

# Waikato progress indicators – *Tupuranga Waikato*

## April 2016 Summary



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# 1 Purpose

This document summarises the latest results from the Waikato Progress Indicators – *Tupuranga Waikato* (WPI) monitoring programme, published in March 2016. The WPI is an online dashboard of 32 environmental, social and economic indicators of a range of societal wellbeings, at: <http://www.waikatoregion.govt.nz/wpi/>.

This 2016 WPI update compares the latest results for each of the WPI indicators with their 2007 baseline results, measuring regional progress over approximately 7-8 years to date. Around half of the WPI indicators also have historical data going back to 2001 or earlier, giving a longer-term view where available. The aim is to inform the Waikato public, planners and decision-makers of genuine progress against key indicators of wellbeing.

The March 2016 data update incorporates a number of WPI indicator changes to harmonise where appropriate with other monitoring programmes (refer Appendix 1). This includes changes that allow better regional and national comparisons around people's surveyed perceptions of personal safety, health and physical activity. Additional background and technical information about the WPI is available from Waikato Regional Council (e.g. Killerby and Huser 2014).

## 2 Background

### What is 'Waikato Progress Indicators' (WPI)?

The WPI is a monitoring framework for assessing progress towards regional wellbeing. The framework's 32 indicators together give a balanced high-level picture about important economic, environmental and social/cultural aspects of the Waikato region. The WPI online dashboard<sup>1</sup> enables an assessment of current regional progress and wellbeing, changes over time, as well as evaluating trends on specific issues, e.g. social wellbeing, health, transport, economic prosperity and the environment.

### Why was the WPI developed?

Across the world, initiatives have been established to monitor and report on societal progress in its broadest sense. These seek to illustrate the balance – or imbalance – and interdependencies of social, economic and environmental aspects of wellbeing and genuine progress towards overall wellbeing. Gross Domestic Product (GDP) has commonly been used as a proxy for the welfare of a country, region or city; however, GDP is inadequate for measuring overall progress and wellbeing (Stiglitz, Sen and Fitoussi 2009). Hence a range of alternative approaches have been developed for measuring genuine progress. These include monetary estimates of social and environmental costs and benefits (to adjust GDP), various aggregated measures and indices (e.g. Social Progress Index, OECD Better Life Index, Happy Planet Index, Canadian Index of Wellbeing) and indicator dashboards such as the New Zealand Progress Indicators, by Statistics New Zealand, and the WPI.

Council's strategic direction<sup>2</sup> calls for an integrated framework to track and report on overall progress. The WPI was built on existing data and systems from established Council monitoring programmes, and good practice initiatives such as the Wellington Region Genuine Progress Index.<sup>3</sup>

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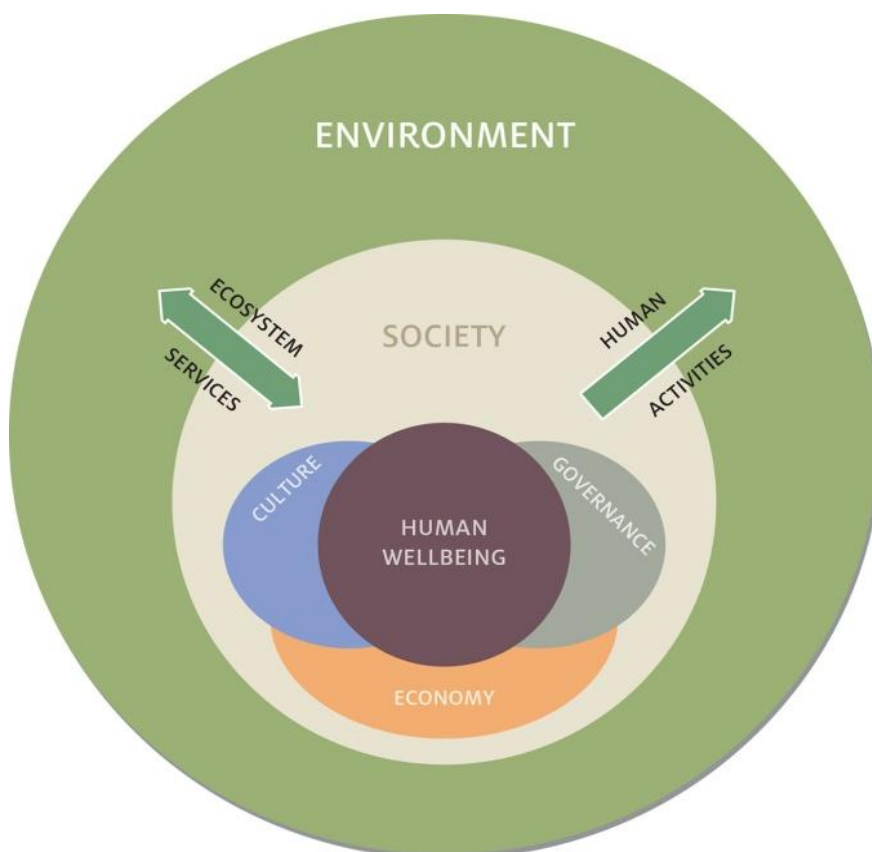
<sup>1</sup> [www.waikatoregion.govt.nz/wpi/](http://www.waikatoregion.govt.nz/wpi/).

