
Thames-Coromandel District	23	17	15	39	29
Hauraki District	26	30	18	24	22
Waikato District	73	90	72	98	78
Matamata-Piako District	59	31	32	45	38
Hamilton City	61	62	55	59	58
Waipa District	41	45	37	36	32
Otorohanga District	14	7	19	12	7
South Waikato District	44	34	23	35	23
Waitomo District	10	21	29	17	25
Taupo District	60	76	37	38	42
Rotorua District	49	46	62	37	52

Source: NZTA (2013) 'Statistical Summary of Territorial Authorities in New Zealand'

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.

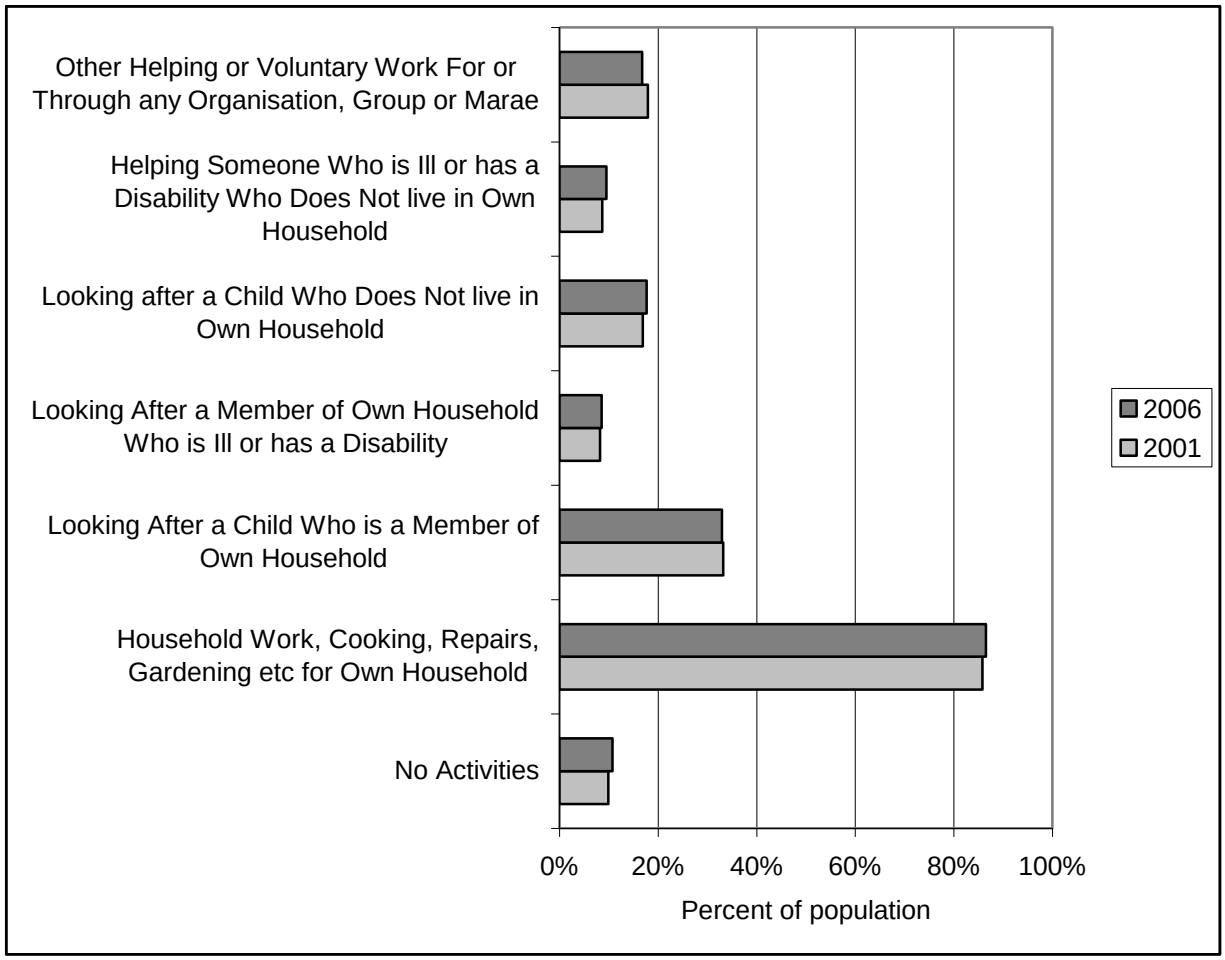
Table 2.5.1a shows that the most frequent form of unpaid activity in New Zealand is household work, cooking, repairs, gardening, etc, for own household, followed by looking after a child who is a member of own household. As at the 2006 Census, rates of unpaid activity in the Waikato Region were similar 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 data for Waikato regional communities was collected through the MARCO Waikato Regional Perception Survey 2010 commissioned by MARCO and Choosing Futures Waikato, where an average 87% 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 2010, 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:

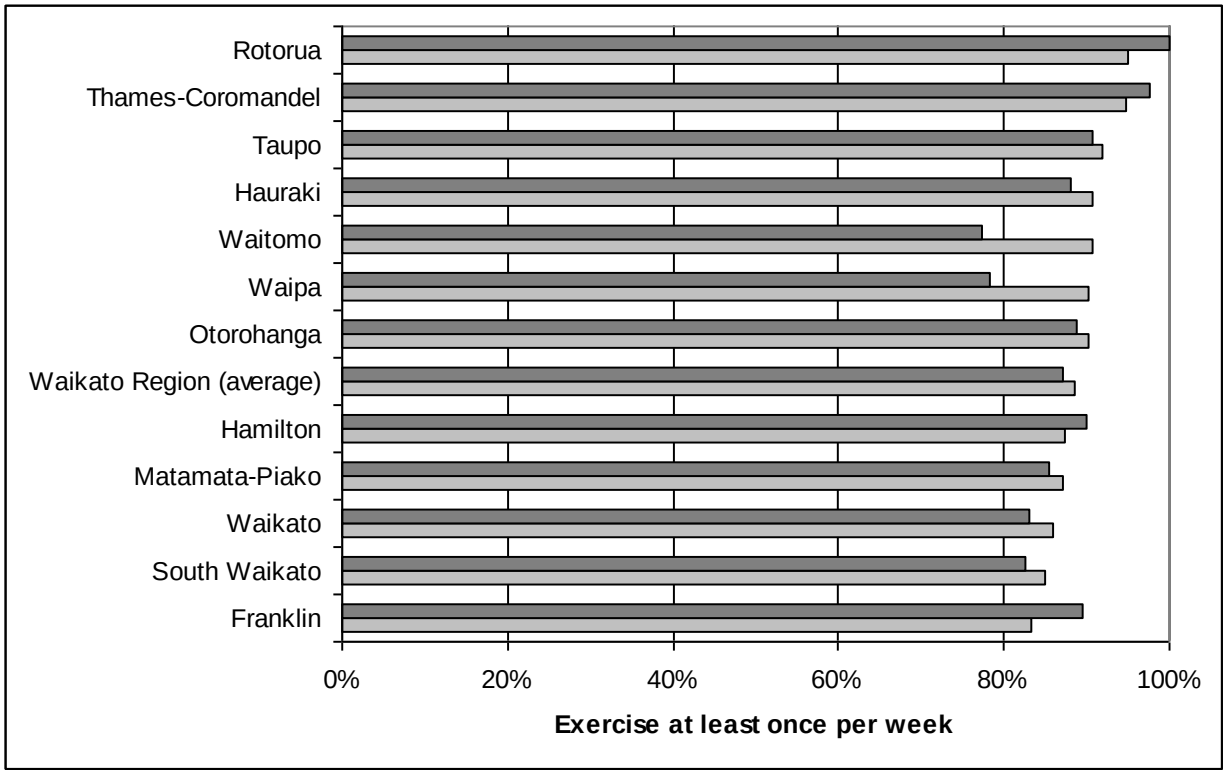
- Generally, Waikato young people's overall levels of activity showed little change in the proportions being active between 1997 and 2001.
- Boys tended to be more active (increasing from 68% to 78%) while girls were less active (decreasing from 80% in 1997 to 63% in 1999 and 72% in 2001), although not 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 data for Waikato regional communities was collected through the 2007 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010.

Respondents to the MARCO Waikato Regional Perception Survey 2010 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 majority of participants (87%) said they exercised for 30 minutes or more at least once per week ranging from approximately 100% in Rotorua and Thames-Coromandel down to 77% in Waitomo. The results are similar to 2007 although there are some larger differences for some districts such as Waipa and Waitomo. These may be due to sampling error, changing demographics and/or a changing situation in relation to exercise.

Figure 2.6.1: Reported participation in sport and active leisure – Waikato territorial authority areas 2007 and 2010 (percent exercising at least once per week)



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

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 and New Zealand as a whole. Of the total Hamilton respondents during the 2010 Quality of Life Survey, 21% said they relate mostly to people with same interests, culture or beliefs, 15% said they relate mostly to people living in the same area, and 63% said it was a mixture of both. According to the 2010 survey results, the most common social networks to which New Zealand residents belong, apart from family, are work or school (57%), online communities such as Facebook and Twitter (50%), and hobby or interest groups (34%). The profile for Hamilton City is similar to the national average. Notable over the period 2008 to 2010 was a rapid rise in the proportion of people belonging to online communities and interest groups.
- 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	😐	⇨

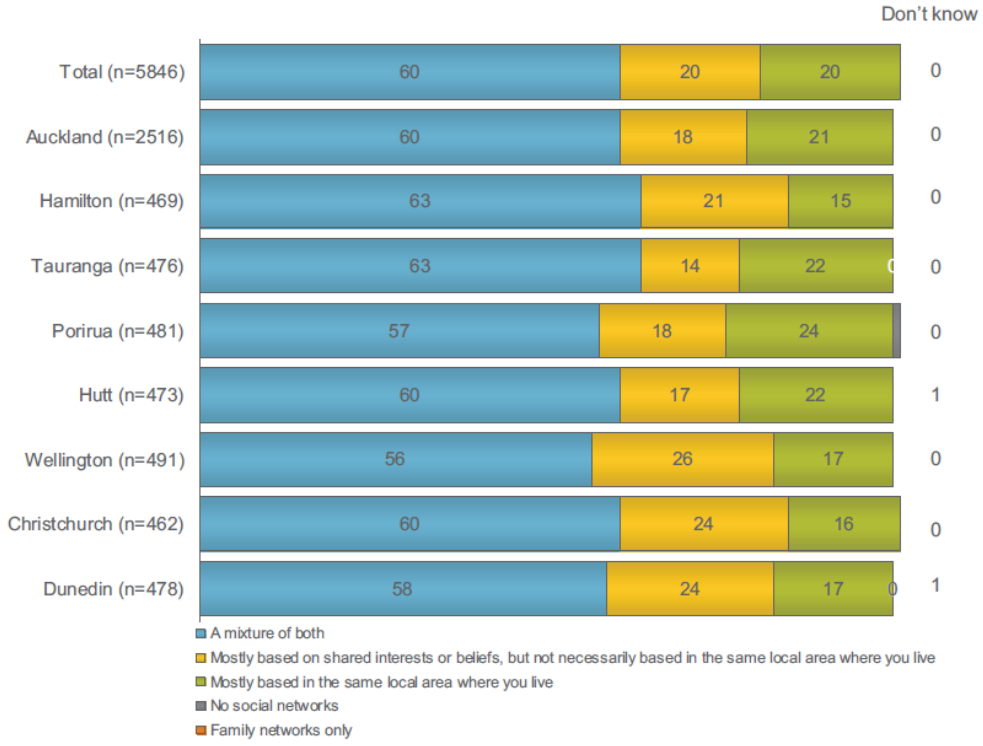
This indicator measures respondents participation in social groups and networks, in particular whether the social group or network that matters to them most is made up of people who live in the same area or people who have the same interest, culture or beliefs. Note that the 2006 survey asks for a specific 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, 2008 and 2010 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 2010, 21% said they relate mostly to people with same interests, culture or beliefs, 15% said they relate mostly to people living in the same area, and 63% said it was a mixture of both (refer Figure 2.7.1a). According to the 2010 survey results, the most common social networks to which New Zealand residents belong, apart from family, are work or school (57%), online communities such as Facebook and Twitter (50%), and hobby or interest groups (34%). The profile for Hamilton City is similar to the national average (refer Table 2.7.1b). Notable over the period 2008 to 2010 was a rapid rise in the proportion of people belonging to online communities and interest groups, from 41% to 53% for Hamilton City and from 31% to 50% for New Zealand overall.

Figure 2.7.1a: Location of social networks to which residents belong – Hamilton City and other metropolitan areas 2010



Source: Quality of Life in New Zealand's Twelve Largest Cities – Residents' Survey 2010

Table 2.7.1b: Social networks and groups to which residents belong – Hamilton City and New Zealand 2010

	Hamilton	New Zealand (total sample)
A sports club	28%	30%
A church or spiritual group	30%	31%
A hobby or interest group	35%	34%
A community or voluntary group such as Rotary, the RSA or Lions	17%	20%
Online community or interest group, including sites like Facebook	53%	50%
A network of people from work or school	57%	57%
Friends	5%	6%
Other social network or group	13%	11%
None of the above	7%	7%

Source: Quality of Life Survey 2010

	Indicator	State	Trend
2.7.2	Contact between young people and their parents	😐	⇩

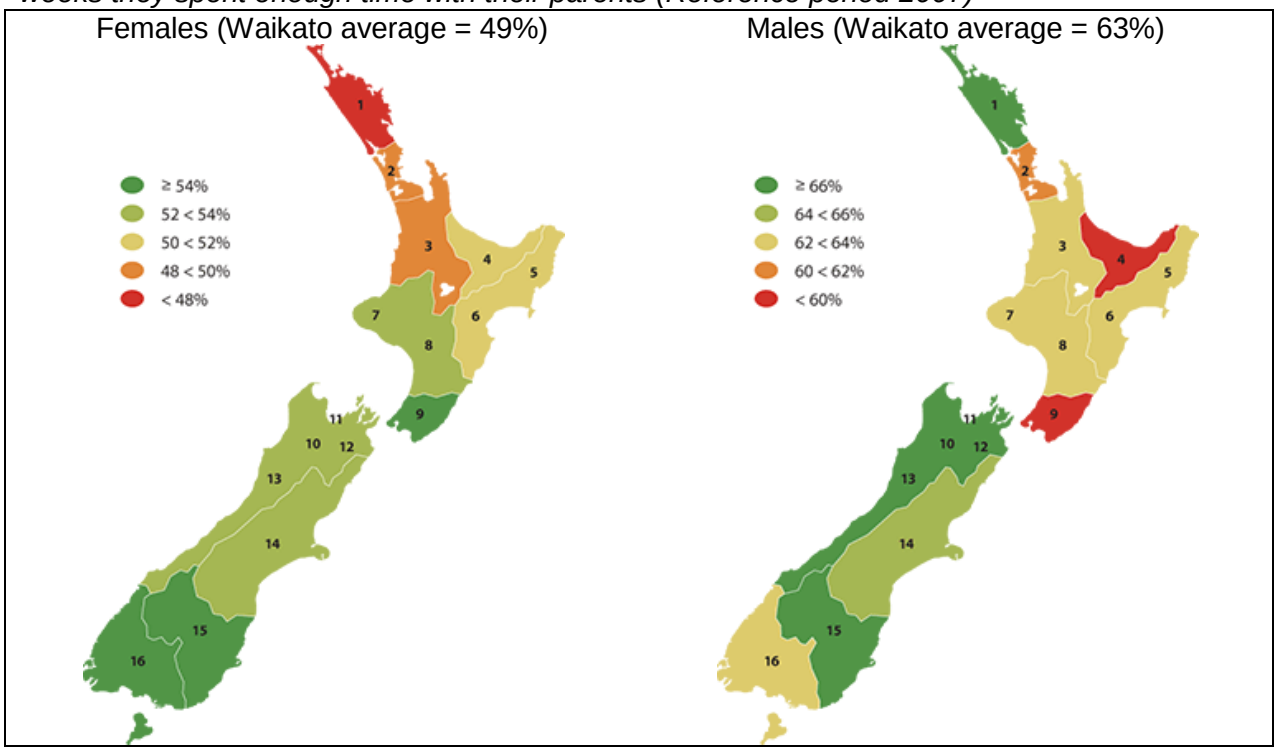
This indicator measures the proportion of secondary school students (aged 12–18 years) reporting that most weeks they spent enough time with their parents.

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

How are we doing?

- Initial estimates of Genuine Progress Indicators (GPI) for New Zealand and the Waikato Region have recently been completed as part of a national research study. For the period 1990 to 2006, the Waikato Region GPI grew by an annual average rate of 1.42% compared to the region's GDP which grew by an annual average rate of 2.29%. This indicates that 'genuine' progress using more balanced measures has been less than progress measured by economic activity (GDP). A related indicator is that of '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. It 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	☹	⇨

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 aims to take into account the "true" cost of economic progress by measuring things such as environmental and social costs (eg, pollution and crime). 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, produced a Waikato Region GPI Report (refer 'A Genuine Progress Indicator for the Waikato Region: Summary Report', June 2010: www.choosingfutures.co.nz/Publications). This shows that, for the period 1990 to 2006, the Waikato Region GPI grew from $9.1 billion to $11.4 billion, an annual average rate of 1.42%. This can be compared to the region's GDP which grew from $9.3 billion to $13.4 billion at an annual average rate of 2.29% (refer Figure 3.1.1a). Over the same period, the national GPI rose at an annual average rate of 2.17%, while national GDP grew at an annual average rate of 3.15%.

When the Waikato Region GPI is expressed in per capita terms the results are relatively static over the study period with an annual average growth rate of 0.45%. By comparison, the national GPI per capita increased by an annual average of 0.9%. In 1990 the Waikato Region GPI amounted to 97.5% of Waikato Region GDP, while in 2006 it amounted to 85.0%. By comparison, the national GPI in 1990 amounted to 94.2% of national GDP, while in 2006 it amounted to 80.9%.

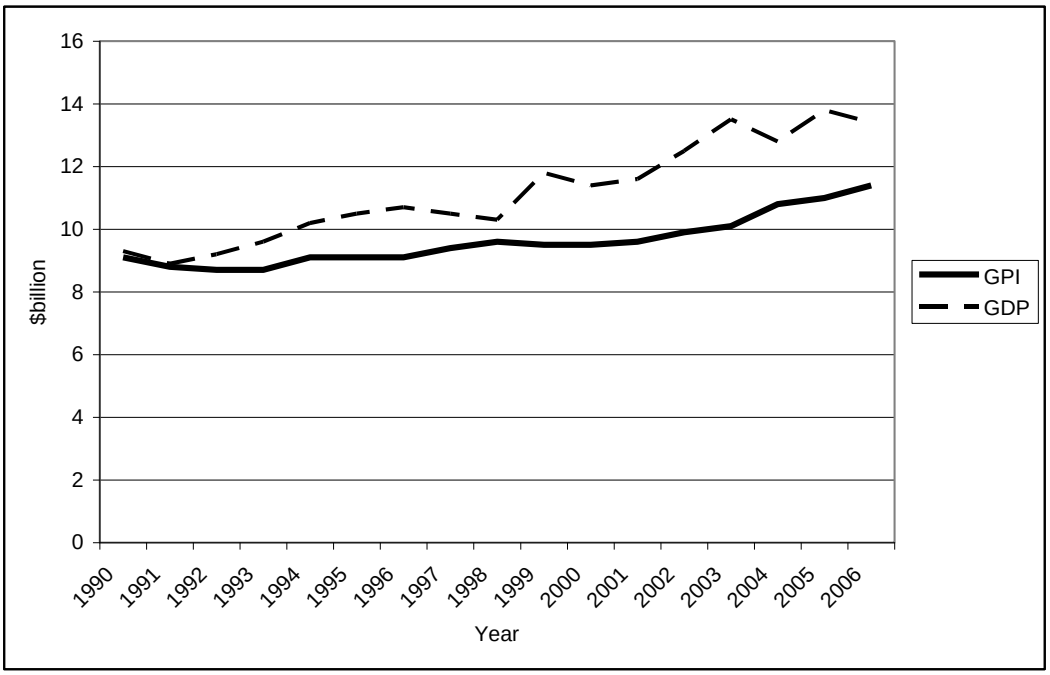
The 2010 EERNZ/Market Economics study represents a first step in creating a GPI for the Waikato Region, using and building on the methodology used for the National GPI.. The study is unique in that it is among the first fully evaluated GPIs to be developed within the New Zealand context. Moreover, it is among only a few sub-national GPI to be developed globally. It also builds on past efforts aimed at improving measurement of national well-being or genuine progress. It represents a first, and preliminary, step in measuring genuine progress in the Waikato Region. There are a number of outstanding theoretical, methodological and empirical issues with the Waikato Region GPI which were beyond the scope of the 2010 study but which future work may address. In collaboration with MARCO, the Waikato Regional Council is working together with Auckland Council and Greater Wellington Regional Council to enhance the GPI methodology.

Another indicator similar to the GPI concept is the '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 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 2003-2004:

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

Figure 3.1.1a: Waikato Region Real GPI and Real GDP 1990-2006



Source: Ecological Economics Research New Zealand (EERNZ) and Market Economics (2010) 'A Genuine Progress Indicator for the Waikato Region: Summary Report', prepared for Waikato Regional Council, June 2010.
Note: Figures are expressed in 2006 $billions.

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 earnings for those in paid employment
3.2.4 Number of businesses and employees by industry
3.2.5 Building consents

How are we doing?

- Based on estimates by Statistics New Zealand, the Waikato Region contributed approximately $16.2 billion or 8.5% of national GDP in 2010. Based on the National Bank's Regional Economic Activity Index, the Waikato Region has tended to slightly outperform national average economic growth over much the period since the late 1980s. Following a relatively lengthy period of sustained growth, the rate of economic growth entered a recessionary period during 2008-2009. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. As at September 2011, annual average percent growth in economic activity was estimated at 0.1% for the Waikato Region and 0.6% for New Zealand.
- 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 8.6% in the March 2012 quarter. Latest figures reflect a general economic slow-down during the period 2008-2012.
- Real median weekly earnings for those in paid employment in the Waikato Region are slightly below the national average, with a value of $783 as at June 2012. After adjusting for inflation, median weekly earnings for those in paid employment in the Waikato Region have increased by about 8% since 1998. Median weekly earnings for males in paid employment as at June 2012 were $951 and for females $624.
- The number of business units in the Waikato Region increased from 43,352 in 2000 to 50,764 in 2012, though the number has been shrinking over the last few years. The rate of growth in the number of business units in the Region has been slightly slower than the national average over this period. There is a similar pattern for employee counts, with the number of employees in the Region increasing from 132,790 in 2000 to 166,770 in 2012. For the Waikato Region, the employee count grew 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 service oriented industries are focused around Hamilton City.
- Since mid-2007 there has been a general decline in the trend for the number of new housing units. According to Statistics New Zealand figures, for the Waikato Region there were 1,717 building consents issued in the year to February 2012, increasing to 1,865 for the year to February 2013.

	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.

In 2006, Statistics New Zealand (SNZ) ran a feasibility study and published experimental regional GDP statistics for 2000–03. This 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. Following the success of this study, in June 2013 Statistics New Zealand released regional GDP data for the period 2007-10.

Table 3.2.1a shows that the Waikato Region contributed approximately $16.2 billion or 8.5% of national GDP in 2010. According to Statistics New Zealand's estimates, Waikato regional GDP grew steadily in 2007/08 and 2008/09, with annual growth rates of 6.6% and 4.7% respectively, but then slumped in the year to March 2010.

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 slightly outperform national average economic growth over much the period since the late 1980s. Following a relatively lengthy period of sustained growth, the rate of economic growth entered a recessionary period during 2008-2009. An economic recovery appeared to have begun during the latter half of 2010, but initial gains have not been maintained. As at September 2011, annual average percent growth in economic activity was estimated at 0.1% for the Waikato Region and 0.6% for New Zealand as a whole.

Additional data is now also available through regular updates from Waikato Regional Council's Regional Economic Model. According to the latest results, Waikato Gross Regional Product was $16.5 billion for the year ended March 2011. This is about 8.5 per cent of New Zealand's GDP. Labour productivity, or value added per full-time equivalent employee in the Waikato Region was NZ$82,700. The largest industries contributing towards GDP in the Waikato region in 2009/10 were: dairy cattle farming, business services, construction, health and community services.

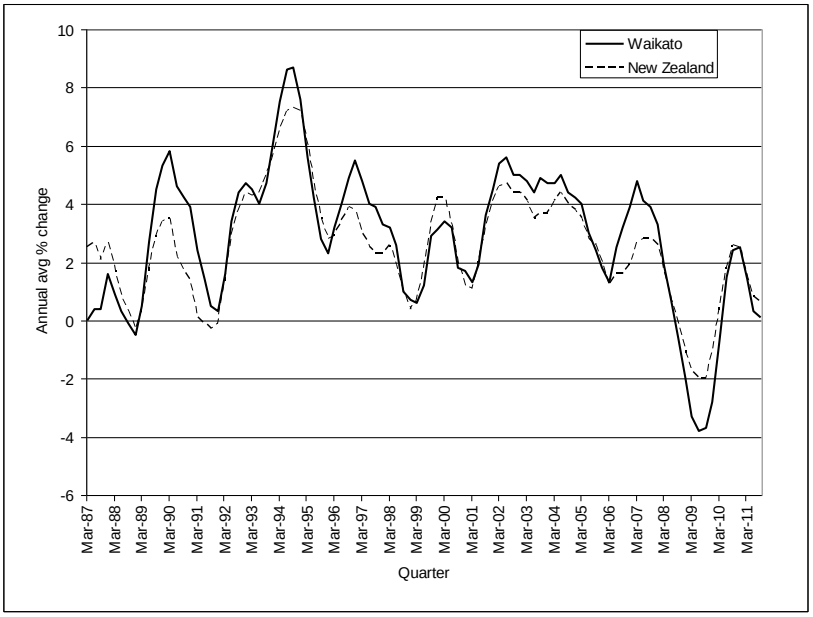
Annual GDP estimates for the Waikato Region are presented in a recent report titled 'A Genuine Progress Indicator for the Waikato Region: Summary Report', June 2010: www.choosingfutures.co.nz/Publications). The results, in Figure 3.2.1c, show that the Waikato regional economy grew by an average 4% per annum over the period 1990 to 2007. Regional GDP hit a plateau during the early 1990s, largely attributable to a period of relatively slow economic growth and recession following the central and local government reforms of 1984 to 1993. More recent results would likely show another plateau following the 2008/09 global financial crisis. Note that the results from this source are not necessarily comparable with the NBNZ data series.

Table 3.2.1a: Regional GDP estimates

	2007	2008	2009	2010
Northland	4,972	5,198	5,415	5,323
Auckland	61,713	65,896	65,016	66,347
Waikato	14,621	15,589	16,321	16,150
Bay of Plenty	8,884	9,567	9,523	9,859
Gisborne	1,271	1,321	1,381	1,413
Hawke's Bay	5,310	5,182	5,375	5,478
Taranaki	5,417	7,982	8,354	7,959
Manawatu-Wanganui	7,123	7,660	7,523	7,978
Wellington	23,685	25,518	25,700	26,858
Tasman / Nelson	2,967	3,164	3,198	3,356
Marlborough	1,655	1,873	1,908	1,864
West Coast	1,127	1,327	1,453	1,395
Canterbury	20,494	22,051	22,419	23,188
Otago	7,158	7,657	7,863	8,270
Southland	3,471	4,011	4,106	4,279
New Zealand GDP	169,869	183,997	185,555	189,718

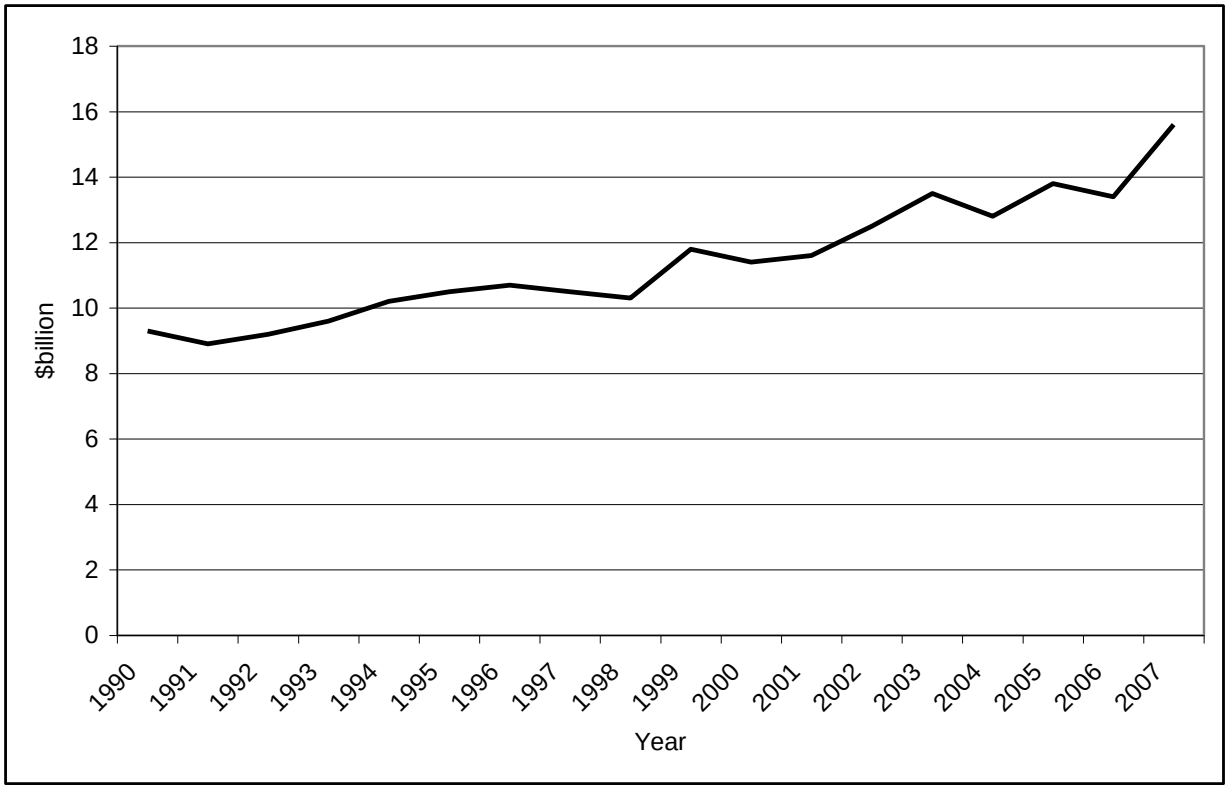
Source: Statistics New Zealand
Notes: Figures may not sum due to rounding. All figures are in current prices ($million). Timeframe is year ended March.

