Waikato Vital Signs Consultancy Report

January 2020

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Commissioned by Momentum Waikato Community Foundation

January 2020

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Executive Summary

This consultancy report has been commissioned by Momentum Waikato Community Foundation and undertaken by the National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato and is an update on the previous Vital Signs report completed by NIDEA in 2016. Part A of the report gives a brief socio-demographic profile of the Vital Signs Region which encompasses nine Territorial Authority (TA) areas – Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato and Waitomo (current and projected) and Part B presents the Waikato Vital Signs report based on selected Vital Signs® indicators.

Data for this report has been extracted and analysed using various survey and administrative datasets sourced from Statistics New Zealand, Ministry of Transport, Ministry of Education, Creative New Zealand, Ministry of Health, Ministry of Justice, Oranga Tamariki, and the Waikato Progress Indicator (WPI) dataset provided by the Waikato Regional Council.

Part A: Socio-Demographic Profile of the Waikato Vital Signs Pilot Region

Current demographic profile

The current resident population of the Vital Signs Region is around 439,200; approximately 9.0 per cent of the population of New Zealand. Hamilton, Waikato and Waipa are the three biggest TAs in the region accounting for 70 per cent of the Vital Signs Region's population

In the region, there are 97 males per 100 females and this scenario of more females than males is mirrored across all TAs except Otorohanga, which has more males (110 per 100 females), and Waikato, where the male to female ratio is close to one.

Around 16 per cent of the Vital Signs Region's population is aged 65 years or more and just over one in five residents are children (0-14 years). Among the TA areas, Thames-Coromandel has the oldest profile with over 30 per cent of its population aged 65+ years. Hamilton has the youngest age profile with over 21 per cent of its resident population aged less than 15 years.

Just over 23 per cent of the region's population is Māori, much higher than the national average of 15.5 per cent. Waitomo has the highest proportion of Māori among its residents and South Waikato has the proportionally biggest Pacific Islander population. Within the region, Hamilton has relatively a much bigger proportion of its resident population identifying with the Asian ethnic group.

Approximately a quarter of the Vital Signs Region's population lives in areas categorised as high deprivation, which is higher than the national average of 20.7 per cent. Among the TAs, South Waikato has the highest proportion followed by Waitomo.

Projected changes

The resident population of the Vital Signs Region is projected to grow by around 9.7 per cent over the 2018-2028 period, which is slightly lower than the increase estimated for New Zealand as a whole. Across the region, the highest growth is estimated for Hamilton and the Waikato District while the population of Thames-Coromandel and South Waikato is expected to decline.

Substantial increase is expected in the number of elderly (65+ years) in the region; population growth of over 40 per cent in the next ten years while all other age groups combined are estimated to increase by only 5 per cent. By 2028, one out of every five residents in the Vital Signs Region will be aged 65 years or more. Apart from Waikato, Hamilton and Otorohanga, the population of children and youth is likely to decline within each TA area.

The highest projected growth is for the Asian and Pasifika populations across the region followed by Māori. In comparison, the European/Other population group is likely to see very little to no growth over the next ten years.

Part B: Waikato Vital Signs Themes and Indicators

Vital Signs® is a programme that measures the vitality of local communities and provides a guide for community action and support. It works by collecting data and publishing reports on significant social and economic trends to show how each community is faring in major quality of life areas such as health, culture and arts, and community as measures by a set of indicators.

The eight Waikato Vital Signs theme areas are:

- **Vital Sign: Children & Youth**
- **Vital Sign: Community**
- **Vital Sign: Culture & Arts**
- **Vital Sign: Economy**
- **Vital Sign: Education**
- **Vital Sign: Environment**
- **Vital Sign: Health**
- **Vital Sign: Recreation**

A total of 34 indicators under these theme areas were initially selected when the 2016 Vital Signs Report was commissioned by following a set of good practice criteria to ensure a credible and manageable set of well-being measures. Two more indicators – Housing affordability and Unmet need for primary health care have been added to this report, making it a total of 36 indicators. More indicators are likely to be added after community consultation, provided they meet the indicator selection criteria.

The findings for selected indicators are presented at the regional and national level and where possible at the TA level. When available, the data are also disaggregated by key demographic characteristics like age, sex, ethnicity and deprivation boundaries defined by the corresponding dataset.

Figure 1 shows the social wellbeing outcomes for 26 of the 36 indicators for Waikato[1] relative to the outcomes for total New Zealand. The data for ten indicators was available either at only the national or regional level and therefore excluded. The circle represents the average outcome for New Zealand for the most recent period. The spokes represent the most recent outcome for Waikato. A spoke falling outside the purple dotted circle means the average outcome for Waikato is higher than the national average and vice versa. The further the spoke is from the circle, more pronounced the difference.

- A spoke with a green dot ●━━━ indicates that the outcome for Waikato is better or similar to that for total New Zealand.
- A spoke with an orange dot ●━━━ indicates that the outcome for Waikato is poorer than that for total New Zealand.

It should be noted that the magnitude of difference in outcomes for Waikato and New Zealand cannot be directly compared across different indicators.

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[1] Waikato refers to either the Waikato Vital Signs Region or the Waikato Region as defined by the Census boundaries depending on the availability of data for the individual indicators. See body of report for more details.

Figure 1: Selected Vital Signs indicator outcomes relative to New Zealand

Legend:
- Outcome **better** than or similar to national average (green)
- Outcome **poorer** than national average (orange)

- - - New Zealand
— Waikato*

Indicators (clockwise): Child abuse, Physical activity, Unmet need for primary health care, Psychological distress, Obesity, Female Life Expectancy, Male Life Expectancy, Smoking, Qualification of school leavers, Participation in ECE, No qualification, Educational attainment, Unemployment, Housing affordability, Home ownership, GDP per capita, Te reo Māori speakers, Participation in the arts, Attendance in the arts, Social connectedness, Perception of safety, Life satisfaction, Motor vehicle casualties, Crime, Unpaid caring & volunteering work, NEET Rate, Teen fertility

Indicator results for the Vital Signs Region or the closest geographical region available (e.g., Waikato Region as defined by Stats NZ, Waikato DHB area, 'Rest of North Island', Waikato care and protection site as defined by Oranga Tamariki, etc.)

The findings for each of the 36 indicators are summarised below. It should be noted here that in the previous report released in 2016, the Waikato Vital Signs (VS) Region only included three TAs – Waikato, Matamata-Piako and Hamilton whereas in this report it includes all nine TAs. So overall findings for some indicators are not directly comparable between the two reports.

This direct comparability issue also holds true for some indicators where there have been changes in the data source or a change in the methodology of calculating rates or conducting surveys.

Vital Sign: Children & Youth

- **Child abuse**

In the Waikato Region, a report of concern for abuse or neglect requiring further action was registered for approximately 355 per 10,000 children/young people. This is higher than the national average of 307 per 10,000 recorded for the year ending June 2019.

The results of this indicator are not directly comparable with the previous report due to data availability issues.

- **Teen fertility**

The teenage fertility rate (19 per 1,000 women aged less than 20 years) across the Waikato DHB area as recorded in 2017 remains higher than that for total New Zealand (15 per 1,000). It ranked eighth among DHB areas with high teen fertility.

The teen fertility rate in the Waikato DHB area has declined from 26.6 (births per 1,000) in 2013 as to 19.5 in 2017.

- **Youth Not in Education, Employment or Training (NEET rates)**

Around 12.3 per cent of the youth aged 15-24 years resident in the Waikato Region, 12.3 per cent were not engaged in education, employment or training. The NEET rate for the 15-24 year combined age group has declined over the 2010-2019 period for both, Waikato Region as well as New Zealand as a whole.

The NEET rate in the Waikato Region as declined from 14.0 per cent in 2015 (as per the previous Vital Signs report) to 12.3 per cent in 2019.

- **Youth suicide**

Age specific suicide rates for youth have declined over the 1996-2016 period. Of all the life-stage groups, youth generally had the highest rate of suicide. Two in every five male deaths and one in three female deaths in the youth age group was by suicide.

The youth suicide rate declined from 23.7 (per 100,000) in 2012 (as per the previous Vital Signs report) to 16.8 in 2016.

Vital Sign: Community

- **Caring and volunteer work**

Across the Vital Signs Region, just over a quarter of the population aged 15+ years were involved in some form of unpaid caring and volunteering work (as reported at the 2018 Census); either looking after a member of their own or another household who is ill or has a disability, or doing other helping or voluntary work for or through an organisation, group or marae (similar to the national average).

