

Waikato progress indicators – Tupuranga Waikato

Summary update July 2018



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1 Purpose

This document summarises latest results from the Waikato Progress Indicators (WPI) – *Tupuranga Waikato* monitoring programme, updated in July 2018. The WPI is an online dashboard of 32 environmental, social and economic indicators, see www.waikatoregion.govt.nz/wpi/. It provides a valuable tool for monitoring regional progress, including progress towards Waikato Regional Council’s Strategic Direction 2016-2019 goals for a healthy environment, strong economy and vibrant communities.¹

This update compares the latest available results for each of the WPI indicators with 2006-07 baseline results, enabling regional progress to be assessed over a decade period. Around half of the WPI indicators also have historical data going back to 2001 or earlier, giving a longer-term view. The aim is to inform the Waikato public, planners and decision-makers of genuine progress against key indicators of wellbeing.

The 2017 and 2018 data refreshes incorporate a range of WPI indicator changes and improvements compared to earlier years, primarily due to participation in the 2016 and 2018 Quality of Life Survey (refer Section 2 of this report, and Killerby and Huser 2017).²

The structure of this update report is:

1. Purpose
2. Latest results
3. Economic trends
4. Social and cultural trends
5. Environmental trends
6. Overall progress (experimental indexes).

For background on the WPI programme, refer to Killerby and Huser (2014).³

¹ Council’s Strategic Direction 2016-2019 was adopted in December 2016:
<https://www.waikatoregion.govt.nz/council/about-us/wrc-strategy/>

² <https://www.waikatoregion.govt.nz/services/publications/technical-reports/2017/tr201711/>

³ <https://www.waikatoregion.govt.nz/services/publications/technical-reports/tr/tr201444/>

2 Latest results

Results from the WPI monitoring programme are presented through:

- Indicator Report Cards
- Scorecard
- Comparisons with other regions and New Zealand
- Circle of wellbeing

The 32 indicators are listed in Appendix 2 and the results for each indicator (primary dataset 2001- 2016/17) are tabulated in Appendix 3.

2.1 Indicator Report Cards

Results for each indicator are summarised in online Report Cards, along with supporting information. These are available online at: www.waikatoregion.govt.nz/wpi/.

2.2 Waikato Region Scorecard

The Scorecard (Figure 1) gives an overview of the Waikato region's progress towards wellbeing since 2007.

The largest positive measured trends over the period 2007 to 2016-17 include, in declining order:

- + Improved air quality – decrease in the number of annual exceedances per year of the regional quality guideline for particulate matter in air, from 20 in 2007 to 12 in 2017.
- + Increased road safety – decrease in the social cost of road injury crashes from approximately \$1,900 per capita in 2007 to \$1,200 per capita in 2016.⁴
- + Better educational attainment – increase in the percentage of school leavers with NCEA level 2 or above from 64 per cent in 2009 to almost 79 per cent in 2016.⁵
- + More use of public transport – increase in the volume of public transport use per person per year from 7.3 in 2006/07 to 8.7 in 2016/17.
- + Less crime – reduction in annual rate of victimisations in the Waikato region, from an estimated 738 per 10,000 people in 2006/07 down to 628 in 2016/17.
- + Higher average incomes – increase in real median weekly household income from \$1,357 in 2007 (expressed in 2017 equivalent dollars) up to \$1,498 in 2017.
- + Growth in regional GDP – increase in real regional GDP per capita from approximately \$45,509 in 2007 (in 2017-equivalent dollars) to \$50,068 in 2017.
- + Increase in building activity – increase in real value of new building consents issued per year from \$1.4 billion in 2007 (in 2017-equivalent dollars) to \$1.5 billion in 2017.

⁴ Despite a significant improvement in road safety over the last decade, the Waikato region still has a higher cost of road crashes per person than the national average (see Table 1). This is influenced by the extent of open roads in the Waikato region, with around 60 per cent of the national total cost of road injury crashes relating to crashes that occur on open roads.

⁵ The level of educational attainment in the Waikato, while significantly improved in recent years, is still slightly below the national average (Table 1, Figure 3).

The largest negative trends over this period include, in declining order:

- Poorer perceptions of community engagement – decrease in the percentage of Waikato survey respondents who agreed that the public has an influence over the decisions their local Council makes (down from 62% in 2006 to 36% in 2018).
- Less physical activity – decrease in the percentage of Waikato survey respondents who reported having been physically active on five or more of the past seven days (down from 61% in 2006 to 40% in 2018).
- More rural subdivision – increase in the percentage of rural land being subdivided each year in the Waikato region, from an average of 414 hectares per year during the period 2001-2006 up to 527 hectares per year during 2006-2013. The greatest amount of subdivision has been occurring on land classed as having higher productive capabilities. Updated figures from the 2018 Census will be available in 2019.
- Higher water use – increase in water allocation as a percent of total allocable water at the Waikato River mouth during the summer months from 67% in 2007 to 85% in 2017.⁶
- Lower perceptions of safety – decrease in the percentage of Waikato survey respondents who reported feeling safe walking alone in their neighbourhood after dark, from 80% in 2006 to 64% in 2018.
- Lower levels of cultural respect – decrease in the percentage of Waikato survey respondents who agree that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries makes their city/area a better place to live, down from 51% in 2006 to 41% in 2018.
- Worse perceived health – decrease in the percentage of Waikato survey respondents who rate their overall health positively, from 90% in 2006 to 79% in 2018.
- Lower levels of community pride – decrease in the percentage of Waikato survey respondents who agree they feel a sense of pride in the way their local area looks and feels, down from 70% in 2006 to 62% in 2018.
- Poorer coastal habitats – increase in the amount of estuarine area covered with invasive species (saltwater paspalum) on both the East Coast and West Coast.
- Fewer Te Reo Māori speakers – decrease in the percentage of Waikato region residents who say that they speak Te Reo, from 5.8% in 2006 and 5.3% in 2013. Updated figures from the 2018 Census will be available in 2019.