Figure 3.2.1b: Annual average percent growth of NBNZ index of regional economic activity, March 1987 to September 2011



Source: National Bank of New Zealand (NBNZ): Regional Trends
Note: Historical series is subject to retrospective change each quarter.

Figure 3.2.1c: Waikato Region Real GDP 1990-2006



Source: Ecological Economics Research New Zealand (EERNZ) and Market Economics (2010) 'A Genuine Progress Indicator for the Waikato Region: Summary Report', prepared for Waikato Regional Council, June 2010.
Note: Figures are expressed in 2006 $billions.

	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, sampling methods and frequency.

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).

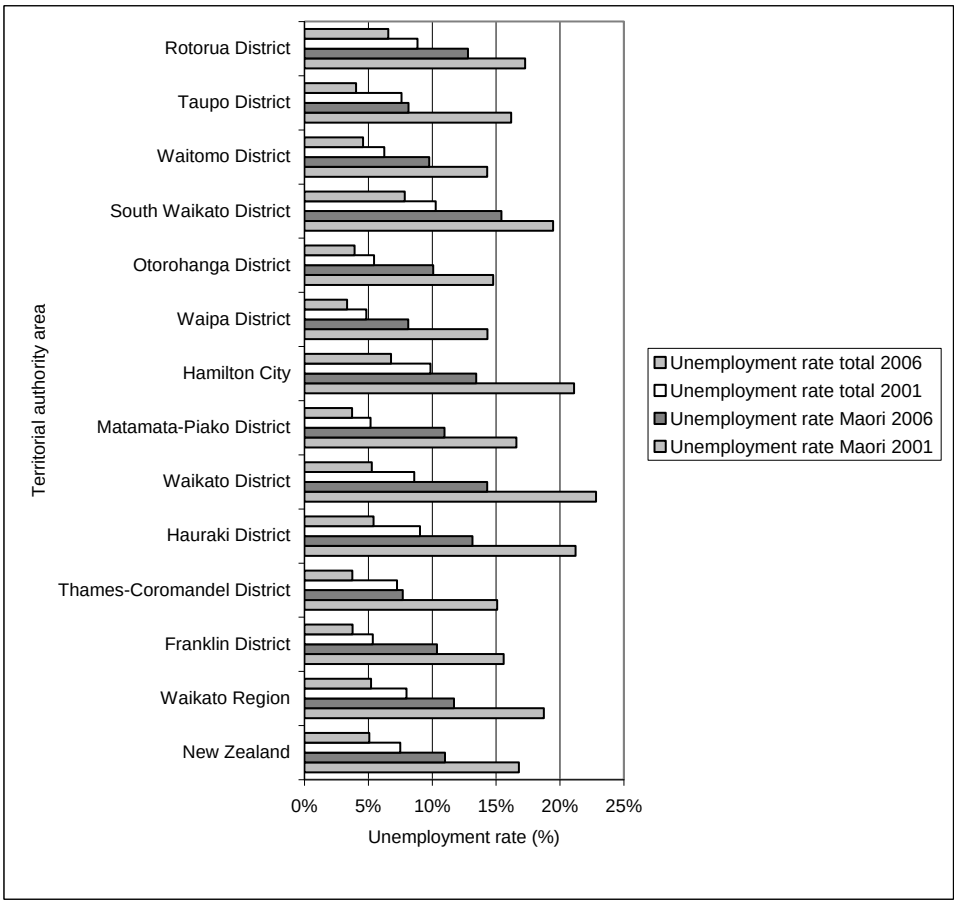
More recent estimates from the quarterly Household Labour Force Survey show that the Waikato regional unemployment rate reached a long-term low of 2.8% in December 2006 but rebounded up to 8.6% in the March 2012 quarter. The Waikato regional unemployment rate was 5.9% as at December 2012 compared to the national unemployment rate of 6.9%. These figures reflect a general economic slow-down during the period 2008-2012.

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

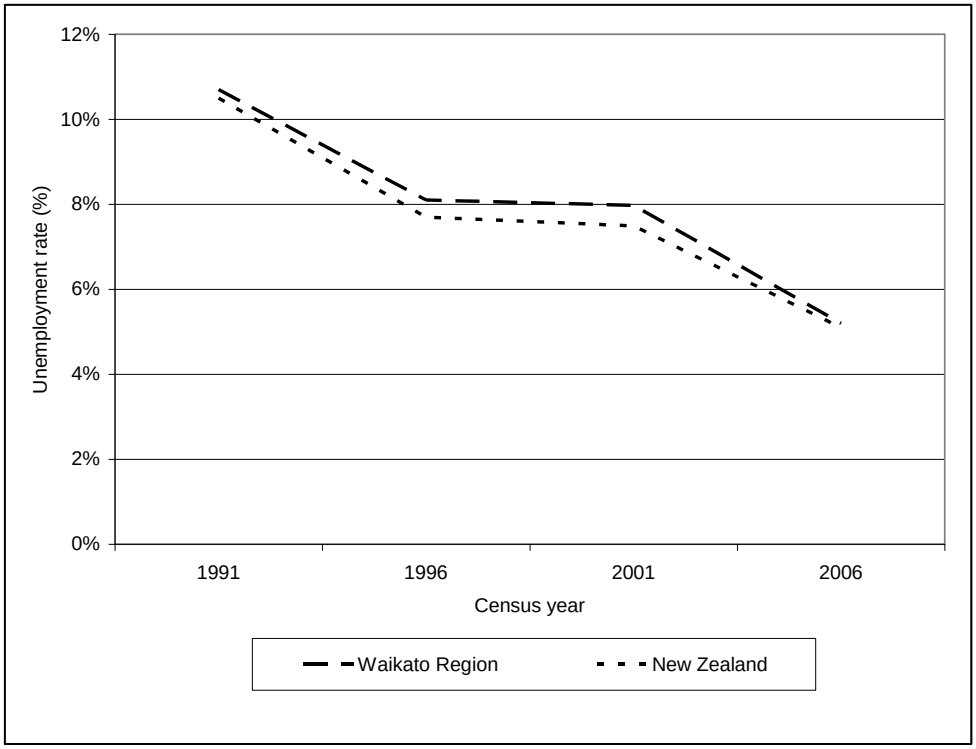
Source: Statistics New Zealand 2006 Census
Note: Census data is randomly rounded to protect confidentiality. Individual figures may not add up to totals, and values for the same data may vary in different tables.

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



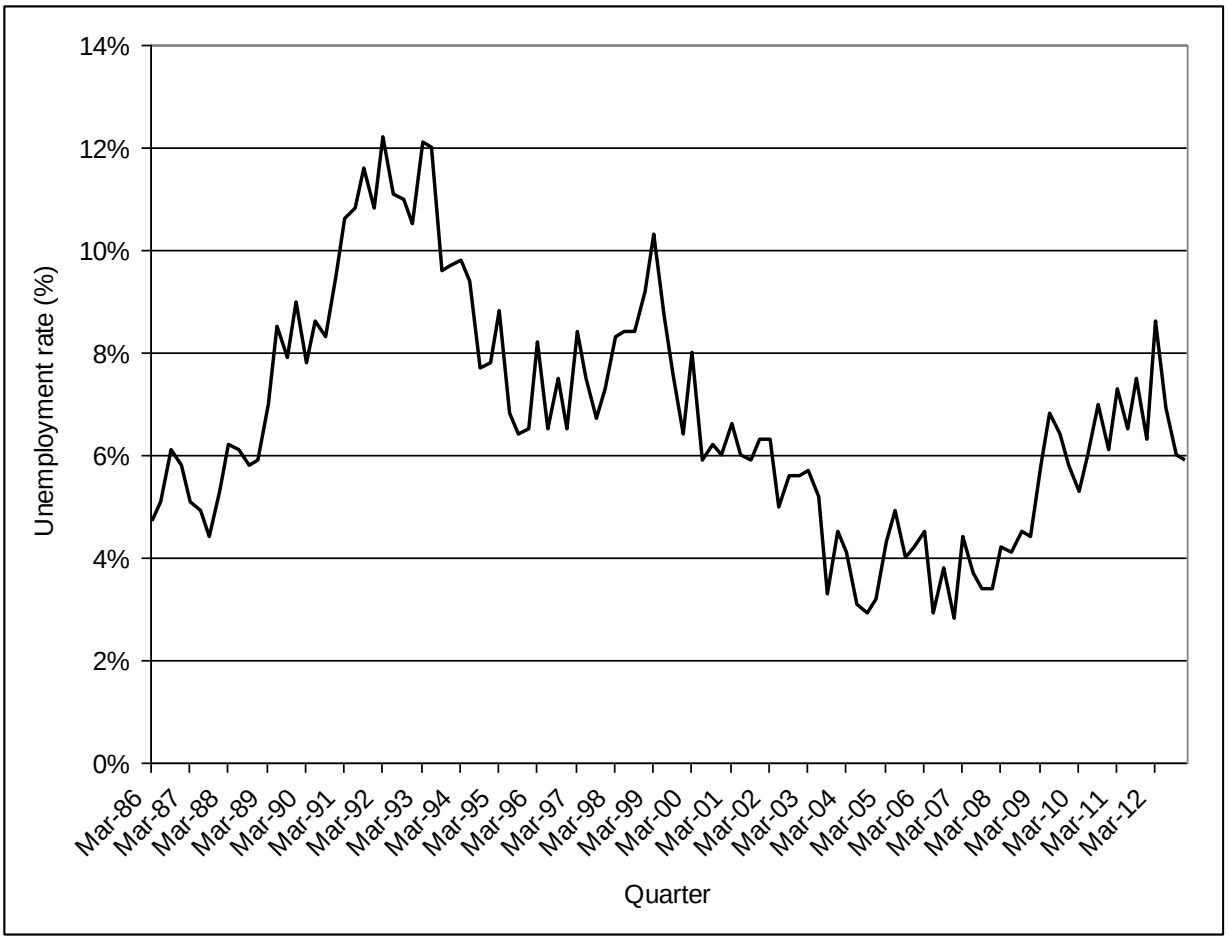
Source: Statistics New Zealand Census

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.

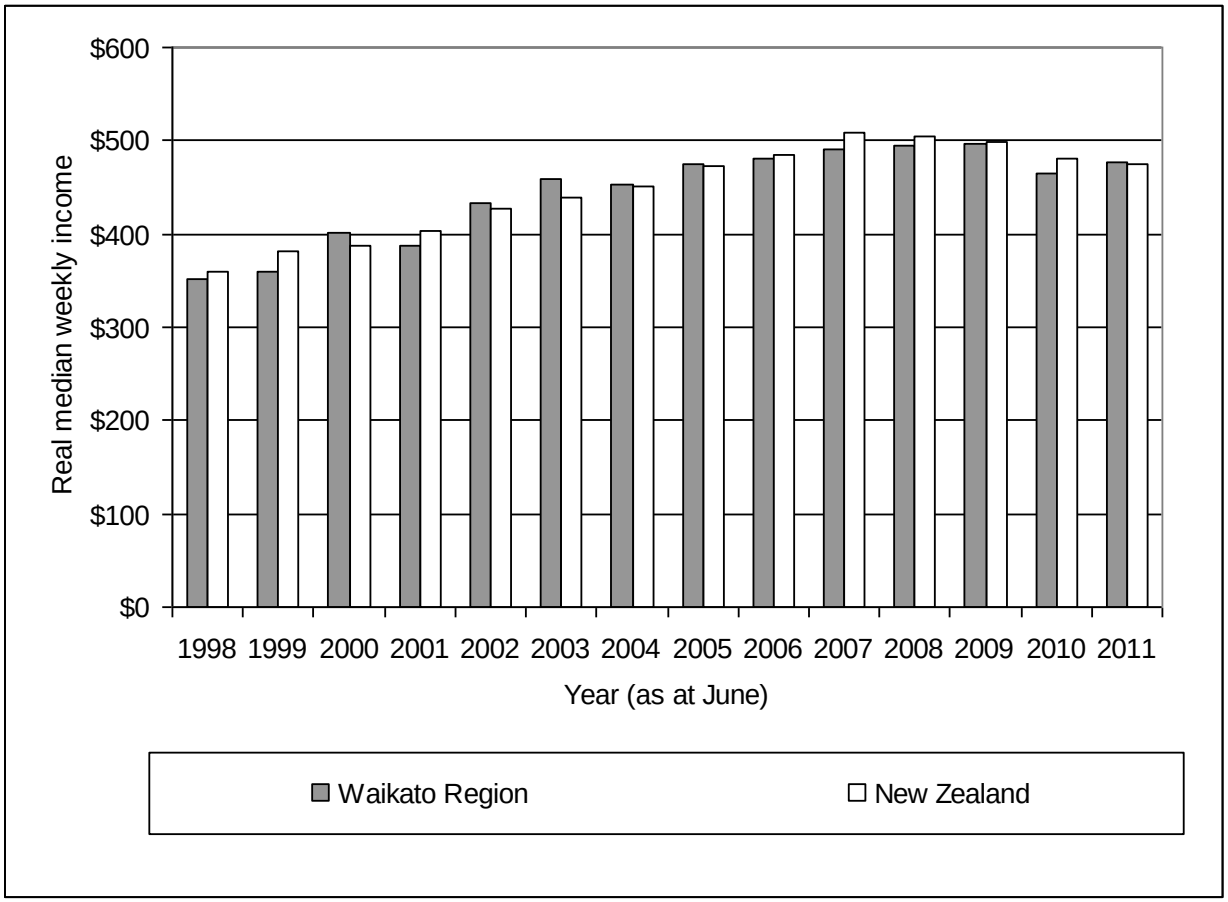
People's income is an important driver of the local economy. The disposable income, derived from weekly income minus fixed expenses, indicates what spending power people have. What people buy and consume with their income determines the health of the local economy.

Figure 3.2.3a shows that median weekly income in the Waikato Region is similar to the national average, with a value of $552 as at June 2011. After adjusting for inflation, median weekly income in the Waikato Region has increased by about 36% since 1998, however this follows a slump associated with the global financial crisis and resulting recession. Table 3.2.3b shows that the median weekly income for males as at June 2011 was $700 and for females $433. Table 3.2.3c shows there are also persistent disparities between ethnic groups, with Māori and Pacific Peoples earning a lower median weekly income than the European/Pākehā ethnic group.

New Zealand Income Survey tables on the Statistics New Zealand website also report a closely related measure, being annual estimates of median weekly earnings for those in paid employment. Data for 1998-2012 for the Waikato Region (Figure 3.2.3b and Table 3.2.3d) show that:

- Median weekly earnings for those in paid employment in the Waikato Region is slightly below the national average, with a value of $783 as at June 2012.
- After adjusting for inflation, median weekly earnings for those in paid employment in the Waikato Region has increased by about 8% since 1998.
- Median weekly earnings for males in paid employment as at June 2012 was $951 and for females $624.

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
2010	$511	$529	$671	$675	$400	$426
2011	$552	$550	$700	$700	$433	$432

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.

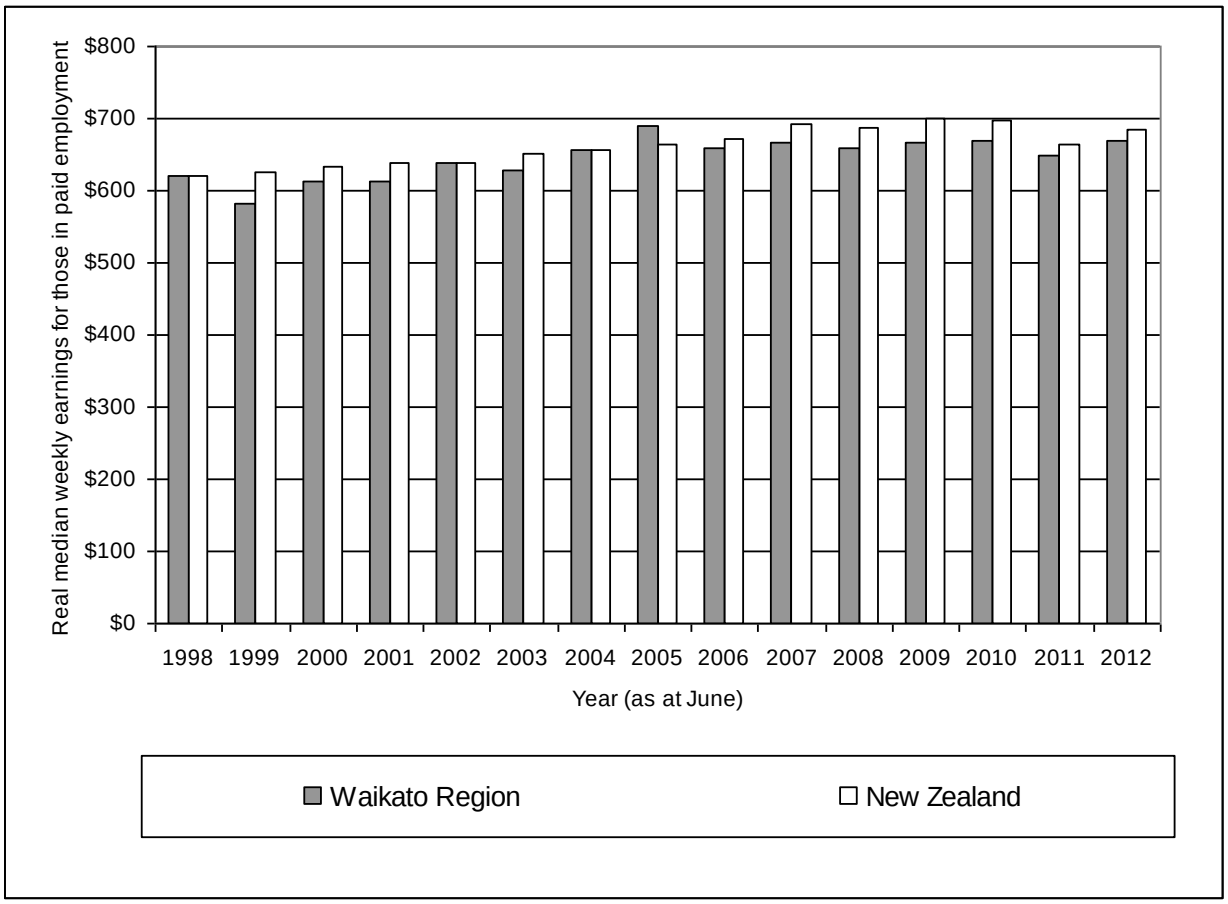
Table 3.2.3c: Median weekly income, Waikato Region and New Zealand by ethnic group

	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	$540	$569	$480	$499	$496	$455
2009	$569	$575	$484	$480	$463	$425
2010	$544	$575	$410	$458	$350	$382
2011	$583	$580	$463	$459	$345	$390

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.

Figure 3.2.3b: Real median weekly earnings for those in paid employment, Waikato Region and New Zealand (base June 2006 quarter)



Source: New Zealand Income Survey
Notes: (1) Median weekly earnings are only from those earning wages and salaries and/or self-employment income. (2) Because the New Zealand Income Survey is a sample survey, all the results are subject to sampling error. Care should be taken when interpreting movements over time.

Table 3.2.3d: Median weekly earnings for those in paid employment, Waikato Region and New Zealand by sex

	New Zealand			Waikato Region		
	Total	Male	Female	Total	Male	Female
1998	$518	$608	$400	$518	$580	$398
1999	$520	$614	$414	$484	$575	$364
2000	$537	$620	$422	$520	$590	$432
2001	$560	$652	$448	$537	$632	$421
2002	$575	$671	$456	$575	$671	$432
2003	$596	$686	$480	$575	$671	$470
2004	$614	$710	$499	$614	$720	$456
2005	$640	$750	$517	$664	$765	$500
2006	$671	$769	$546	$659	$767	$518
2007	$707	$806	$575	$681	$801	$518
2008	$729	$844	$591	$700	$814	$541
2009	$756	$863	$630	$720	$844	$600
2010	$767	$863	$649	$736	$863	$600
2011	$767	$882	$652	$750	$840	$600
2012	$800	$921	$671	$783	$951	$624

Source: New Zealand Income Survey
Notes: (1) Median weekly earnings are only from those earning wages and salaries and/or self-employment income. (2) Because the New Zealand Income Survey is a sample survey, all the results are subject to sampling error. Care should be taken when interpreting movements over time.

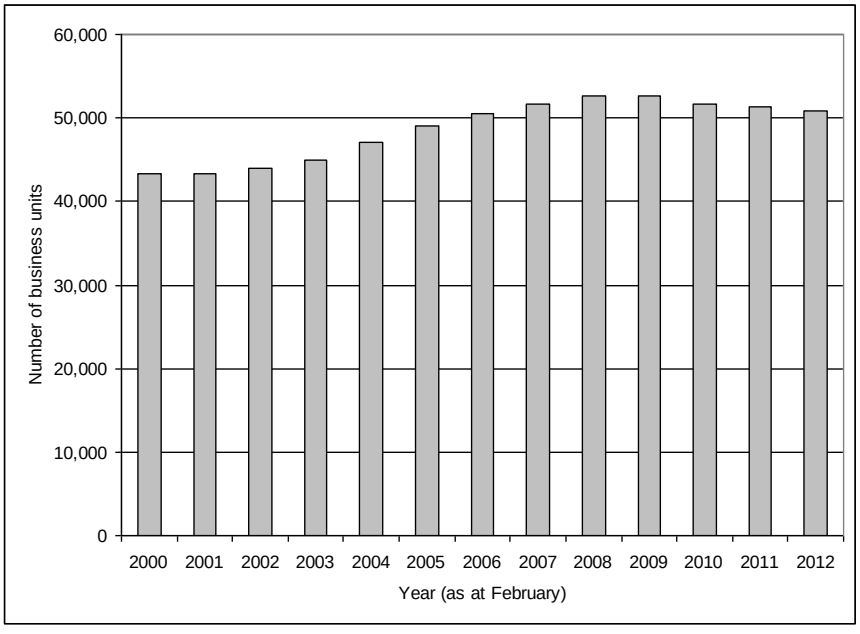
	Indicator	State	Trend
3.2.4	Number of businesses and employees by industry	😐	⇨

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.

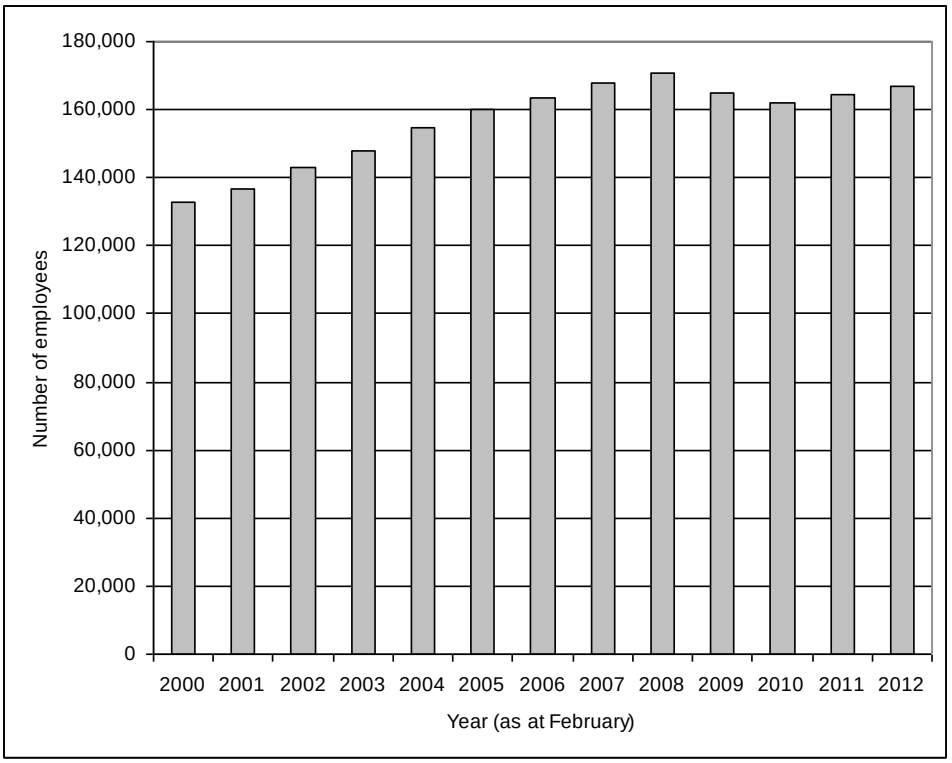
Figure 3.2.4a shows that the number of business units in the Waikato Region increased from 43,352 in 2000 to 50,764 in 2012, though the number has been shrinking over the last few years. The rate of growth in the number of business units in the Region has been slightly slower than the national average over this period. Figure 3.2.4b shows a similar pattern for employee counts, with the number of employees in the Region increasing from 132,790 in 2000 to 166,770 in 2012. For the Waikato Region, the employee count grew 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



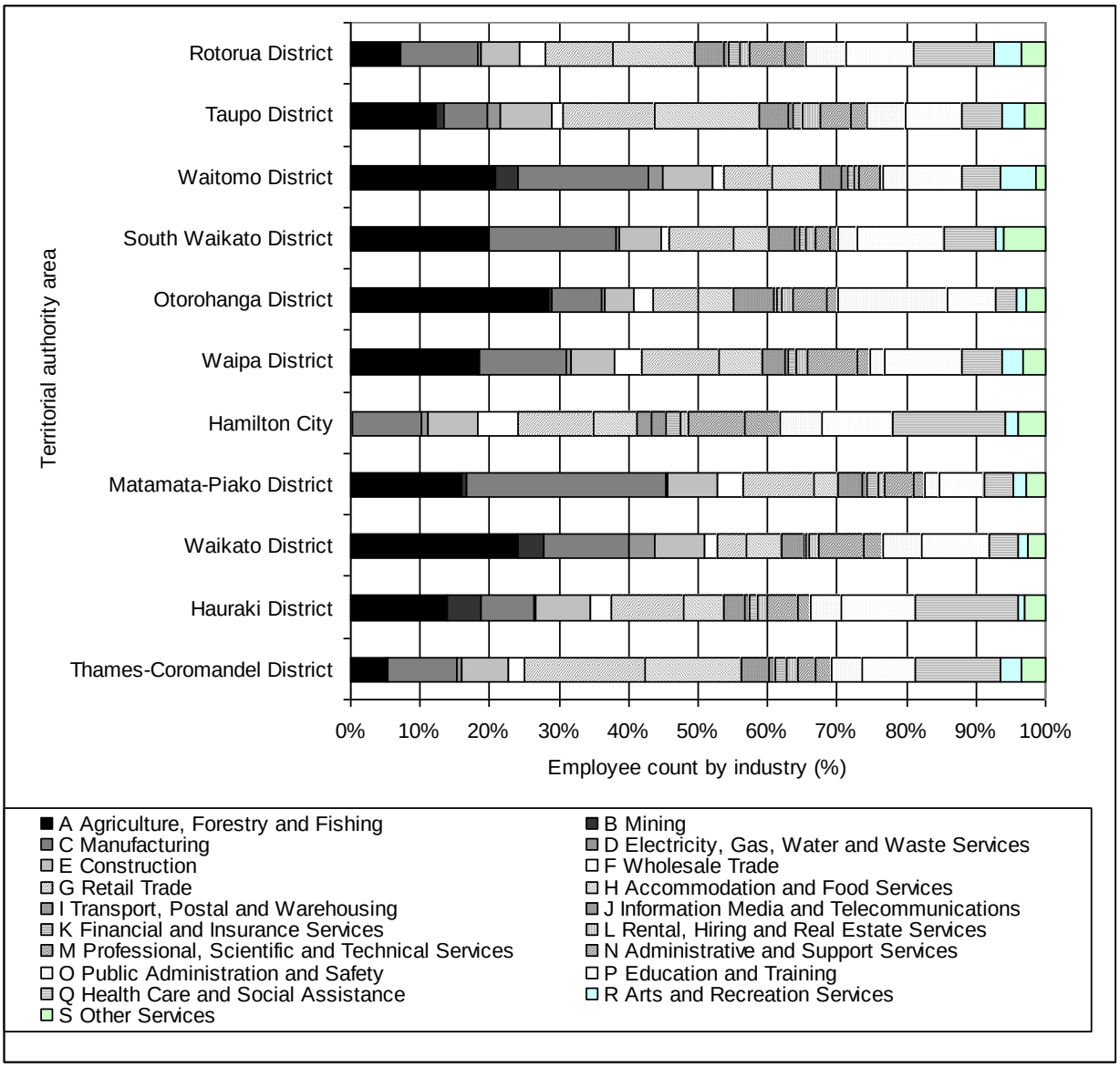
Source: Statistics New Zealand Business Tables
Notes: (a) 'Employee count' is a head-count of all salary and wage earners for the February reference month. Figures have been rounded, and discrepancies may occur between sums of component items and totals. (b) Historical series may be subject to retrospective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

Table 3.2.4c: Employee counts by industry classification (ANZSIC), Waikato Region and New Zealand 2011

ANZSIC	New Zealand	Waikato Region	New Zealand	Waikato Region
A Agriculture, Forestry and Fishing	111,100	16,030	5.8%	9.8%
B Mining	6,150	1,330	0.3%	0.8%
C Manufacturing	214,010	19,780	11.2%	12.0%
D Electricity, Gas, Water and Waste Services	13,570	1,870	0.7%	1.1%
E Construction	113,820	11,360	6.0%	6.9%
F Wholesale Trade	102,980	6,610	5.4%	4.0%
G Retail Trade	193,820	17,120	10.1%	10.4%
H Accommodation and Food Services	131,780	11,450	6.9%	7.0%
I Transport, Postal and Warehousing	80,910	4,910	4.2%	3.0%
J Information Media and Telecommunications	39,250	2,130	2.1%	1.3%
K Financial and Insurance Services	53,430	2,490	2.8%	1.5%
L Rental, Hiring and Real Estate Services	27,120	2,160	1.4%	1.3%
M Professional, Scientific and Technical Services	142,440	10,360	7.5%	6.3%
N Administrative and Support Services	92,430	5,540	4.8%	3.4%
O Public Administration and Safety	107,980	8,210	5.7%	5.0%
P Education and Training	170,440	15,780	8.9%	9.6%
Q Health Care and Social Assistance	206,520	17,720	10.8%	10.8%
R Arts and Recreation Services	37,730	3,590	2.0%	2.2%
S Other Services	64,410	5,760	3.4%	3.5%
Total Industry	1,909,900	164,180	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 2010



Source: Statistics New Zealand Business Tables
Notes: ANZSIC = Australian and New Zealand Standard Industrial Classification.