Population involved in unpaid caring and volunteering work has marginally declined from 27.2 per cent in 2013 in the Waikato VS Region (as per the previous Vital Signs report) to 26.5 per cent in 2018.

- **Community engagement**

The proportion of respondents who believed that the public has some or a large influence on the decisions of the Council has declined substantially in the Waikato Region, indicating that more people across the region would like to have a bigger say in what their local council does.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data source.

- **Community pride**

In the Waikato Region, six in ten respondents agreed or strongly agreed that they felt a sense of pride in the way their city or local area looks and feels. This proportion declined since the last survey.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data source.

- **Crime**

The number of victimisations reported annually per 10,000 population in the Vital Signs Region is similar to the national average and has increased marginally over the 2015-2019 period.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data collection and reporting methodology by NZ Police.

- **Motor vehicle casualties**

Compared to the national average, the Vital Signs Region had a higher proportion of the total population either seriously injured or killed in a motor vehicle accident in the year ending June 2018.

The number of road casualties (fatal and serious injuries) recorded annually per 100,000 population has increased from 81 in 2013 to 87 in 2018 in the Waikato VS Region. This increase is also noted nationally.

- **Overall life satisfaction**

Across New Zealand, 81.1 per cent self-reported feeling satisfied with their life in 2018, which is a slight decline from the 82.6 per cent recorded in 2014. In 'Rest of North Island' (of which Waikato Region is a part), the proportion reporting satisfaction is lower than the national average.

Not directly comparable with the previous report due to changes in data availability.

- **Perception of safety**

Across New Zealand, 61.9 per cent reported feeling safe or very safe walking alone in their neighbourhood at night in 2018, marginally more than the 60.9 per cent recorded in 2014. Comparing across regions, the 'Rest of North Island' of which Waikato Region is a part has the lowest proportion of people reporting feeling safe.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data source.

- **Social connectedness**

Nationally, 16.5 per cent of the population aged 15 + years reported feeling lonely all the time, most of the time or some of the time, which is an increase from the 13.9 per cent recorded in 2014. Comparing across regions, 'Rest of North Island' (of which Waikato Region is a part) and Northland/BOP/Gisborne had the highest proportion of survey respondents who reported feeling lonely.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in definition.

- **Voter turnout**

Voter turnout has declined over the 2013-2016 period for local authority elections held for the Waikato Regional Council and the Matamata-Piako, Hamilton, Otorohanga and Waitomo District/City Councils.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data source.

Vital Sign: Culture & Arts

- **Attending/participating in arts**

Eight in ten New Zealanders have engaged with the arts in the last 12 months (of the 2017 survey) and this proportion is higher than that recorded in previous survey years. Compared to the national average, attendance and participation in the arts is lower in the Waikato Region.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data collection methodology.

- **Te reo Māori speakers**

In the Vital Signs Region a slightly higher proportion of Māori residents reported in the 2018 Census that they could hold a conversation about everyday things in te reo Māori compared to the national average.

The proportion of te reo speakers among Māori residents in the Waikato VS Region has declined marginally from 23.9 per cent in 2013 to 22.8 per cent in 2018.

Vital: Economy

- **Gross Domestic Product (GDP)**

The ratio of the nominal GDP per capita for the Waikato Region to that for New Zealand has declined over the 2014-2018 period.

This ratio has declined from 0.91 in 2014 (as per the previous Vital Signs report) to 0.88 in 2018.

- **Home ownership**

Over half of the resident population of the Vital Signs Region aged 15+ years live in houses they own or partly own or hold in a family trust across the Vital Signs Region, similar to the national average recorded at the 2018 Census.

This proportion of residents in the Waikato VS Region who reported owning their own home has increased marginally from 49.8 per cent in 2013 to 52.0 per cent in 2018. This increase is also noted nationally.

- **Household crowding**

The Waikato DHB area has 8.9 per cent of its resident population living in crowded households in 2013. This is lower than the national average of 10.1 per cent and has declined from the level recorded in 2006.

This indicator has not been updated due to unavailability of data.

- **Housing affordability**

In New Zealand, 22 per cent of households spent more than 30 per cent of their total household income on housing costs in 2018. Households living in rented dwellings spend a much larger proportion of their household income on housing expenses.

This is a new indicator.

- **Income inequality**

In the Waikato Region, income inequality has increased slightly over the 2007-2017 period. In 2017, the equivalised disposable income of a household at the 80th percentile was 3.4 times that for a household at the 20th percentile, similar to the national average (back in 2007, the ratio was 3.0 in the Waikato Region).

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in data availability.

- **Unemployment**

The 2019 unemployment rate in the Waikato Region is marginally lower than that recorded nationally.

Across the Waikato Region the rate of unemployment has declined from 6.1 per cent recorded for 2014 (as per the previous Vital Signs report) to 3.6 per cent in 2019.

Vital: Education

- **Educational attainment**

The proportion of the adult population aged 25-34 years in the Vital Signs Region with a level 4 or higher qualification is a little over half as per the 2018 Census, well below the national average of 58.1 per cent.

This proportion has increased from 47.9 per cent recorded for the Waikato VS Region in 2013 to 53.2 per cent in 2018.

- **No qualification**

Compared to the national average, a higher proportion of the adult population aged 25-34 years across the Vital Signs Region reported having no formal qualifications.

The proportion of the 25-34 year population of the Waikato VS Region with no qualifications has declined from 15.9 per cent in 2013 to 11.6 per cent in 2018. This decline is also noted nationally.

- **Participation in early childhood education**

The proportion of children in the Waikato Region who regularly attended Early Childhood Education (ECE) six month prior to starting school is similar to the national average of 97.0 per cent and has increased over the 2014-2019 period.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in definition of the indicator due to data availability reasons.

- **Qualification of school leavers**

Across the Waikato Region, 77.7 per cent of the students who left school in 2018 had a qualification of NCEA Level 2 or above; lower than the national average of 79.4 per cent.

The proportion of school leavers with NCEA Level 2 or above qualification has increased marginally in the Waikato VS Region from 75.6 per cent in 2014 to 77.7 per cent in 2018. Similar increase is noted nationally.

Vital: Environment

- **Environmental attitudes**

Compared to 2013 (as reported in the previous report), the proportion of the surveyed population assessing themselves to be pro-ecological or mid-ecological in their attitude towards the environment has declined marginally from 89.0 per cent in 2013 to 87.0 per cent in 2019.

- **River water quality**

The proportion of satisfactory river water samples for ecological water quality remains largely unchanged over the 2008-2017 period – around 72 per cent. Water quality at ten Waikato River sites is mostly stable over the last ten years, with some notable improving trends (total phosphorus, chlorophyll a, arsenic) as well as worsening trends (turbidity, nitrogen, E.coli).

- **Soil quality**

Since 2014, as detailed in the previous report, the percentage of monitoring sites in the Waikato region meeting five or more soil quality targets has increased marginally to 81.5 per cent.

- **Threatened environments**

Most of the Waikato region's land area is in non-indigenous cover with approximately 28 per cent covered by indigenous (native) vegetation. Around 17 per cent of this area (399,459.2 ha) is legally protected for conservation and biodiversity protection purposes (399,459.2 ha, which is 59 per cent of the region's indigenous cover).

There is no updated data for this indicator.

- **Waste recycling**

In 2019, only a quarter of the surveyed population in the Waikato Region thought availability of waste recycling services and facilities has become a little better or much better over the past few years. This is much lower than the 42 per cent reported in 2013 as per the previous Vital Signs Report.

Vital: Health

- **Smoking**

One out of every five people aged 15+ years across the Waikato Region reported being a current smoker in 2014/17. This is lower than the proportion recorded in 2011/14 for the region but higher than the national average recorded for 2014/17.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in methodology for calculating rates (unadjusted rates as opposed to age standardised rates used in this report).

- **Life expectancy**

New Zealand women have a life expectancy at birth of 83.7 years, higher than that for men who are likely to live until 80.3 years on average. Lowest life expectancy at birth among women as well as men is recorded for the Waitomo and South Waikato TA areas.

This indicator has not been updated due to unavailability of data.

- **Obesity**

Over one-third of the population aged 15+ years across the Waikato Region is obese, higher than the national average. The obesity rate in the region has remained similar to that recorded for 2011/14 whereas nationally the rate has increased.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in methodology for calculating rates (unadjusted rates as opposed to age standardised rates used in this report).