<sup>2</sup> [www.waikatoregion.govt.nz/Council/About-us/WRC-strategy/](http://www.waikatoregion.govt.nz/Council/About-us/WRC-strategy/)

<sup>3</sup> [www.gpiwellingtonregion.govt.nz/](http://www.gpiwellingtonregion.govt.nz/)

## How was the WPI developed?

The WPI was built on the foundations of pre-existing regional community outcomes and environmental monitoring and reporting frameworks. To develop a suitable framework for monitoring regional wellbeing, we reviewed more than 20 wellbeing monitoring initiatives nationally and internationally, and identified a conceptual generic model of how the economy, society and environment interact (Figure 1).



**Figure 1 WPI conceptual framework**

Source: Adapted from Hall et al (2010).

The WPI conceptual framework is adapted from the Organization for Economic Co-operation and Development (OECD) (Hall et al 2010). It considers that societies are based on two linked systems: the Human system (Society) and the Ecosystem (Environment). Human wellbeing is at the centre: an increase in human wellbeing is the final goal of progress and includes both individual (e.g. one's own state of health, living standard, knowledge) and social dimensions (e.g. family and community support and connectedness, shared values). Three societal aspects support human wellbeing: economy, culture and governance. Recognising the limits and constraints of a healthy environment, having a strong economy, a vibrant culture and effective governance are considered supporting pillars to human wellbeing.

Based on the previously identified aspirations of the Waikato community and stakeholders, derived through prior community engagement, Council officers and advisors developed a list of questions that the progress indicators should help address (Killerby and Huser 2014). These were then grouped into relevant topics (e.g. health, education, environment) and indicators were selected to address each of the questions (Appendix 2) based on a set of robust criteria:

- relevance to the concept being measured;
- timeliness with regard to both an annual reporting cycle and availability of an historical time series;
- comparability with New Zealand, other regions and overseas jurisdictions; and
- other criteria such as measurability, availability, and avoidance of duplication within the indicator set.



## **How is the WPI used?**

The WPI website, indicator report cards and other products can be used for a variety of purposes including:

- Presenting a comprehensive high-level picture of how the Waikato region is doing.
- Providing a shared evidence-base to stimulate debate, facilitate common understanding and identify challenges, opportunities and agreed solutions.
- Identifying areas where there is a lack of progress, as well as areas where good progress is made.
- Identifying priorities for action.
- Telling stories about complex and inter-linked issues in an understandable way.
- Encouraging a debate about the region's future and what matters most to people.
- Highlighting trade-offs between economic, environmental and social goals and actions.
- Recognising areas for effective collaboration, strategic alliances and shared services.
- Providing a baseline monitoring framework for Waikato Regional Council's strategic direction and other regional projects (e.g. Waikato Plan, Economic Development Strategy, WRC Long Term Plan 2015-2025).
- Enabling benchmarking with other regions, New Zealand overall and internationally.

## 3 Latest results

Results from the WPI monitoring programme are presented through:

- Indicator Report Cards
- Waikato region 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- 2015) are tabulated in Appendix 3.

### Indicator Report Cards

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

### Waikato Region Scorecard

The Scorecard (Figure 2) gives an overview of the Waikato region's progress towards wellbeing since 2007.