	Indicator	State	Trend
3.2.5	Building consents	😐	⇩

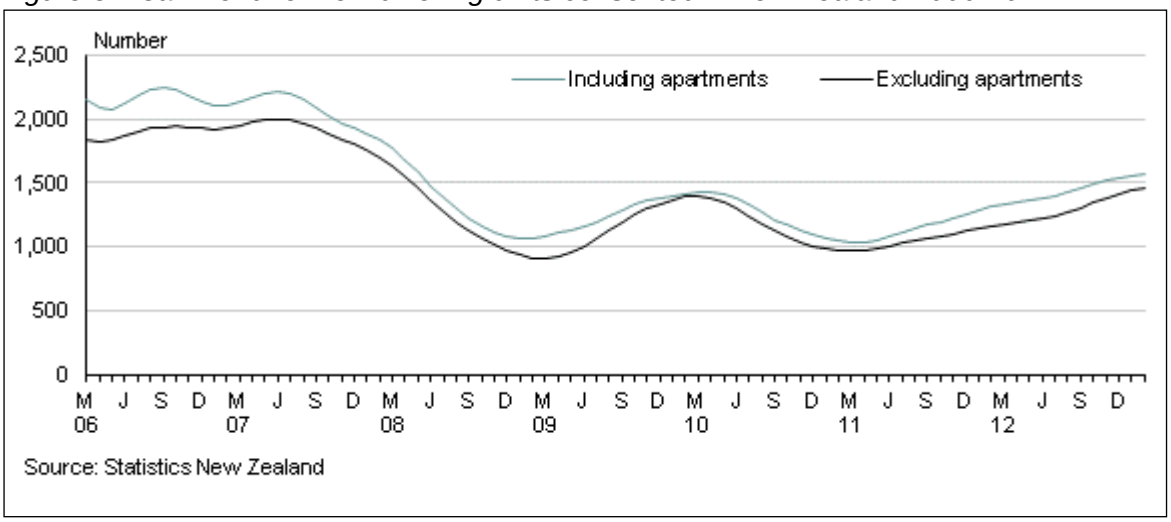
This indicator provides a monthly measure of the number and value of all building consents issued in a territorial authority area that have a value of $5,000 or higher.

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.

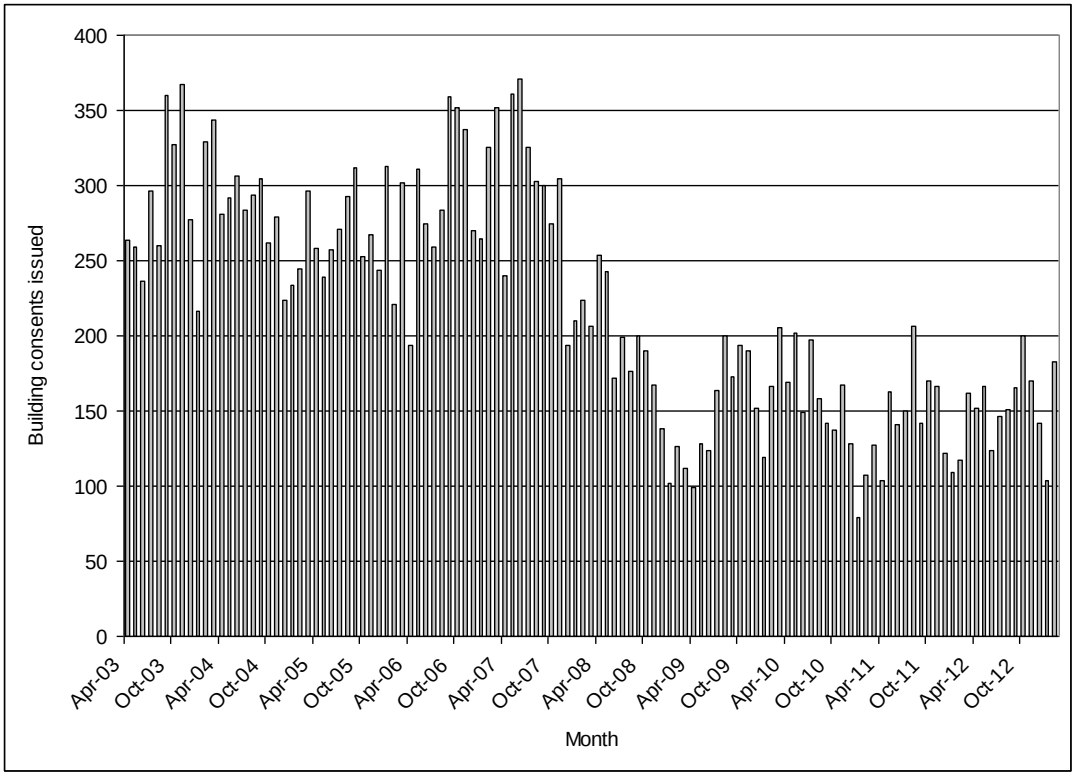
Figure 3.2.5a shows that since June 2007 there has been a general decline in the number of new housing units. According to Statistics New Zealand, the trend for the number of new dwellings, including apartments, has increased by 53 percent since the most recent low point in March 2011. Figure 3.2.5b shows that for the Waikato Region there were 1,717 building consents issued in the year to February 2012, increasing to 1,865 for the year to February 2013. Figure 3.2.5c shows a similar pattern for most territorial authority areas in the Region. Much of the partial regional recovery during 2009 to 2012 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 councils themselves.

Figure 3.2.5a: Trend for new dwelling units consented – New Zealand 2006-2012



Source: Statistics New Zealand

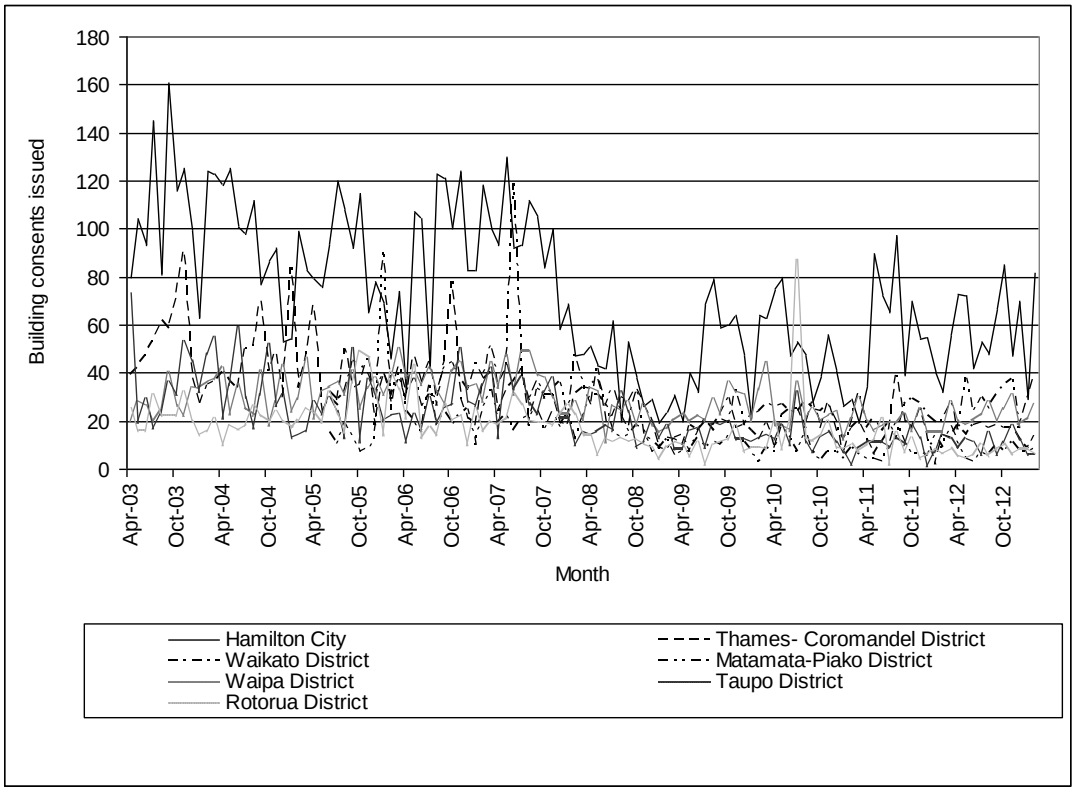
Figure 3.2.5b: Number of new dwelling units authorised – Waikato Region



Source: Statistics New Zealand

Note: On 1 November 2010, part of the former Franklin district was reassigned from the Auckland region to the Waikato region. This change is included in data from January 2011.

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.

A substantial proportion of water supplies in the Waikato Region remained ungraded as at April 2013. Of the supplies in the Waikato Region that had a grading listed on the Drinking Water website as at April 2013, the most numerous 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 2013 updates of this report, a number of areas had their water gradings changed on the Drinking Water website. These are shown in Table 3.3.1b.

Table 3.3.1a: Public health grading for community water supplies by territorial authority, as at April 2013

Territorial Authority	Zone	Grade
Hamilton City	Greenhill Road	Au
Hamilton City	Hamilton City	Aa
Hamilton City	Powells Road	Au
Hamilton City	Ruakura/Ryburn Road	Au
Hamilton City	SH26, Morrinsville Road	Au
Hamilton City	Templeview	Aa
Hauraki District	Kaihere School	Uu
Hauraki District	Kaimanawa	Uu
Hauraki District	Karangahake	Uu
Hauraki District	Kerepehi	Uu
Hauraki District	Mackaytown	Uu
Hauraki District	Ohinemuri	Uu
Hauraki District	Paeroa	Ec
Hauraki District	Turua	Uu
Hauraki District	Waihi	Uu
Hauraki District	Waikino	Uu
Hauraki District	Waimata School	Uu
Hauraki District	Waitakaruru	Uu

Territorial Authority	Zone	Grade
Matamata-Piako District	Elstow-Waihou Combined School	Uu
Matamata-Piako District	Hinuera	Uu
Matamata-Piako District	Kereone School	Uu
Matamata-Piako District	Kiwitahi School	Uu
Matamata-Piako District	Mackay Subdivision, Waihou	Uu
Matamata-Piako District	Manawaru Playcentre	Uu
Matamata-Piako District	Manawaru School	Uu
Matamata-Piako District	Matamata	Eb
Matamata-Piako District	Morrinsville	Uu
Matamata-Piako District	Motumaoho School & Community	Uu
Matamata-Piako District	Springdale School	Uu
Matamata-Piako District	Tahuna	Uu
Matamata-Piako District	Tatua Co-operative Dairy Co Ltd	Uu
Matamata-Piako District	Tatuanui School	Uu
Matamata-Piako District	Tauhei School	Uu
Matamata-Piako District	Te Aroha	Uu
Matamata-Piako District	Te Aroha West	Uu
Matamata-Piako District	Te Poi	Uu
Matamata-Piako District	Totara Springs Christian Cent.	Uu
Matamata-Piako District	Wairere Primary School	Uu
Matamata-Piako District	Waitoa	Uu
Matamata-Piako District	Walton Primary School	Uu
Otorohanga District	Arohena	Uu
Otorohanga District	Hauturu School	Uu
Otorohanga District	Kawhia	Ee
Otorohanga District	Kio Kio School	Uu
Otorohanga District	Korakonui School	Uu
Otorohanga District	Maihiihi School	Uu
Otorohanga District	Ngutunui School	Uu
Otorohanga District	Otewa Marae	Uu
Otorohanga District	Otewa School	Uu
Otorohanga District	Otorohanga	Ee
Otorohanga District	Rakaunui Marae	Uu
Otorohanga District	Ranginui	Uu
Otorohanga District	Tihiroa	Uu
Otorohanga District	Waikeria	Ue
Otorohanga District	Waipa	Ee
South Waikato District	Arapuni	Uu
South Waikato District	Athol	Uu
South Waikato District	Carter Holt Harvey Kinleith	Uu
South Waikato District	Kuranui School	Uu
South Waikato District	Lichfield	Uu
South Waikato District	Lichfield School	Uu
South Waikato District	Putaruru	Ue
South Waikato District	Te Waotu School	Uu
South Waikato District	Tirau	Ed
South Waikato District	Tokoroa	Ed
Thames-Coromandel District	Colville	Uu
Thames-Coromandel District	Colville School	Uu
Thames-Coromandel District	Coroglen School	Uu
Thames-Coromandel District	Coromandel	Eb
Thames-Coromandel District	Hahei	Uu

Territorial Authority	Zone	Grade
Thames-Coromandel District	Hikuai School	Uu
Thames-Coromandel District	Hikutaia	Uu
Thames-Coromandel District	Manaia School	Uu
Thames-Coromandel District	Matarangi	Uu
Thames-Coromandel District	Matatoki	Uu
Thames-Coromandel District	Onemana	Uu
Thames-Coromandel District	Opoutere School	Uu
Thames-Coromandel District	Pauanui	Uu
Thames-Coromandel District	Puriri	Uu
Thames-Coromandel District	Tairua	Ec
Thames-Coromandel District	Tapu School	Uu
Thames-Coromandel District	Te Puru - Aputa Ave	Uu
Thames-Coromandel District	Te Puru - Unarei	Uu
Thames-Coromandel District	Te Puru School	Uu
Thames-Coromandel District	Te Rerenga	Uu
Thames-Coromandel District	Te Rerenga School	Uu
Thames-Coromandel District	Thames	Bb
Thames-Coromandel District	Thornton Bay	Uu
Thames-Coromandel District	TKK Maori O Harataunga	Uu
Thames-Coromandel District	Whangamata	Uu
Thames-Coromandel District	Whenuakite School	Uu
Thames-Coromandel District	Whitianga	Bb
Waikato District	Glen Massey School	Uu
Waikato District	Horsham Downs School and Hall	Uu
Waikato District	Huntly	Eb
Waikato District	Huntly - Rotongaro	Ed
Waikato District	Lakewood Lodge	Uu
Waikato District	Maramarua School	Uu
Waikato District	Matahuru Papakainga Marae	Uu
Waikato District	Ngaruawahia	Ee
Waikato District	North Western Dist, Waikato DC	Au
Waikato District	Ohinewai School	Uu
Waikato District	Onewhero	Uu
Waikato District	Orini Combined School	Uu
Waikato District	Pokeno	Uu
Waikato District	Port Waikato	Uu
Waikato District	Pukemiro School	Uu
Waikato District	Raglan	Ed
Waikato District	Rotokauri School	Uu
Waikato District	Ruawaro Combined School	Uu
Waikato District	Southern Districts, Waikato DC	Au
Waikato District	Taupiri	Ee
Waikato District	Taupiri - Hopu Hopu	Ee
Waikato District	Tauwhare School	Uu
Waikato District	Te Akau	Uu
Waikato District	Te Akau School	Uu
Waikato District	Te Kauri Marae	Eu
Waikato District	Te Kauwhata	Ed
Waikato District	Te Kotahitanga Marae (Waikato)	Uu
Waikato District	Te Kowhai School	Uu
Waikato District	Te Kura O Ngati Haua School	Uu
Waikato District	Te Mata School	Uu

Territorial Authority	Zone	Grade
Waikato District	Te Uku School	Uu
Waikato District	Tuakau	Uu
Waikato District	Waerenga School	Uu
Waikato District	Waingaro Hot Springs	Uu
Waikato District	Waingaro Pa	Uu
Waikato District	Waingaro School	Uu
Waikato District	Waiterimu School	Uu
Waikato District	Waitetuna School	Uu
Waikato District	Western District, Waikato DC	Au
Waikato District	Whatawhata School	Uu
Waikato District	Whitikahu School	Uu
Waipa District	Cambridge	Uu
Waipa District	Goodwood School	Uu
Waipa District	Hamilton International Airport	Eu
Waipa District	Hautapu School	Uu
Waipa District	Hora Hora School	Uu
Waipa District	Karapiro School	Uu
Waipa District	Kihikihi	Ab
Waipa District	Ngahinapouri School	Uu
Waipa District	Paterangi School	Uu
Waipa District	Pokuru School	Uu
Waipa District	Puahue School	Uu
Waipa District	Pukeatua School	Uu
Waipa District	Pukerimu Rural	Eb
Waipa District	Rukuhia School	Uu
Waipa District	Te Awamutu	Ub
Waipa District	Te Awamutu - Pirongia	Uc
Waipa District	Te Miro School	Uu
Waipa District	Te Pahu School	Uu
Waipa District	Tokanui	Uu
Waipa District	Wharepapa South School	Uu
Waipa District	Whitehall School	Uu
Waitomo District	Aria School	Uu
Waitomo District	Benneydale	Uu
Waitomo District	Kinohaku School	Uu
Waitomo District	Mapiu School	Uu
Waitomo District	Mokau, Waitomo	Uu
Waitomo District	Motiti Marae	Uu
Waitomo District	Piopio	Eb
Waitomo District	Piripiri School	Uu
Waitomo District	Pureora	Uu
Waitomo District	Rangitoto School	Uu
Waitomo District	Taharoa	Uu
Waitomo District	Te Ahoroa Marae	Uu
Waitomo District	Te Kuiti	Eb
Waitomo District	Te Wharekura O Oparure	Uu
Waitomo District	Waitomo Caves	Ee
Waitomo District	Whareorino School	Uu
Rotorua District	Atiamuri Playcentre	Uu
Rotorua District	Brunswick 4	Uu
Rotorua District	Brunswick Park 1	Uu
Rotorua District	East Rd Broadlands	Uu

Territorial Authority	Zone	Grade
Rotorua District	Hamurana	Eb
Rotorua District	Kaharoa	Eu
Rotorua District	Horohoro School	Uu
Rotorua District	Kaingaroa	Ee
Rotorua District	Lakes Ranch	Uu
Rotorua District	Mamaku	Da
Rotorua District	Ngakuru School	Uu
Rotorua District	Ngongotaha	Da
Rotorua District	Okataina Ed.& Rec.Trust Camp	Uu
Rotorua District	Okawa Bay Resort	Uu
Rotorua District	Paradise Valley	Uu
Rotorua District	Parklands Estate	Uu
Rotorua District	Rainbow Springs	Uu
Rotorua District	Reporoa	Ec
Rotorua District	Rerewhakaaitu School	Uu
Rotorua District	Rotoiti	Db
Rotorua District	Rotoma	Ea
Rotorua District	Rotorua Central	Ua
Rotorua District	Rotorua East	Ec
Rotorua District	Tarawera Community Supply	Uu
Rotorua District	Te Takinga Marae	Uu
Rotorua District	Te Wairoa Buried Village	Uu
Rotorua District	Tui Ridge Park	Uu
Rotorua District	Tumunui Complex	Uu
Rotorua District	Upper Atiamuri School	Uu
Rotorua District	Waikite Hotpool Complex	Uu
Rotorua District	Waikite Valley School	Uu
Rotorua District	Waimangu Volcanic Valley	Uu
Rotorua District	Waiotapu School Camp	Uu
Rotorua District	Waiotapu Thermal Wonderland	Uu
Rotorua District	Waipa Sawmill	Uu
Rotorua District	Whangamarino School	Uu
Taupo District	Acacia Bay	Ed
Taupo District	Atiamuri Village	Uu
Taupo District	Bonshaw Park	Uu
Taupo District	Braxmere Lodge	Uu
Taupo District	Centennial Drive	Uu
Taupo District	Hatepe Village	Uu
Taupo District	Hautu Prison	Du
Taupo District	Kinloch	Ed
Taupo District	Kuratau Primary School	Uu
Taupo District	Lake Taupo Christian Camp	Uu
Taupo District	Mangakino	Dd
Taupo District	Marotiri School	Uu
Taupo District	Mokai	Uu
Taupo District	Motuoapa	Uu
Taupo District	Motuoapa Fishing Club	Uu
Taupo District	Motuoapa Lodge	Uu
Taupo District	Motutere Camping Ground	Uu
Taupo District	Omori/Kuratau/Pukawa	Uu
Taupo District	Rangipo Prison and Village	Uu
Taupo District	Rangitaiki Primary School	Uu

Territorial Authority	Zone	Grade
Taupo District	River Rd Reporoa	Uu
Taupo District	St Pauls Tihoi Venture School	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	Waihaha Rural Area	Uu
Taupo District	Wairakei Resort & SH1 Dvlpmt	Uu
Taupo District	Waitahanui	Uu
Taupo District	Waitahanui Primary School	Uu
Taupo District	Whakamaru	Uu
Taupo District	Whakamaru Settlers Hall	Uu
Taupo District	Whakamoenga Point	Uu
Taupo District	Whareroa	Uu

Source: 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*

Table 3.3.1b: Changes to public health grading for selected community water supplies between 2009 and 2013

Territorial Authority	Zone	2009 Grade	2013 Grade
Hamilton City	Templeview	Ab	Aa*
Hauraki District	Paeroa	Uu	Ec*
Otorohanga District	Otorohanga	Uu	Ee*
Otorohanga District	Waikeria	Uu	Ue***
Otorohanga District	Waipa (River)	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	North Western Dist	Uu	Au****
Waikato District	Te Kauwhata	Uu	Ed*
Waikato District	Western District	Uu	Au****
Waipa District	Te Awamutu	Eb	Ub****
Waipa District	Te Awamutu – Pirongia	Ec	Uc****
Waitomo District	Piopio	Uu	Eb****
Rotorua District	Hamurana	Ee	Eb*
Rotorua District	Kaharoa	Ee	Eu****
Rotorua District	Kaingaroa	Uu	Ee****
Rotorua District	Okareka	Uu	Da*
Rotorua District	Reporoa	Uu	Ec*
Rotorua District	Rotoma	Uu	Ea****
Rotorua District	Rotorua Central	Ee	Ua**
Rotorua District	Rotorua East	Ee	Ec*

Source: 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.

* = grading updated on Drinking Water website between June 2009 and April 2010.

** = grading updated on Drinking Water website between April 2010 and March 2011.

*** = grading updated on Drinking Water website between March 2011 and February 2012.

**** = grading updated on Drinking Water website between February 2012 and April 2013.

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.

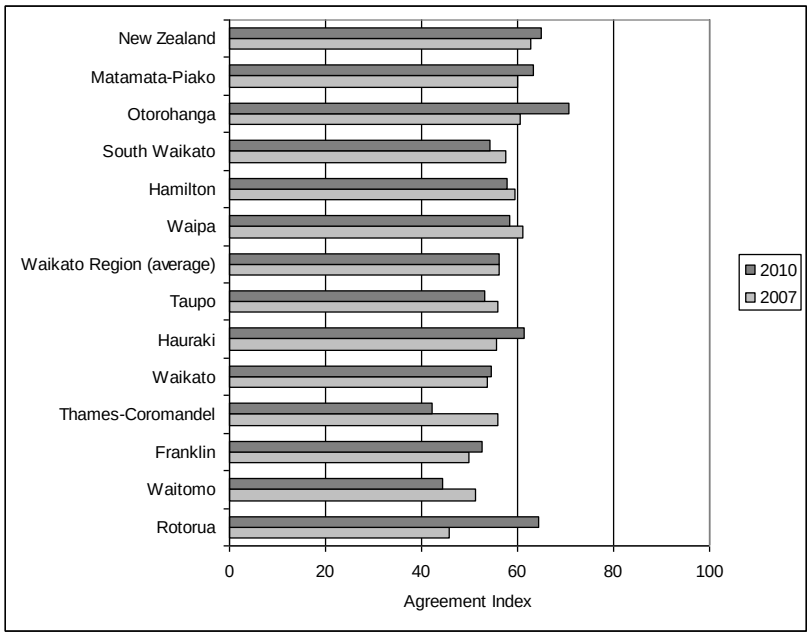
	Indicator	State	Trend
3.4.1	Residents' confidence in councils' decision-making	😐	?

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.

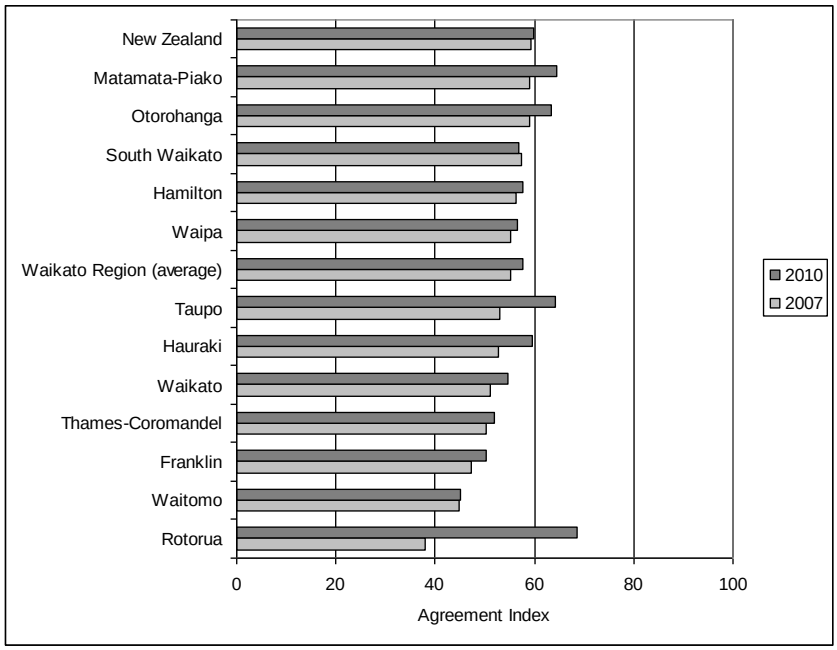
Data for this indicator was previously only available for major metropolitan areas such as Hamilton. Baseline data for Waikato regional communities was collected through the 2007 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010. 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…. (a) Overall, you understand how your Council makes decisions; (b) You have enough say in what your Council does; (c) Overall, you have confidence that the Council makes decisions that are in the best interests of your district'. Over half of the respondents (52%) in 2010 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). The Agreement Index (weighted average score) ranged from 57.6 points for the statement 'Overall, you understand how your Council makes decisions' down to 50.6 for the statement 'You have enough say in what your Council does'. The factor 'Overall, you understand how your Council makes decisions' (Index 57.6) was up 2.4 points from 2007 while the factor 'You have enough say in what your Council does' (Index 50.6) was up 3.1 points. The Agreement Index for the Council Decision Making factors varied by location but the variance was greatest for the statement 'Overall, you have confidence that the Council makes decisions that are in the best interests of your district'. Thames-Coromandel respondents agreed less with this statement (Index 42.2).

Figure 3.4.1a: Confidence in Council decision making – Waikato territorial authority areas and New Zealand average



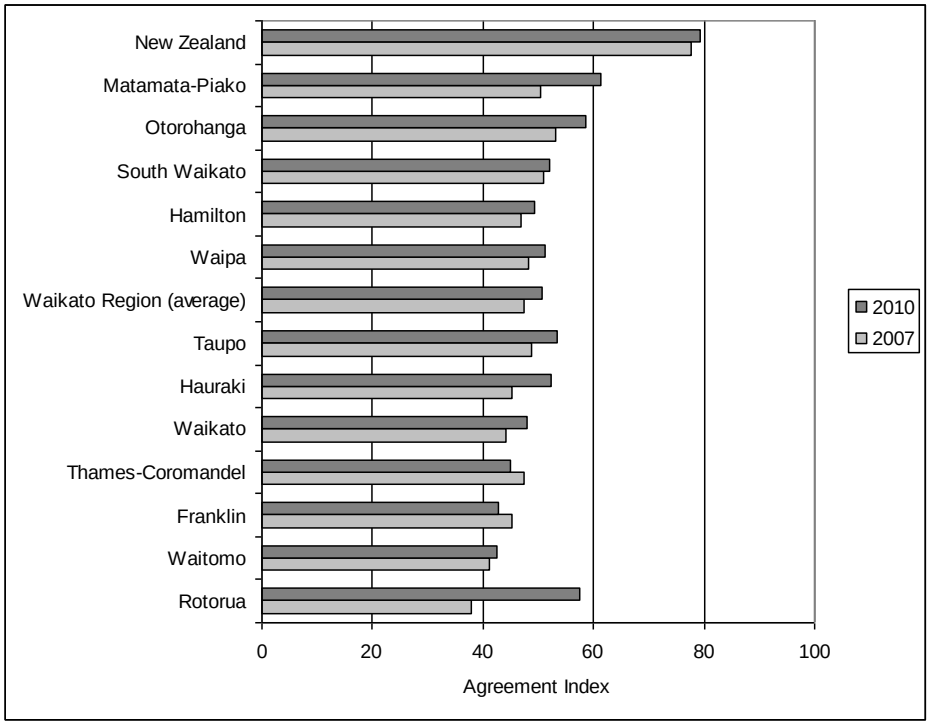
Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2008
Note 1: The Agreement Index for New Zealand was calculated as a weighted average index from a five-point scale. Results for New Zealand come from a different 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.
Note 2: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

Figure 3.4.1b: Understand how Council makes decisions – Waikato territorial authority areas and New Zealand average



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2008
Note 1: 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.
Note 2: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

Figure 3.4.1c: Have enough say in what Council does – Waikato territorial authority areas and New Zealand average



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2008

Note 1: 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.