⁶ While increased allocation of water up to 100% of the total allocable water is not necessarily negative, the observed trend of increasing water use puts an increased pressure on our water resources. The more rapid increase of water use compared with the economy (GDP growth) in recent years indicates that water is being used less efficiently.

2.3 Circle of Wellbeing

The WPI circle of wellbeing captures trend information about many indicators in one diagram. The central circle represents the WPI score for each indicator in the Waikato region in approximately 2006-07 and the spokes show WPI score progress to 2016-17. Where a spoke extends outside the white circle it means regional wellbeing has improved over the past decade. Where a spoke falls within the circle, regional wellbeing has declined. The length of the spokes reflects the size of change.

As per the overall WPI Scorecard (Figure 1), the most notable positive trends are in air quality, road safety, educational attainment, public transport, crime, income, GDP and building activity. Other, smaller positive trends are evident for a range of social, economic and environmental indicators. The largest adverse trends over this period are poorer perceptions of community engagement, lower levels of physical activity, more rural subdivision, higher water use, lower perceptions of safety, lower perceptions of cultural respect, worse perceived health, lower levels of community pride, poorer coastal habitats and fewer Te Reo Māori speakers.

It is only from 2006-07 that there is a robust enough regional data set to cover all the WPI indicators. Over time, as the WPI monitoring programme extends into the future, the diagram below will give an increasingly accurate signal of long term regional progress.

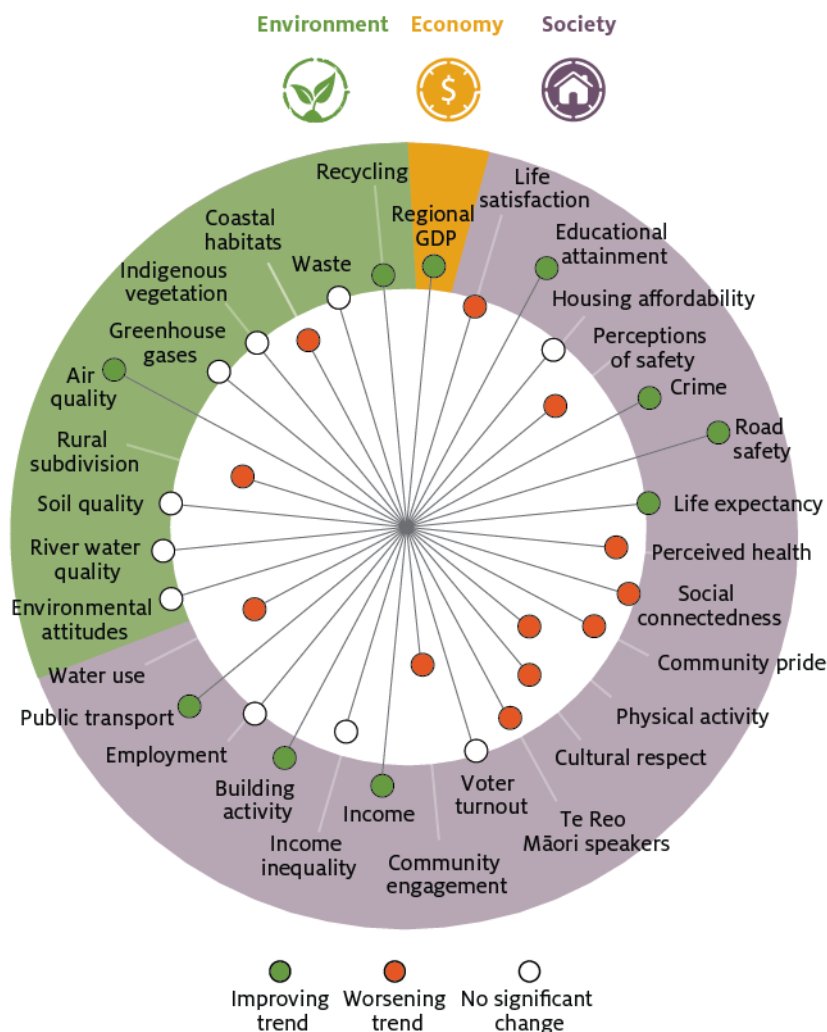


Figure 2 WPI indicator trends 2006-07 to 2016-17, Waikato region.

Source: WPI Monitoring Programme database (Waikato Regional Council)

2.4 Comparison of Waikato with other regions and New Zealand

NOTE: For the Waste indicator, BOP and NZ average figures relate to 2015.

Table 1 and Figure 3 below show the latest indicator comparisons between the Waikato region, selected other regions and New Zealand average where comparable data is available. This shows that the Waikato region is behind the national average on a range of economic, social and environmental wellbeing indicators.

Indicator	Waikato	Auckland	Wellington	Bay of Plenty	New Zealand
Regional GDP	\$50,068	\$61,924	\$69,851	\$48,402	\$57,002
Life satisfaction	87%	pending	pending	n/a	pending
Educational attainment	78.6%	83.6%	85.1%	78.5%	80.3%
Housing affordability	16.0%	17.6%	15.0%	16.0%	16.4%
Perceptions of safety	64%	pending	pending	n/a	pending
Crime	628	TBC	TBC	TBC	562
Road safety	\$1,193	\$584	\$501	\$1,121	\$882
Life expectancy	81.0	82.3	81.6	81.1	81.4
Perceived health	79%	pending	pending	n/a	pending
Social connectedness	61%	pending	pending	n/a	pending
Community pride	62%	pending	pending	n/a	pending
Physical activity	40%	pending	pending	n/a	pending
Cultural respect	41%	pending	pending	n/a	pending
Te Reo Māori speakers	5.3%	2.2%	3.3%	7.9%	3.5%
Voter turnout	37.0%	39.9%	44.4%	40.9%	42.5%
Community engagement	36%	pending	pending	n/a	pending
Income	\$1,498	\$1,778	\$1,890	\$1,387	\$1,578
Income inequality	0.411	0.469	0.412	0.386	0.433
Building activity (\$m)	1,505	n/a	n/a	n/a	n/a
Employment	69.4%	68.2%	72.1%	66.8%	68.2%
Public transport	8.7	53.4	73.5	10.6	31.9
Water use	85%	n/a	n/a	n/a	n/a
Environmental attitudes	89%	n/a	n/a	n/a	n/a
River water quality	28%	n/a	n/a	n/a	n/a
Soil quality	86%	n/a	n/a	n/a	n/a
Rural subdivision	527	n/a	n/a	n/a	n/a
Air quality	12	n/a	n/a	n/a	n/a
Greenhouse gases	NZ proxy	n/a	n/a	n/a	78,727
Indigenous vegetation	27.2%	n/a	n/a	n/a	n/a
Coastal habitats	80	n/a	n/a	n/a	n/a
Waste	220,741	n/a	n/a	127,193	2,461,000
Recycling	70.3%	86.1%	79.2%	72.6%	80.1%