The largest positive measured trends over the period 2007 to 2014-15 include:

- + Decrease in the social cost of road injury crashes from approximately \$1800 per capita in 2007 to \$900 per capita in 2014.<sup>4</sup>
- + Increase in public transport volumes per annum from 7.3 boardings per person in 2006/07 to 9.9 in 2014/15 (peaking at 12.2 per person in 2011/12).
- + Decrease in the number of annual exceedances per year of the regional guideline for particulate matter in air (air quality guideline), from 20 in 2007 to 10 in 2015.
- + Reduction in annual total recorded criminal offences per 10,000 population in the Waikato Police District, from 1,074 in 2006/07 to 908 in 2013/14.
- + Increase in the percentage of school leavers with NCEA level 2 or above from 64 per cent in 2009 to 75 per cent in 2014.<sup>5</sup>

The largest negative trends over this period include:

- Increase in water allocation as a percent of total allocable water at the Waikato River mouth during the summer months from 67% in 2007 up to 86% in 2015.<sup>6</sup>
- 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.
- Decrease in annual building activity, from over \$1.3 billion in the year to June 2007 to around \$1 billion in 2015 (following a slump and slow recovery).
- Increase in the amount of estuarine area covered with invasive species (saltwater paspalum) on both the East Coast and West Coast.
- Decrease in physical activity, with the percentage of people who reported doing 30 minutes of regular physical activity per day falling from 54 per cent in 2006-07 to 46 per cent in the period 2011-14.<sup>7</sup>

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<sup>4</sup> 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 and Figure 4). This is influenced by the extent of open roads in the Waikato region, with around 57 per cent of the national total cost of road injury crashes in 2014 relating to crashes that occurred on open roads.

<sup>5</sup> The level of educational attainment in the Waikato, while significantly improved in recent years, is still slightly below the national average (Table 1, Figure 4).

<sup>6</sup> While increased allocation of water up to 100% is not necessarily negative, the observed trend of increasing water use exerts an increased pressure on our water resources. The more rapid increase of water use compared with the economy (GDP growth) indicates that water is being used less efficiently.

In parallel with the key trends above, there was moderate overall growth in real Gross Domestic Product (GDP) per person between 2007 and 2014, and most recently a fall in Waikato GDP per person in 2015 (mainly associated with dairy farming).<sup>8</sup>



**Figure 2 WPI trends – Scorecard for 2007 to 2014-15 (refer Appendix 3 for data).**

Source: WPI Monitoring Programme database (Waikato Regional Council)

<sup>7</sup> The recent trend of reduced physical activity (last bullet point above) means that the Waikato region has now dropped below the national average (Table 1, Figure 4).