Note 2: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

	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 2010, the Waikato Region contributed approximately 8.5% of national GDP. Of this, approximately 11.3% ($1.8 billion) was agricultural production. The proportion contributed by agriculture has increased since 2007 when it was 8.3%. The Waikato Region accounted for 20% of the national agriculture industry in 2010, the highest of any region, including 25% of New Zealand's dairy industry.

	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.

In June 2013 Statistics New Zealand released regional GDP data for the period 2007-10. This confirmed that the Waikato Region contributed approximately $16.2 billion or 8.5% of national GDP in 2010. Of this, approximately 11.3% ($1.8 billion) was agricultural production. The proportion contributed by agriculture has increased since 2007 when it was 8.3%. Agriculture and food product manufacturing dominate Waikato's economy, although the region is more diversified than other agriculture-based regions.

The dry weather conditions in 2008 and 2010 caused considerable volatility in the Waikato Region's GDP, to a greater extent than other agriculture-based regions. According to Statistics New Zealand's regional GDP report for 2007-10, the Waikato Region accounted for 20 percent of the national agriculture industry in 2010, the highest of any region, followed by Canterbury (18 percent) and Southland (10 percent).

Growth from dairy and volatility from dairy prices were also highlighted in the Statistics New Zealand 2007-10 regional GDP report. Waikato, Southland, and West Coast contributed about 25 percent, 12 percent, and 3 percent, respectively, to the country's dairy farming GDP. These regions are reliant on dairy farming as it makes up a large proportion of their economy. National dairy farming GDP fluctuated, with peaks in 2008 and 2010 and a low in 2009. This reflected the movements in world milk prices. GDP from dairy product manufacturing was also volatile in these regions, with 2008 and 2010 being low years and 2009 a peak. Compared with Southland and the West Coast, Waikato contributed a relatively higher proportion to dairy product manufacturing, which moderated large increases to dairy farming over 2007–10

Table 3.5.1: Regional GDP estimates by industry – Waikato Region – Top 5 industries (2010)

	2007	2008	2009	2010
Agriculture	1,209	2,019	1,262	1,823
Manufacturing	2,208	1,675	2,732	1,813
Forestry, fishing, mining, electricity, gas, water, and waste services	1,230	1,274	1,463	1,505
Professional, scientific, technical, administrative, and support services	919	907	952	1,050
Health care and social assistance	849	951	993	1,044

Source: Statistics New Zealand regional GDP series.
Notes: All figures are in current prices ($ million). 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 2013, including guest nights in Rotorua. The Waikato Region contributes approximately 9% of New Zealand's overall guest nights in commercial accommodation (excluding the Rotorua area). In February 2013 compared with February 2012, total monthly guest nights in New Zealand increased 1.5% to 3.26 million.
- For the year ended December 2012 there were 2.565 million international visitor arrivals to New Zealand, down 1.4% 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 $1.40 billion was spent by international and domestic visitors in the Waikato Region during 2009, up from $1.27 billion in 2004. The former Ministry of Tourism projected that by 2016 total visitor expenditure in the Region will rise to an estimated $1.604 million. However, significant changes to the global economy over the past few years mean that these forecasts need to be treated with caution.
- At the national level, an estimated 6.2% of full-time equivalent employees were directly engaged in producing goods and services purchased by tourists in 2012. No known data is available at the regional level for this indicator.

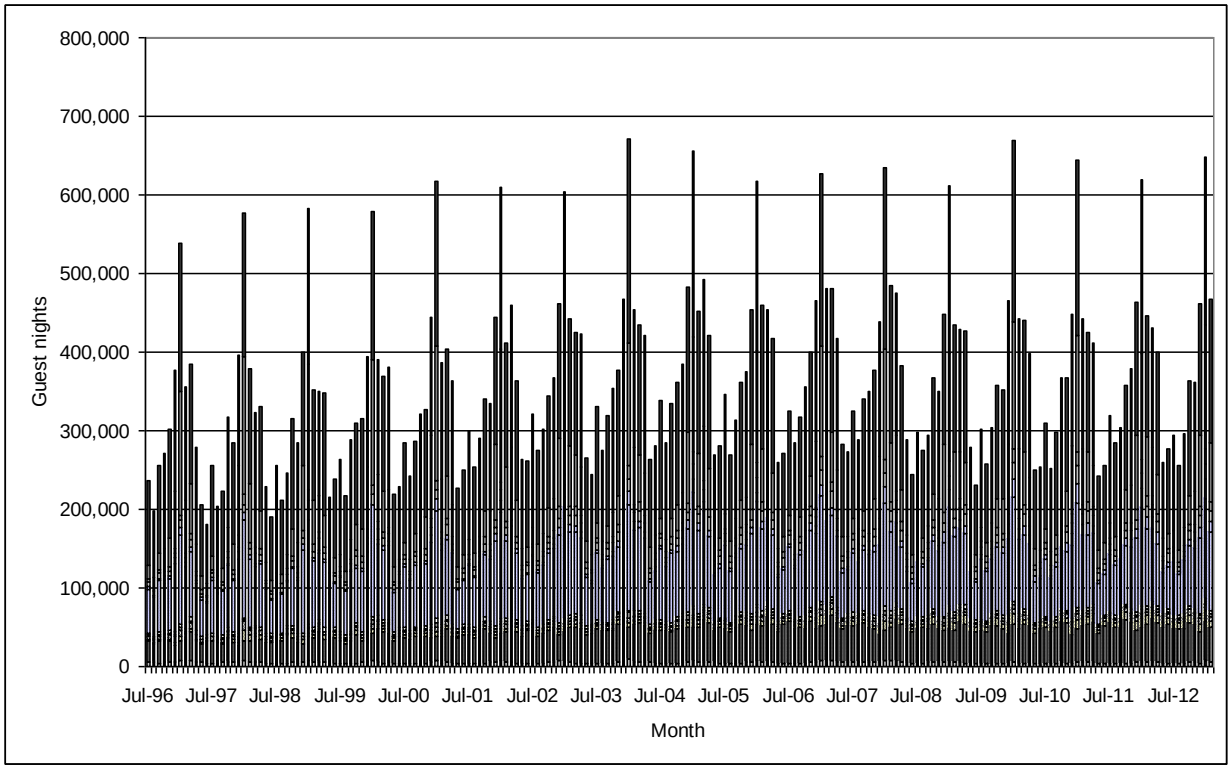
	Indicator	State	Trend
3.6.1	Visitor nights in commercial accommodation	😐	⇨

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.

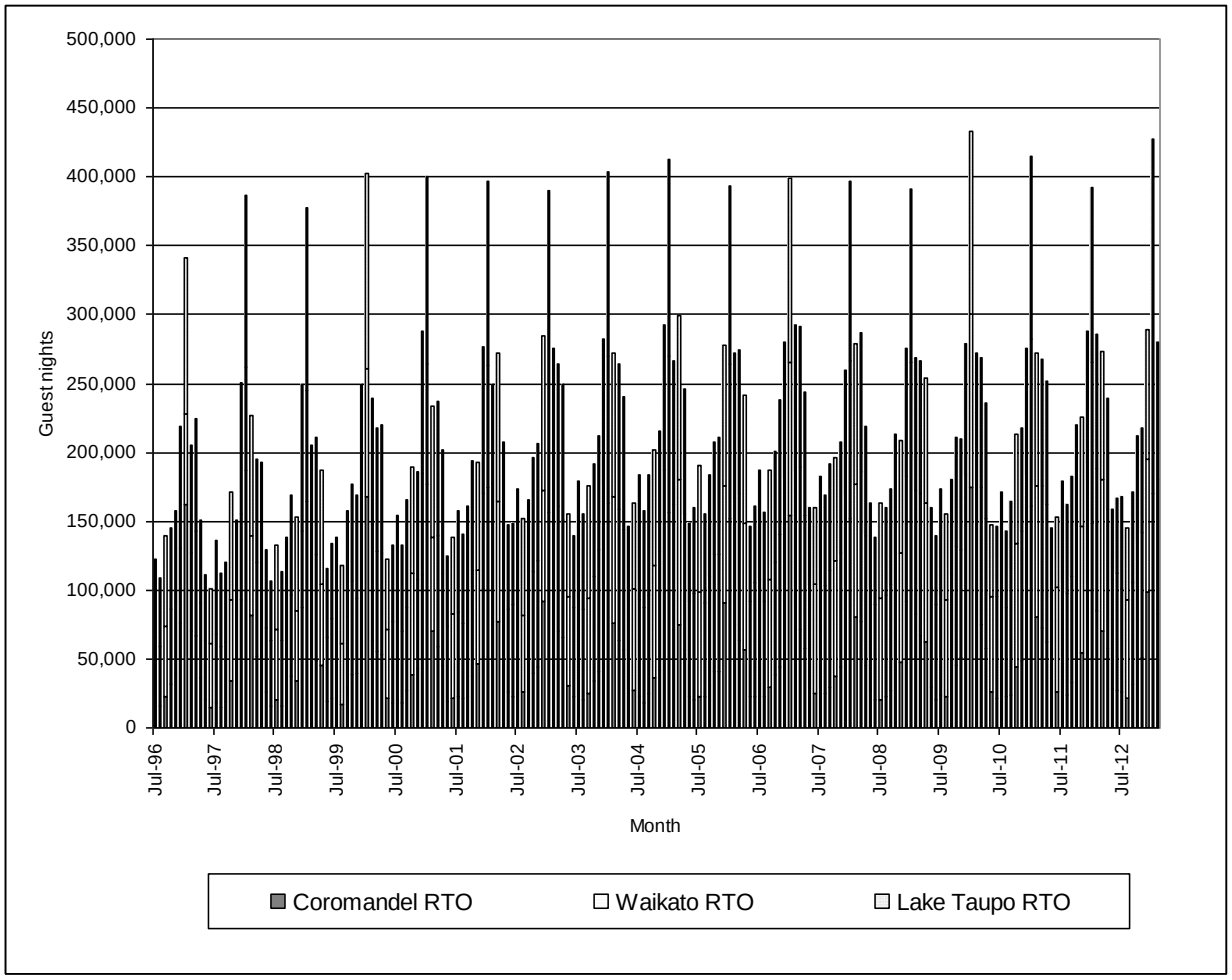
An estimated 4.5 million guest nights were recorded in commercial accommodation in the Waikato Region in the year to February 2013, including guest nights in Rotorua (refer Figure 3.6.1a). Approximately 38% of all guest nights in the Region are in the Rotorua District, of which only a small part is included within the Waikato Regional Council boundary. This is followed by 21% in the Taupo District, 14% in Thames-Coromandel and 13% in Hamilton City. There is also a high level of seasonality, with visitor nights peaking during the summer months. The Waikato Region contributes approximately 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 dropped during 2008/09 and recovered during 2009/10. In February 2013 compared with February 2012, total monthly guest nights in New Zealand increased 1.5% to 3.26 million.

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



Source: Commercial Accommodation Monitor
Notes: (a) Waikato figures are calculated as the sum of guest nights for all territorial authorities in the Region (including Rotorua). (b) Franklin District data is still reported in the Accommodation Survey pivot tables on a monthly basis (based on accommodation providers that were within the boundaries of the former Franklin District).

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



Source: Ministry of Economic Development – 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.

The Ministry of Business, Innovation and Employment's quarterly International Visitor Survey shows a six per cent drop in spending by international visitors between 2011 and 2012. According to the Ministry, year to December 2012 data showed that spending by international visitors was at its lowest since 2001. The drop in spending can be partly attributed to a 1 per cent drop in visitor numbers over the same period, as well as global economic conditions and the strong New Zealand dollar, and the 2011 impact of the Rugby World Cup.

For the year ended December 2012 there were 2.565 million international visitor arrivals to New Zealand, down 1.4% 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 since 2008 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: International Visitor Survey (IVS)

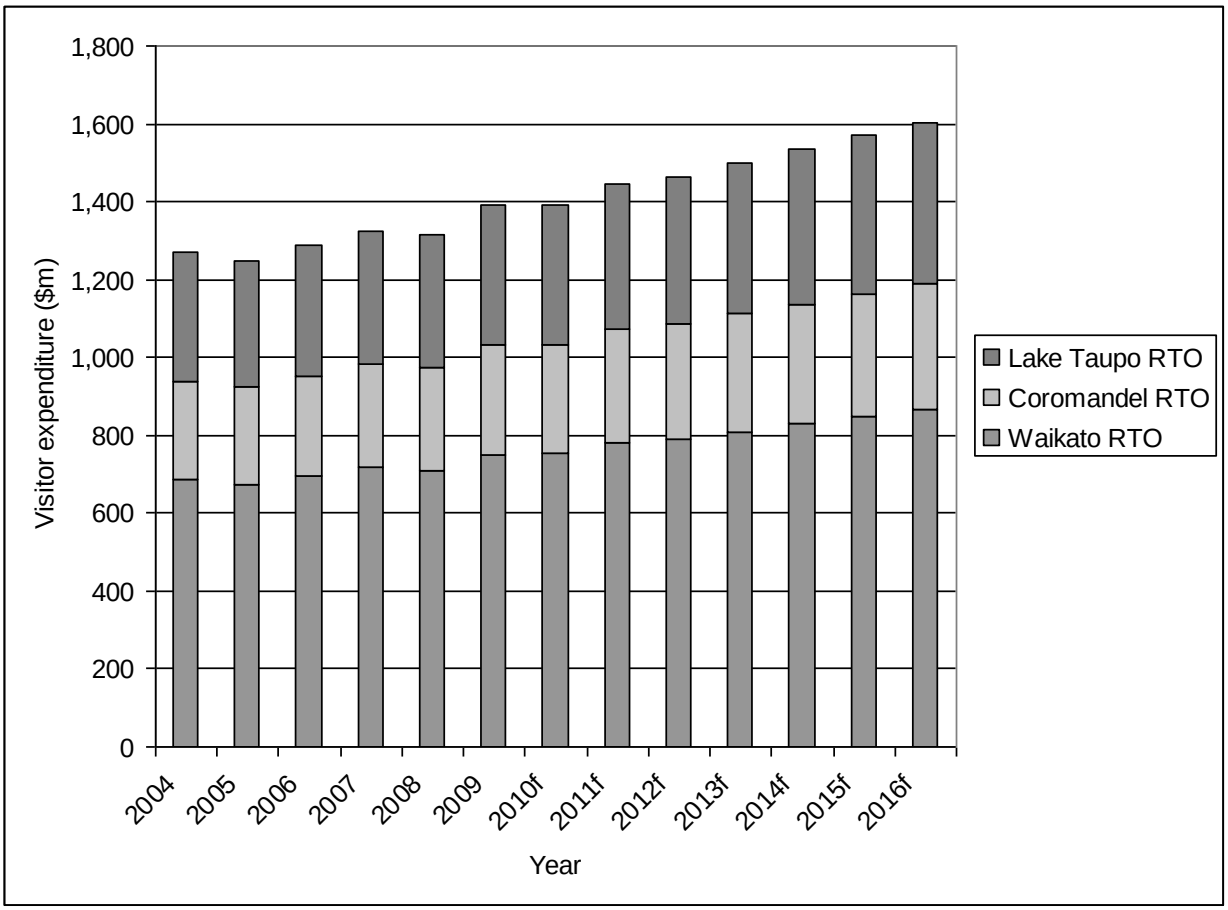
	Indicator	State	Trend
3.6.3	Income from tourism (international and domestic)	😐	?

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 2009 international and domestic travellers spent an estimated total of $752m in the Waikato Regional Tourism Organisation (RTO) area, $358m in the Lake Taupo RTO and $282m in Coromandel RTO. International overnight travellers accounted for around 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 $1.40 billion was spent by international and domestic visitors in the Waikato Region during 2009, up from $1.27 billion in 2004. The former Ministry of Tourism projected that by 2016 total visitor expenditure in the Region will rise to an estimated $1.604 million. However, significant changes to the global economy over the past few years mean that these forecasts need to be treated with caution.

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



Source: Former 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. 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.

An estimated 119,800 full-time equivalent employees (6.2% of total employment in New Zealand) were directly engaged in producing goods and services purchased by tourists for the year ended March 2012 (including education services for international students). 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

	Employment (FTE persons) engaged in tourism in New Zealand			Employment (FTE persons) engaged in tourism as a percentage of total employment in New Zealand		
Year ended March	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	104,800	61,500	166,300	6.6%	3.9%	10.4%
2002	106,800	62,300	169,100	6.5%	3.8%	10.3%
2003	111,100	64,800	175,900	6.6%	3.8%	10.4%
2004	112,200	64,900	177,100	6.4%	3.7%	10.2%
2005	113,600	64,100	177,700	6.3%	3.5%	9.8%
2006	117,800	67,000	184,800	6.3%	3.6%	9.9%
2007	119,600	67,000	186,600	6.3%	3.5%	9.8%
2008	121,900	68,500	190,400	6.4%	3.6%	10.0%
2009	124,300	69,500	193,800	6.5%	3.6%	10.1%
2010	121,000	67,400	188,400	6.4%	3.6%	9.9%
2011	120,700	67,400	188,100	6.3%	3.5%	9.8%
2012	119,800	67,100	186,900	6.2%	3.4%	9.6%

Source: Statistics 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 2012 was estimated at around $2.6 billion. This compares with $1.11 billion in 1998, an increase of 70% on an inflation-adjusted basis over a fourteen year period. R&D expenditure increased as a percentage of overall national GDP over the period 1998 to 2012. R&D expenditure was 1.27% of GDP in the 2012 reference year compared with 1.09% in 1998. Despite these increases, New Zealand's total R&D expenditure continues to be relatively low compared with other countries in the OECD. Australia's R&D expenditure made up 2.20% of GDP in 2010, and the OECD average was 2.38% for 2010. Research income by the University of Waikato increased by around 39% in real terms over the period 2002 to 2012. Research income contributed approximately 13.3% of total revenues for the University of Waikato in 2012.
- 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 2001 to 2005 but has subsequently been lower. In 2011 there were approximately 16,500 effective full-time students (EFTS enrolled at both institutes combined.

	Indicator	State	Trend
3.7.1	Total research funding	😐	⇧

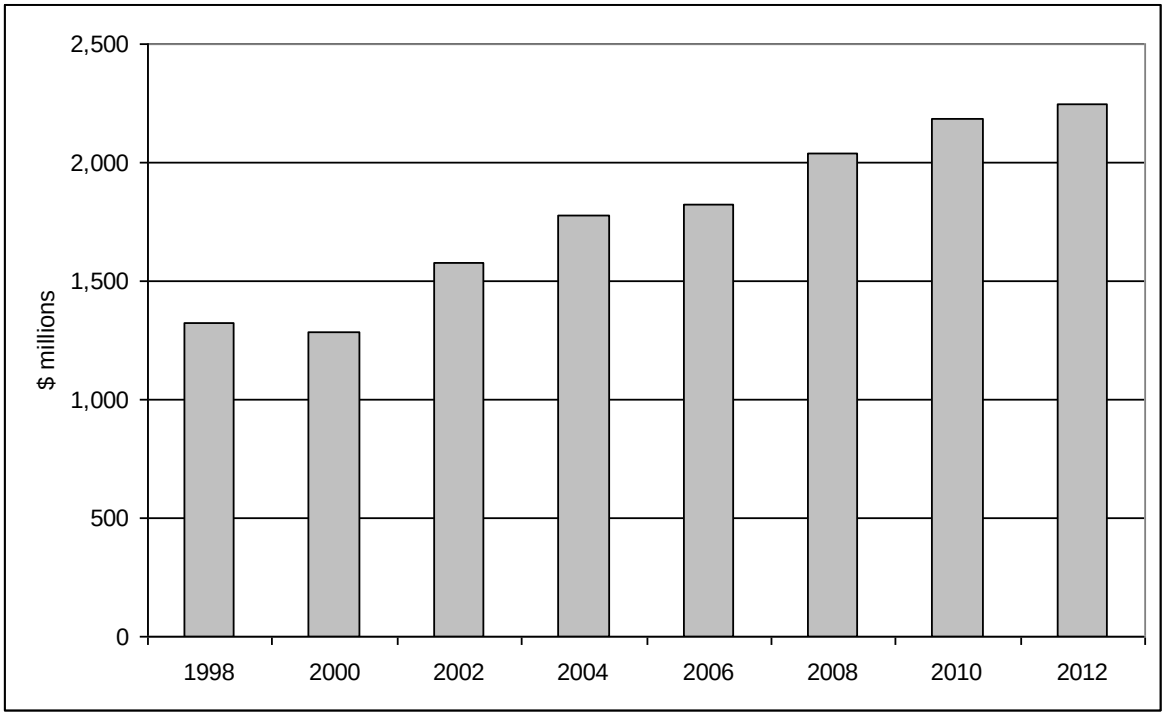
At the national level only, this indicator presents information on research and development expenditure, type of research and development by sector, and source of funding for research and development expenditure.

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 results from the 2012 New Zealand Research and Development Survey, total research and development expenditure in New Zealand was estimated at $2.6 billion (up 9 per cent from 2010). This compares with $1.11 billion in 1998, an increase of 137% in nominal terms over a fourteen year period and 70% 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 increased as a percentage of overall national GDP over the period 1998 to 2012. R&D expenditure was 1.27% of GDP in the 2012 reference year compared with 1.09% in 1998. Despite these increases, New Zealand's total R&D expenditure continues to be relatively low compared with other countries in the OECD. Australia's R&D expenditure made up 2.20% of GDP in 2010, and the OECD average was 2.38% for 2010.

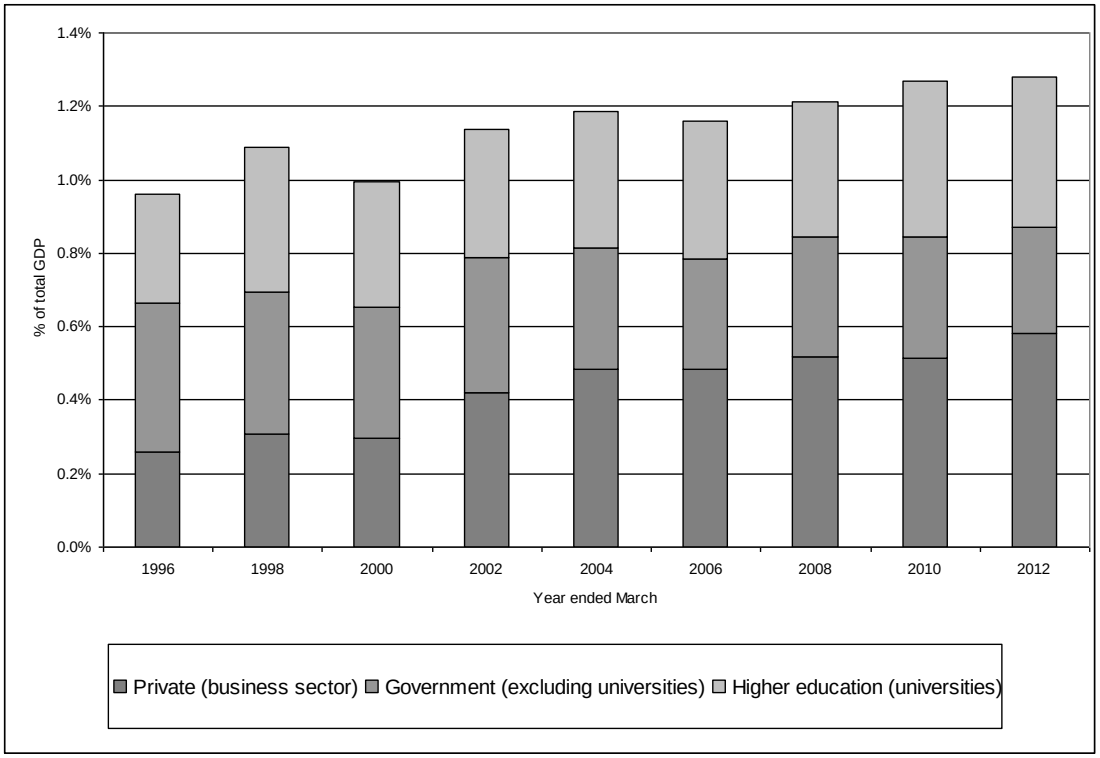
Figure 3.7.1c shows that research income by the University of Waikato increased by around 39% in real terms over the period 2002 to 2012. Research income contributed approximately 13.3% of total revenues for the University of Waikato in 2012.

Figure 3.7.1a: Real expenditure on research and development in New Zealand ($million) in June 2006 dollars



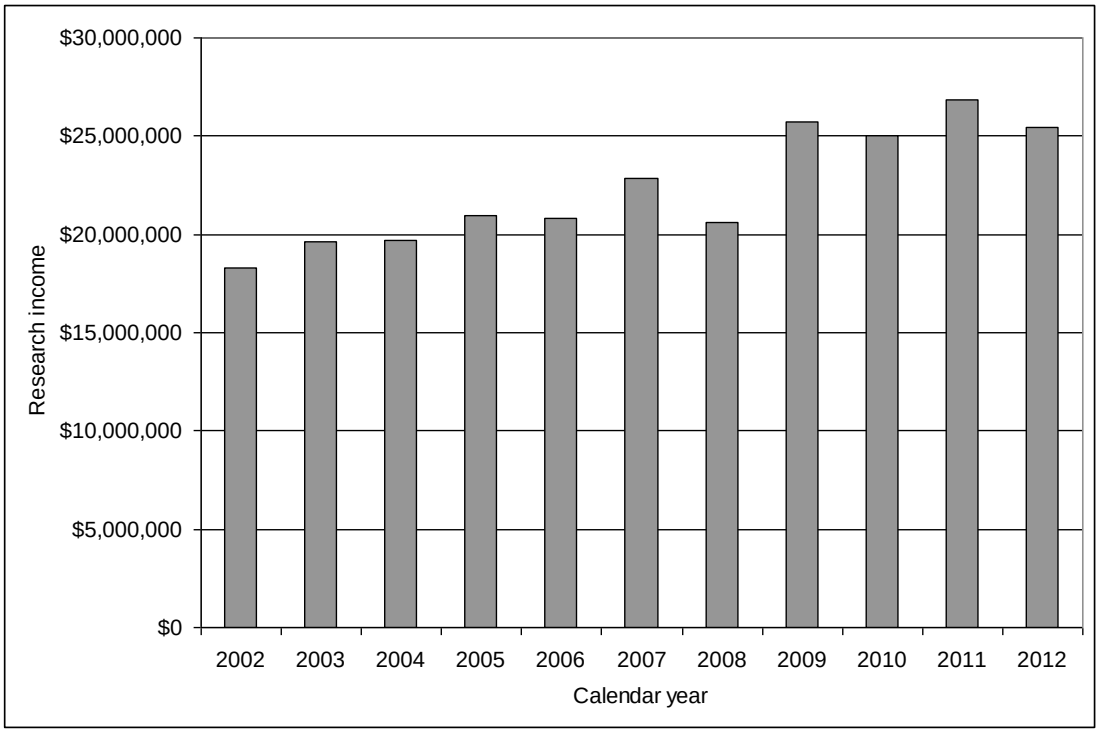
Source: Statistics New Zealand: Research and Development Surveys
Notes: For the purpose of this indicator, gross expenditure on R&D is adjusted by the Consumers Price Index (CPI) (base June 2006 quarter) to calculate real R&D expenditure.

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.

Figure 3.7.1c: Real research income (June 2006 dollars) – University of Waikato (consolidated)



Source: Annual Reports – University of Waikato
Notes: Includes income earned by subsidiaries and associates (ie, consolidated).