- **Psychological distress**

In 2014/17, 8.5 per cent of the population aged 15+ years across the Waikato Region reported suffering from high or very high levels of psychological distress, higher than the national average of 7.3 per cent.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in methodology for calculating rates (unadjusted rates as opposed to age standardised rates used in this report).

- **Unmet need for primary health care**

Around one-third of the population aged 15+ years across the Waikato Region experienced one or more types of unmet need for a GP, nurse or other health care worker because of cost or transport. This rate is higher than the national average.

This is a new indicator.

Vital Sign: Recreation

- **Physical activity**

Just under half of the people in the Waikato Region reported meeting the physical activity guidelines in the 2014/17 year, marginally lower than the national average.

This indicator is not directly comparable to the findings in the previous Vital Signs report due to change in methodology for calculating rates (unadjusted rates as opposed to age standardised rates used in this report).

Introduction

This consultancy report was commissioned by Momentum Waikato Community Foundation and undertaken by the National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato and is an update of the 2016 Vital Signs Reported completed by NIDEA. It is presented in two parts:

- **Part A** presents a brief socio-demographic profile, both current and projected, of the Waikato Vital Signs Region including all its nine constituent TAs
- **Part B** presents the Waikato Vital Signs report based on selected Vital Signs® indicators which will inform Momentum Waikato's evidence-based approach towards investing in the community.

The data and findings contained in this report aim to provide a better understanding of the characteristics of the communities being served, as well as the demographic changes projected to occur in the resident population of these communities over the next eighteen years.

Vital Signs® is a programme that measures the vitality of local communities and provides a guide for community action and support. It works by collecting data and publishing reports on significant social and economic trends to show how each community is faring in major quality of life areas such as health, arts and culture, and community. Canada led the way with the introduction of the programme by the Toronto Foundation in 2001, after a group of civic leaders came up with a new way to engage their community in understanding and monitoring the health and vitality of Toronto. Coordinated by Community Foundations of Canada, it became a nationwide programme in 2006. As of 2015, 49 communities across Canada are participating in the Vital Signs® programme, either by producing a report or acting on findings from previous reports.

Based on the Canadian model, Vital Signs® was launched in 2013 in the United Kingdom (UK), and by 2015, 13 community foundations were involved. Currently more than 65 communities in Canada and around the world, including in Turkey, Australia and Ireland, are using Vital Signs® to focus resource allocation and support to where it will have the greatest impact within the community.

In New Zealand, the first Vital Signs® report was undertaken by the Acorn Foundation for the Western Bay of Plenty and released in 2015. The Acorn Foundation is a philanthropic community group that funds projects and areas of need in the Western Bay of Plenty Community.[2] The Vital Signs® report was aimed at helping the Acorn Foundation to direct donations to where they are

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[2] http://www.acornfoundation.org.nz/about-us.html

most needed within the area. The report methodology used an online survey to capture the responses of residents in the Western Bay of Plenty sub-region aged over 17 years, with 1,546 people participating (Acorn Foundation, 2015).[3]

Report Structure and Scope

Part A: Socio-Demographic Profile of the Waikato Vital Signs Pilot Region

The first section of Part A of the report looks at the current resident population of the Vital Signs Region and the nine component TA areas as estimated for 2018. It disaggregates the population data by the key demographic characteristics: age (0-14, 15-24, 25-44, 45-64, 65-74 and 75+ years), sex (male, female), ethnicity (Māori, Pacific peoples, Asian, Middle Eastern/Latin American/African or MELAA and European/Other including New Zealander) and socio-economic deprivation as defined by the New Zealand Index of Deprivation. Numerical and structural changes in the population over the 2013-2018 inter-censal period are also examined.

The second section presents the population changes that are likely to occur over the next decade (2018-2028). Again, data are presented for the Vital Signs Region and the nine component TA areas and projected changes are analysed by the two key demographic characteristics: age and ethnicity.

In the third section, selected measures from the 2018 Census data are used to present a socio-demographic snapshot of Vital Signs Region and the nine component TA areas.

Comparisons are drawn with the total New Zealand population including comparison with the previous 2013 Census where required/possible.

Part B: Waikato Vital Signs Themes and Indicators

Waikato Vital Signs is divided into eight themes based on the Vital Signs® framework. Within these themes, a number of social and economic indicators have been selected based on the criteria detailed below. Indicators are statistical measures which show the state or level of a given variable and include social, economic and environmental categories. The indicators used in this report are a mixture of objective measures, e.g., motor vehicle casualties; subjective measures, e.g., overall life satisfaction, and those that predict later outcomes, such as cigarette smoking (Ministry of Social Development, 2010).

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[3] The sampling error was calculated to be ±2.5 per cent (at a 95 per cent confidence interval). Data was weighted by age, sex, ethnicity and residential ward.

For the first 2016 Vital Signs Report, 34 indicators were selected by Momentum Waikato in consultation with NIDEA. Two more indicators have been added in this report – Housing affordability and Unmet need for primary health care, making it a total of 36 indicators. It is likely more indicators will be added to the programme after community consultation, provided they meet the selection criteria which was used to select these first set of indicators.

Criteria for indicator selection

The selection process used the following good practice criteria to ensure a credible and manageable set of indicators (as listed in Table 1):

- Valid and meaningful – an indicator should adequately reflect the phenomenon it is intended to measure and should be relevant to the needs of the user.
- Statistically sound and robust – indicator measurement needs to be methodologically sound and fit for the purpose to which it is being applied.
- Intelligible and easily interpreted – indicators should be sufficiently simple to be interpreted in practice and intuitive in the sense that it is obvious what the indicator is measuring.
- Relate where appropriate to other indicators – a single indicator often tends to show part of a phenomenon and is best interpreted alongside other similar indicators (e.g. together as a theme).
- Ability to be disaggregated – indicators should be able to be broken down into population sub-groups or areas of particular interest, such as ethnic groups or regional areas.
- Consistency over time – indicators should be able to show trends over time, based on regular and repeated data collection.
- Timeliness – there should be minimal time lag between the collection and reporting of data to ensure that indicators are reporting current rather than historical information.
- Linked to emerging issues – indicators should be selected to reflect important issues as closely as possible (i.e. what does it tell us?)

Source: (Ministry of Social Development, 2006; Ministry of Social Development, 2010).

Table 1: Waikato Vital Signs themes and indicators

Vital Sign: Children & Youth

- Child abuse
- Teen fertility
- Youth Not in Education, Employment or Training (NEET rates)
- Youth suicide

Vital Sign: Community

- Caring and volunteer work
- Community engagement
- Community pride
- Crime
- Motor vehicle casualties
- Overall life satisfaction
- Perception of safety
- Social connectedness
- Voter turnout

Vital Sign: Culture & Arts

- Attending/participating in arts
- Te reo Māori speakers

Vital Sign: Economy

- Gross Domestic Product (GDP)
- Home ownership
- Household crowding
- Housing affordability
- Income inequality
- Unemployment

Vital Sign: Education

- Educational attainment
- No qualification
- Participation in early childhood education
- Qualification of school leavers

Vital Sign: Environment

- Environmental attitudes
- River water quality
- Soil quality
- Threatened environments
- Waste recycling

Vital Sign: Health

- Cigarette smoking
- Life expectancy
- Obesity
- Psychological distress
- Unmet need for primary health care

Vital Sign: Recreation

- Physical activity

Data Sources

Socio-Demographic Profile of the Waikato Vital Signs Pilot Region

- Population estimates and projection based on the 2013 Census. At the time of completion of this report, the more updated 2018 Census based estimates and projection were not available. However, the general overall population trends are unlikely to deviate greatly.
- Usually resident population[4] data from the 2018 Census

Waikato Vital Signs Themes and Indicators

Data for the selected indicators has been sourced from the Census and regional or national surveys as well as some administrative datasets as listed below:

- 2018 customised Census data from Statistics New Zealand
- Birth and Death Registrations
- Household Labour Force Survey
- Household Economic Survey
- New Zealand Police Crime Statistics
- New Zealand Transport Agency – Crash Analysis Database
- Creative New Zealand Survey
- 'Your Environment – what matters? Survey by the Waikato Regional Council
- Waikato Progress Indicators (WPI) database from the Waikato Regional Council
- New Zealand General Social Survey (NZGSS)
- New Zealand Health Survey

Appendix Table 1 gives the details of the surveys used as a data source for this report.