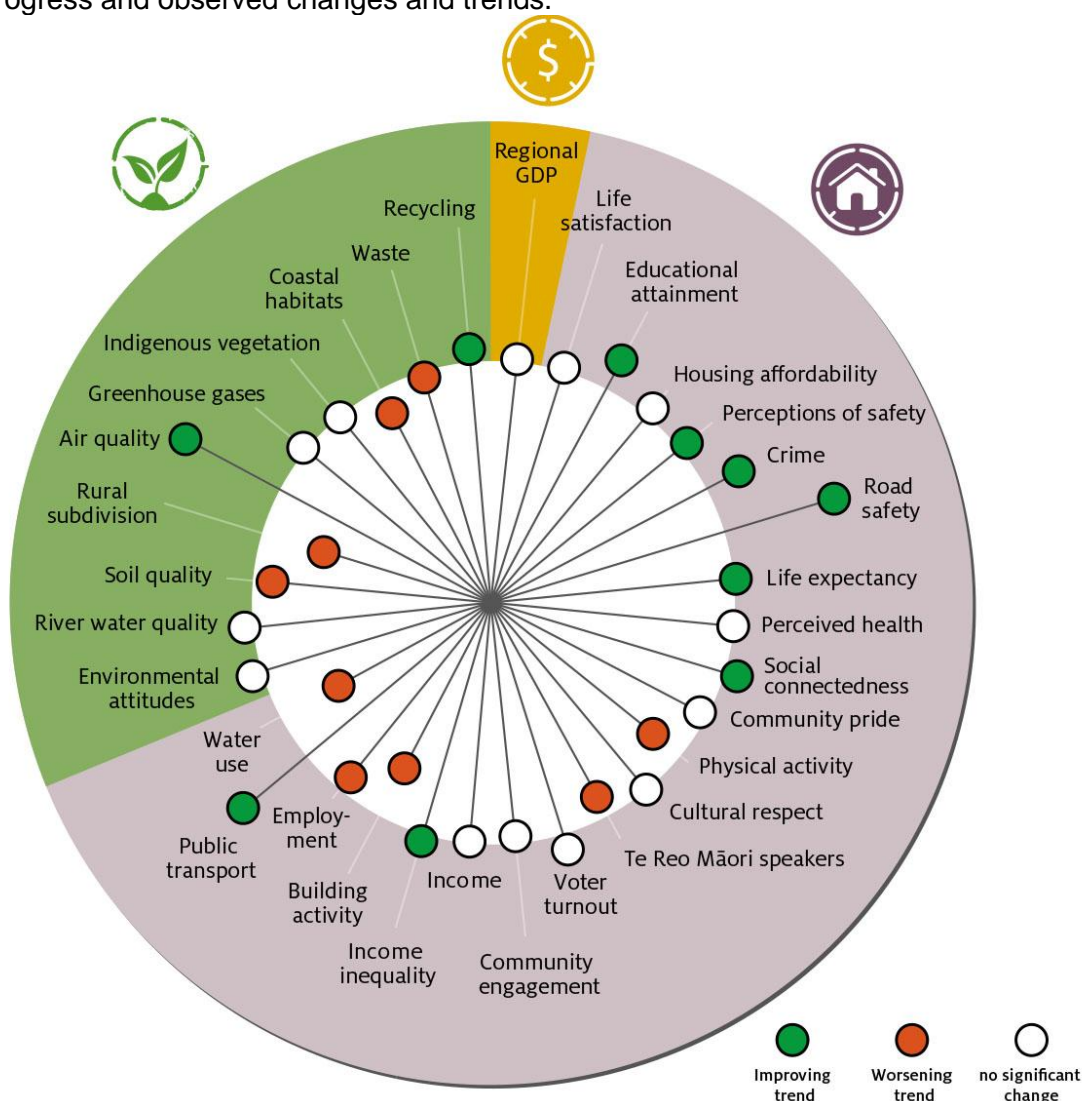
<sup>8</sup> [www.stats.govt.nz/browse\\_for\\_stats/economic\\_indicators/NationalAccounts/RegionalGDP\\_HOTPYeMar15/Commentary.aspx#waikato](http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts/RegionalGDP_HOTPYeMar15/Commentary.aspx#waikato)

## Circle of Wellbeing

The WPI circle of wellbeing captures trend information about many indicators in one diagram for the period 2007 to 2014-15. The white central circle represents the WPI score for each indicator in the Waikato region in approximately 2007 and the spokes show WPI score progress to 2014-15. Where a spoke extends outside the white circle it means regional wellbeing has improved. Where a spoke falls within the circle, regional wellbeing has declined.

As per the overall WPI Scorecard (Figure 2), the most notable positive trends are in road safety, public transport, air quality, crime and educational attainment. Other, smaller positive trends are evident for a range of social, economic and environmental indicators. The largest negative trends over this period have been for water use, rural subdivision, building activity, physical activity and coastal habitats.

It is only from 2007 that there is a robust enough regional data set to cover all of 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 and observed changes and trends.



**Figure 3 WPI indicator trends 2007 to 2014-15, Waikato region.**

Source: WPI Monitoring Programme database (Waikato Regional Council)

## Comparison of Waikato with other regions and New Zealand

Table 1 and Figure 4 below show the latest indicator comparisons between the Waikato region, selected other regions and the New Zealand average in 2014/15, where comparable data is available. This shows that the Waikato region is behind the national average on a number of economic, environmental and social wellbeing indicators.