NOTE: For the Waste indicator, BOP and NZ average figures relate to 2015.

Table 1 Comparison of WPI with selected other regions and New Zealand

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Several indicators do not have comparable regional and/or national results (n/a) because either: (1) the WPI data are from a Waikato regional-specific survey (e.g. environmental attitudes) or (2) comparable regional data are not collected or comparison is not meaningful (e.g. soil quality, river water quality) or (3) scale-related data rather than dimensionless data are being used for the WPI indicator (e.g. building activity, rural subdivision) or (4) in the case of greenhouse gases, changes in the New Zealand total are used as a proxy for regional changes in the absence of regional data.

Comparisons of the Waikato region with New Zealand average for specific key indicators are shown in Figure 3 using latest available data. In this diagram, the central circle represents national average wellbeing. Where a spoke extends outside the white circle it means regional wellbeing is better than the national average, and where it falls within the white circle, wellbeing is worse than the national average.

The diagram shows that the Waikato region is behind the national average on a range of economic, social and environmental wellbeing indicators, including road safety, cultural respect, voter turnout and GDP growth, but also that the region has relatively affordable housing, better life satisfaction and an above-average percentage of Te Reo Māori speakers.

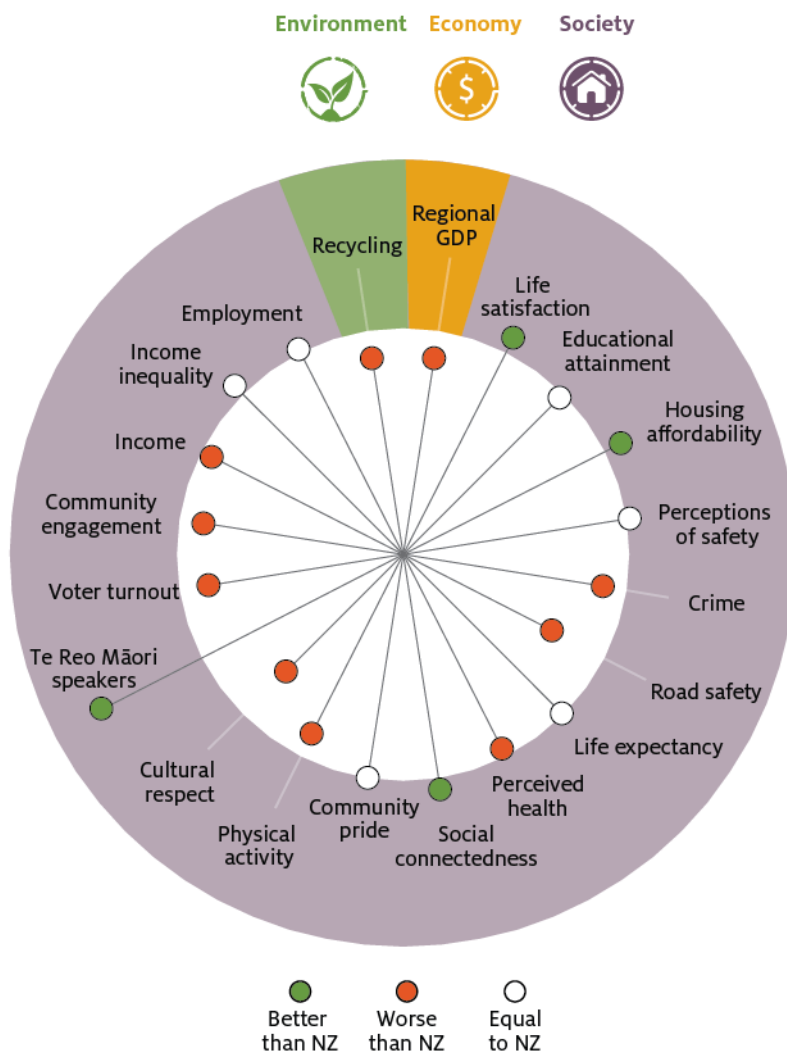


Figure 3 Comparison Waikato region with New Zealand (selected indicators only).

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Excludes indicators that do not have comparable regional or national results. Information based on latest measured data (i.e. no imputed or estimated missing values). Indicators whose spoke end-points overlap the white central circle are classified as not being significantly from the New Zealand average.

3 Economic trends

Latest WPI results show increasing signs of a regional economic recovery following a prolonged slump after the 2008 Global Financial Crisis and the low farm gate milk price since 2013:

- + Regional GDP has expanded 10 per cent in real terms since 2007.
- + Real median weekly household income has increased (Figure 4).
- + Building activity, a lead indicator of economic activity, has improved in recent years (Figure 5).