Where possible, data for each indicator has been disaggregated for the nine TAs in the Waikato Vital Signs region. Findings for most indicators have been shown at the regional level - Waikato Vital Signs Region or the Waikato Region (as defined by StatsNZ boundaries) (see Figure 2 for boundaries of these regions/areas). Comparative data for total New Zealand has been included as a benchmark (where possible). Where regional data are unavailable, only national level data are presented. The findings for the indicators have also been disaggregated by key demographic characteristics, age, sex, ethnicity and deprivation where appropriate, provided the corresponding data is available.

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[4] Estimated Resident Population (ERP) and Usually Resident Population (URP) counts from the Census are not directly comparable because the estimates include people not counted by the Census, for example, people who were temporarily overseas during the Census or people who did not respond.

Boundaries

The **Waikato Vital Signs Region** (henceforth referred to as the '**Vital Signs Region**' or '**Waikato VS Region**') encompasses the following nine territorial authorities (henceforth referred to as TAs) across the Waikato Region:

- Thames-Coromandel District
- Hauraki District
- Waikato District
- Matamata-Piako District
- Hamilton City
- Waipa District
- Otorohanga District
- South Waikato District
- Waitomo District

Waikato Region as defined by Statistics New Zealand not only includes the nine TAs listed above but also parts of Taupo and Rotorua Districts.

Waikato District Health Board (DHB) includes the lower part of the Waikato District, the entire remaining eight Waikato Region TAs, and also the upper half of the Ruapehu District. It does not include the Taupo or the Rotorua Districts, which are both a part of the Bay of Plenty DHB area. There are 20 DHBs across the country funding and providing primary and secondary health care services.

Each TA is made up of **Statistical Areas 1 and 2**, henceforth referred to as SA1 and SA2. The **SA2** was created by StatsNZ as a part of the Statistical Standard for Geographic Areas 2018 (SSGA18), and replaces the 1992 New Zealand Standard Areas Classification (NZSAC92). SA2s provide higher aggregations of population data than can be provided at the SA1 level. The SA2 geography aims to reflect communities that interact together socially and economically. In populated areas, SA2s generally contain similar sized populations.

Figure 2: Boundary map for the Vital Signs Region, Waikato Region and the Waikato DHB area
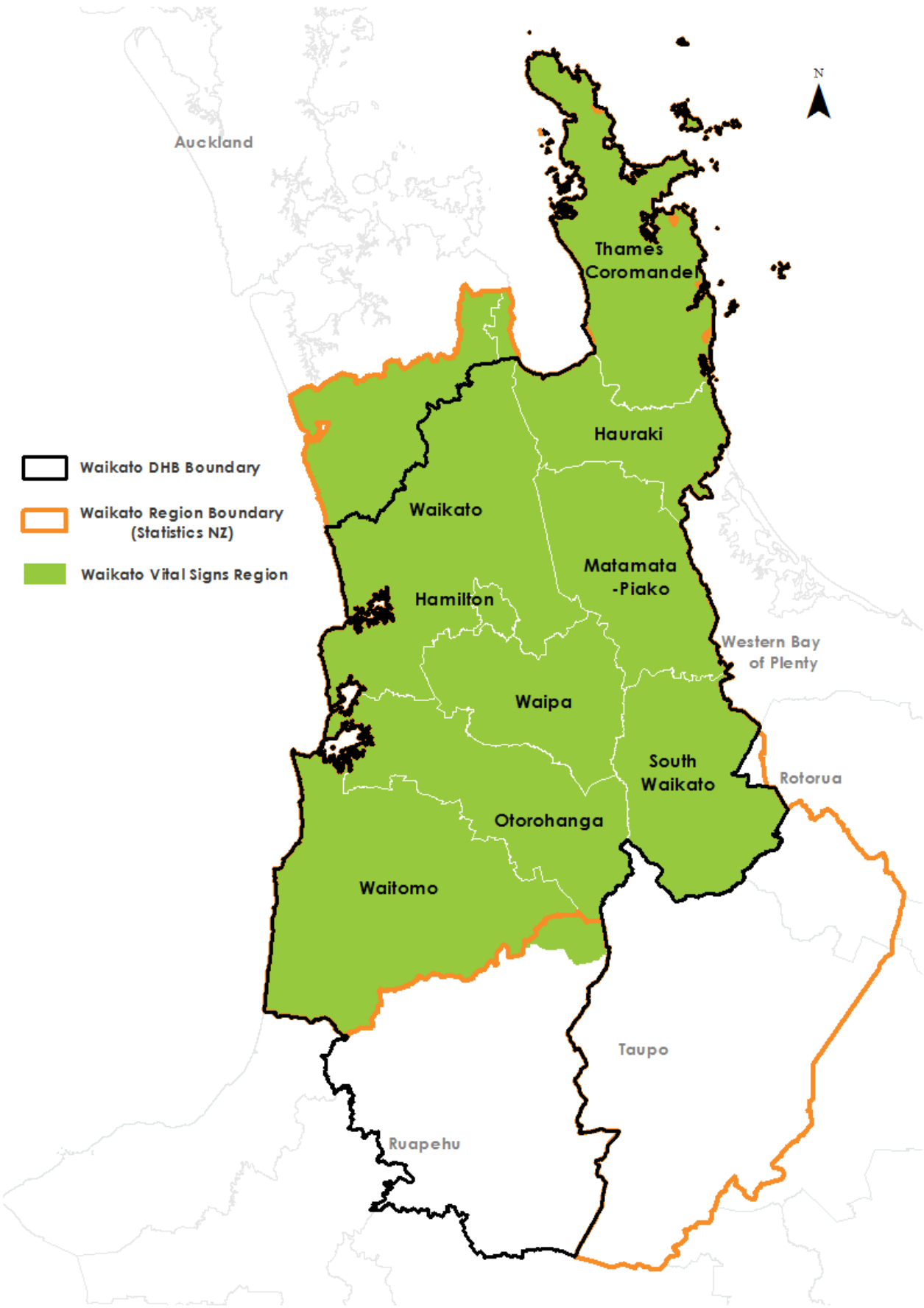
As per the population estimates based on the 2013 Census, 8.9 per cent of New Zealand's population in 2018 was resident in the Vital Signs Region. Table 2 shows the distribution of the resident population of the Vital Signs Region by sex, age group and ethnic group, with comparative data included for the Waikato Region, Waikato DHB area and total New Zealand. The sex, age and ethnic profiles of the Waikato Region and the Waikato DHB area are similar to that of the Vital Signs Region. Therefore, any findings pertaining to either of these two broader regional boundaries are likely to be fairly representative of the corresponding situation in the Vital Signs Region.

Table 2: Key demographic characteristics of the Vital Signs Region compared to that for Waikato Region, Waikato DHB and New Zealand

		Vital Signs Region	Waikato Region	Waikato DHB	New Zealand
Estimated resident population, 2018		**430,170**	472,100	419,850	4,841,000
Sex	Females	**50.6%**	50.6%	50.7%	50.6%
	Males	**49.4%**	49.4%	49.3%	49.4%
Age Group	0-14 years	**21.1%**	21.1%	21.1%	19.6%
	15-24 years	**13.2%**	12.9%	13.2%	13.2%
	25-44 years	**25.0%**	24.9%	25.0%	26.6%
	45-64 years	**25.0%**	25.1%	24.8%	25.4%
	65-84 years	**14.0%**	14.2%	14.1%	13.4%
	85+ years	**1.8%**	1.8%	1.8%	1.8%
Ethnic Group*	Maori	**23.3%**	23.9%	23.9%	16.5%
	Pacific Peoples	**4.7%**	4.5%	4.6%	8.1%
	European	**74.1%**	74.4%	73.7%	70.2%
	Asian	**10.0%**	9.5%	10.0%	15.1%
	Middle Eastern/Latin American/African	**1.2%**	1.1%	1.2%	1.5%
	Other ethnicity	**1.2%**	1.2%	1.2%	1.2%

* Multiple ethnicity counting means that the people can be counted in more than one ethnic group. Based on 2013 population estimates.

Note: All Ministry of Health data uses a prioritised ethnicity count. Prioritisation is a classification which assigns the ethnicity of a person who has given multiple responses to just one ethnicity. This process ensures that the total number of responses equals the total population. In doing so, prioritisation conceals diversity within and overlap between ethnic groups by eliminating multiple ethnicities from data. This form of expressing ethnic data is now being discontinued across official statistics. The recognition of multiple ethnicities is important in making comparisons between different ethnic groups as people reporting several ethnicities may have different characteristics from those who do not (Statistics New Zealand, 2006).