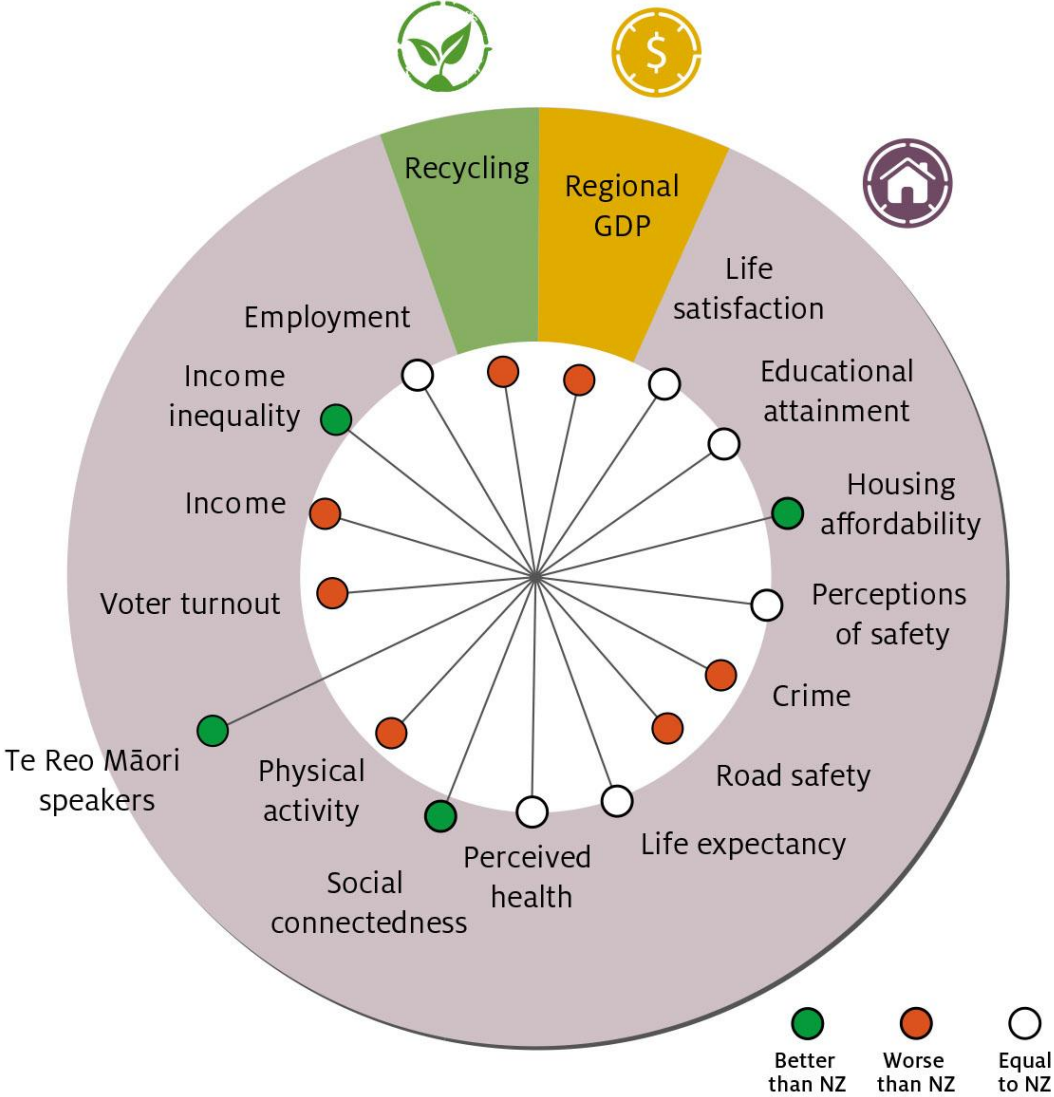
Indicator	Waikato	Auckland	Wellington	Bay of Plenty	New Zealand
Regional GDP	\$45,160	\$56,997	\$65,974	\$43,159	\$52,953
Life satisfaction	84.5%	87.1%	88.3%	86.4%	86.7%
Educational attainment	74.5%	81.6%	83.3%	76.6%	77.1%
Housing affordability	14.7%	18.8%	14.4%	14.7%	16.0%
Perceptions of safety	69.4%	71.2%	73.5%	69.4%	71.6%
Crime	907.5	955.7	730.3	886.5	787.5
Road safety	929	472	448	921	769
Life expectancy	81.0	82.3	81.6	81.1	81.4
Perceived health	88.1%	92.4%	90.7%	n/a	90.1%
Social connectedness	63.3%	64.8%	63.5%	63.5%	63.9%
Community pride	68.4	n/a	n/a	n/a	n/a
Physical activity	46.3%	46.5%	48.3%	n/a	52.4%
Cultural respect	70.5	n/a	n/a	n/a	n/a
Te Reo Māori speakers	5.3%	2.2%	3.3%	7.9%	3.5%
Voter turnout	40%	35%	42%	41%	43%
Community engagement	46.2	n/a	n/a	n/a	n/a
Income	\$1,356	\$1,575	\$1,589	\$1,327	\$1,460
Income inequality	0.276	0.304	0.320	0.277	0.297
Building activity (\$m)	1,036	n/a	n/a	n/a	n/a
Employment	65.6%	66.0%	68.4%	64.3%	66.2%
Public transport	9.9	n/a	n/a	n/a	n/a
Water use	86%	n/a	n/a	n/a	n/a
Environmental attitudes	23	n/a	n/a	n/a	n/a
River water quality	28%	n/a	n/a	n/a	n/a
Soil quality	79%	n/a	n/a	n/a	n/a
Rural subdivision	527	n/a	n/a	n/a	n/a
Air quality	11	n/a	n/a	n/a	n/a
Greenhouse gases	NZ proxy	n/a	n/a	n/a	80,962
Indigenous vegetation	27.2%	n/a	n/a	n/a	n/a
Coastal habitats	76.75	n/a	n/a	n/a	n/a
Waste	228,723	n/a	n/a	127,193	2,461,000
Recycling	70.3%	86.1%	79.2%	72.6%	80.1%