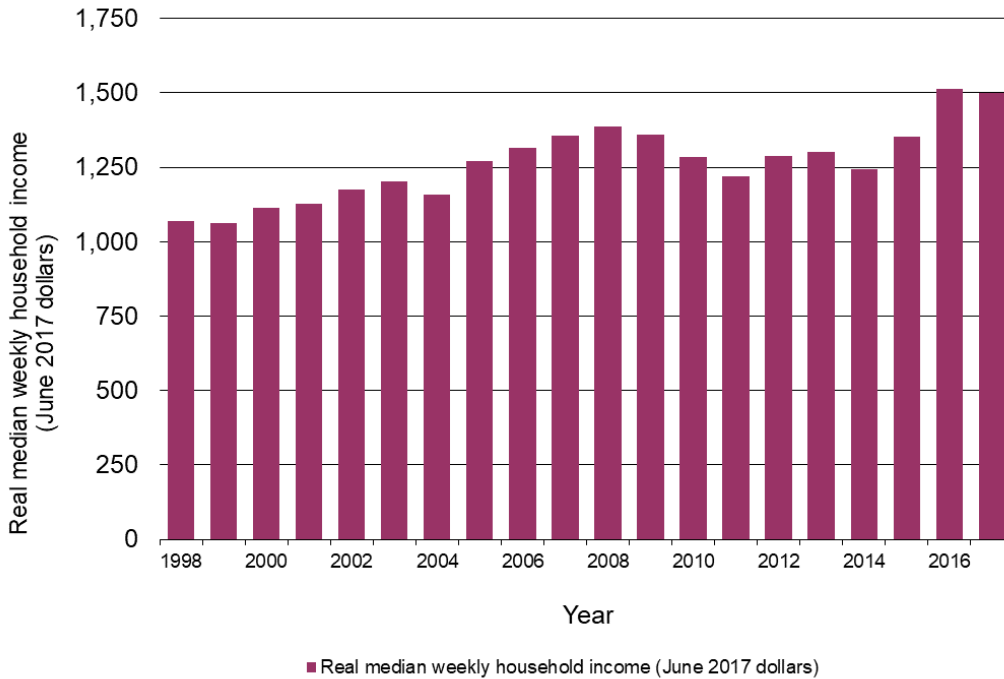


Figure 4 Real median weekly household income (June 2017 dollars).

Source: WPI Monitoring Programme database (Waikato Regional Council)

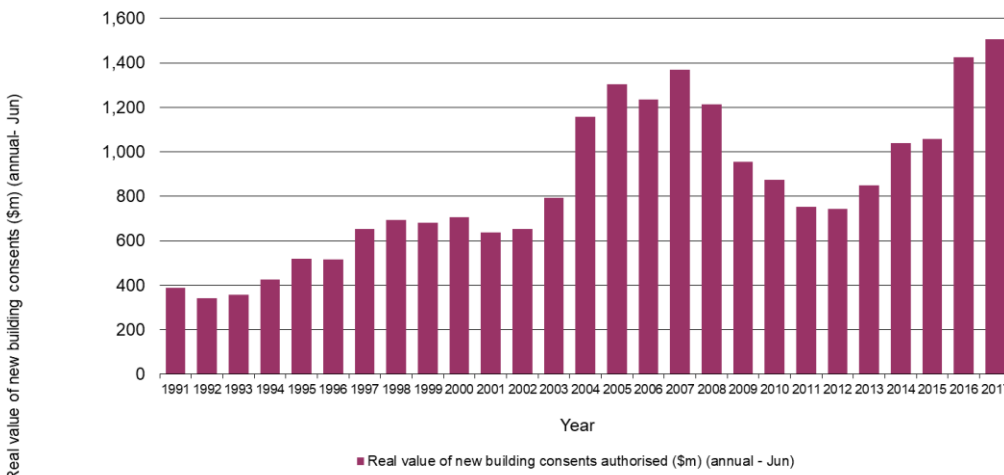


Figure 5 Real value of building consents authorised (\$m) (annual – Jun).

Source: WPI Monitoring Programme database (Waikato Regional Council)

4 Social and cultural trends

Latest WPI results show a mix of positive and negative social and cultural trends over the past decade. Positives include:

- + Decrease in the social cost of road injury crashes.
- + Increase in the percentage of school leavers with NCEA level 2 or above (Figure 6).
- + Increase in public transport per capita compared to a decade ago but dropping from peak levels seen five years ago.
- + Reduction in annual rate of criminal victimisations.

Negatives include decreases in the percentage of people who:

- Agree the public has an influence over the decisions their local Council makes.
- Are physically activity on a regular basis (Figure 7).
- Feel safe walking alone in their neighbourhood after dark.
- Agree that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries makes their city/area a better place to live.
- Rate their overall health positively.
- Feel a sense of pride in the way their local area looks and feels.
- Speak Te Reo Māori.

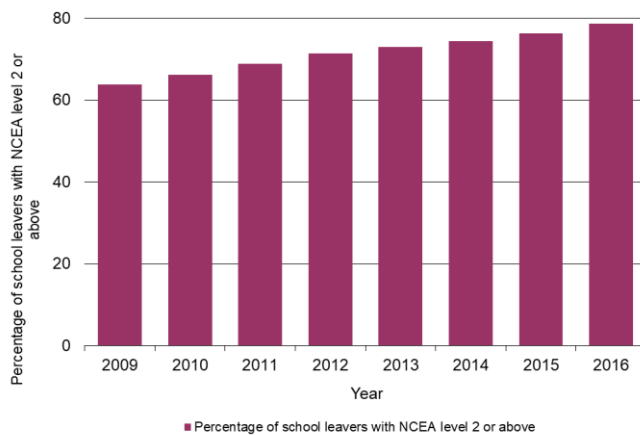


Figure 6 Percentage of school leavers with NCEA Level 2 or above.