PART A:

Socio-Demographic Profile of the Vital Signs Region

Thames-Coromandel (31,500),[+12.8%]

Hauraki (21,000),[+10.8%]

Hauraki (21,000),[+10.8%]

Waikato (79,900),[+17%]

Matamata-Piako (36,000),[+7.9%]

Hamilton (169,500),[+10.5%]

Waipa (56,200),[+12.5%]

South Waikato (25,100),[+6.9%]

Otorohanga (10,500),[+8.4%]

Waitomo (9,490),[+2.5%]

( ) : Estimated population in 2019
[ ] : Inter-censal Change 2013-2018
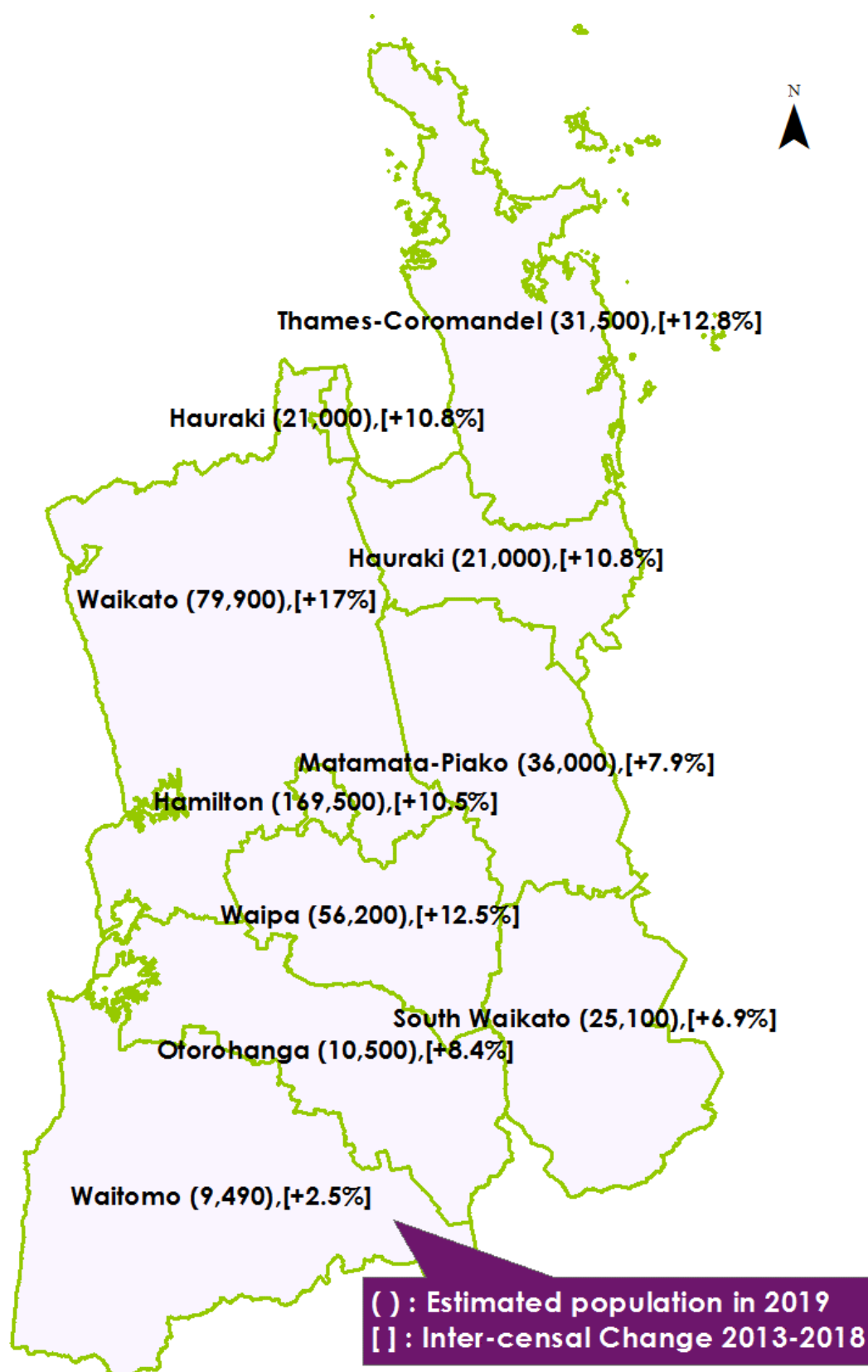
Figure A-1: Estimated resident population of each TA in the Vital Signs Region in 2019 and percentage change over 2013-2018 inter-Census period

1.1.1 Estimated resident population

As per the estimates for the year 2019, the current resident population of the Vital Signs Region is around 439,200; approximately 9.0 per cent of the population of New Zealand. Figure A-2 geographically disaggregates the estimated resident population (2013 Census based estimates) of the region and shows the number and proportion resident in each of the nine TAs in 2019. Hamilton, Waikato and Waipa are the three biggest TAs in the region accounting for 70 per cent of the Vital Signs Region's population.

Figure A-2: Estimated resident population of each TA and the proportion (%) of the Vital Signs Region's total population resident in each area, 2019
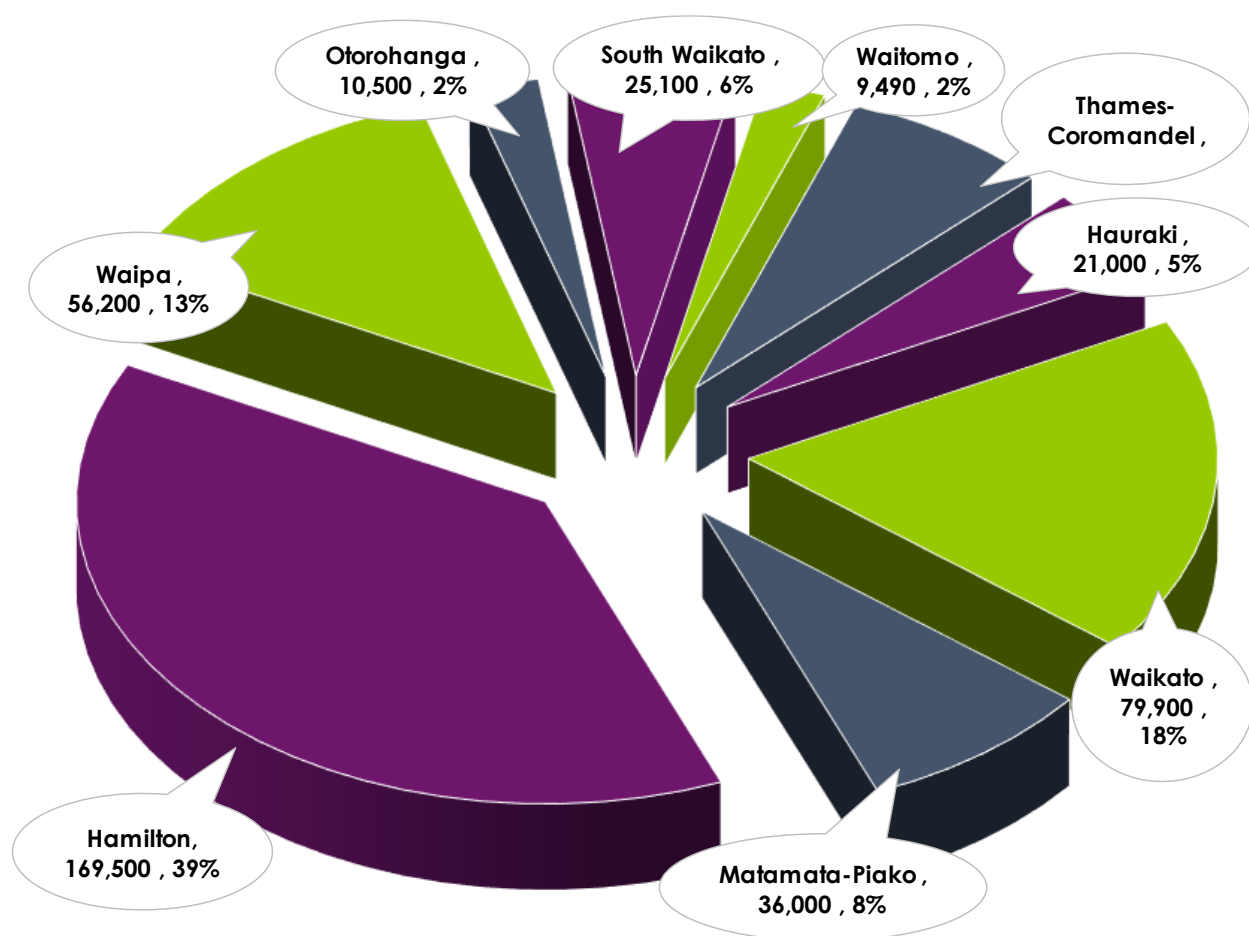
We now look at the key demographic characteristics of the resident population of the Vital Signs Region. In order to examine the changes that have occurred over the last decade, the remaining part of this section uses the usually resident population counts for the 2013 and 2018 Censuses.[5] It should be noted that there is very little change in the demographic profile of the region as well as the component TA areas between the years 2018 and 2019.