**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. community pride, 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 4 using 2014/15 data. In this diagram, the white 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 number of economic, environmental and social wellbeing indicators but also that the region has more affordable housing and an above-average percentage of Te Reo Māori speakers.



**Figure 4 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).

## 4 Next steps

The results of the WPI programme provide a robust basis for discussing regional challenges and opportunities and to identify priorities for closer collaboration and partnerships. Results from the WPI are used to help monitor and inform Council's strategic direction and other region-wide initiatives (e.g. Waikato Plan, Economic Development Strategy, Regional Land Transport Plan). Selected individual indicators that reflect Waikato Regional Council's functions and roles are also included as performance measures in Council's Long Term Plan 2015-2025.<sup>9</sup>

During 2016, a regional survey is being undertaken as part of the Quality of Life project<sup>10</sup> to provide latest data and trends for a number of social wellbeing indicators. The results will be included in the next WPI update in March 2017. Further work is also being undertaken throughout 2016-17 towards a more harmonised approach to regional indicators monitoring in New Zealand and other ongoing indicator improvements. In addition, WPI secondary indicators and territorial authority data have been compiled to support closer analysis and develop 'progress stories' about how and why levels of wellbeing are changing over time in the Waikato region.

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

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<sup>9</sup> [www.waikatoregion.govt.nz/Council/Policy-and-plans/Long-Term-Council-Community-Plan-Annual-Plan-and-Annual-Report/2015-2025-Long-Term-Plan/](http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Long-Term-Council-Community-Plan-Annual-Plan-and-Annual-Report/2015-2025-Long-Term-Plan/)

<sup>10</sup> [www.qualityoflifeproject.govt.nz/](http://www.qualityoflifeproject.govt.nz/)

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# Appendix 1 Review of WPI indicators 2015-16

A review of the WPI indicators was undertaken prior to the March 2016 data update. This focused on options for harmonisation with other wellbeing monitoring programmes, particularly the Wellington Region Genuine Progress Index (WR-GPI), and addressing time series breaks for a number of items. Issues and changes resulting from this review are summarised below. Further discussions are also occurring with regard to data improvements and harmonisation of other indicators over time.