Source: WPI Monitoring Programme database (Waikato Regional Council)

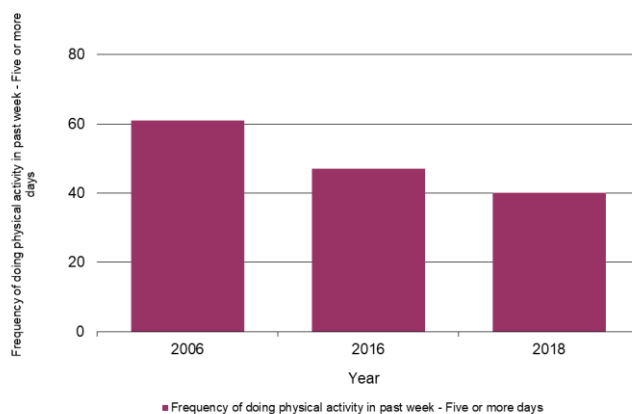


Figure 7 Frequency of doing regular physical activity in past week.

Source: WPI Monitoring Programme database (Waikato Regional Council)

5 Environmental trends

Latest WPI results show a mix of positive and negative environmental trends over the past decade. Positives include:

- + Decrease in the number of annual exceedances per year of the regional air quality guideline for particulate matter (Figure 8).
- + Increase in recycling from 66% of households in 2008 to 70% in 2012 (most recent available).

Negatives include:

- Increase in rural subdivision (Figure 9).
- Increase in water use.
- Increase in the amount of estuarine area covered with invasive species.

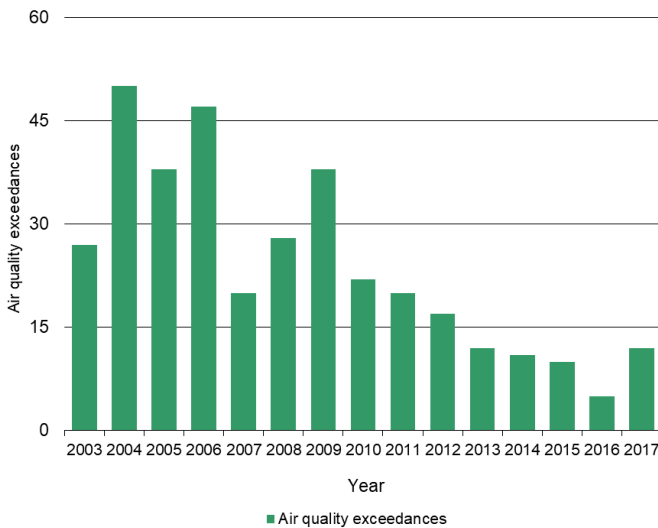


Figure 8 Air quality exceedances.

Source: WPI Monitoring Programme database (Waikato Regional Council)

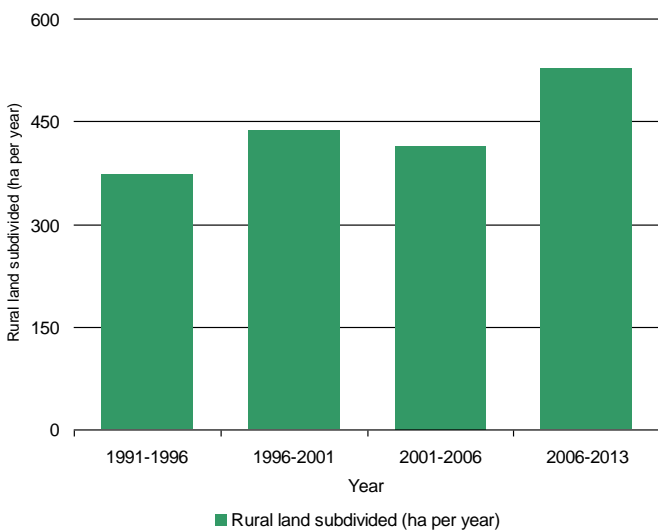


Figure 9 Rural land subdivided (average ha per year).

Source: WPI Monitoring Programme database (Waikato Regional Council)

6 Overall progress (experimental indexes)

Work has been undertaken over recent years to investigate methods for deriving a composite index using the WPI dataset (Huser *et al.* 2016).⁷ Composite indexes combine several individual indicators into fewer summary indicators. In this case we combined all the 32 WPI indicators into a single number. Approaches explored to derive an exploratory Waikato Wellbeing Index have included the Canadian Index of Wellbeing (CIW) reference-year method (Michalos *et al.* 2011) and Principal Components Analysis (PCA). Most approaches show a widening gap between GDP and alternative measures of wellbeing (Figures 10 and 11).

Further efforts are required to develop and test composite indicators that provide meaningful information and are sensitive to change over time.

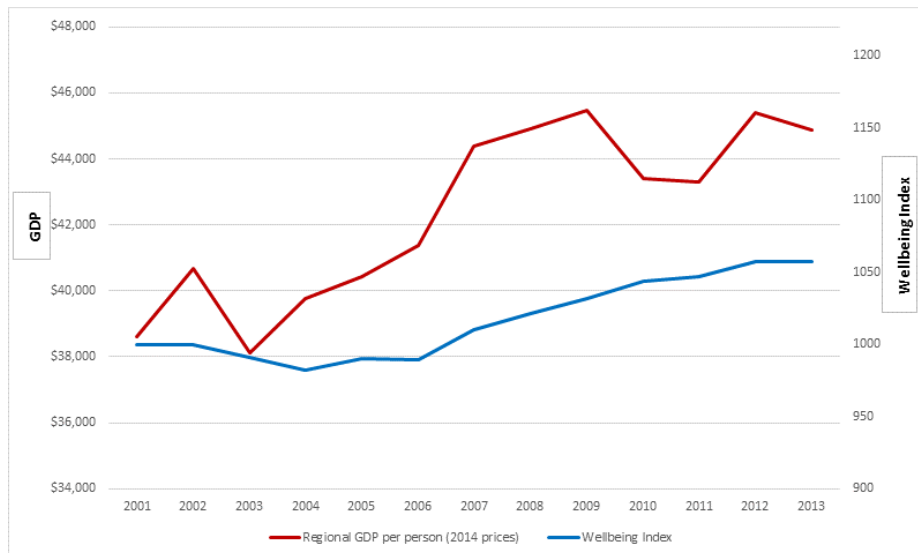


Figure 10 GDP vs Waikato Wellbeing Index (PCA method) 2001-2013.