1.1.2 Sex profile

Apart from Otorohanga where there are noticeably more males than females and the Waikato and Waitomo Districts where there is one female for every resident male, all other TAs have fewer males than females. One of the factors contributing to this skewed male to female ratio is what demographers call the "missing men" phenomenon – males missing from official statistics due to under-enumeration, migration and other gender-linked factors (Callister & Lawton, 2011).

Figure A-3: Sex Ratio (males per 100 females)

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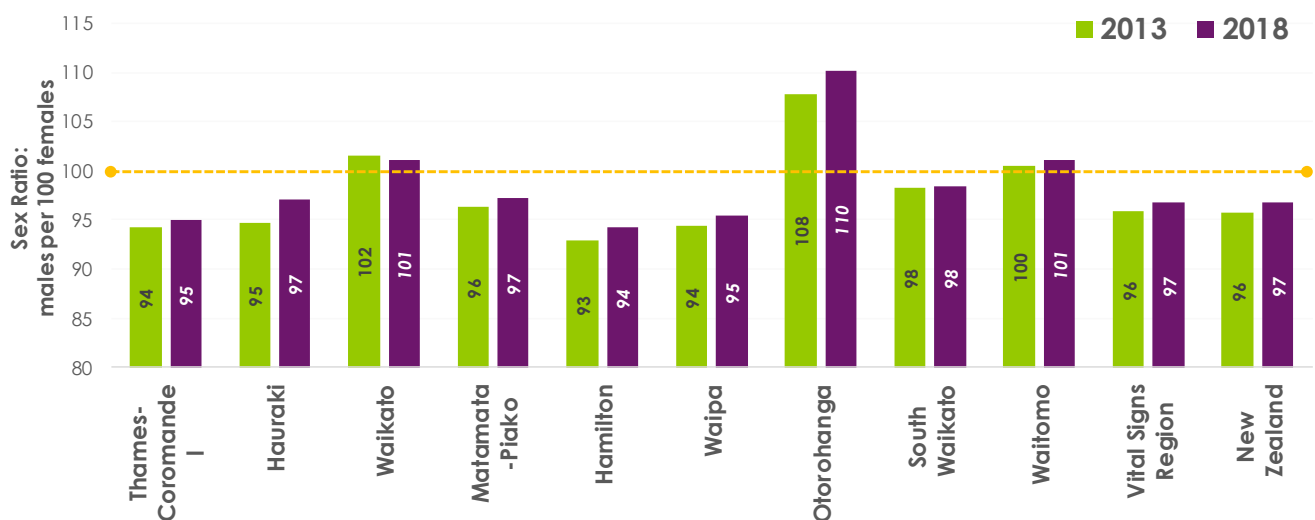
[5] Usually Resident Population (URP) counts from the Census do not include people not counted by the Census, for example, people who were temporarily overseas during the Census or people who did not respond.

1.1.3 Age profile

Figure A-4 shows the age profile (percentage in each broad age group) of the each of the TAs in the Vital Signs Region compared to that for the region as a whole and New Zealand as per the 2018 Census usually resident population counts.

Figure A-4: Age distribution of the usually resident population, Census 2018
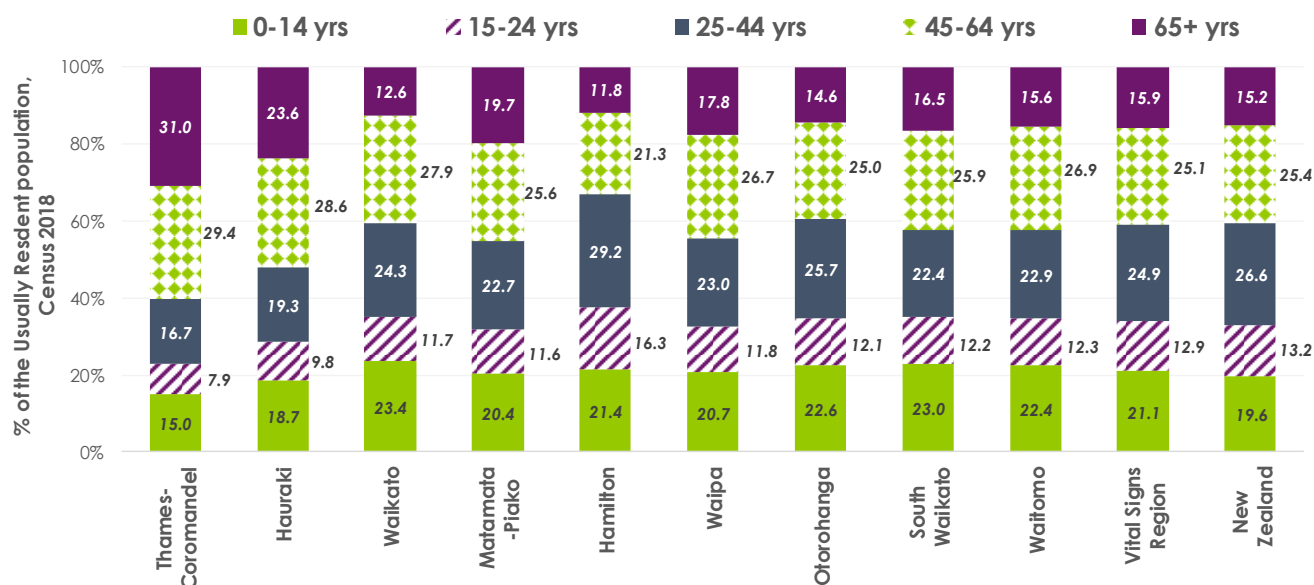
Numerical Change, 2013-2018

Figure A-5 shows the percentage increase in the number of residents of each broad age group over the inter-Census period, 2013-2018. Across all TAs over the last five years, the most substantial growth has been in the population of 65+ year olds. This mirrors the trend seen nationally. The biggest increase in the number of elderly was recorded in Thames Coromandel (+31.4 per cent) followed by Waikato (+26.9 per cent) and Waipa (+25.3 per cent). This increase in the number of elderly is termed **numerical ageing**. Numerical ageing is primarily due to improvements in life expectancy and longevity.

In comparison to the elderly population, the increase in number of children (0-14 years) was not as substantial with numbers in Waitomo in fact declining over this inter-censal period. Overall, the population of children increased by around 10.6 per cent in the Vital signs Region, which is slightly more than the 6.7 per cent increase nationally.