## Indicators review 2015-16 – Issues and changes as at March 2016

Indicator	Issue/change	Discussion/ rationale
Life satisfaction	Change to biennial Quality of Life survey	Changes in the NZ General Social Survey (GSS) for this item created a time series break
Educational attainment	Changed from five-yearly Census percentage of adults with at least a high school qualification; to annual Ministry of Education percentage of school leavers with NCEA level 2 or above	Harmonisation with WR-GPI indicator on school level qualifications
Housing affordability	Consideration is being given (subject to data costs) to changing from NZ Household Economic Survey (HES) ratio of housing costs to total household income; to HES percentage of households that spend more than 30% of their disposable income on housing	Possible harmonisation with WR-GPI indicator on housing affordability
Perceptions of safety	Changed from NZ GSS percentage who feel safe or very safe walking alone at night; to NZ Crime and Safety Survey percentage who feel very/fairly safe walking alone in their neighbourhood after dark	Changes in the NZ GSS for this item created a time series break Also, the NZ Crime and Safety Survey was identified as a potentially better data source for this item
Crime	NZ Police have been requested to assist with compiling a consistent set of recorded offences rates per 10,000 people	Change in method of monitoring and reporting recorded offences from 2014 created a time series break
Road safety	Consideration is being given to possibly changing from social cost of road crashes per person; to road injury rate per 100,000 people	Possible harmonisation with WR-GPI indicator on road injuries
Perceived health	Changed from NZ GSS percent with good, very good or excellent health; to NZ Health Survey percent with good, very good or excellent health	Statistics NZ advised that the NZ Health Survey may be a better source for this item NZ Health Survey is undertaken annually, with results reported triennially
Social connectedness	Change to biennial Quality of Life survey	Changes in the NZ GSS for this item created a time series break
Community pride	Change to biennial Quality of Life survey	Possible harmonisation with WR-GPI indicator on sense of pride
Physical activity	Changed from MARCO Survey percent who exercise at least once per week; to NZ Health Survey percent who did 30 minutes of activity a day on 5 or more of the past 7 days	NZ Health Survey is undertaken annually, with results reported triennially (including results for all regions)
Cultural respect	Options are being explored jointly with Greater Wellington Regional Council for an alternative indicator	WPI and WR-GPI may consider adopting a common indicator (e.g. NZ GSS Acceptance of Diversity item/s)
Te Reo Māori speakers	A consistent time series was purchased from SNZ for the period 1996 to 2013	Data update to ensure consistent time series (including choice of denominator)
Voter turnout	Consideration is being given to changing from voter turnout in regional council elections; to average voter turnout in local council, DHB and regional council elections	Possible harmonisation with WR-GPI indicator on voter turnout
Community engagement	Change to biennial Quality of Life survey	Possible harmonisation with WR-GPI indicator on perception of influence on council decisions
Income	Changed from NZ Income Survey median weekly earnings (deflated by CPI); to NZ Income Survey median weekly household income (deflated by CPI)	Harmonisation with WR-GPI indicator on purchasing power
Building activity	Changed from new dwelling units authorised (annual - Dec); to real value of new building consents authorised (\$m) (annual - Jun)	Harmonisation with WR-GPI indicator on building activity
Protected land	Indicator changed to indigenous vegetation	Harmonisation to WR-GPI indicator on extent of indigenous vegetation on land (pending adoption)
Recycling	No change at this time 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 March 2016)
<b>Economy</b>			
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
<b>Society</b>			
Are we generally happy with our life? How satisfied are we with our work life balance?	Life satisfaction	Life satisfaction	Self-rated overall life satisfaction
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 people who feel very/fairly safe walking alone in their neighbourhood after dark
How safe are we?	Community safety	Crime	Annual total recorded offences per 10,000 population (fiscal year) – pending change to new offender statistics
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	Self-rated general health status – percent with good, very good or excellent health
How well connected are we with our family, neighbourhood and community?	Social connectedness	Social connectedness	Self-reported absence of loneliness (percentage of respondents who were lonely 'none of the time' in the last four weeks)
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 did 30 minutes of activity a day on 5 or more of the past 7 days
Do we know and respect Māori customs?	Cultural identity	Cultural respect	Level of agreement by survey respondents that 'Your neighbourhood are knowledgeable and show respect for the many and diverse cultures of the people who live here'

Key questions	Topic	Indicator	Definition (current as at March 2016)
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	Percentage of all enrolled electors (residents and ratepayers) who cast a vote in their regional council elections – pending change to 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	People's level of agreement that they have enough say in what their council does
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 new building consents authorised (\$m) (annual - Jun)
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
<b>Environment</b>			
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 total productive land meeting five or more soil quality targets
How much land is sub-divided/paved every year? How much of this is fertile soil?	Land and water	Rural subdivision	Hectares of rural land subdivided in the Waikato region between Censuses (average per annum)
How clean is our air?	Air and climate	Air quality	Urban air quality – number of exceedances per year of the regional guideline