Source: Huser, Killerby and Patterson 2016.

Note: Based on actual and imputed data.

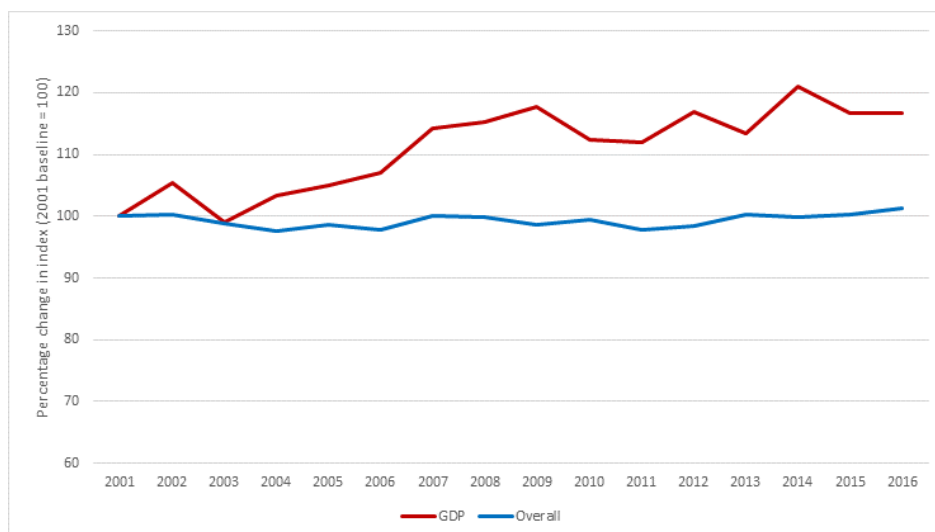


Figure 11 GDP vs Waikato composite indexes (CIW method) 2001-2016.

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Based on actual and imputed data.

⁷ Towards a wellbeing index for the Waikato Region. New Zealand Planning Quarterly, Issue 200, March 2016.

7 Next steps

The results of the WPI programme provide a robust basis for discussing regional challenges and opportunities and identifying priorities for closer collaboration and partnerships. Results from the WPI help monitor and inform Council's strategic direction and other region-wide initiatives, such as the Waikato Plan and the Waikato Regional Economic Development Strategy. Selected individual indicators that reflect Waikato Regional Council's functions and roles are also included as performance measures in Council's Long Term Plan and Annual Report.

Further work is ongoing towards indicator improvements, better accessibility and communication of indicator results and more harmonised monitoring in New Zealand. This includes working with other regional councils (LAWA)⁸, with the Ministry for the Environment and Statistics NZ on environmental reporting⁹ and with NZ Police to ensure a consistent long-term regional time series of crime trends. A priority for 2018/19 is to work together with Treasury NZ and Statistics NZ to develop a dashboard of wellbeing indicators to support the Government's first Wellbeing Budget in 2019.

Engaging with strategic regional and local partners to share data, align indicators and combine knowledge to tell progress stories from different perspectives will be a continuing focus for the WPI programme. Partners include Iwi/Waikato River Authority, Hamilton City Council, district councils, Waikato Mayoral Forum, Waikato District Health Board, Waikato Regional Economic Development Agency and other business and sector groups, New Zealand Transport Agency, New Zealand Treasury, Statistics New Zealand, Ministry for the Environment, Ministry of Social Development, Ministry of Business, Innovation and Employment, community trusts (WEL Energy, Trust Waikato, Momentum Waikato Community Foundation/Vital Signs) and other non-government organisations.

In addition to the 32 high level measures, the WPI programme compiles secondary indicators and data broken down by territorial authority (where available) to support closer analysis and develop 'progress stories' about how and why levels of wellbeing are changing over time in the Waikato region. This includes information about distributional aspects, such as by age, gender, ethnicity, income or locality. Regional data can mask local trends so information at the community level is important, for example the mix of drivers for deprivation across the territorial authorities are totally different.¹⁰

At the global level, the Sustainable Development Goals (SDGs)¹¹ adopted in 2015 by all the 193 UN member countries, provide a yardstick to evaluate, assess and measure progress. The SDGs include 17 Goals and 169 targets, with indicators under development. The SDGs aim to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda with specific targets to be achieved by 2030. Governments, communities, corporates and business are adopting the SDGs to demonstrate their relevance and value. Work has started to map and align the WPI with the SDG indicators as they are being developed.

⁸ Land, Air, Water Aotearoa (LAWA): <https://www.lawa.org.nz/about/>

⁹ Environmental indicators: http://archive.stats.govt.nz/browse_for_stats/environment/environmental-reporting-series/environmental-indicators/Home.aspx

¹⁰ The report *Socioeconomic Deprivation in the Waikato Region – using the Index of Multiple Deprivation* (McMillan and Exeter, 2018) shows that areas within the Waikato region rank among the most deprived areas in New Zealand. The New Zealand Index of Multiple Deprivation (IMD), released by the University of Auckland last year looks at 28 indicators which are grouped into seven domains of deprivation: employment, income, crime, housing, health, education and access to services.

¹¹ Sustainable Development Goals (SDGs): <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

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Appendix 1 Review of WPI indicators

A review of the WPI indicators was undertaken prior to the March 2016 data update focusing on options for harmonisation with other wellbeing monitoring programmes, particularly the Wellington Region Genuine Progress Index (WR-GPI), and addressing time series breaks for some items. Issues and changes resulting from this review were reported in the 2016 WPI annual update summary report.

Further changes since March 2016 are summarised below. Discussions are ongoing regarding data improvements and harmonisation of other indicators over time.