Figure A-5: Percentage change in the usually resident population of each broad age group over the 2013-2018 inter-Census period
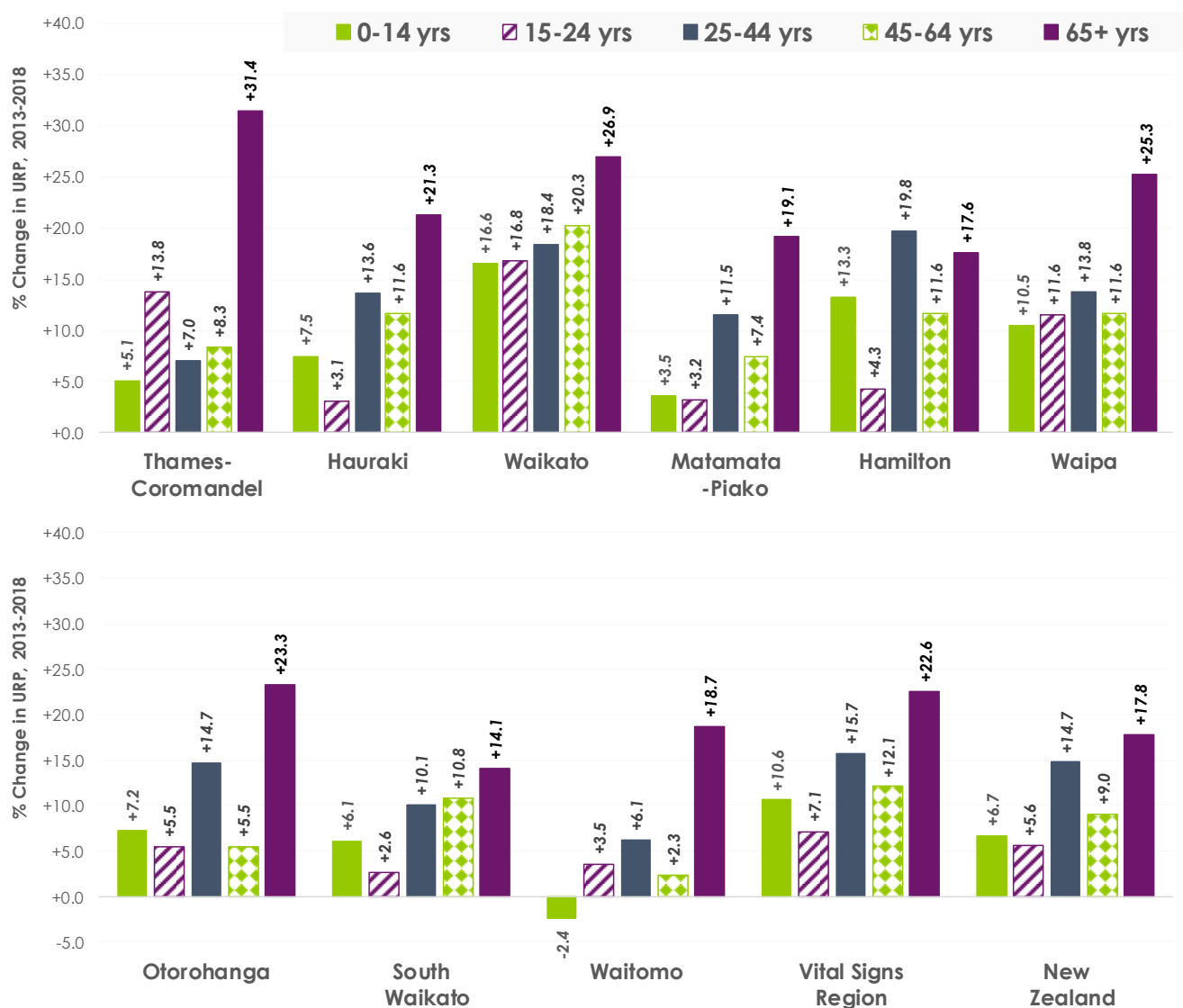
Compositional Change, 2013-2018

Figure A-6 shows the age-sex structure of the Vital Signs Region in 2013 and 2018 compared to New Zealand as a whole. The age-sex structures of the TAs in the region as recorded at the 2018 Census are shown in Figure A-7.

Over the last five years, the proportion of elderly in the region has increased marginally, which is similar to the national trend. The increase in the proportion of the population that is old is called **structural ageing**. The primary cause of structural ageing is declining birth rates. In New Zealand, structural ageing has been accelerated by the loss of large numbers of people at the working ages through out-migration. When a region or TA loses young people to out-migration it also reduces its reproductive potential, which then further accelerates the onset of structural ageing.

Currently, Thames-Coromandel and Hauraki have the oldest age profile in the region with a much higher proportion of the resident population aged 65 years or more - 31 per cent and 24 per cent respectively. Hamilton City and Waikato District, on the other hand have the youngest population profiles with comparatively higher proportions at younger ages and lower proportion of elderly among its residents.

Data for some other indicators of structural ageing like the Dependency ratio, Labour market entry to exit ratio and the median age of the population are included in Section 1.3, Figure A-19.

Figure A-6: Age-sex structure (composition) of the usually resident population of the Vital Signs Region compared to New Zealand, 2013 and 2018
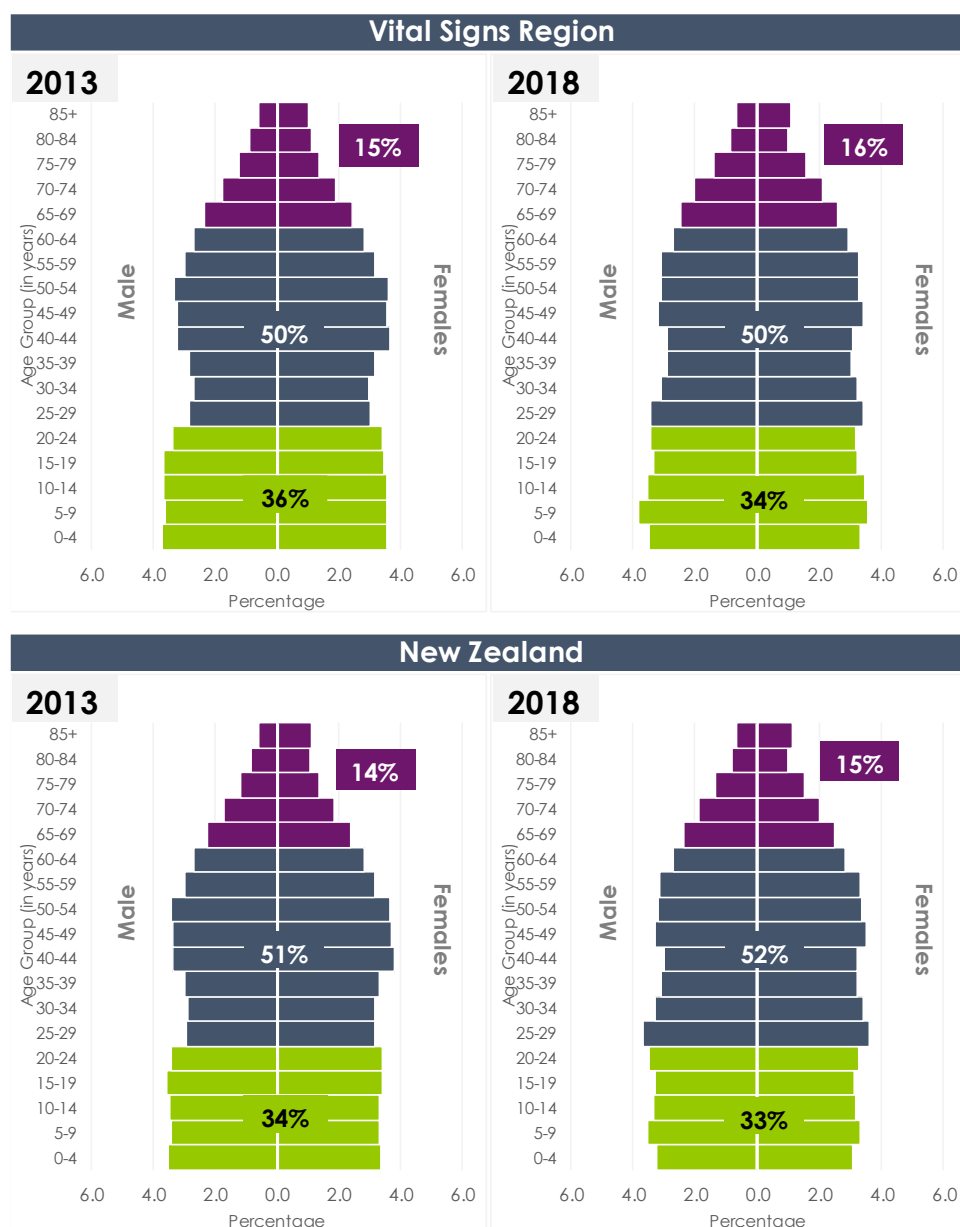
Figure A-7: Age-sex structure (composition) of the usually resident population of each TA in the Vital Signs Region, Census 2018
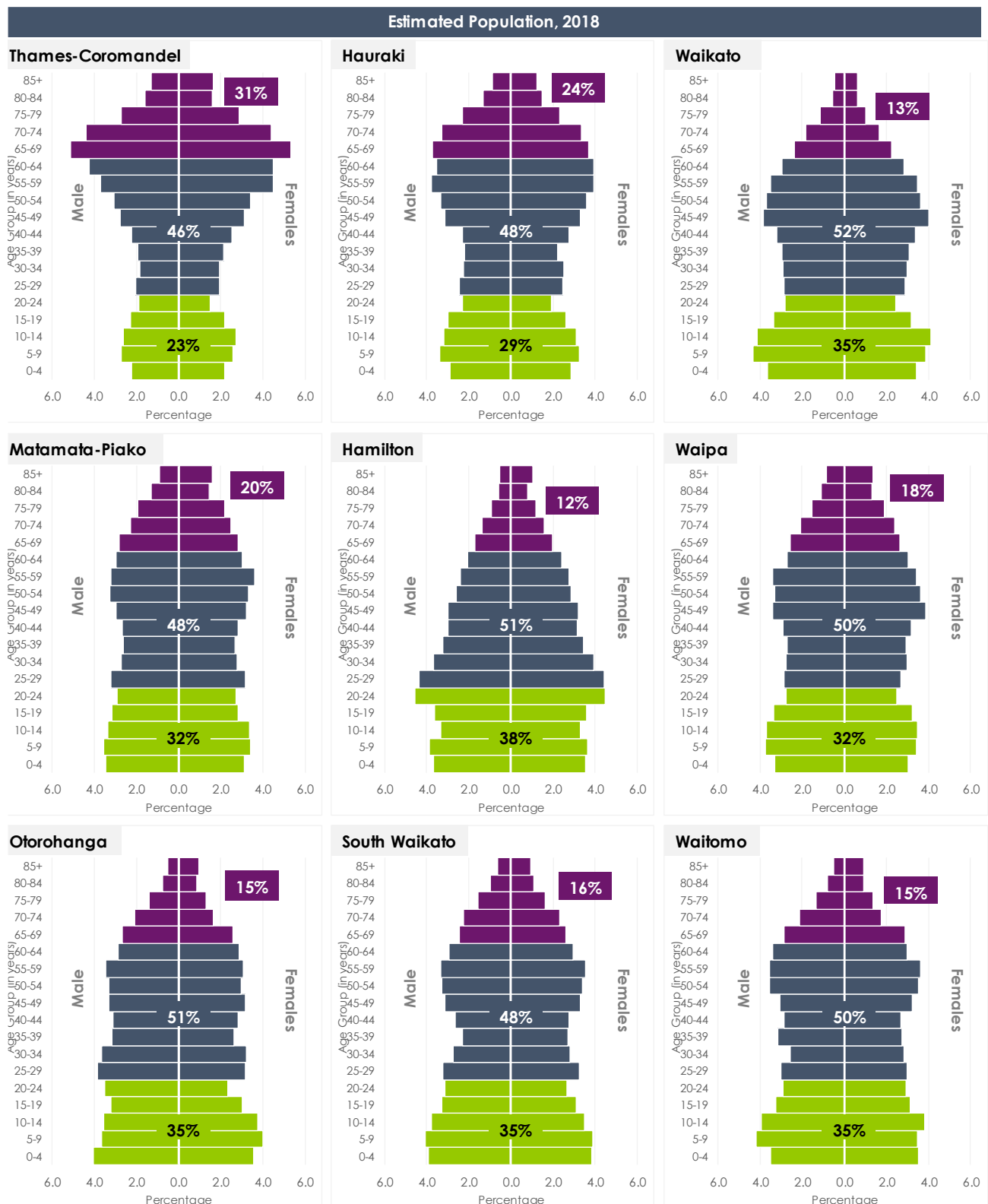
1.1.4 Ethnic profile