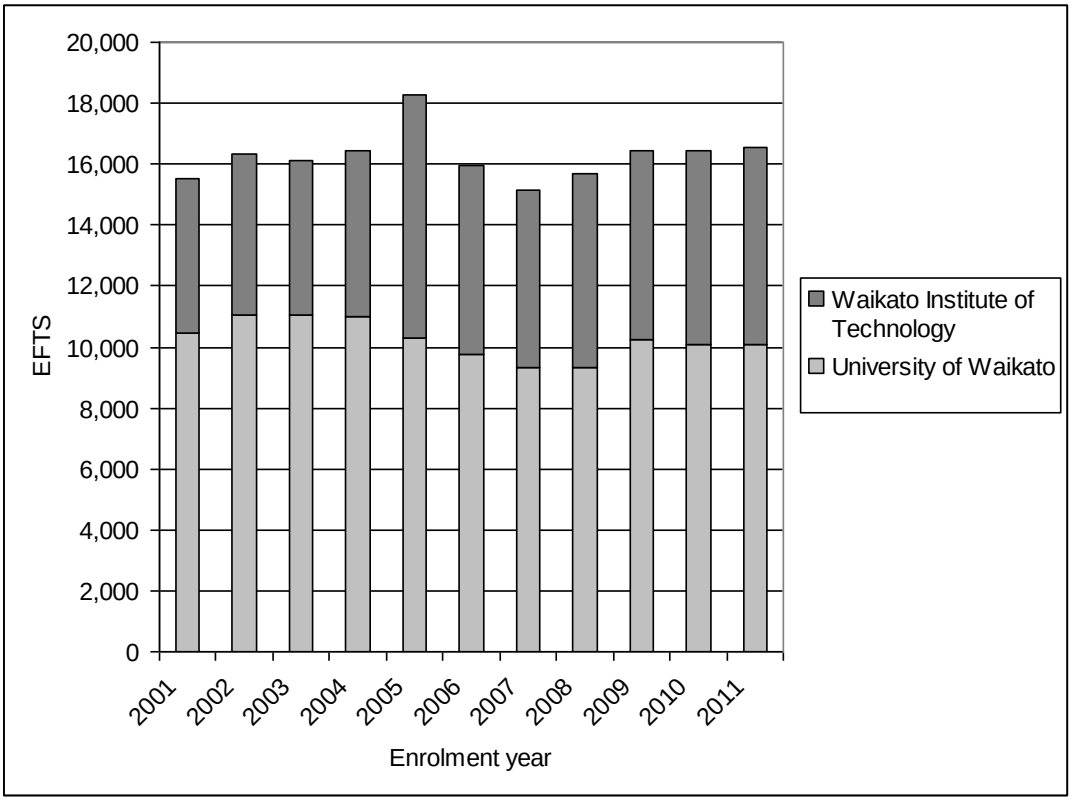
	Indicator	State	Trend
3.7.2	Enrolments at tertiary education institutes	😐	⇨

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 and have since gradually increased. 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 2001 to 2005 but has subsequently been lower. In 2011 there were approximately 16,500 effective full-time students (EFTS) enrolled at both institutes combined.

Figure 3.7.2: Domestic and international students enrolled (EFTS), 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 other tertiary education providers (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	☺	?

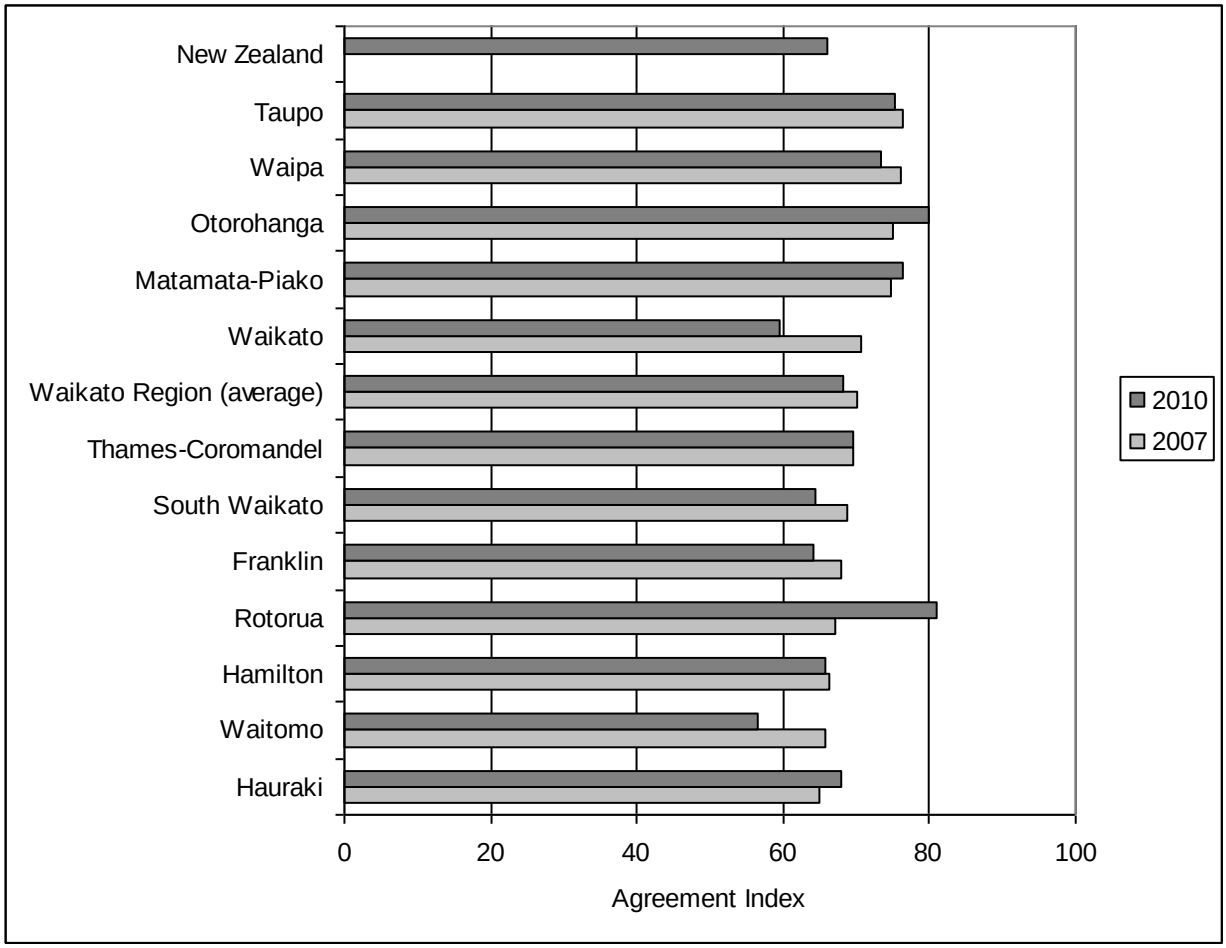
This indicator measures residents' rating of their sense of pride in the way their city/town looks and feels.

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 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010. 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?'

In 2010, three quarters of the respondents (75%) agreed with the statement 'You feel a sense of pride in the way your district looks and feels' (scores of 6 – 10). A tenth of the respondents (9%) strongly agreed (Score of 10) while 7% rated this with a score of 9. The Agreement Index (a weighted score across the Agreement scale) was 68.1 points. This was 2 points lower than 2007 but still implies most respondents feel a sense of pride in their district.

There was much 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 is from. The majority of each area agreed with this statement but the few from Rotorua most strongly agreed. Conversely, it seems that a slightly higher proportion of those from Waitomo (27%) and the Waikato District (22%) disagreed with this. This reflects in the Agreement Index with those from Rotorua (Index 81.0) and Otorohanga (Index 80.0) agreeing most strongly with the statement 'You feel a sense of pride in the way your district looks and feels'. Those from Waitomo (Index 56.6) and the Waikato District (Index 59.4) agreed the least strongly.

Figure 4.1.1: Respondents' sense of pride in the way their district looks and feels – Waikato territorial authority areas and New Zealand average



Source: MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO); Big Cities Quality of Life Survey 2010

Note 1: 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.

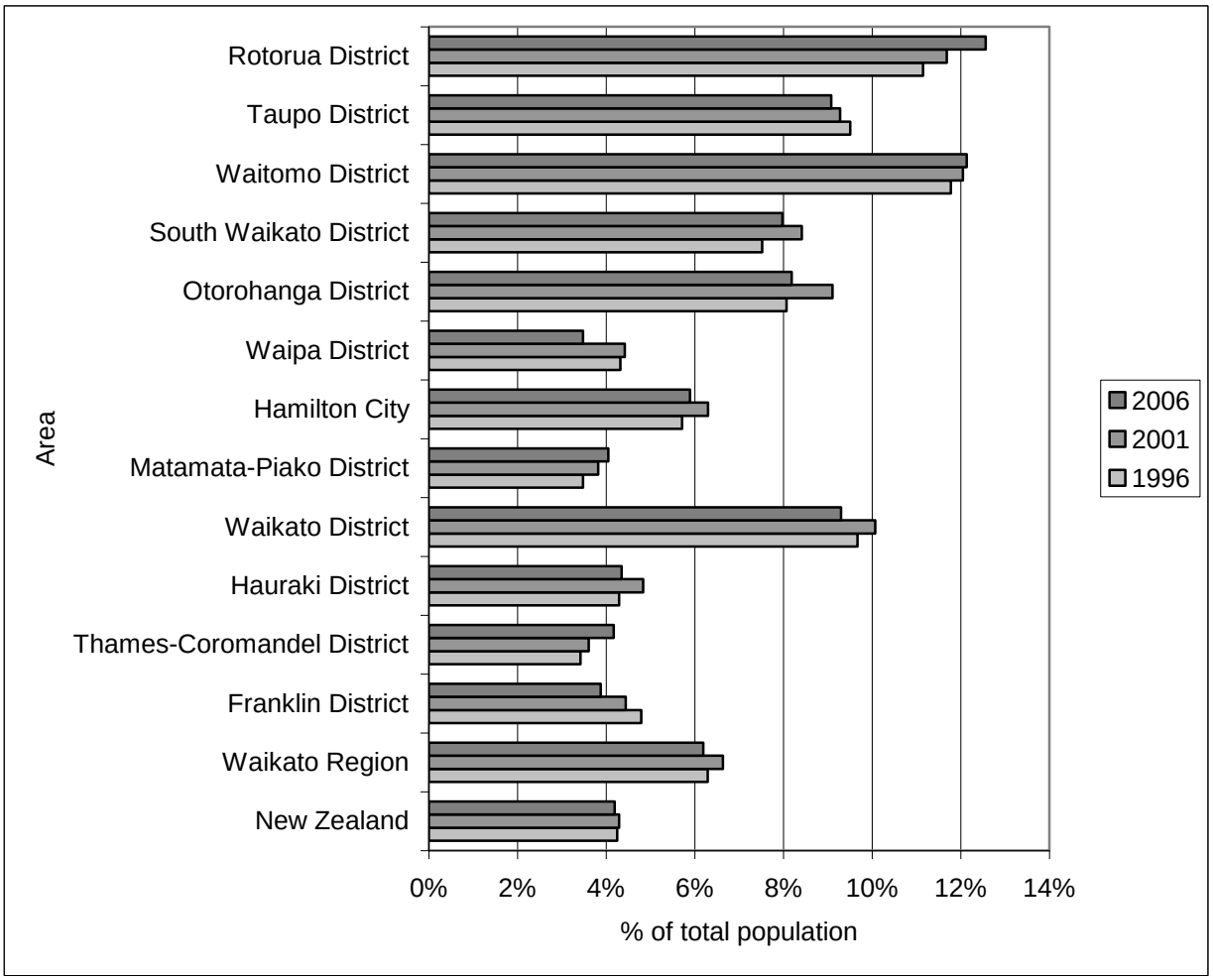
Note 2: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

	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



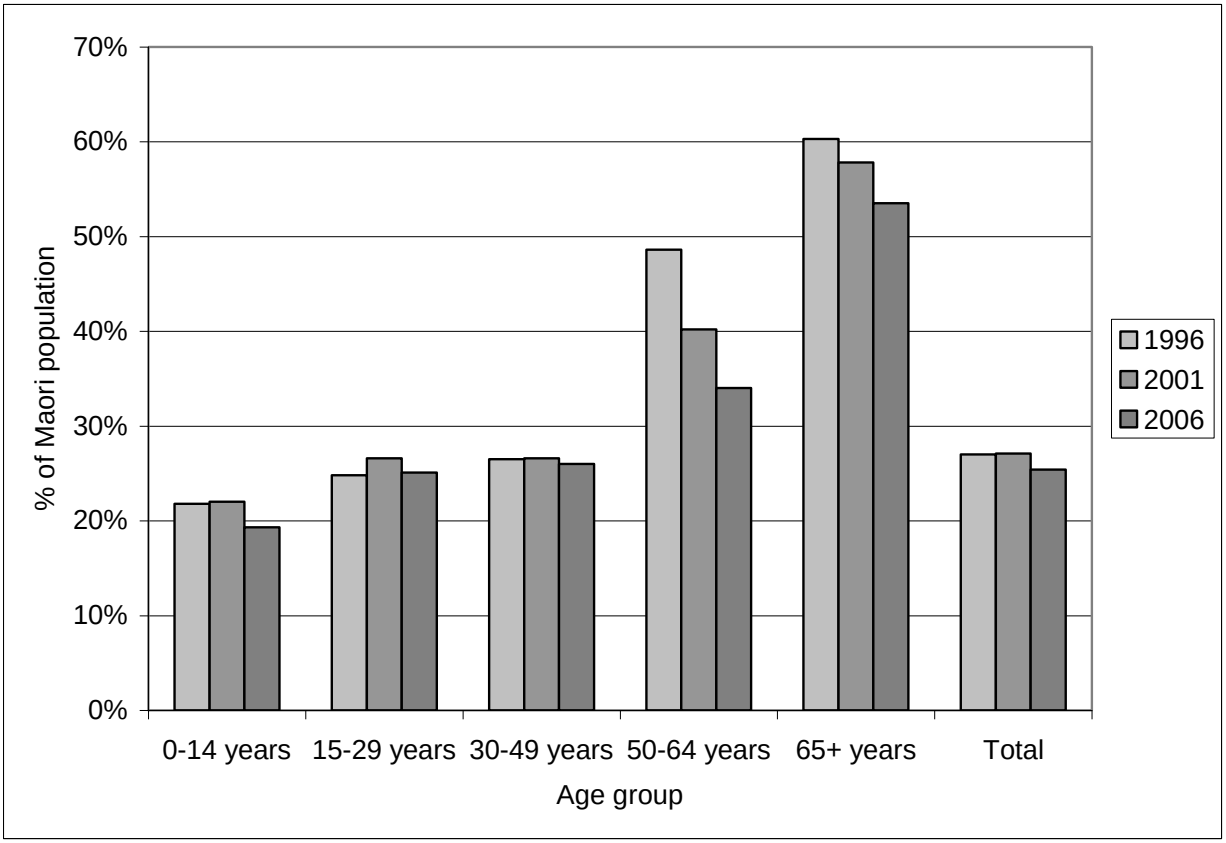
Source: Statistics New Zealand Census

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 2009

Figure 4.1.2c: Māori language speakers as proportion of Māori population, by age - Waikato Region



Source: Statistics New Zealand Census/MSD Social Report 2009

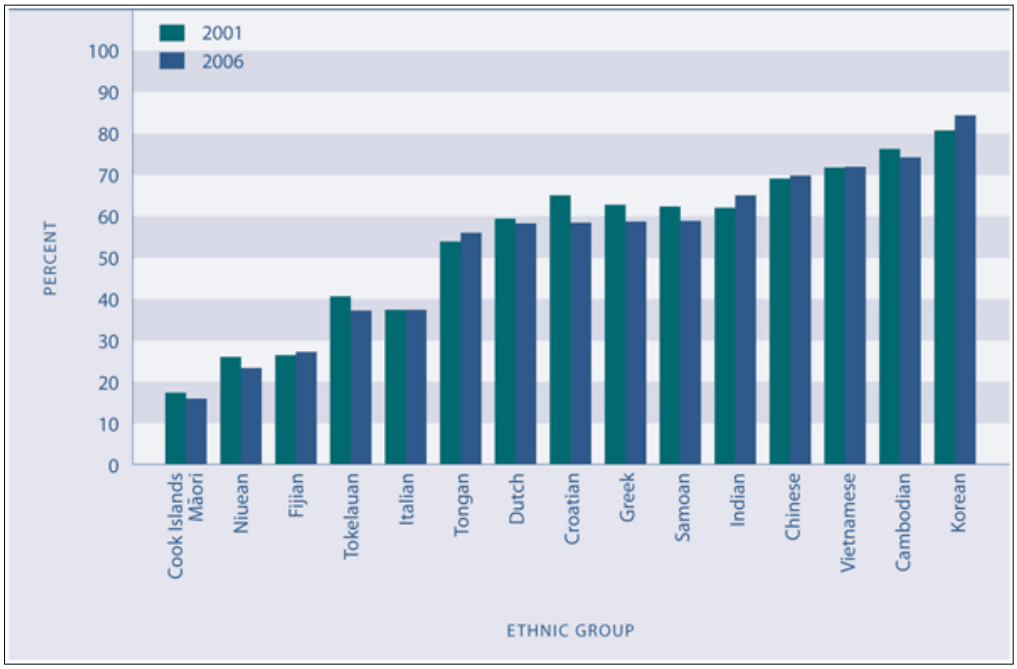
	Indicator	State	Trend
4.1.3	Proportion of population that speak the 'first language' of their ethnic group	☹	?

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.

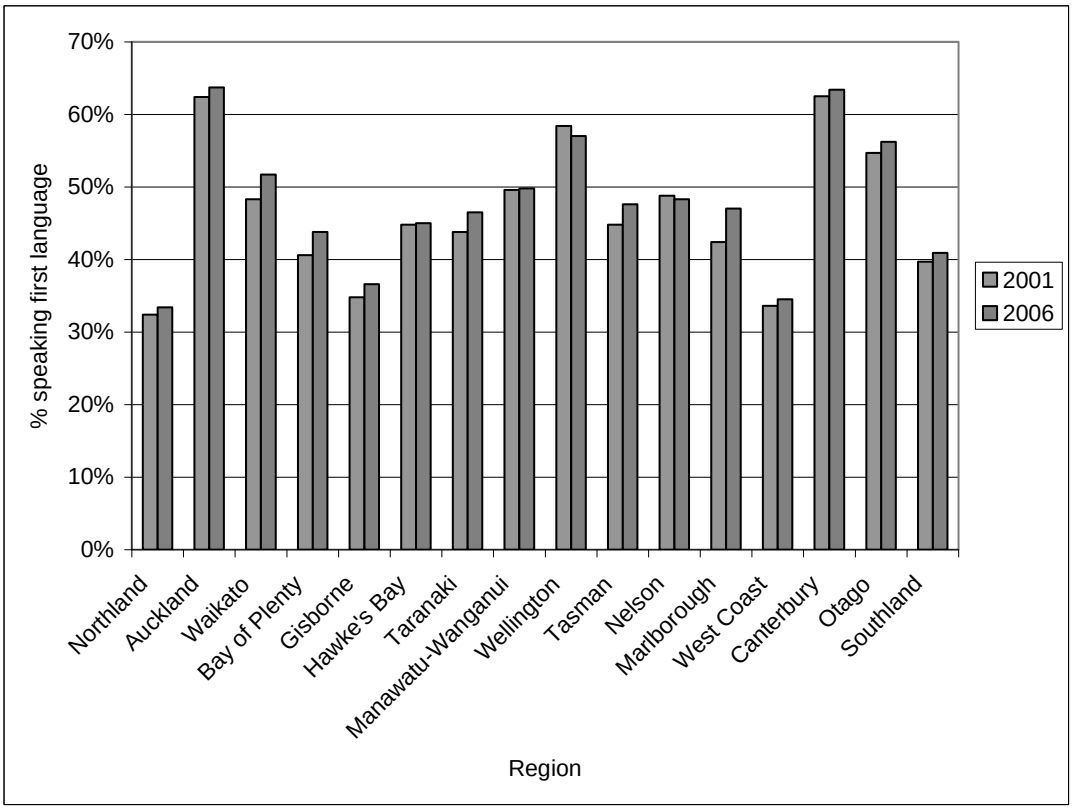
In 2006 at the national level, the proportion of people who could hold everyday conversations in the first language of their ethnic groups varied widely between ethnic groups, from 16% of Cook Islands Māori to 84% of Koreans. Between 2001 and 2006, most ethnic groups experienced little change in the 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



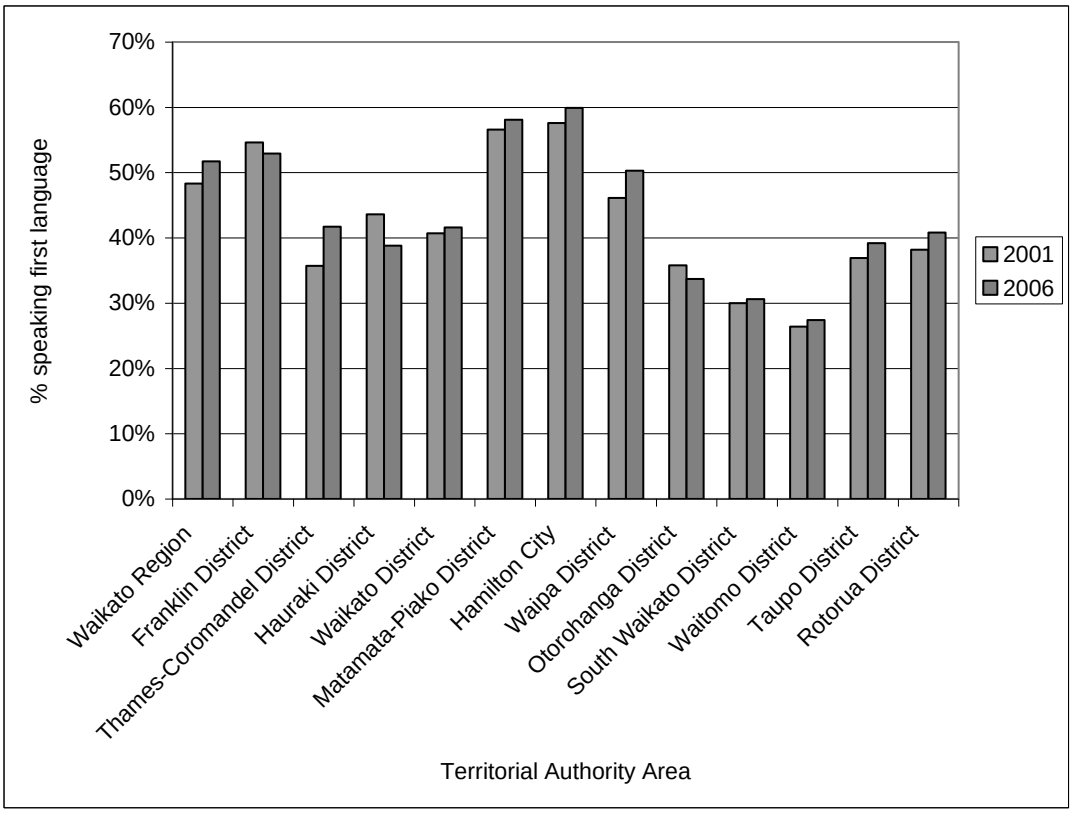
Source: Statistics New Zealand Census /MSD Social Report 2009
Note: Totals refer to combined selected ethnic groups

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 2009

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 2009

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 535 buildings and places listed on the Historic Places Trust Register in Waikato Region territorial authority areas as at April 2013, compared with 474 that were counted on the online register in May 2008.
- As at May 2006, 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". No comparable quantitative data has subsequently been requested. The New Zealand Historic Places Trust website now includes a section called 'Heritage Lost'. This allows the reader to explore stories about various registered heritage places that have been lost due to development, fires, neglect, storms and other natural disasters.
- 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 535 buildings and places listed on the Historic Places Trust online register in Waikato Region territorial authority areas as at April 2013. This compares with 474 that were counted on the online register in May 2008 (note: there was a small change in geographic area for the Waikato Region since the disestablishment of Franklin District in October 2010).

Table 4.2.1: Buildings and sites registered on the Historic Places Trust Register by territorial authority

Territorial authority	May 2008	April 2009	April 2010	March 2011	March 2012	April 2013
Franklin District	11	11	12	n/a	n/a	n/a
Waikato District	44	44	46	49	51	78
Otorohanga District	14	14	15	14	14	20
Waitomo District	16	16	16	15	14	17
Waipa District	65	65	66	69	69	69
Thames-Coromandel District	170	171	172	172	174	185
Hauraki District	28	28	28	28	28	30
Matamata-Piako District	48	48	48	48	48	48
South Waikato District	25	25	25	25	25	24
Hamilton City	36	36	39	40	42	42
Rotorua District	14	14	14	14	15	17
Taupo District	3	3	3	4	4	5
Total	**474**	**475**	**484**	**478**	**484**	**535**

Source: Compiled from New Zealand Historic Places Trust data.
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.

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'. No comparable data has subsequently been requested. 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. More recent searches of the website indicate that several buildings and sites in the Region are deregistered each year but this is offset by a small number of new registrations each year.

The New Zealand Historic Places Trust website now includes a section called 'Heritage Lost'. This allows the reader to explore stories about various registered heritage places that have been lost due to development, fires, neglect, storms and other natural disasters. Stories of interest in the Waikato Region include:

- Horotiu Bridge, Horotiu – Deregistered during 2001. Lost to: Demolition (health and safety). Originally registered as a Category 2 historic plac, the Horotiu Bridge was constructed in 1919-21 to link Waikato County with Waipa County.
- Store Shed (with Ex Terra Lumen inscribed); and Rotowaro Carbonisation Works Adit, Rotowaro – Deregistered during 2001. Lost to: Demolition (redevelopment). Originally registered as Category 2 historic places. The Rotowaro Carbonisation Works Adit was part of New Zealand's only low-temperature carbonisation works, known as the Rotowaro Carbonisation Works. The buildings were demolished to make way for the expansion of the opencast mine activities.
- Line Depot Carpenters' Shops, Arapuni – Deregistered during 2000. Lost to: Demolition (redevelopment). Originally registered as a Category 2 historic place. Constructed as part of the first state-built hydro-electric dam project on the Waikato River, this building was amongst the earliest structures completed upon commencement of the £1,170,891 Arapuni project in September 1924.

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	😐	?

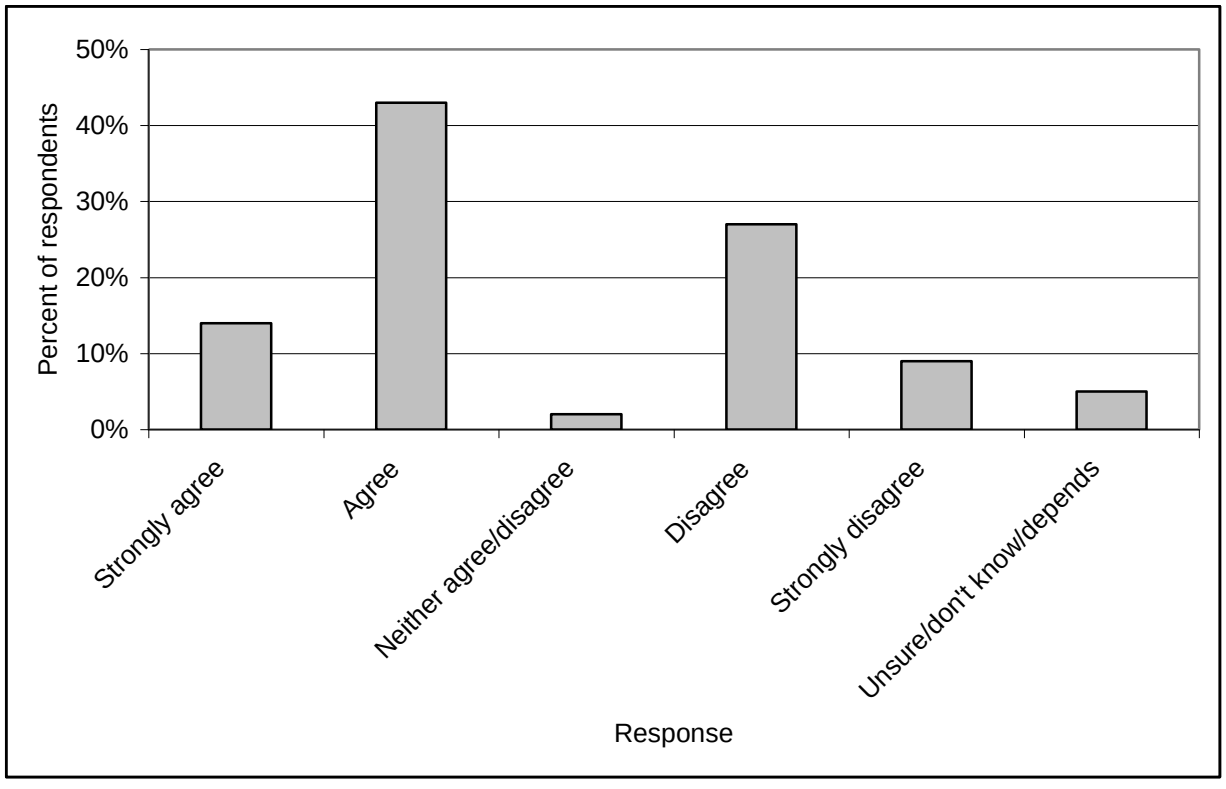
This indicator measures whether respondents to the Waikato Regional Council Environmental Awareness, Attitudes and Actions Survey feel that sustainable design of new developments and subdivisions has become better, become worse or stayed the same in the last few years at the regional, district, rural 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 WRC'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.

This indicator has been gathered as part of WRC's Environmental Awareness, Attitudes and Actions Survey in 2006. This survey has been undertaken again in March 2013; however this indicator has not been included this time. The group has recommended that this indicator be removed from the MARCO indicator set due to lack of utilisation by TLAs in the region.

Figure 4.2.3: Sustainable design of new developments – Waikato Region respondents 2006



Source: Waikato Regional Council 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?