WPI indicator changes between March 2016 and July 2018

Indicator	Issue/change	Discussion/ rationale
Life satisfaction	Changed from NZ General Social Survey (NZGSS) to Quality of Life Survey	Changes in the NZ General Social Survey (GSS) for this item created a time series break
Perceptions of safety	Changed from NZGSS to Quality of Life Survey	Changes in the NZ GSS for this item created a time series break
Crime	Changed to new NZ Police data on victimisations	Change in method of monitoring and reporting from 2014 created a time series break
Perceived health	Changed from NZ Health Survey (NZHS) to Quality of Life Survey	Quality of Life Survey data have similar properties to NZ Health Survey regional data for this item
Social connectedness	Changed from NZGSS to Quality of Life Survey	Changes in the NZ GSS for this item created a time series break
Community pride	Changed from MARCO Waikato Regional Perception Survey to Quality of Life Survey	Harmonisation with WR-GPI MARCO Waikato Regional Perception Survey discontinued (replaced by Quality of Life survey)
Physical activity	Changed from NZHS to Quality of Life Survey	Quality of Life Survey results have similar properties to NZ Health Survey regional data for this item
Cultural respect	Changed from MARCO Waikato Regional Perception Survey to Quality of Life Survey	Harmonisation with WR-GPI MARCO Waikato Regional Perception Survey discontinued (replaced by Quality of Life survey)
Voter turnout	Changed from voter turnout in regional council elections to average voter turnout in local council, DHB and regional council elections	Harmonisation with WR-GPI indicator on voter turnout
Community engagement	Changed from MARCO Waikato Regional Perception Survey to Quality of Life Survey	Harmonisation with WR-GPI MARCO Waikato Regional Perception Survey discontinued (replaced by Quality of Life survey)
Recycling	No change but exploring options for alternative indicators	Changes in the NZ GSS for this item have substantially reduced the frequency of data updates

Appendix 2 The Waikato Progress Indicators

Key questions	Topic	Indicator	Definition (current as at July 2018)
Economy			
How prosperous is our region? How are we planning for a prosperous future?	Economic growth	Regional GDP	Real (inflation adjusted) regional Gross Domestic Product (GDP) per capita
Society			
Are we generally happy with our life? How satisfied are we with our work life balance?	Life satisfaction	Life satisfaction	Percentage of people who rate their overall quality of life positively
What are the educational opportunities How qualified and skilled is our workforce? Are education opportunities accessible and adequate	Education	Educational attainment	Percentage of school leavers with NCEA level 2 or above
Are we satisfied with our housing? How accessible, adequate and affordable is our housing?	Housing	Housing affordability	Ratio of housing costs to household income
Do we feel safe?	Community safety	Perceptions of safety	Percentage of adults who feel safe walking alone in their neighbourhood after dark
How safe are we?	Community safety	Crime	Rates of recorded victimisations per 10,000 population (fiscal year)
How safe are we?	Community safety	Road safety	Estimated annual social costs of road injury crashes per capita
How healthy are we?	Health	Life expectancy	Life expectancy at birth (from Life Tables estimated using Census data)
How do we feel about our health and wellbeing?	Health	Perceived health	Percentage of people who rate their overall health good, very good or excellent
How well connected are we with our family, neighbourhood and community?	Social connectedness	Social connectedness	Percentage of people who agree or strongly agree that they experience a sense of community with others in their neighbourhood
Are we proud about where we live and our community?	Social connectedness	Community pride	People's reported sense of pride in the way their city/town looks and feels
How much do we participate in sports, leisure and arts?	Leisure and recreation	Physical activity	Percentage of people who say they were physically active on five or more of the past seven days
Do we know and respect other cultures?	Cultural identity	Cultural respect	Level of agreement by survey respondents that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries makes their area a better place to live

Key questions	Topic	Indicator	Definition (current as at July 2018)
Do we recognise and protect our cultural heritage and distinctive identity? How comfortable do we feel about expressing our cultural practices?	Cultural identity	Te Reo Māori speakers	Percentage of Te Reo Māori speakers in the total population
Are we involved in our community? How much do we participate in decision making?	Civic engagement	Voter turnout	Average voter turnout in local council, DHB and regional council elections
Are we satisfied with our opportunity to participate in (council) decision making?	Civic engagement	Community engagement	Percentage of people who agree that the public have 'large' or 'some' influence over the decisions that their local Council makes
How wealthy are we?	Wealth and income	Income	Real median weekly household income
Wealth and income	Wealth and income	Income inequality	Gini coefficient – a measure of the concentration of income within the region
How prosperous is our region? How are we planning for a prosperous future?	Wealth and income	Building activity	Real value of total new building consents issued per annum (year to June)
How many people have a job? How many are unemployed - and how long	Employment	Employment	Employment rate - the proportion of total working age population who are employed
Does our infrastructure cope with current and increasing demand? What services are available?	Infrastructure	Public transport	Public transport volumes per capita – average number of passenger transport boardings per resident per annum
How do we use our natural resources? How much water do we use? How much have we got?	Resource use	Water use	Water allocation as a percent of total allocable water – Waikato River mouth during summer months
Environment			
How much do we value or environment? Can we sustain a healthy environment <u>and</u> grow our economy? What do we value most? What are the threats to our environment?	Environmental values	Environmental attitudes	Average regional NEP (New Environmental Paradigm) Scale score
How good is our water quality?	Land and water	River water quality	River water quality for ecological health – percentage of unsatisfactory river water samples for ecological water quality in Waikato rivers and streams (all sites average)
How healthy are our soils? How resilient are we to food production?	Land and water	Soil quality	Percentage of soil monitoring sites meeting five or more soil quality targets - Waikato Region
How much land is sub-divided/paved every year? How much of this is fertile soil?	Land and water	Rural subdivision	Average annual area (hectares) of rural land subdivided in the Waikato Region between Censuses

Key questions	Topic	Indicator	Definition (current as at July 2018)
How clean is our air?	Air and climate	Air quality	Urban air quality – number of exceedances per year of the regional guideline for particulate matter (all monitoring sites total)
Is the climate changing?	Air and climate	Greenhouse gases	National annual total greenhouse gas emissions
How much of our environment is protected? What is the health and condition of our ecosystems?	Biodiversity	Indigenous vegetation	Extent of indigenous vegetation on land
How healthy is our coastal and marine environment? How safe are our beaches for swimming?	Coastal and marine	Coastal habitats	Hectares of estuarine area covered with invasive species (saltwater paspalum)
How much pollution and waste do we produce? What sort of waste do we produce? How much per GDP/product?	Waste	Waste	Estimated tonnage of waste to landfill per annum
How much of our waste do we recycle?	Waste	Recycling	Self-reported prevalence of household recycling

Appendix 3 WPI time series data 2001 to 2016-17

Key:

Grey cell indicates imputed or extrapolated data

White cell indicates measured data

Note that the trend direction for some of these indicators has a negative interpretation (e.g. crime).