<b>Key questions</b>	<b>Topic</b>	<b>Indicator</b>	<b>Definition (current as at March 2016)</b>
			for particulate matter (all 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	Percentage of land covered in indigenous forest, scrub and tussock
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 2015

Key:

Grey cell indicates imputed or extrapolated data

White cell indicates measured data

Note that (a) the trend direction for some of these indicators has a negative interpretation (e.g. crime); and (b) pre-2009 historical data for the new educational attainment measure is currently being sourced.

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Regional GDP	\$38,767	\$40,840	\$38,231	\$39,896	\$40,552	\$41,396	\$44,340	\$44,852	\$45,888	\$43,509	\$43,285	\$45,415	\$43,809	\$47,150	\$45,160
Life satisfaction	83.1%	83.1%	83.1%	83.1%	83.1%	83.1%	83.1%	83.1%	84.4%	85.7%	85.1%	84.5%	84.5%	84.5%	
Educational attainment						63.8%			63.8%	66.1%	68.9%	71.4%	72.9%	74.5%	
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%
Perceptions of safety	65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	65.5%	65.7%	65.9%	66.6%	67.3%	68.0%	68.7%	69.4%	
Crime	1,088.2	1,091.7	1,036.8	991.9	910.8	1,053.5	1,074.2	1,008.5	1,003.6	1,074.6	1,041.8	1,027.4	897.1	907.5	
Road safety	1,378	1,378	1,378	1,378	1,672	1,450	1,812	1,569	1,377	1,212	1,198	1,068	824	929	
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	81.1	
Perceived health	87.6%	87.6%	87.6%	87.6%	87.6%	87.6%	87.6%	87.7%	87.8%	87.9%	87.9%	88.0%	88.1%	88.1%	
Social connectedness	65.0%	65.0%	65.0%	65.0%	65.0%	65.0%	65.0%	65.0%	66.5%	68.0%	68.5%	69.0%	69.0%	69.0%	
Community pride	70.1	70.1	70.1	70.1	70.1	70.1	70.1	69.4	68.8	68.1	68.2	68.3	68.4	68.4	
Physical activity	53.9%	53.9%	53.9%	53.9%	53.9%	53.9%	53.9%	52.6%	51.4%	50.1%	48.8%	47.6%	46.3%	46.3%	
Cultural respect	70.0	70.0	70.0	70.0	70.0	70.0	70.0	69.9	69.9	69.8	70.0	70.3	70.5	70.5	
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%	
Voter turnout	49%	48%	46%	45%	42%	40%	37%	39%	40%	42%	41%	40%	40%	40%	
Community engagement	47.5	47.5	47.5	47.5	47.5	47.5	47.5	48.5	49.6	50.6	49.1	47.7	46.2	46.2%	
Income	\$1,108	\$1,189	\$1,203	\$1,145	\$1,290	\$1,324	\$1,361	\$1,405	\$1,370	\$1,281	\$1,233	\$1,314	\$1,296	\$1,263	\$1,356
Income inequality	0.295	0.294	0.294	0.293	0.291	0.288	0.286	0.293	0.268	0.276	0.322	0.302	0.276	0.276	
Building activity	623	638	777	1,133	1,275	1,210	1,339	1,189	935	856	738	728	831	1,018	1,036
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%
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

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Water use	67%	67%	67%	67%	67%	67%	67%	65%	64%	69%	72%	76%	87%	86%	86%
Environmental attitudes	23	22	22	21	21	22	22	22	22	22	23	23	23	23	
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%
Soil quality	88	88	88	87	86	87	86	87	80	84	82	82	76	79	
Rural subdivision	436	432	427	423	418	414	430	446	462	479	495	511	527	527	
Air quality	17	17	27	50	38	47	20	28	39	21	20	17	12	11	10
Greenhouse gases	80,076	80,640	83,052	82,375	84,638	84,502	82,319	81,818	79,388	79,668	80,080	82,078	80,962	80,692	
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%	
Coastal habitats	62.18	63.80	65.42	67.04	68.66	70.27	71.89	73.51	75.13	76.75	78.37	79.99	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
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%	