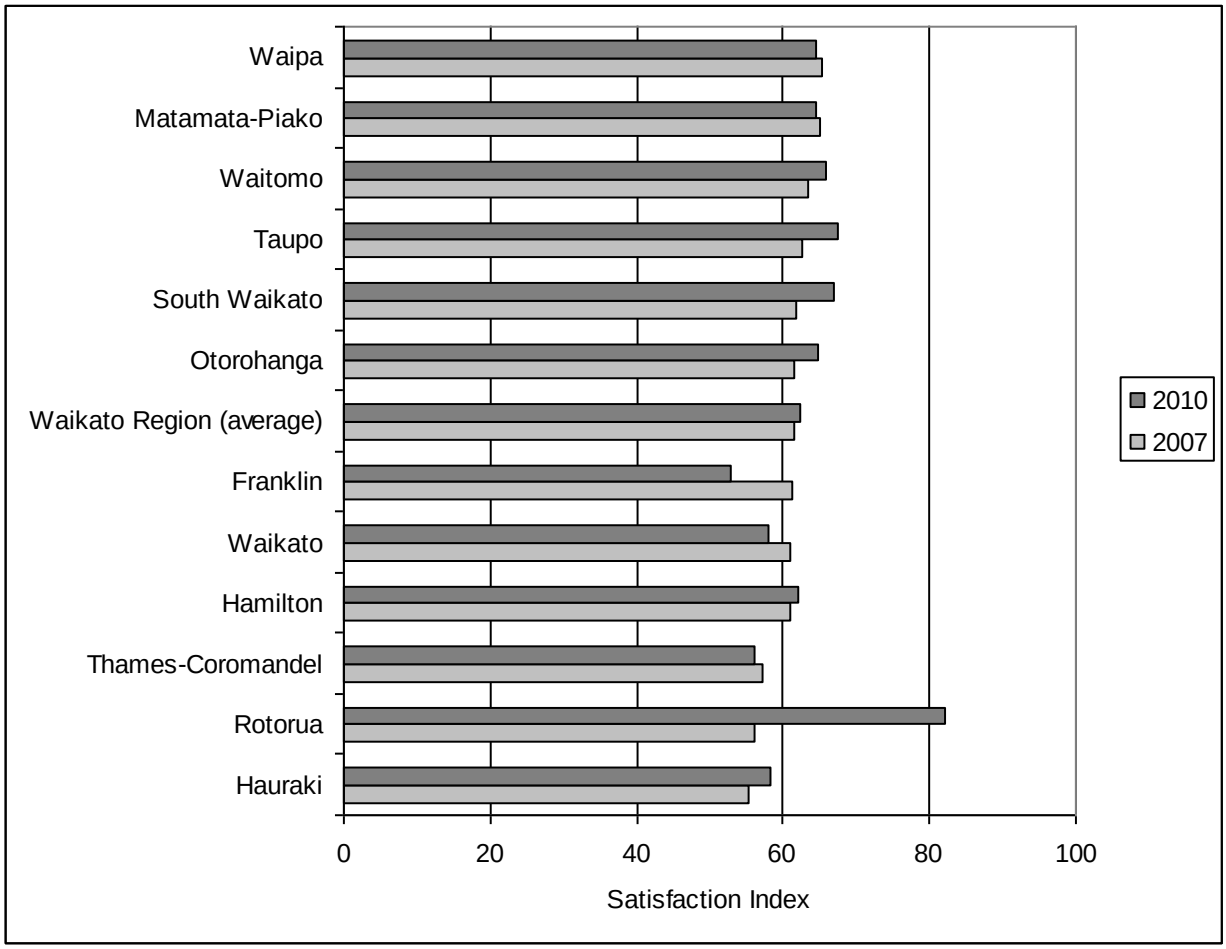
- In 2010, survey results showed a Waikato regional Satisfaction Index of 62.2 points for 'cultural facilities and opportunities provided in your area'. This was similar to the 2007 survey results.
- At present there is only national-level data available on people's participation in cultural and arts 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 generally increased over the period 1999/00 to 2003/04, 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 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. The survey was repeated in 2010. 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'

In 2010, survey results showed a Waikato regional Satisfaction Index (weighted average score) of 62.2 points for 'cultural facilities and opportunities provided in your area'. This was similar to the 2007 survey results. The scores vary between locations within the Region, and between the 2007 and 2010 survey periods (refer Figure 4.3.1).

Figure 4.3.1: Respondents' satisfaction with cultural facilities and opportunities in their area – Waikato territorial authority areas



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO)
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

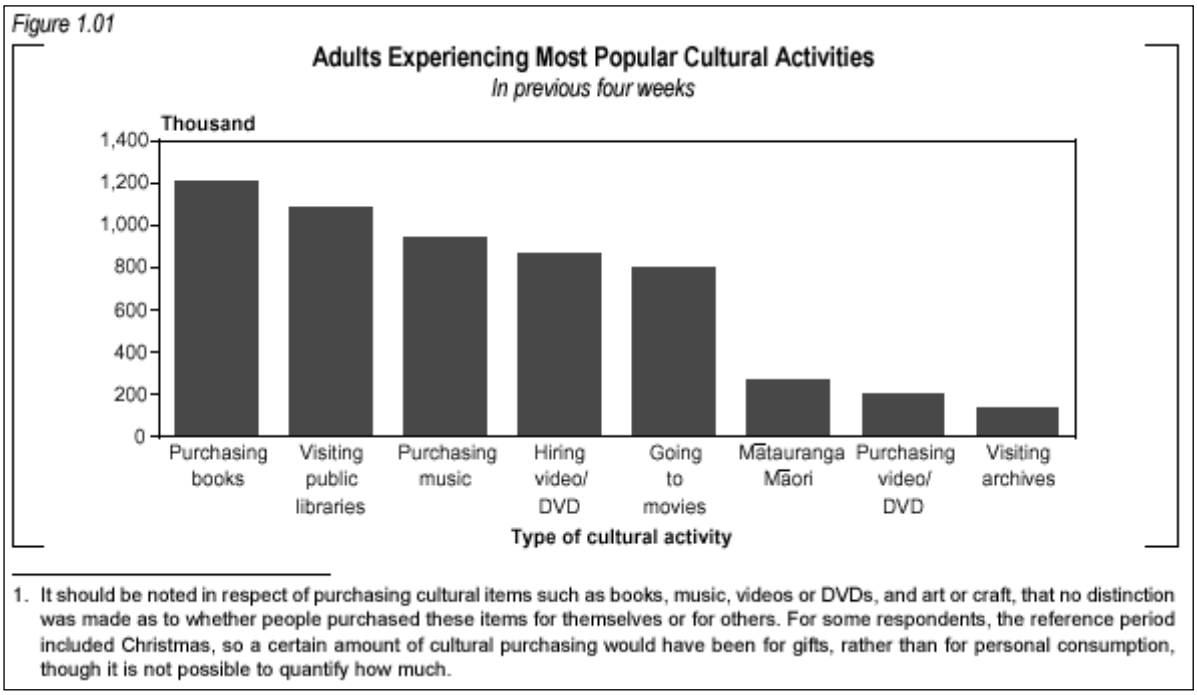
	Indicator	State	Trend
4.3.2	Participation in cultural and arts activities	😐	?

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.

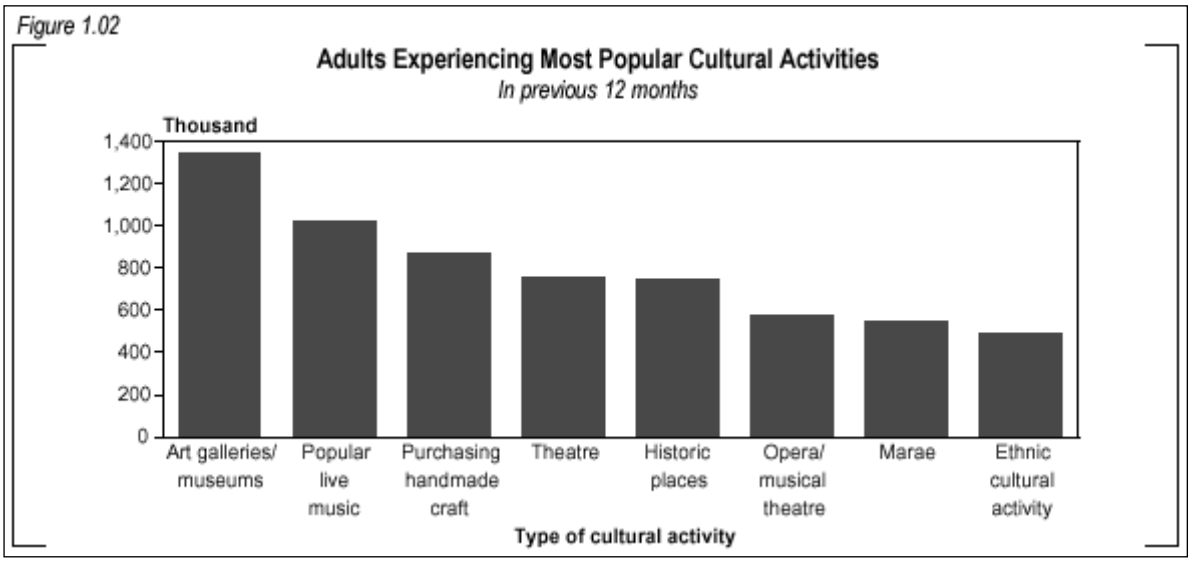
This indicator was measured in a one-off national survey and there are currently no plans to repeat it. However there are plans at the local and regional level to collect similar survey data. Figure 4.3.2a shows that at the national level the most frequently cited cultural activities in the four weeks 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

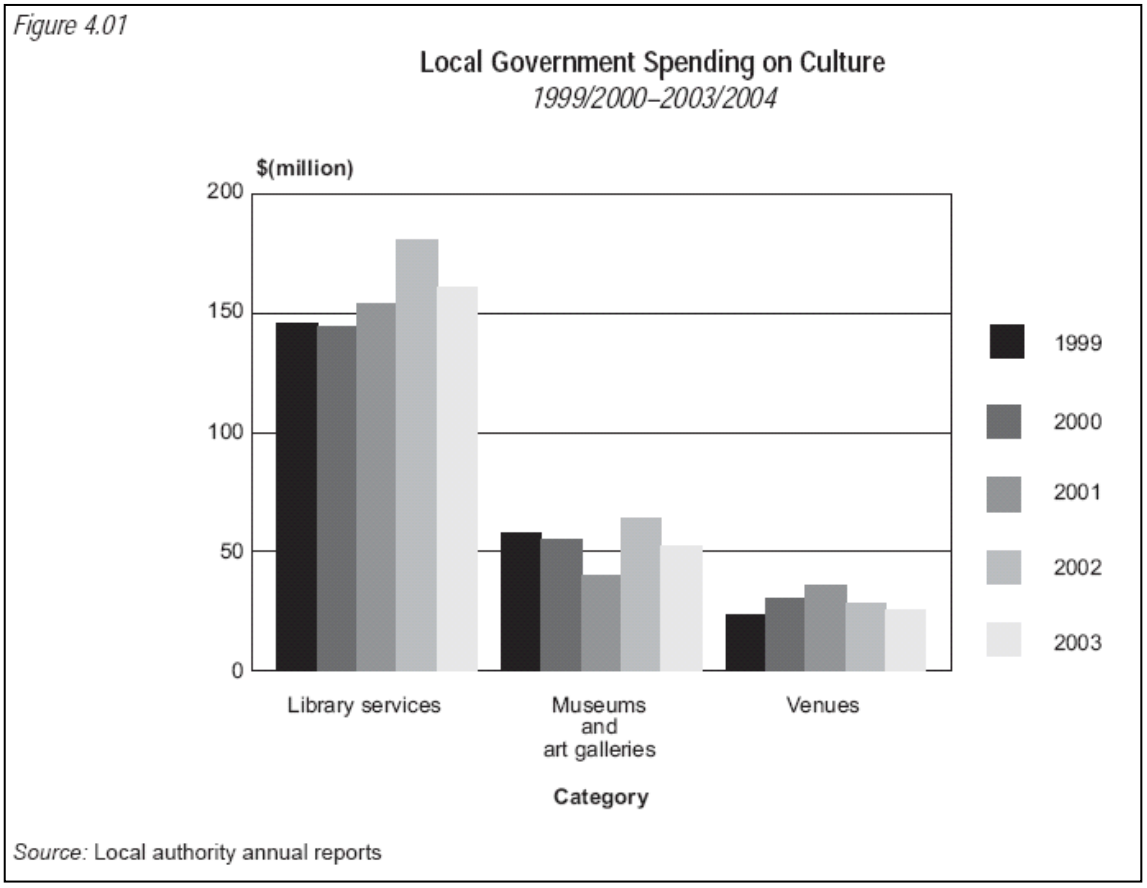
	Indicator	State	Trend
4.3.3	Proportion of council's spending on cultural activities and events	😐	⇧

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) showed that council spending on cultural activities generally increased over the period 1999/00 to 2003/04, 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 around 127,000 people in New Zealand were engaged in cultural employment in 2006. 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	😐	⇧

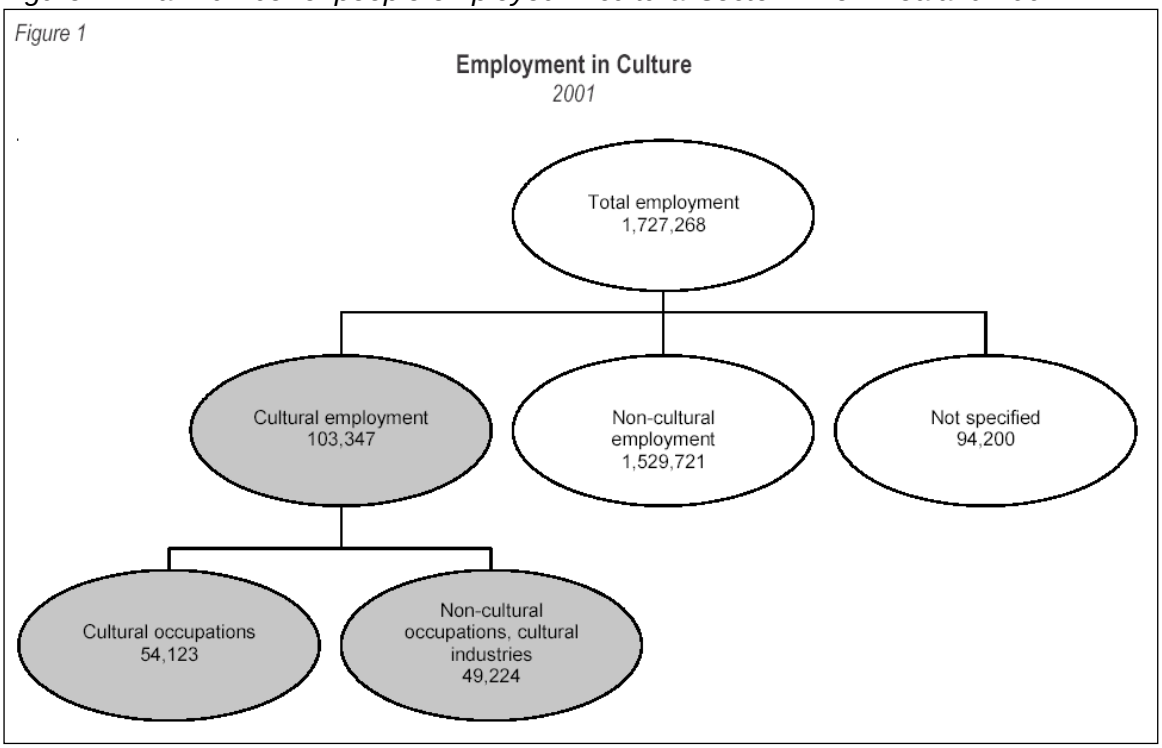
This indicator measures the number of people in paid employment in the cultural sector, including people in cultural occupations and people in non-cultural occupations working in the cultural industry across New Zealand. Note that paid employment in the cultural sector can be divided into two overlapping 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.

According to the Ministry of Culture and Heritage's 2009 report on Cultural Indicators for New Zealand, in 2006 there were 126,530 people in cultural employment, making up 6.9 percent of the total national workforce. This was a substantial increase from 1996 when 89,440 people were employed in the cultural sector (making up 5.9 per cent of total employment).

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

Table 1

Employment in the Cultural Sector
1991 to 2001

	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

Table 3

Key Paid Employment Indicators
Cultural occupations
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)	58	47
Percent engaged part-time	29	23
Percent post-school qualified	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

Figure 4.4.1d: Number of people employed in cultural sector – New Zealand 1996-2006

Year	Number of People in Cultural Employment	Percentage of Total Workforce
2006	126,530	6.9
2001	104,940	6.6
1996	89,440	5.9

Source: Ministry of Culture and Heritage: Cultural Indicators Report 2009

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	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.
5.2	Cultural well-being	5F We are knowledgeable about and show respect for the many and diverse cultures of the people who live here.

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?

- Voter turnout in local authority elections peaked in 1989 and then steadily declined, with the exception of the 1998 elections, dropping to 44% in 2007 (a level comparable with pre-1989 election turnout). However, there was an increase in voter turnout for the most recent 2010 local authority elections. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. Voter turnout for national general elections has also been declining in the long-term, reaching a low in 2002 for New Zealand overall, rebounding for the 2005 and 2008 elections and then reaching a new record low in 2011. Only 68% of those eligible to cast a ballot actually did so.
- 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. Data is not yet available for this item for 2010. There has been a long run increase in the proportion of female elected members in elected positions in New Zealand, but this stabilised at around 30 per cent since the late 1990s. Many of the territorial authorities in the Waikato Region have a relatively high proportion of female elected members, ranging from 50% in the South Waikato District to a low of 13% in the Thames-Coromandel District, reflecting a similar pattern to the 2004 and 2007 local body election results.
- 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	😐	⇩

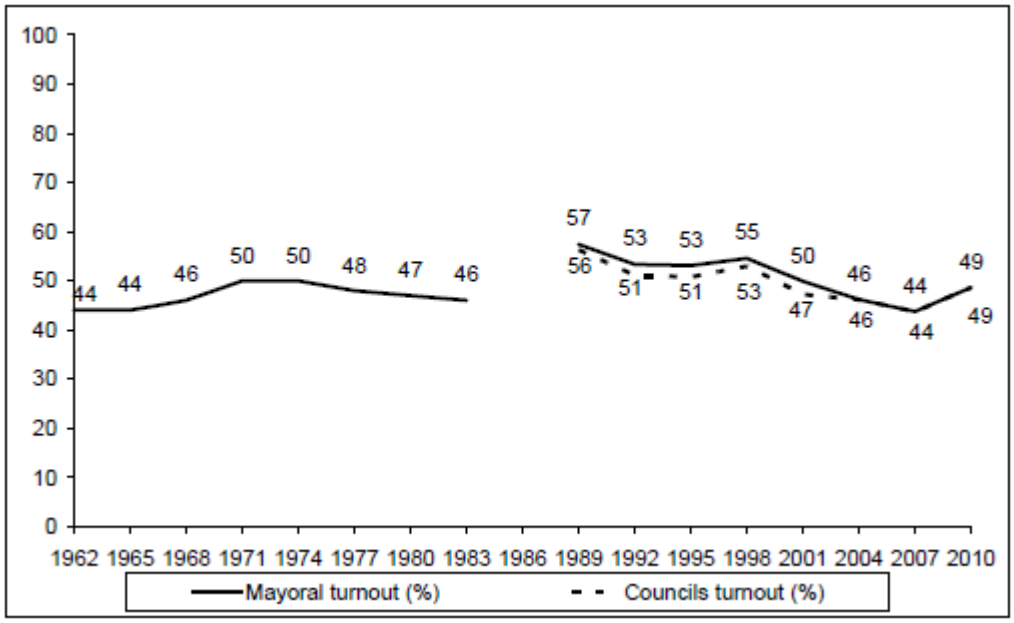
This indicator measures the proportion of all enrolled electors (both resident and ratepayer) who cast a vote in the most recent local body elections, and the proportion of persons aged 18 or over usually resident in General electorates (voting-age population) who cast a vote in General electorates in 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.

Voter turnout in local authority elections peaked in 1989 following the restructuring of local government and when the use of postal voting was mandatory. Since 1989, turnout steadily declined, with the exception of the 1998 elections, dropping to 44% in 2007 (a level comparable with pre-1989 election turnout). However, there was an increase in voter turnout for the most recent 2010 local authority elections. Table 5.1.1b shows that for almost all local authorities in the Waikato Region, voter turnout reached a low point in the 2007 local authority elections. Local authority voter turnout tends to be generally higher for councils with a smaller constituency. In the Waikato Region in 2010, the highest voter turnouts were in the Thames-Coromandel, Taupo and Waitomo districts (49%-61%).

Voter turnout for national general elections has also been declining in the long-term, reaching a low in 2002 for New Zealand overall, rebounding for the 2005 and 2008 elections and then reaching a new record low in 2011. Voter turnout for the General Roll was just 75.5% in 2011. The record low turnout was cited by some political analysts as having biased the outcome of the 2011 election. At a minimum, it suggests a diminishing level of democratic engagement by the public. Only 68% of those eligible to cast a ballot actually did so.

Figure 5.1.1a: Voter turnout in local authority elections



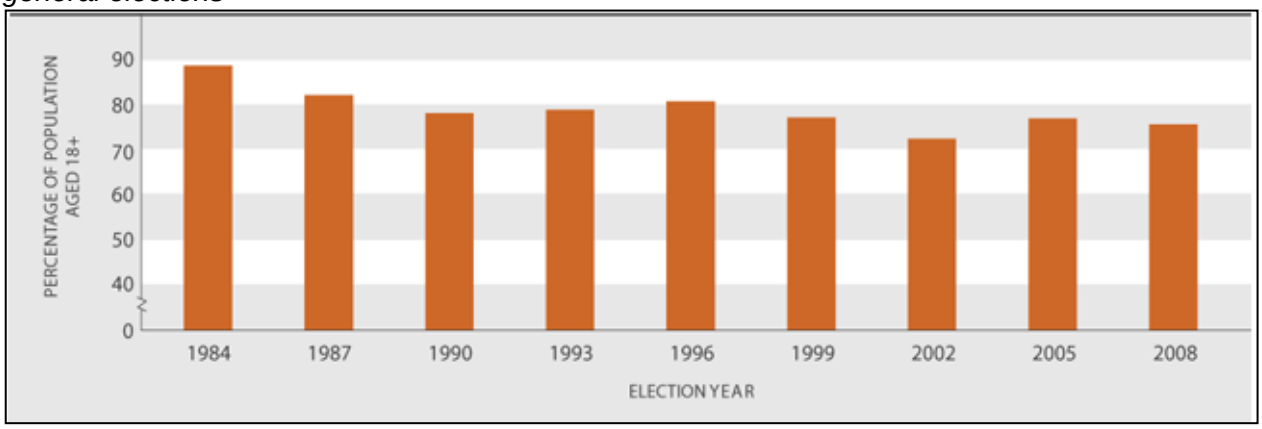
Source: Department of Internal Affairs
Note: Data prior to 1983 is based on total turnout. 1986 data was not collected in a comparable form. Data from 1989 represents TA councillor and mayoral elections.

Table 5.1.1b: Voter turnout in local authority councillor elections – Waikato Region territorial authorities

Territorial authority	1989	1992	1995	1998	2001	2004	2007	2010
Franklin District	59%	54%	47%	49%	49%	46%	35%	n/a
Thames-Coromandel District	83%	68%	62%	82%	61%	56%	53%	61%
Hauraki District	65%	59%	59%	64%	63%	53%	49%	43%
Waikato District	61%	53%	54%	52%	51%	42%	35%	34%
Matamata-Piako District	65%	51%	54%	61%	52%	42%	42%	42%
Hamilton City	58%	52%	50%	54%	47%	45%	35%	38%
Waipa District	57%	49%	53%	49%	50%	42%	34%	42%
Otorohanga District	69%	56%	71%	62%	51%	55%	40%	36%
South Waikato District	67%	45%	43%	54%	44%	41%	39%	39%
Waitomo District	62%	54%	65%	65%	61%	56%	40%	49%
Taupo District	70%	62%	61%	62%	60%	53%	50%	55%
Rotorua District	60%	60%	52%	54%	49%	49%	44%	43%
New Zealand	**56%**	**51%**	**51%**	**53%**	**47%**	**46%**	**44%**	**49%**
Waikato Region*	**57%**	**54%**	**53%**	**57%**	**49%**	**45%**	**37%**	**42%**

Source: Department of Internal Affairs
Note: The Waikato Region time series relates to voter turnout for Waikato Regional Council elections.

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

Table 5.1.1c: Voter turnout in New Zealand general elections – Party votes and turnout for general electorates

Electorate	12 October 1996	27 November 1999	27 July 2002	17 September 2005	8 November 2008	26 November 2011
Hamilton East	89.3%	85.6%	78.4%	83.0%	80.5%	74.5%
Hamilton West	87.6%	84.1%	75.2%	80.2%	78.6%	72.8%
Coromandel	88.8%	87.8%	82.9%	84.1%	81.6%	76.6%
Taranaki-King Country	86.1%	82.6%	75.3%	81.8%	80.3%	75.8%
Port Waikato	86.6%	83.9%	79.2%	82.6%		
Piako			75.8%	80.5%		
Karapiro	85.8%	83.1%				
Waikato					80.8%	76.0%
Taupo	85.6%	83.7%	75.8%	80.2%	80.2%	74.7%
Rotorua	88.6%	85.2%	77.0%	81.3%	80.0%	74.8%
New Zealand General Electorate total	**89.0%**	**85.7%**	**78.5%**	**82.0%**	**80.9%**	**75.5%**

Source: Electoral Commission

	Indicator	State	Trend
5.1.2	Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	😐	⇨

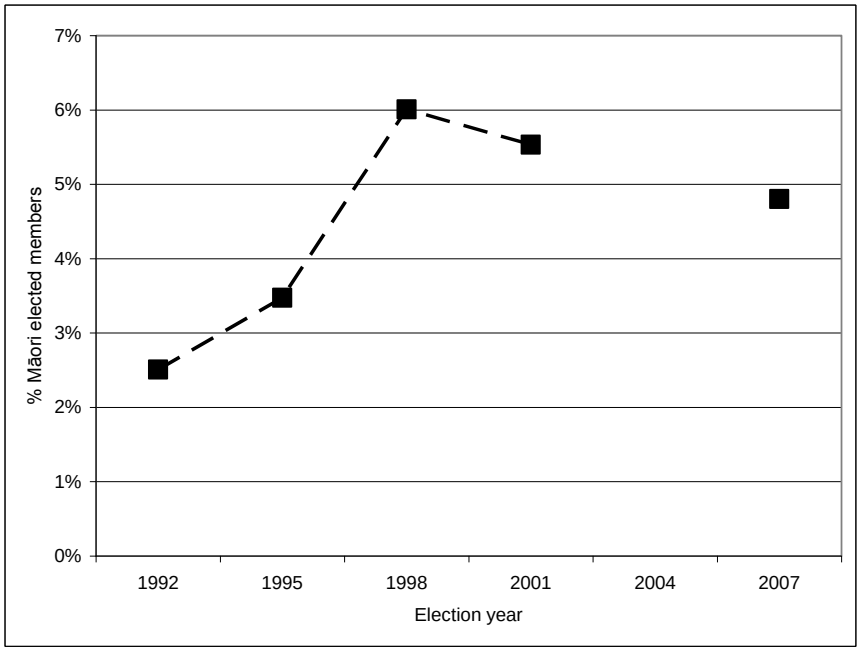
This indicator measures the proportion of female elected members of the regional, city or district council in the most recent elections, and the proportion of Māori elected members in local government.

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. Data is not yet available for this item for 2010.

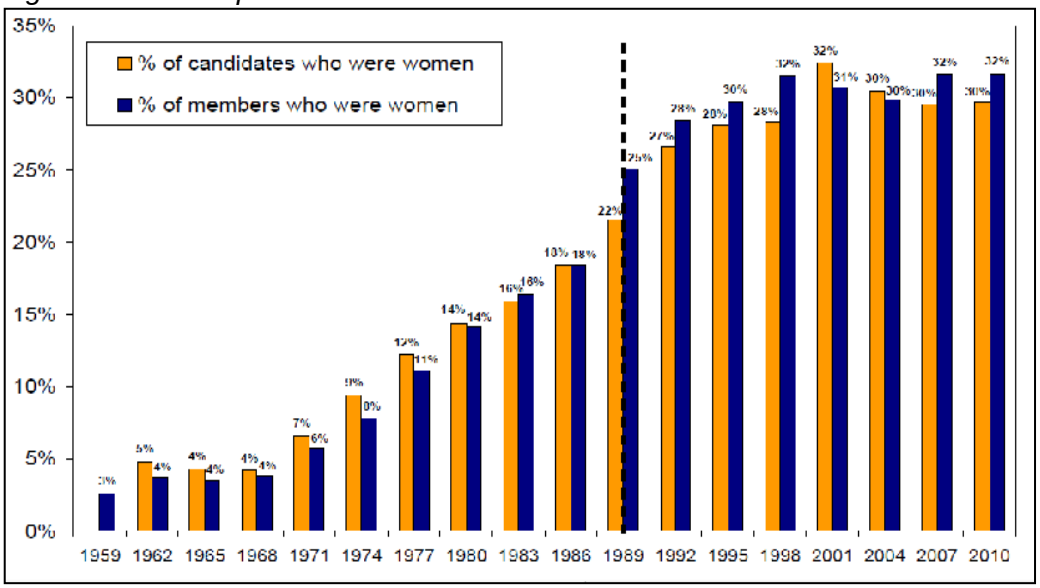
Figure 5.1.2b shows there has been a long run increase in the proportion of female elected members in elected positions in New Zealand, but this stabilised at around 30 per cent since the late 1990s. Many of the territorial authorities in the Waikato Region have a relatively high proportion of female elected members, ranging from 50% in the South Waikato District to a low of 13% in the Thames-Coromandel District (refer Table 5.1.2c), reflecting a similar pattern to the 2004 and 2007 local body election results.

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 1959-2010



Source: Department of Internal Affairs

Note: Elections from 1959 to 1986 represent local government prior to restructuring, and the data applies to councillors and mayors of cities and districts. Elections from 1989 to 1998 apply to the combined total of mayors, councillors and members of regional councils, territorial authorities and community boards. Elections from 2001 include DHBs and elections from 2004 also include trusts.