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Regional GDP	\$39,607	\$41,725	\$39,059	\$40,760	\$41,431	\$42,293	\$45,509	\$45,890	\$46,910	\$44,552	\$44,310	\$46,448	\$44,723	\$48,480	\$47,492	\$48,201	\$50,068	
Life satisfaction	90%	90%	90%	90%	90%	90%	89%	89%	88%	88%	87%	86%	86%	85%	85%	84%	86%	87%
Educational attainment						63.8%	63.8%	63.8%	63.8%	66.1%	68.9%	71.4%	72.9%	74.5%	76.2%	78.6%		
Housing affordability	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	14.1%	15.5%	13.6%	14.7%	16.0%	14.1%	16.4%	14.7%	16.1%	16.0%	
Perceptions of safety	80%	80%	80%	80%	80%	80%	79%	77%	76%	74%	73%	71%	70%	68%	67%	65%	65%	64%
Crime	747.4	749.8	712.0	681.2	625.5	723.5	737.7	692.6	689.2	738.0	715.5	705.6	616.1	623.3	568.9	611.9	627.7	
Road safety	1,425	1,425	1,425	1,425	1,721	1,513	1,870	1,614	1,417	1,261	1,229	1,108	846	980	1,180	1,193		
Life expectancy	78.5	78.8	79.0	79.3	79.5	79.8	80.0	80.1	80.3	80.5	80.6	80.8	81.0	81.0	81.0			
Perceived health	90%	90%	90%	90%	90%	90%	89%	89%	88%	88%	87%	86%	86%	85%	85%	84%	82%	79%
Social connectedness	63%	63%	63%	63%	63%	63%	63%	63%	64%	64%	64%	64%	64%	65%	65%	65%	63%	61%
Community pride	70%	70%	70%	70%	70%	70%	70%	70%	69%	69%	69%	69%	69%	68%	68%	68%	65%	62%
Physical activity	61%	61%	61%	61%	61%	61%	60%	58%	57%	55%	54%	53%	51%	50%	48%	47%	44%	40%
Cultural respect	51%	51%	51%	51%	51%	51%	50%	49%	49%	48%	47%	46%	45%	45%	44%	43%	42%	41%
Te Reo Māori speakers	6.4%	6.3%	6.2%	6.0%	5.9%	5.8%	5.7%	5.7%	5.6%	5.5%	5.4%	5.4%	5.3%	5.3%	5.3%	5.3%		
Voter turnout							37.6%	38.9%	40.2%	41.5%	40.9%	40.3%	39.7%	39.1%	38.5%	37.0%		
Community engagement	62%	62%	62%	62%	62%	62%	60%	59%	57%	56%	54%	52%	51%	49%	48%	46%	41%	36%
Income	\$1,128	\$1,177	\$1,203	\$1,156	\$1,271	\$1,317	\$1,357	\$1,387	\$1,361	\$1,284	\$1,219	\$1,288	\$1,300	\$1,244	\$1,354	\$1,512	\$1,498	
Income inequality	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.435	0.340	0.379	0.418	0.440	0.371	0.406	0.470	0.411		
Building activity	636	652	794	1,158	1,303	1,236	1,368	1,215	955	874	754	744	849	1,040	1,058	1,425	1,505	
Employment	67.8%	67.8%	67.8%	67.8%	67.8%	67.8%	68.4%	66.9%	64.7%	64.5%	64.5%	62.7%	64.1%	65.1%	64.0%	66.0%	69.4%	
Public transport	4.2	4.3	4.5	4.9	5.1	5.5	7.3	9.1	11.1	11.0	10.9	12.2	11.9	10.1	9.9	9.1	8.7	
Water use	67%	67%	67%	67%	67%	67%	67%	65%	64%	69%	72%	76%	87%	86%	86%	86%	85%	
Environmental attitudes	77%	77%	77%	77%	79%	81%	83%	86%	86%	87%	88%	88%	89%	89%	88%	88%		
River water quality	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	28.0%	27.9%	28.0%	28.0%	
Soil quality	85%	85%	85%	84%	84%	84%	86%	86%	80%	84%	82%	82%	79%	79%	79%	84%	86%	
Rural subdivision	436	432	427	423	418	414	430	446	462	478	495	511	527	527	527	527		
Air quality	17	17	27	50	38	47	20	28	38	22	20	17	12	11	10	5	12	
Greenhouse gases	78,822	79,367	81,750	81,300	83,278	83,326	80,985	80,878	78,257	78,672	78,516	80,847	80,151	80,877	80,703	78,727		
Indigenous vegetation	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%	27.2%		
Coastal habitats	62.18	63.80	65.41	67.03	68.65	70.27	71.89	73.51	75.13	76.75	78.37	79.99	81.61	81.61	81.61	81.61		
Waste	222,000	222,000	222,000	222,000	222,000	222,000	222,815	223,629	224,444	225,258	226,073	226,887	227,499	228,111	228,723	224,732	220,741	
Recycling	66.2%	66.2%	66.2%	66.2%	66.2%	66.2%	66.2%	66.2%	68.9%	71.5%	70.9%	70.3%	70.3%	70.3%	70.3%	70.3%		