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	2010
Franklin District	21%	40%	25%	n/a
Thames-Coromandel District	44%	13%	0%	13%
Hauraki District	31%	23%	23%	23%
Waikato District	15%	15%	15%	29%
Matamata-Piako District	27%	27%	36%	27%
Hamilton City	23%	38%	50%	42%
Waipa District	25%	25%	17%	33%
Otorohanga District	50%	43%	29%	29%
South Waikato District	38%	50%	70%	50%
Waitomo District	40%	33%	50%	33%
Taupo District	45%	33%	40%	30%
Rotorua District	17%	25%	50%	50%

Source: Department of Internal Affairs

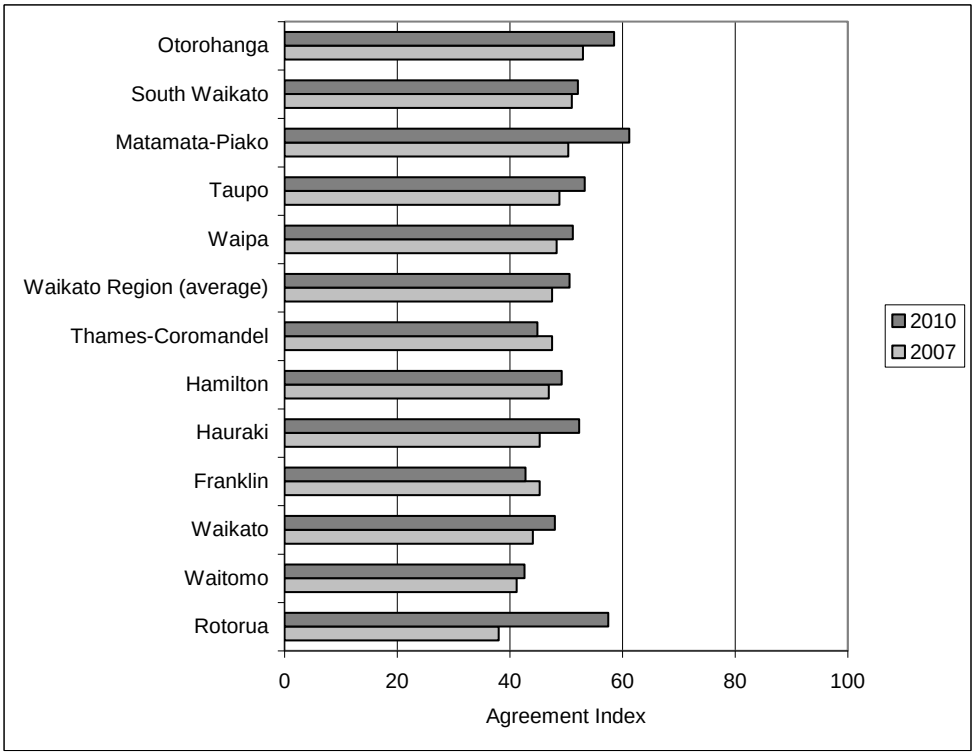
	Indicator	State	Trend
5.1.3	Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	😐	?

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.

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 through the biennial Quality of Life Surveys. Baseline data for Waikato regional communities was collected through the 2007 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. This was repeated during 2010. 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…. 'You have enough say in what your Council does''. 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. In 2010, the highest level of satisfaction for this item was in the Matamata-Piako District (Agreement Index of 61.2 points) and the lowest level was in the Waitomo District (42.6 points).

Figure 5.1.3: Respondents' level of agreement that they have enough say in what their Council does – Waikato territorial authority areas 2007 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

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	😐	?

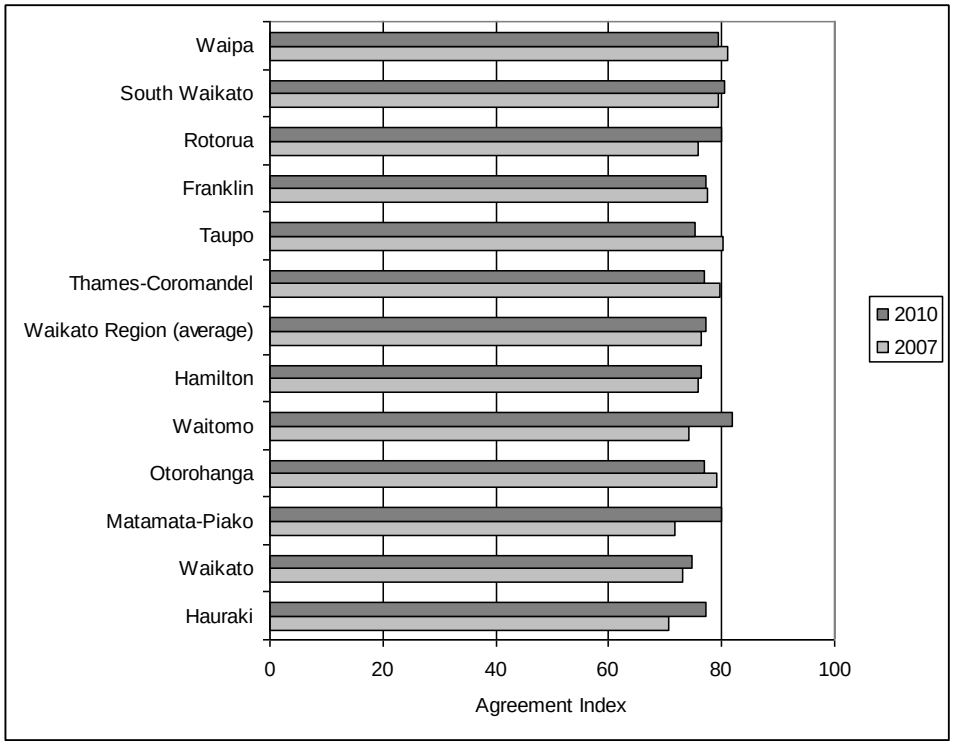
This indicator measures residents' views about whether cultural diversity makes their region/city/town a better or worse place to live. New Zealand is home for an increasing number of people with diverse lifestyles and cultures from different countries. This diversity impacts on how we communicate with different population groups, how they are made to feel part of the community 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 MARCO Waikato Regional Perception Survey commissioned by MARCO and Choosing Futures Waikato. This was repeated in 2010. 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>?' The two statements were (a) 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here' and (b) 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here.' From the resulting percentages, an Agreement Index (weighted average score) was calculated for each statement.

At the Waikato regional level, the Agreement Index was 77.3 points in 2010 for 'Your family are knowledgeable and show respect for the many and diverse cultures of the people who live here'. The Agreement Index was 69.8 points for 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here.' Both results were similar to the 2007 survey. Some variation is also revealed at the sub-regional level.

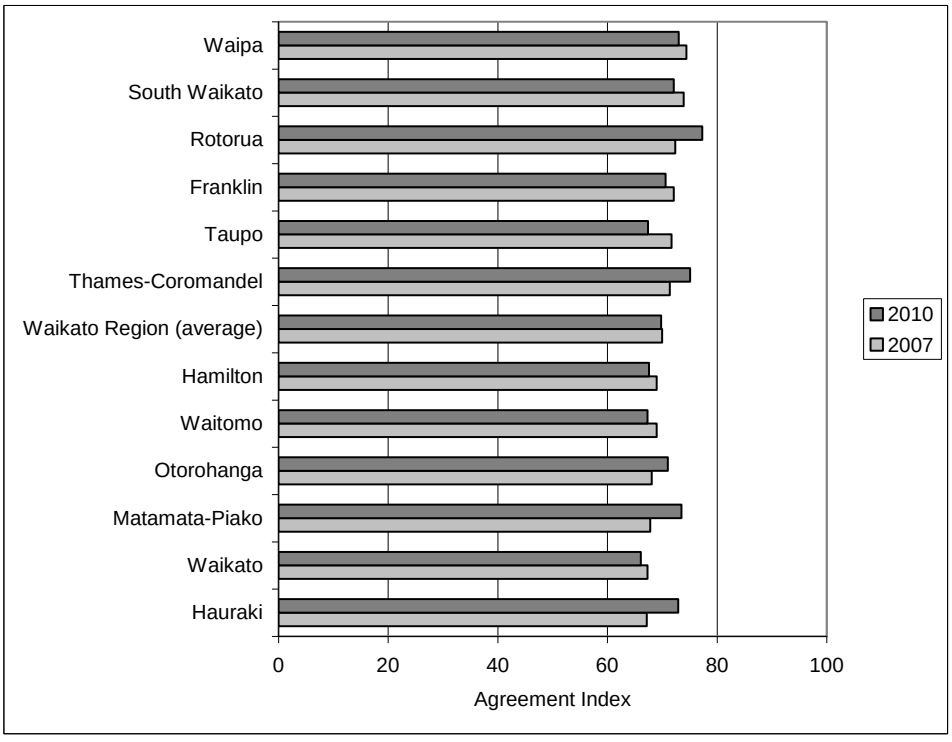
Respondents who rated either of these questions with scores that reflected strong agreement (Scores 7 – 10) or disagreement (scores 0 – 3) were asked 'For what reasons do you say that?' This question was asked as an open question with the answers grouped together for analysis purposes. The main positive comments evolved around feeling there were no cultural problems and that people were accepted as part of the community (38%). Others commented that they have few other ethnicities in their town (5%), or said they were foreign themselves and had no problems. Others offered neutral comments (9%), did not know or could not comment (4%) or did not answer this question (5%). Some respondents felt that different cultures were not welcomed by the community (11%) while a few (4%) had issues with other races or choose not to mix (0.3%). A small number of respondents said they were foreign themselves and had some problems. The 2010 results were very similar to 2007.

Figure 5.2.1a: Perceptions of cultural diversity – Family respect for cultures – Waikato territorial authority areas 2007 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

Figure 5.2.1b: Perceptions of cultural diversity – Neighbourhood respect for cultures – Waikato territorial authority areas 2007 and 2010



Source: 2007 and 2010 MARCO Waikato Regional Perception Survey (International Research Consultants Ltd/MARCO).
Note: The 2010 survey used a similar survey method as the first survey undertaken in 2007. For most districts 70 interviews were carried out (100 for Hamilton) but only 21 for Waitomo and 8 for Rotorua. The 2007 survey used a similar sampling method. Hence, the results for Waitomo and Rotorua should be treated with particular caution.

WHERE TO FROM HERE

The brief for this 2013 MARCO data analysis project was to update data and metadata spreadsheets for monitoring progress toward Waikato Regional Community Outcomes, based on the existing set of MARCO indicators – including data collection and analysis at the territorial authority level where available. Project outputs included:

1. Updated spreadsheet supplied by WRC with data and graphs www.choosingfutures.co.nz/Publications/
2. Update any relevant regional report cards on the Choosing Futures Waikato website using Episerver CMS, see www.choosingfutures.co.nz/MARCO-indicators/.
   Note: This did not include district-level report cards.
3. Updated Data Analysis Report 2013 (refer www.choosingfutures.co.nz/Publications).
4. Documentation of changes/differences from Data Analysis Report 2012 (refer Appendix One of this report).

The next update of this Waikato regional MARCO indicators data analysis report will be undertaken in early 2014. A number of the indicators will be updated as the 2013 Census data will and results from the collaborative MARCO Perception Survey 2013 will become available.

In 2013/14 the Waikato Regional Council will also use selected MARCO indicators (and possibly other data/information) to develop a comprehensive and balanced picture of regional progress and wellbeing (Genuine Progress Index, GPI), by considering some key economic, environmental and social/cultural aspects relevant to our region.

FURTHER INFORMATION

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For information about local community outcomes contact your local council.

Appendix One: 2013 update notes

This Appendix updates the notes included in Appendix One of the 2012 report titled "Waikato Regional Community Outcomes Progress Report – Data Analysis Report 2012". Differences between the two reports are summarised as follows.

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
Full document	✓	Of the 75 indicators in the monitoring set, 25 were updated as part of this 2013 report. Some additional contextual information was also sourced for other indicators. Internal hyperlinks and url addresses were checked and updated in the spreadsheet (published separately).	n/a
Title Page	✓	Updated the 'prepared for' line from 'MARCO and Choosing Futures Waikato' to 'MARCO and Waikato Regional Council'.	
Headers	✓		
Contents page	✓		
Acknowledgements	✓	Minor text changes only.	
Disclaimer	×	No change.	
Further information	×	No change.	
Executive summary	✓	Takes account of latest data. Key changes highlighted relate to environmental indicators, specifically water quality deterioration and increasing greenhouse gas emissions, as well as mention of the lingering socio-economic impacts of the GFC.	
States and Trends	✓	Internal hyperlinks checked and updated in spreadsheet. Takes account of latest data. Interpretive text has been updated. Latest 'trend' circle of well-being excludes a number of indicators previously reported, due to a prolonged period of no new data. Also, the Unemployment indicator has been changed from Census to HLFS (Dec 1996 base) for this diagram to enable an up-to-date time series to be reported. Latest 'state' trend' circle of well-being excludes a number of indicators previously reported, due to no recent (late 2000s/early 2010s) data. Also, the Unemployment indicator has been changed from Census to HLFS (Dec 2012 base) for this diagram to enable an up-to-date national comparison.	
Introduction	✓	Minor text updates.	
Waikato Regional Community Outcomes	✓	Minor text updates.	
Monitoring and Reporting Community Outcomes	×	No change.	
How To Read This Report	×	No change.	
Indicator summary/introductory sections	×	No change.	

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
1. Sustainable Environment			
1.1.1 River water quality for ecological health	✓	Spreadsheet hyperlinks checked (WRC website) including river monitoring map. Data updated to 2012. Figure 1.1.1b modified slightly to distinguish upper and lower Waikato River from other rivers and streams in the seven water zones (seeking to avoid giving the impression of a discontinuous trend with regard to upstream/downstream water quality results, more in line with WRC's presentation of the data). Following correspondence with WRC water scientists, Figure 1.1.1c (trend graph of five-year rolling average composite index) has been removed. Trend continues to show a decline, based primarily on the new Figure 1.1.1c (formerly Figure 1.1.1d) (trends for monitoring sites on the Waikato River over the period 1992 to 2011). Note that this has not been updated to 2012 trend information on the WRC website, pending the release of updated trend analysis report (WRC Techncial Report 2013/20 due for release later in 2013). Following feedback from WRC, the 'Total phosphorus' row was deleted from Figure 1.1.1 due to concerns about possible analytical issues with the underlying measure. We note that this row remains on the WRC online version but with an asterisk noting that it is under review. Updated data has been included in the trend circle of well-being.	2008-2012
1.1.2 River water quality for recreation	✓	Spreadsheet hyperlinks checked (WRC website). Data updated to 2012. Figure 1.1.2a modified slightly to distinguish upper and lower Waikato River from other rivers and streams in the seven water zones (more in line with WRC's presentation of the data). Trend symbol remains a down arrow. The most recent data shows no significant improvement in water quality for recreation across all sites compared to last year. Following correspondence with WRC water scientists, Figure 1.1.2b (trend graph of five-year rolling average composite index) has been removed. Previous time series interpretation has also been updated to be consistent with statements in the most recent trend in river water quality report 2008 (due to be updated late 2013). Following feedback from WRC, the previously	2008-2012

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		reported down-arrow was replaced with a 'no trend' symbol (⇨). Updated data has been included in the trend circle of well-being.	
1.1.3 Lakes water quality for ecological health	✓	Spreadsheet hyperlinks checked (WRC website). Graph 1.1.3a updated to include axis labels (%) as per updated WRC web version. Lake Taupo data updated to 2007-2011 five year moving average. Tables 1.1.3c to 1.1.3f in the report now start at 1996 instead of 1995 to allow readability. The full series is retained in the Indicator Spreadsheet. Due to consistent deterioration in Lake Taupo water quality indicators, particularly since the mid 2000s, consideration was given to assigning this indicator trend a down arrow (⇩). However these changes were not implemented following feedback from WRC.	2011
1.1.4 Lakes water quality for contact recreation	×	Spreadsheet hyperlinks checked (WRC website). Data checked for 2011-12. No new data available since last update.	2011-12
1.1.5 Land use	×	Spreadsheet hyperlinks checked (WRC website). No more recent data presented. Reference remains to data development project: 'This indicator is under development (Envirolink Tools Land Use Database Project 2010/11, led by Daniel Rutledge, LCR).' Statistics New Zealand website was checked for updated land use figures from Agricultural Production Census. No more recent census statistics identified (latest 2007). Following WRC feedback, a new Table 1.1.5c was created (selected livestock numbers – Waikato Region), to reflect key elements of the 2002 to 2012 (latest) time series in Agricultural Production Statistics. However this is supplementary information only and is largely based on inter-censal sample surveys. No change was made to key summary information as a result of the new table.	2007
1.1.6 Urban air quality	✓	Spreadsheet hyperlinks checked (WRC website). Data checked and updated to 2011.	2011
1.1.7 Groundwater availability and use	×	Spreadsheet hyperlinks checked (WRC website). No new results (just updated last year).	1988-2011

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
1.1.8 Surface water availability and use	×	Data gap remains.	N/A
1.1.9 Protection of natural heritage and landscapes	×	Spreadsheet hyperlinks checked (WRC website). No new data.	2010
1.1.10 Extent of native vegetation	×	Spreadsheet hyperlinks checked (WRC website). No new data available. Next update 2014/15.	1995
1.1.11 Protected native vegetation areas	×	Spreadsheet hyperlinks checked (MfE biodiversity page). No new data available. For completeness, a South Island map was added to this report alongside the North Island map.	2009
1.2.1 People's environmental attitudes	×	Spreadsheet hyperlinks checked (WRC website). This indicator is now gathered as part of WRC's EAAA survey (Environmental Paradigm). The survey has been undertaken in March 2013 and results will be available in September 2013. No new data available.	2008
1.2.2 People's personal environmental actions	×	Spreadsheet hyperlinks checked (WRC website). No new results available on WRC website (Environmental Awareness, Attitudes and Actions Survey).	2006
1.3.1 Coastal water quality for recreation	×	Spreadsheet hyperlinks checked (WRC website). No new data available. WRC has discontinued monitoring of coastal beaches (Long Term Plan 2012-22). Previous monitoring results at Coromandel and West Coast beaches all indicate excellent water quality which is unlikely to change.	2008-09
1.3.2 Public access to coast (coastline ownership)	×	Spreadsheet hyperlinks checked (WRC website). No new data available. Next update in 2014/15.	2002
1.4.1 Rural subdivision	×	Spreadsheet hyperlinks checked (WRC website). No new data available. Updates coincide with five-yearly Census results. 2006 data at the territorial authority level are not available on the WRC website. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data.	2006

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
1.4.2 Stock density	×	Spreadsheet hyperlinks checked (WRC website). No new data available. Next update scheduled for 2014/15.	2008
1.5.1 Total energy consumption	×	Spreadsheet hyperlinks checked (WRC website). No new data reported on WRC website. Additional data was also sought in the MBIE Regional Economic Activity Report 2013. An additional sentence of context was added to this year's MARCO report to reflect a sentence in the MBIE report: "The region has developed economic strengths in electricity generation including geothermal and hydro energy."	2007
1.5.2 Greenhouse gas emissions	✓	Updated results from MFE annual New Zealand Greenhouse Gas Inventory. Latest information and trends for the period 1990-2011 have been graphed and summarised. The previous national emissions time series graph seemed to suggest that net emission levels had levelled off. This is no longer the case, with net emissions rising rapidly in the past three year period. Hence there is no long a question around whether or not to retain the down-arrow trend for this indicator. In the longer run, it would be appropriate to show a flat trend symbol once the 1990 emissions level looks like being attained. However, NZ is now 22.1% exceeding this level (up from 19.4% in 2009). Also added an extra sentence to the initial context information: "In May 2013, global atmospheric concentrations of CO2 reached a 'milestone' of 400 parts per million, up from around 300 ppm in the 1950s".	2011
1.5.3 Energy efficiency	×	Spreadsheet hyperlinks checked (WRC website). No new results available on WRC website. There are currently no plans to update this indicator.	2003
1.6.1 Waste to landfills	✓	Spreadsheet hyperlinks checked (WRC website website) and added (MfE Quantity of solid waste sent to landfill – Indicator update page). Latest 2011 national data was updated, including Figure 1.6.1a. The national data collection that began in recent years has not been in place long enough to show a national trend. Underlying sub-national data are not published. The regional information for this section of the report was completely rewritten following receipt from WRC of a copy of the May 2013 publication titled: 'Bay of Plenty and Waikato Regions Waste Stocktake'. Updated data was also	2012

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		included in the trend circle of well-being (2006 to 2012 data).	
1.6.2 Proportion of recycling	✓	Spreadsheet hyperlinks checked (MfE website). A short amount of time was spent searching online for update to the MfE "Targets in the New Zealand Waste Strategy: 2006 Review of Progress", but not more recent information was found. The regional information for this section of the report was completely rewritten following receipt from WRC of a copy of the May 2013 publication titled: 'Bay of Plenty and Waikato Regions Waste Stocktake'. In response to the available limited trend information, the trend symbol was changed from an up-arrow to a 'no trend' symbol (⇨).	2012
2. Quality of Life			
2.1.1 Life expectancy at birth	✓	Spreadsheet hyperlinks checked (Stats NZ website). National data updated to 2010-12. These are labelled 'interim' pending the release of new population estimates following the 2013 Census. Sub-national data do not appear to be available through the Stats NZ website.	2010-12
2.1.2 Social deprivation index	×	No new data available. Updates are undertaken following each five-yearly Census. Hyperlink updated in spreadsheet to reflect minor changes to the new University of Otago website.	2006
2.1.3 Avoidable mortality and hospitalisation rates	✓	Spreadsheet hyperlinks checked (Waikato DHB Health Needs Assessment), and updated (Ministry of Health online data collections). No new data available on Waikato DHB website – no further update since the 2008 Health Needs Assessment. The Health Ministry's Public Health Intelligence (PHI) online tool has been replaced by CPHROnline – Centre for Public Health Research (http://cphronline.massey.ac.nz/). Recommend that MARCO contact Waikato DHB to see if there is any more recent data available on avoidable mortality and hospitalisation rates, as currently reported data is quite dated. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data. This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data.	2011

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		WRC subsequently provided a link to a NZ Herald article and diagram illustrating five years of hospital mortality rate data. Text and diagrams from this article have been incorporated into this MARCO report. Summary text remains unchanged and inconclusive. No official data series has yet been sourced directly from Waikato DHB or the Ministry of Health.	
2.1.4 Overall quality of life	×	No new data (MARCO Waikato Regional Perception Survey, last undertaken 2010). Next survey planned in June/July 2013.	2010
2.1.5 Barriers to accessing General Practitioners (GPs)	×	No new data (MARCO Waikato Regional Perception Survey, last undertaken 2010).	2010
2.2.1 School leavers with no formal qualification	✓	Hyperlinks checked (Education Counts website). Data updated to 2011. Also a small sample of data verification and update for 2009 and 2010. Figure 2.2.1c (Percentage of school leavers with little or no formal attainment, by ethnic group for whole of New Zealand 1993-2007) is no longer shown on the Education Counts website but remains a valuable graph for the MARCO indicators report. The source is cited as 'Ministry of Education (downloaded from Education Counts website May 2010)'.	2011
2.2.2 Educational attainment of the adult population	×	No new Census results (Census data). Supplementary annual data for the period 1986 to 2009 were previously added from the HLFS (reported through the MSD Social Report). Trend data used in the circle of wellbeing is still the Census data, which tells a similar story to the sample data (ie, a general increase in the proportion of the adult population in the Waikato Region with post-secondary qualifications). The MSD Social Report was not published in 2011. The Social Report Project Manager was contacted by email on 18 February 2012 to confirm this. Updates are now triennial. HLFS sample data on labour force and education status appears to be only available at a national level through the Statistics NZ website. It is likely that Statistics NZ commissioned a special data extract to provide regional data for the MSD Social Report. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data. This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data.	2009

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
2.2.3 Participation in early childhood education	✓	Hyperlinks checked (MSD Social Report website and Ministry of Education ECE participation data). The MSD Social Report was not published in 2011, so no additional data is available via this source. However, the Ministry of Education now reports prior participation of Year 1 students in childhood education service through the Education Counts website. ECE attendance data updated to 2012, including territorial authority-level data in Appendix. Data added for 2012. A check on historical data resulted in a small number minor retrospective amendments, possibly resulting from changes to local government boundaries over time.	2012
2.2.4 Adult and community education	×	No new data.	2010
2.2.5 Work opportunities matching skills	×	No new data (MARCO survey). Next survey planned in June/July 2013.	2010
2.3.1 Rent to income ratio	×	No new data on Statistics NZ website. 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 require a special data extraction. Comparable 2006 data could potentially be sourced from Statistics New Zealand for a fee. Recommendation carried over from previous updates, 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. 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. Due to the lack of any new data and the passing of time, the trend symbol for this indicator has now been turned from a down-arrow to a question mark. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data. This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data. A small amount of additional information was sourced from the MBIE Regional Economic Activity Report 2013 with regard to annual average regional rental cost and rental share of household income.	2001

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
2.3.2 Housing affordability	✓	Regional boundary level information is only available by special request, as survey numbers in the Household Economic Survey are generally too low. Available survey data for the Auckland/upper North Island region was previously updated in the annual MARCO report descriptively only. However there is now a consistent 2007-2012 data series online which permits meaningful interpretation. The table and findings have been fully incorporated into this update of the MARCO report. However, this indicator has not been incorporated into the circles of well-being due to the level of geographic aggregation being so high ('rest of the North Island') and the trend symbol remains a question mark. These decisions by the consultant are open to feedback. Recommendation carried over from previous updates, that MARCO contact Stats NZ to discuss a special data request to estimate a consistent 2001-2012 time series for housing costs as a proportion of household income (from the Household Economic Survey) for the Waikato Region and any interested TLAs (eg, Hamilton City).	2012
2.3.3 Home ownership rate	×	No new results (Census data). This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data. This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data.	2006
2.3.4 Household crowding (Canadian Crowding Index)	×	No new results (Census data). This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data. This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data.	2006
2.3.5 Proximity to work, study and recreation	×	No new data (MARCO survey). Next survey planned in June/July 2013.	2010
2.4.1 Criminal victimisation rates	✓	No new national-level data from the New Zealand Crime and Safety Survey (last undertaken 2009). 2012 calendar year data on recorded offences updated from the Statistics NZ website. Previous figures suggested an adverse trend for the Waikato Police District. This was reflected by a change in the trend symbol (to a down arrow). The interpretive text was checked, modified and agreed with Tony Sasso, Waikato Police. Latest 2012 data shows a reversal of this trend. The trend	2012

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		symbol and interpretation has been updated accordingly.	
2.4.2 Perceptions of safety	×	No new data (MARCO survey). Next survey planned in June/July 2013.	2010
2.4.3 Road traffic crashes and casualties	×	No new data (previously sourced via MSD Social Report). A hyperlink was added in the spreadsheet during 2012 to the Waikato section of crash reports on the NZTA website. However, the latest published reports only cover data for the period up to 2009. The 'crash analysis reports' page of the NZTA website was updated on 9 April 2013: "As part of the NZTA's commitment to the government's Safer Journeys Strategy, we provide a range of crash analysis reports. These reports provide information at a variety of levels (national, regional and territorial authority) and across a number of key road safety themes." While the newly available data provides useful trend and regional comparison data for a range of relevant measures, it does not report on the specific aggregated indicator previously selected for reporting by MARCO. In April 2013, NZTA published a report titled 'Statistical Summary of Territoria Authorities in New Zealand'. This provides data on deaths and serious injuries for 2008-2012 which has been included in this MARCO report as supplementary information. This is reported in nominal terms and not standardised to deaths and injuries per 100,000 population. MARCO may wish to source updated aggregate data on road deaths and injuries from NZTA for this indicator (i.e. Deaths and injuries per 100,000 population).	2009
2.5.1 Unpaid work	×	No new results (Census data).	2006
2.6.1 Participation in sport and active leisure	×	No new data (MSD Social Report and MARCO Survey data). Next MARCO survey planned in June/July 2013. Sport NZ's 2013/14 Active NZ Survey (ANZS) will explore sport and recreation participation and volunteering among New Zealand adults (aged 16 years and over). The survey started in April 2013 and will finish in March 2014. Results will follow later in 2014. The MARCO spreadsheet was updated to include a hyperlink to this forthcoming data source (formerly sparc.org.nz, now www.sportnz.org.nz).	2010
2.7.1 Participation in social networks	×	No new data.	2010, Hamilton only

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
and groups		Hamilton not a participant in latest QoL survey.	
2.7.2 Contact between young people and their parents	×	No new data available. The NZ Youth Survey was last undertaken in 2012. The youth2000 website indicates that results from the 2012 national survey will be available in mid 2013.	2007
2.8.1 Youth and older people's engagement in decision-making	×	Data gap remains.	N/A
3. Sustainable Economy			
3.1.1 Genuine Progress Indicator (or Ecological footprint)	✓	Spreadsheet hyperlink checked (WRC website). No new data available. Text has been updated to reflect recent work. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data.	2006
3.2.1 Regional Gross Domestic Product (GDP)	✓	Hyperlinks checked and updated (Stats NZ website, NBNZ/ANZ website and WRC 'Our economy' page). Regional GDP data were released from SNZ later in June 2013 and this subsequently became the cut-off for the 2013 MARCO update. The new release on 28 June 2013 provide regional GDP statistics for the years ended March 2007 to 2010, fully consistent with the GDP statistics of the nation. The results of regional GDP include a breakdown by industry. All key results were incorporated into this update, including the circle of wellbeing trend diagram. Updates were also made to 6.5.1 (Regional GDP contributed by primary industries). Also note that, in terms of national GDP trends, New Zealand is scheduled to transition to recently updated international standard methodologies in 2014. No new data available on the NBNZ/ANZ revamped website. It appears that the NBNZ regional index data is no longer available online. Latest Regional Trends summary report is dated August 2012. MARCO may wish to establish a standing annual data request via Steve Edwards, Economics Division The National Bank of New Zealand, if this index is still being calculated. Latest results from Waikato Regional Council's Regional Economic Model were transcribed ("$16.5 billion for the year ended March 2011. This is about 8.5 per cent of New Zealand's GDP"). State symbol was changed from ☺ to 😐 in the 2010 update to reflect the fact that New Zealanders were feeling the effects of economic recession but that living standards are still relatively high (compared to many other countries).	2011

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		The symbol has remained unchanged for the 2011-2013 updates, however there would be merit in reviewing this in future update rounds. This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data.	
3.2.2 Unemployment rate	✓	No new Census data. HLFS quarterly estimates updated to December 2012. No retrospective revisions by Stats NZ. No change to the long run trend symbol. Current state symbol is set at 😐.	2012
3.2.3 Median weekly income	✓	Hyperlink checked. Stats NZ Table Builder function is no longer being updated. Latest available online data for this specific indicator was 2011. The new InfoShare function does not report results from the New Zealand Income Survey but does have a range of similar indicators from the Earnings and Employment Survey (eg, average hourly earnings) though not at a Waikato Regional Council level. New Zealand Income Survey tables on the Stats NZ website report a range of closely related measures, notably annual estimates of median weekly earning for those in paid employment by regional council area. Feedback was sought from WRC as to whether this or another alternative indicator should be adopted. Based on feedback from WRC, consideration was first given to any possible additional information that could be derived from the Waikato Regional Economic Profile 2012. Page 16 of the report presents median weekly household income trends over the same period as this MARCO report (1998-2011), hence no additional information was derived from this source. Next, annual estimates of median weekly earning for those in paid employment were located on the SNZ website and incorporated into this MARCO report through new Figure 3.2.3b and Table 3.2.3d, through interpretive and summary text and incorporation into the 'state' circle diagram. Alonger and more consistent time series than expected was found, through Table Builder for ease of updating, hence this series was also updated in the 'trend' circle diagram. For completeness, text on the previous indicator remains (in addition to updated indicator information) but could be deleted if WRC would prefer.	2012
3.2.4 Number of businesses and	✓	Hyperlink checked (Stats NZ website).	2012

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
employees by industry		Data updated to 2011, including retrospective revision of all historical data from 2003 onward. Franklin District data is no longer reported. Table 3.2.4c (employee counts by industry classification by regional council area) has not been updated because this information has not been updated on InfoShare (hence this still reports 2011 data). Appendix tables (territorial authority level) have also not been updated, for the same reason. Trend symbol remains ⇨.	
3.2.5 Building consents	✓	Hyperlink checked (Stats NZ website). Updated to February 2013 data. Also updated the national trend graph for 2006-2012 from the Stats NZ website. Commencing this update, Franklin District data are not reported. No change to the long-term trend symbol (still showing a decline). Consideration should be given to reviewing this in future updates.	2013
3.3.1 Drinking water quality	✓	Hyperlink checked and updated (drinkingwater.esr.cri.nz). A considerable amount of updated data was available due to expansion of listed supplies on the WINZ database. Most of these are ungraded small supplies. A more comprehensive listing is provided in this MARCO update to signal the volume of testing to be undertaken and to make the update process more systematic. Any changes to existing published gradings since 2009 are also listed in: 'Table 3.3.1b: Changes to public health grading for selected community water supplies between 2009 and 2013'. Due to the large proportion of supplies that remain ungraded, the trend symbol remains '?'. Note that Whitianga's water supply rating was changed from Bb to Uu on Drinking Water website between April 2010 and March 2011, but was subsequently changed back to Bb as at February 2012. For this reason, it is no longer listed as changed in the list of 'Changes to public health grading for selected community water supplies between 2009 and 2011'. Similarly, Kihikihi's water supply rating was changed from Ab to Uu on Drinking Water website between April 2010 and March 2011, but was subsequently changed back to Ab as at February 2012. For this reason, it is no longer listed as	2013

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		changed in the list of 'Changes to public health grading for selected community water supplies between 2009 and 2011'. Kaharoa's water supply rating was changed from Ee to Eb on Drinking Water website between June 2009 and April 2010, but was subsequently changed to Eu as at April 2013.	
3.4.1 Residents' confidence in councils' decision-making	×	No new data (MARCO survey). Next survey planned in June/July 2013.	2010
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 checked (WRC 'our economy' page). Regional GDP data were released from SNZ later in June 2013 including a breakdown by industry. All key results were incorporated into this update. Prevoius figure was replaced by a Table showing Waikato's top 5 industries in 2010 with focus on agriculture, using interpretive text from SNZ. Generic text about 2010/11 regional GDP levels from from Market Economics Ltd was updated in this report. WRC may have access to more detailed updated estimates not shown on the website?	2010
3.6.1 Visitor nights in commercial accommodation	✓	Hyperlink checked (Stats NZ website). References to Ministry of Economic Development have now been removed in the report and spreadsheet. Data updated to February 2013, including a limited amount of checking for any retrospective updates of historical data (none found). Note remains that Franklin District data is still reported in the Accommodation Survey pivot tables on a monthly basis (based on accommodation providers that were within the boundaries of the former Franklin District).	2013
3.6.2 International visitors	×	Hyperlink checked (MED tourism research and data webpage) and added (Regional Tourism Data 2006-2011 link). References to Ministry of Economic Development have now been removed in the report and spreadsheet. National-level text updated to year ended December 2012. Regional-level data no longer appears to be available from the IVS online in a similar format to previously. This was also noted in the 2009, 2010,	2007

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		2011 and 2012 Update Reports. Due to prolonged lack of regional data, the trend symbol for this indicator has now been set as a question mark and this indicator has been removed from the 'trend' circle of well-being. There is a set of online New Zealand Regional Tourism Data Pivot Tables 2006 to 2011 which contain modelled regional data by RTO and may or may not include regional estimates of international visitor numbers and nights. However the file is in protected mode which disables pivot features; hence the data cannot be accessed by the consultant. Moreover: "These estimates supersede previously published Regional Tourism Estimates. Unfortunately, this has involved some revisions to historical data…" Hence, any newly available modelled estimates would not be consistent with the previous 1998-2007 series. MARCO may wish to contact Tourism Waikato or the MBIE Tourism Strategy Group regarding IVS data for 2006 to 2011 for the Waikato Region (Number of international visitors and Number of nights in the area). However, note that the 2008 'Indicators Mapping Report' recommended this indicator be removed from the MARCO set due to lack of utilisation by TLAs in the Region. This decision is still pending.	
3.6.3 Income from tourism (international and domestic)	×	Hyperlink checked (MBIE tourism research and data webpage) and added (Regional Tourism Data 2006-2011 link). References to Ministry of Economic Development have now been removed in the report and spreadsheet. There is a set of online New Zealand Regional Tourism Data Pivot Tables 2006 to 2011 which contain modelled regional data by RTO and may include regional estimates of visitor expenditure measures. However the file is in protected mode which disables pivot features; hence the data cannot be accessed by the consultant. In the 2011 update it was reported that: 'Regional expenditure forecasts are once again available through pivot tables on the Tourism NZ website. The new visitor expenditure estimates are more conservative than previous historical estimates. The updated series replaces the old series entirely in the MARCO dataset. Forecasts are provided out to 2016'. As at February 2013, no new regional tourism forecasts appeared to be available. Due to prolonged lack of regional data, the trend symbol for this indicator has now been set as a question mark and this indicator has been removed from the 'trend' circle of well-being.	2009

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		The MBIE Regional Activity Report 2013 was checked for additional data, but the international tourism spending figure reported for Waikato Region ($300 million) appears to be inconsistent with other figures reported (likely for a variety of reasons).	
3.6.4 Employment in the tourism industry	✓	Hyperlink checked (Stats NZ website). Update to 2012 data included retrospective changes to the time series (2001-2011 data). There appears to have been a major change to the methodology which has resulted in revised data for the entire time series. Only national-level data is available for this indicator. Based on recent years' data, the trend symbol remains unchanged (⇨). 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. This decision is still pending.	2012
3.7.1 Total research funding	✓	Hyperlinks checked (Stats NZ and University of Waikato). The National R&D Survey is undertaken biennially. Data was updated for 2012 in this MARCO report, including retrospective update to 2010 historical data. This mostly affects the private sector data to ensure comparability with 2012 results. New national data for 2014 is expected to be available in around March 2015. University of Waikato research income data has been updated from Annual Report for 2012 and checked/updated for earlier years.	2012
3.7.2 Enrolments at tertiary education institutes	✓	Hyperlink checked (Education Counts website). Ministry of Education EFTS data updated to 2011, plus some minor retrospective updates to historical data.	2011
4. Culture and Identity			
4.1.1 Residents' rating of their sense of pride in the way their city/town looks and feels	×	No new data from MARCO survey. Next survey planned in June/July 2013. Hamilton not a participant in latest QoL survey.	2010
4.1.2 Number of Māori speakers (in Māori and total population)	×	No new data (Census item). This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data.	2006

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
		This indicator has been dropped from the 'state' circle of well-being due to absence of any recent (late 2000s/early 2010s) data.	
4.1.3 Proportion of population that speak the 'first language' of their ethnic group	×	As of 2010/11, 'language retention' regional-level data is no longer provided through the MSD Social Report regional indicators set. No new data (Census item). This indicator has been dropped from the 'trend' circle of well-being due to a prolonged period with no new data.	2006
4.2.1 Number of buildings and places listed on the Historic Places Trust register	✓	Hyperlink checked (NZHPT website). Website search results (reported count per TLA) used to update data. Note there is also a 'recent registrations' function which supplements the online register, and a 'Heritage Lost' section, both of which could be explored to provide additional interpretation for this indicator subject to MARCO interest and resourcing. For ease of compilation, from 2011 the tally approach was discontinued. Hence, the TLA level data is no longer classified according to Category 1 Historic Place, Category 2 Historic Place or Historic Area. Only a total value is reported for each TLA, as reported by the count function on the HPT website (through the Advanced Search function). This altered the compilation task from 2-3 hours to approximately 0.5 hours for this indicator, with little loss of value to the report. On the basis of recent years' results, the trend symbol remains the same (⇨). Note that the period 2012-13 was a period of rapid increase for this indicator, particularly due to an increased number of buldings and sites in the Waikato District becoming HPT registered over the period, but this may not be indicative of a continuing trend.	2013
4.2.2 Number and proportion of heritage buildings demolished or removed from heritage records	×	Hyperlink checked (NZHPT website). No changes from previous quantitative data (verification only). Additional text added in relation to specific stories in the 'Heritage Lost' section of the NZHPT website relevant to Waikato Region including: • Horotiu Bridge. • Rotowaro Carbonisation Works buildings. • Arapuni Line Depot Carpenters' Shops. Due to the absence of up-to-date quantitative data for this item, the trend symbol has been changed to a question mark.	2006

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
4.2.3 Design of new developments	×	Hyperlink checked and updated (WRC website). No new results available on WRC website. This indicator has been gathered as part of WRC's Environmental Awareness, Attitudes and Actions Survey in 2006. This survey has been undertaken again in March 2013, however this indicator has not been included this time. 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.	2006
4.3.1 Residents' satisfaction with cultural facilities provided	×	No new data from MARCO survey. Next survey planned in June/July 2013.	2010
4.3.2 Participation in cultural and arts activities	×	Hyperlink checked (Stats NZ website). No new data available (NZ Cultural Experiences Survey). No additional relevant information found on Ministry of Culture and Heritage website.	2002
4.3.3 Proportion of council's spending on cultural activities and events	×	Hyperlink checked (Stats NZ website). No new data available from Statistics NZ. No additional relevant information found on Ministry of Culture and Heritage website.	2003/04
4.4.1 People employed in the cultural sector	×	No new data available from Statistics NZ. Data remains available at the national level only. Further investigation was undertaken on Ministry of Culture and Heritage website. Latest 2009 Employment in the Cultural Sector report has already been incorporated into the MARCO information.	2006
5. Participation and Equity			
5.1.1 Percentage of voter turnout at local and general elections	×	Hyperlink checked (DIA website – Local Election Statistics) and added (electionresults.govt.nz). No new data (no elections).	2011
5.1.2 Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	×	Hyperlink checked (DIA Local Election Statistics webpage). No new data (no elections).	2010
5.1.3 Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	×	No new data from MARCO survey. Next survey planned in June/July 2013.	2010
5.2.1 Percentage of residents perceiving that cultural diversity	×	No new data from MARCO survey.	2010

Section/Indicator	Updated?	Changes/Comments	Latest Data (Year)
makes their region/city/town a better place to live		Next survey planned in June/July 2013.	
Where To From Here	✓	Text updates.	
Further Information	×		
Appendices			
Appendix One: Update notes	n/a		
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	✓	ECE participation data updated to 2012.	2012
Appendix Tables 3.2.4a to 3.2.4b: Employee counts and businesses by industry classification (ANZSIC), territorial authority areas	×	Data not updated (not yet refreshed in Stats NZ InfoShare tool). Note that these tables are difficult to read given the small font size.	2011

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
2.2.3	Year 1 students who have had some Early Childhood Education (ECE) by ethnicity and territorial authority
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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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: Waikato Regional Council: 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_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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_2 equivalents using Global Warming Potentials published in the IPCC Third Assessment Report (TAR))

Territorial authority	CO_2 (t/yr)	CH_4 (t/yr)	N_2O (t/yr)	HFC's (t/yr)	PFC's (t/yr)	SF_6 (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.otago.ac.nz/wellington/research/hirp/projects/otago020194.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
Franklin District		
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
Thames-Coromandel District		
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
Hauraki District		
533800	Ngatea	6
533901	Hauraki Plains	5
533902	Turua	4
533903	Kerepehi	9
534200	Ohinemuri	6

CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
534300	Paeroa	9
534400	Waihi	10
Waikato District		
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
Matamata-Piako District		
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
Hamilton City		
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

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
Waipa District		
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

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
Otorohanga District		
531100	Kawhia Community	10
531200	Otorohanga	9
531301	Otorohanga Rural West	6
531303	Te Kawa	4
531304	Otorohanga Rural East	5
South Waikato District		
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
Waitomo District		
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
Taupo District		
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

CAU_num_2006	CAU_name_2006	CAU_average_NZDep2006
541333	Kinloch	2
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
Rotorua District		
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 2.2.3b: Early childhood attendance by Year 1 students, by ethnic group, 2012

	European/ Pākehā	Māori	Pasifika	Asian	Other ethnic groups	Total
Thames-Coromandel District	99.2	97.1	n	n	n	98.4
Hauraki District	96.4	90.9	n	n	n	94.1
Waikato District	97.4	90.5	90.5	92.0	n	94.3
Matamata-Piako District	95.2	90.2	n	n	n	93.8
Hamilton City	98.7	91.0	91.8	98.1	97.1	95.4
Waipa District	97.0	89.2	n	n	n	95.2
Otorohanga District	96.0	93.8	n	n	n	96.5
South Waikato District	97.1	93.6	92.3	n	n	94.4
Waitomo District	95.1	89.8	n	n	n	89.9
Taupo District	96.6	88.0	n	n	n	93.0
Rotorua District	97.3	91.6	88.8	96.4	n	93.9

Source: Ministry of Education – Education Counts website.
http://www.educationcounts.govt.nz/statistics/ece2/participation
Note: 'n' is used for cells with small numbers of Year 1 students (less than 20). Prior participation rates in these cases often are subject to large fluctuations and may not provide a very reliable basis for comparison with other categories.

Appendix Table 3.2.4a: Business geographic units by industry classification (ANZSIC), territorial authority areas 2011

ANZSIC06	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City	Waipa District	Otorohanga District	South Waikato District	Waitomo District	Taupo District	Rotorua District
A Agriculture, Forestry and Fishing	673	1,026	3,082	2,187	220	2,039	927	823	739	710	1,140
B Mining	3	10	38	9	6	12	3	6	9	7	5
C Manufacturing	186	109	297	181	733	250	34	101	27	214	341
D Electricity, Gas, Water and Waste Services	12	13	30	9	32	24	5	11	6	35	26
E Construction	607	188	797	338	1,478	662	91	137	81	568	609
F Wholesale Trade	83	42	160	108	664	223	31	34	21	105	232
G Retail Trade	327	113	237	224	1,161	318	41	158	61	323	486
H Accommodation and Food Services	297	84	152	107	555	162	33	78	52	272	401
I Transport, Postal and Warehousing	131	76	175	93	371	158	26	78	36	188	261
J Information Media and Telecommunications	21	15	20	16	117	22	2	7	5	25	47
K Financial and Insurance Services	168	76	327	229	878	288	53	116	43	222	288
L Rental, Hiring and Real Estate Services	758	413	1,517	1,024	2,734	1,354	405	369	291	856	1,299
M Professional, Scientific and Technical Services	242	105	349	168	1,439	426	55	68	52	309	499
N Administrative and Support Services	113	37	143	66	498	144	17	29	19	142	209
O Public Administration and Safety	44	24	50	30	108	25	9	16	23	50	85
P Education and Training	71	43	146	76	318	123	25	68	35	102	202
Q Health Care and Social Assistance	121	59	187	95	860	184	27	65	24	111	327
R Arts and Recreation Services	85	44	137	109	221	189	14	34	23	118	178
S Other Services	173	89	223	156	721	237	47	105	38	202	361
Total Industry	4,115	2,566	8,067	5,225	13,114	6,840	1,845	2,303	1,585	4,559	6,996

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 2011

ANZSIC06	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City	Waipa District	Otorohanga District	South Waikato District	Waitomo District	Taupo District	Rotorua District
A Agriculture, Forestry and Fishing	470	760	3,780	2,090	230	2,880	940	1,550	920	1,740	2,120
B Mining	20	260	610	70	6	20	15	6	140	160	25
C Manufacturing	920	420	1,920	3,750	7,330	1,960	230	1,440	820	890	3,290
D Electricity, Gas, Water and Waste Services	50	15	570	45	670	120	15	25	90	260	160
E Construction	620	420	1,120	940	5,270	970	140	480	320	1,040	1,630
F Wholesale Trade	220	170	310	480	4,280	640	95	85	75	240	1,100
G Retail Trade	1,590	570	660	1,330	8,130	1,740	210	730	300	1,850	2,880
H Accommodation and Food Services	1,270	310	790	430	4,600	970	170	400	310	2,150	3,520
I Transport, Postal and Warehousing	370	160	500	460	1,650	510	190	290	130	570	1,240
J Information Media and Telecommunications	85	45	65	110	1,510	70	9	55	35	130	220
K Financial and Insurance Services	150	65	75	210	1,450	200	25	75	45	180	470
L Rental, Hiring and Real Estate Services	140	65	220	110	830	260	55	95	30	350	400
M Professional, Scientific and Technical Services	230	240	1,000	550	6,120	1,100	160	170	130	640	1,510
N Administrative and Support Services	220	110	440	210	3,780	300	50	95	25	310	900
O Public Administration and Safety	390	240	860	260	4,480	320	520	210	150	790	1,710
P Education and Training	700	580	1,530	840	7,530	1,760	230	990	350	1,160	2,930
Q Health Care and Social Assistance	1,140	800	660	560	11,920	900	100	580	240	800	3,440
R Arts and Recreation Services	280	55	240	250	1,410	470	45	85	220	460	1,160
S Other Services	310	160	390	350	2,920	520	90	470	65	440	1,020
Total Industry	9,190	5,440	15,740	13,060	74,140	15,720	3,300	7,840	4,390	14,170	29,740

Source: Statistics New Zealand Business Tables
Note: ANZSIC = Australian and New Zealand Standard Industrial Classification.

Appendix Three: Website References

Easy searchable access to the indicator data and associated metadata (additional information about the data) is available from the MARCO website: http://www.choosingfutures.co.nz/Publications/ (click on "Searchable Spreadsheet – Update 2013"). The following website links provide access to other relevant websites referred to in this report. The links below are annually checked and updated as part of the data update and quality control process (last updated May-June 2013).

Code	Indicator name	Website
1.1.1	River water quality for ecological health	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/River-and-streams/
1.1.2	River water quality for recreation	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/River-and-streams/
1.1.3	Lakes water quality for ecological health	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/Lakes/
1.1.4	Lakes water quality for contact recreation	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/Lakes/lake9-keypoints/
1.1.5	Land use	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Land-and-soil/Land/land1-key-points/
1.1.6	Urban air quality	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Air/Air-quality/
1.1.7	Groundwater availability and use	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Freshwater/Groundwater/flow5a-report/
1.1.8	Surface water availability and use	n/a
1.1.9	Protection of natural heritage and landscapes	http://www.waikatoregion.govt.nz/PageFiles/14822/TR201012.PDF
1.1.10	Extent of native vegetation	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Biodiversity/veg1-keypoints/
1.1.11	Protected native vegetation areas	http://www.mfe.govt.nz/environmental-reporting/report-cards/biodiversity/2010/index.html
1.2.1	People's environmental attitudes	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and-economy/Communities-and-their-views/
1.2.2	People's personal environmental actions	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and-economy/Communities-and-their-views/p2f-keypoints/
1.3.1	Coastal water quality for recreation	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Coasts/Coastal-water-quality/
1.3.2	Public access to coast (coastline ownership)	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Coasts/Natural-character-and-biodiversity/
1.4.1	Rural subdivision	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Land-and-soil/Land/
1.4.2	Stock density	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Land-

		and-soil/Land/
1.5.1	Total energy consumption	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and- economy/Economy-and-resource-use/ and http://www.eeca.govt.nz/energy-end-use-database
1.5.2	Greenhouse gas emissions	http://www.mfe.govt.nz/publications/climate/new-zealand-greenhouse-gas-inventory/index.html Previous NIWA web information no longer available (www.niwa.co.nz).
1.5.3	Energy efficiency	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and-economy/Sustainability/
1.6.1	Waste to landfills	http://www.mfe.govt.nz/environmental-reporting/waste/solid-waste/quantity.html
1.6.2	Proportion of recycling	http://www.mfe.govt.nz/publications/waste/waste-strategy-review-progress-mar07/index.html
2.1.1	Life expectancy at birth	http://www.stats.govt.nz/searchresults.aspx?q=life%20tables. Also reported in Waikato DHB Health Needs Assessment http://www.waikatodhb.govt.nz/page/pageid/2145840843/Health_Needs_Analysis .
2.1.2	Social deprivation index	http://www.otago.ac.nz/wellington/research/hirp/otago020194.html
2.1.3	Avoidable mortality and hospitalisation rates	http://www.waikatodhb.govt.nz (keyword: 'Health Needs Assessment') or http://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets?mega=Health%20statistics&title=See%20all
2.1.4	Overall quality of life	http://www.choosingfutures.co.nz/Publications/
2.1.5	Barriers to accessing General Practitioners (GPs)	http://www.choosingfutures.co.nz/Publications/
2.2.1	School leavers with no formal qualification	http://www.educationcounts.govt.nz/statistics/schooling/school_leavers2/highest-attainment-numbers-2009
2.2.2	Educational attainment of the adult population	http://www.stats.govt.nz and www.socialreport.msd.govt.nz/regional/knowledge-skills/adult-education.html
2.2.3	Participation in early childhood education	http://www.socialreport.msd.govt.nz/regional/ and http://www.educationcounts.govt.nz/statistics/ece2/participation
2.2.4	Adult and community education	http://www.choosingfutures.co.nz/Publications/
2.2.5	Work opportunities matching skills	http://www.choosingfutures.co.nz/Publications/
2.3.1	Rent to income ratio	http://www.stats.govt.nz
2.3.2	Housing affordability	http://www.stats.govt.nz
2.3.3	Home ownership rate	http://www.stats.govt.nz
2.3.4	Household crowding (equivalised crowding index)	http://www.stats.govt.nz
2.3.5	Proximity to work, study and recreation	http://www.choosingfutures.co.nz/Publications/
2.4.1	Criminal victimisation rates	http://www.justice.govt.nz and www.stats.govt.nz (keyword: crime)
2.4.2	Perceptions of safety	http://www.choosingfutures.co.nz/Publications/
2.4.3	Road traffic crashes and casualties	http://www.nzta.govt.nz/site-resources/content/about/docs/media/statistical-summary-of-territorial-authorities-in-new-zealand.pdf or http://www.nzta.govt.nz/resources/crash-analysis-reports/trends.html or http://www.nzta.govt.nz/resources/results.html?catid=142 or http://www.socialreport.msd.govt.nz
2.5.1	Unpaid work	http://www.stats.govt.nz
2.6.1	Participation in sport and active leisure	http://www.sportnz.org.nz/activenzsurvey and www.choosingfutures.co.nz/Publications/
2.7.1	Participation in social networks and groups	http://www.qualityoflifeproject.govt.nz/

2.7.2	Contact between young people and their parents	http://www.youth2000.ac.nz/ and http://www.socialreport.msd.govt.nz/regional/social-connectedness/contact-youth-people.html
2.8.1	Youth and older people's engagement in decision-making	n/a
3.1.1	Genuine Progress Indicator (or Ecological footprint)	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and-economy/Sustainability ; http://www.choosingfutures.co.nz/PageFiles/147/Waikato%20GPI-Summary%20Report%20(EERNZ%20June%202010).PDF; http://www.choosingfutures.co.nz/Publications/
3.2.1	Regional Gross Domestic Product (GDP)	http://www.stats.govt.nz (keyword: regional GDP) and http://www.anz.co.nz/commercial-institutional/economic-markets-research/ and http://www.waikatoregion.govt.nz/Community/About-the-Waikato-region/Our-economy/
3.2.2	Unemployment rate	http://www.stats.govt.nz (household labour force survey)
3.2.3	Real median weekly income	http://www.stats.govt.nz (keyword: income survey) - use Table Builder function for median weekly earnings for those in paid employment, by region
3.2.4	Number of businesses and employees by industry	http://www.stats.govt.nz (access data through Infoshare)
3.2.5	Building consents	http://www.stats.govt (keyword: building consents)
3.3.1	Drinking water quality	http://www.drinkingwater.esr.cri.nz/supplies/Suppliescompliance.asp
3.4.1	Residents' confidence in councils' decision-making	http://www.choosingfutures.co.nz/Publications/ and www.qualityoflifeproject.govt.nz
3.4.2	Residents' satisfaction with councils' approach to planning and providing services	n/a
3.5.1	Regional GDP contributed by primary industries	http://www.stats.govt.nz (keyword: regional GDP) and http://www.waikatoregion.govt.nz/Community/About-the-Waikato-region/Our-economy/
3.6.1	Visitor nights in commercial accommodation	http://www.tourismresearch.govt.nz/ (CAM pivot tables) or http://www.stats.govt.nz (keyword: accommodation)
3.6.2	International visitors	http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data/other-research-and-reports/regional-data#Regional_Tourism_Data_2006-2011 and http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data
3.6.3	Income from tourism (international and domestic)	http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data/other-research -and-reports/regional-data#Regional_Tourism_Data_2006-2011 and http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data (keyword: tourism expenditure forecasts). Archived reports are at http://www.med.govt.nz/sectors-industries/tourism/tourism-research-data/other-research-and-reports/forecasts/2011-2016-forecasts-update/old-forecasts-regional.
3.6.4	Employment in the tourism industry	http://www.stats.govt.nz/ (keyword: tourism)
3.7.1	Total research funding	http://www.stats.govt.nz and www.waikato.ac.nz
3.7.2	Enrolments at tertiary education institutes	http://www.educationcounts.govt.nz/statistics/tertiary_education/participation
4.1.1	Residents' rating of their sense of pride in the way their city/town looks and feels	http://www.choosingfutures.co.nz/Publications/ and www.qualityoflifeproject.govt.nz
4.1.2	Number of Māori speakers (in Māori and total population)	http://www.stats.govt.nz; http://www.socialreport.msd.govt.nz/regional/cultural-identity/index.htm l

4.1.3	Proportion of population that speak the 'first language' of their ethnic group	http://www.stats.govt.nz
4.2.1	Number of buildings and places listed on Historic Places Trust register	http://www.historic.org.nz (online register - advanced search - search by local authority)
4.2.2	Number and proportion of heritage buildings demolished or removed from heritage records	http://www.historic.org.nz
4.2.3	Design of new developments	http://www.waikatoregion.govt.nz/Environment/Environmental-information/Environmental-indicators/Community-and-economy/Communities-and-their-views/
4.3.1	Residents' satisfaction with cultural facilities provided	http://www.choosingfutures.co.nz/Publications/
4.3.2	Participation in cultural and arts activities	http://www.stats.govt.nz (keyword: cultural experiences)
4.3.3	Proportion of council's spending on cultural activities and events	http://www.stats.govt.nz
4.4.1	People employed in the cultural sector	http://www.stats.govt.nz (keyword: cultural) and http://www.mch.govt.nz/files/CulturalIndicatorsReport.pd f
5.1.1	Percentage of voter turnout at local and general elections	http://www.dia.govt.nz/Services-Local-Elections-Index?OpenDocument and http://www.electionresults.govt.nz / (also http://www.socialreport.msd.govt.nz/regional/civil-political-rights/ for historical data)
5.1.2	Degree of representation by tangata whenua and minority groups on governance and decision-making bodies	http://www.dia.govt.nz/Services-Local-Elections-Index?OpenDocument or http://www.lgnz.co.nz/projects/SocialandCommunityIssues/ElectedMemberSurvey/index.html and http://www.socialreport.msd.govt.nz/regional/civil-political-rights/women.html
5.1.3	Residents' rating of satisfaction with council's provision of opportunities for community involvement in decision-making	http://www.choosingfutures.co.nz/Publications/ and www.qualityoflifeproject.govt.nz
5.2.1	Percentage of residents perceiving that cultural diversity makes their region/city/town a better place to live	http://www.choosingfutures.co.nz/Publications/