Figure A-8 shows the ethnic profile of the usually resident population of each of the nine TAs in the region compared to that for the Vital Signs Region as a whole and New Zealand. Almost a quarter (23.3 per cent) of the Vital Signs Region's population identifies as Māori, which is a much higher proportion than that recorded nationally.

The ethnic profile varies across the region with some TAs like Waitomo and South Waikato having a much higher proportion of Māori residents and Hamilton having a much higher proportion of residents identifying with the Asian and Middle Eastern, Latin American and African (MELAA) ethnic groups.

Figure A-8: Ethnic distribution of the usually resident population, Census 2018

Proportion of the Usually Resident Population, Census 2018
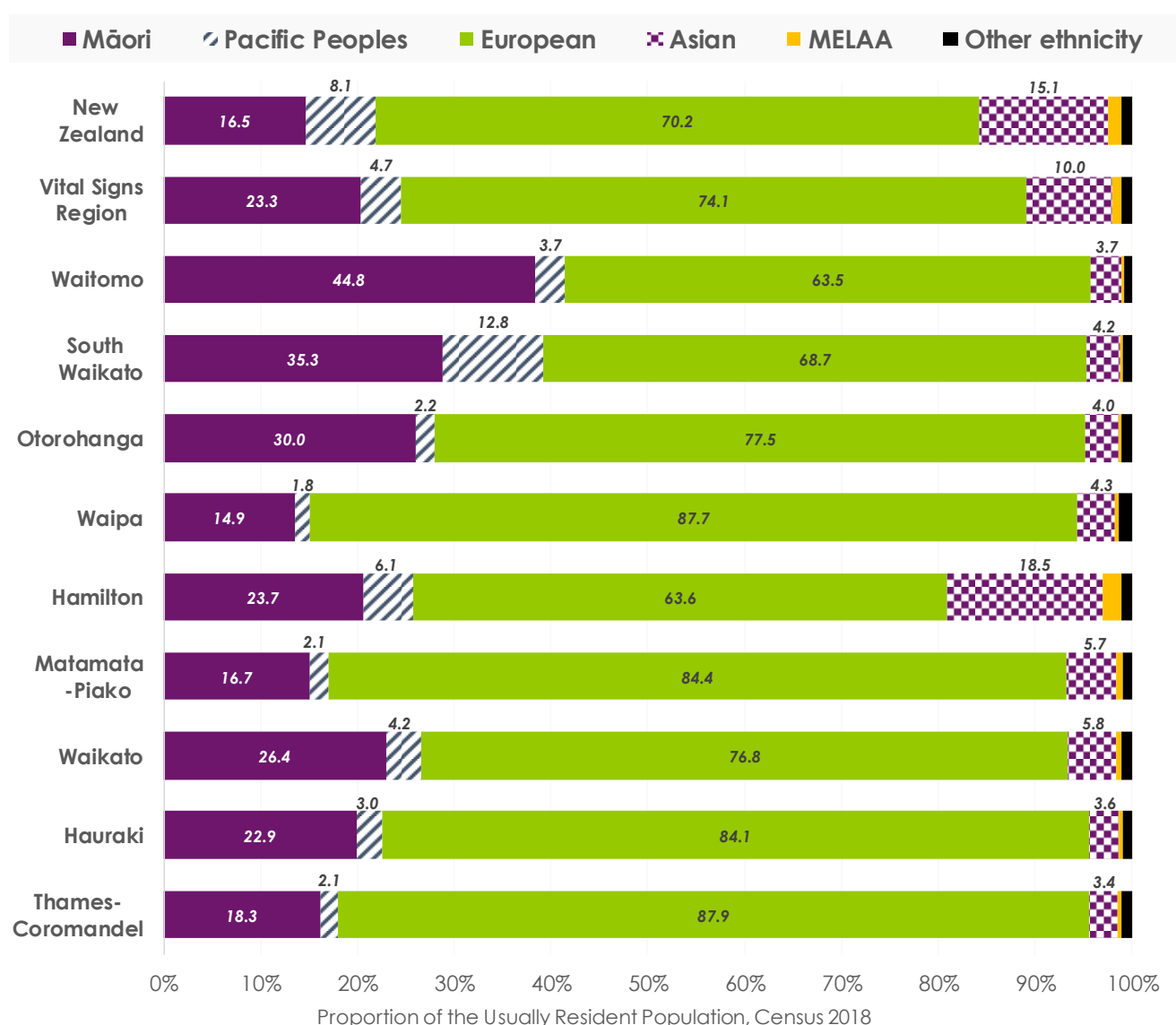
Numerical Change, 2013-2018

Figure A-9 shows the percentage increase in the number of residents of each broad ethnic group over the inter-Census period, 2013-2018. The growth in population of these four ethnic groups has not been uniform with the Asian, Pasifika and Māori groups experiencing substantially more growth than the residual European/Other ethnic group. This pattern is mirrored across all TAs in the region. Overall, the percentage increase in numbers for these four ethnic groups over the last five years has been slightly higher in the Vital Signs Region compared to the national average. This especially holds true for the Asian and Pasifika groups.

To be noted here is that the Māori population, being the indigenous group, can only grow via internal net migration gain and fertility. Overall, Māori and Pasifika dynamics are driven by higher fertility rates, whereas for the Asian ethnic group the growth is driven by migration.

Figure A-9: Estimated percentage change in population of each broad ethnic group over the 2013-2018 period (based on 2013 Census based projections)
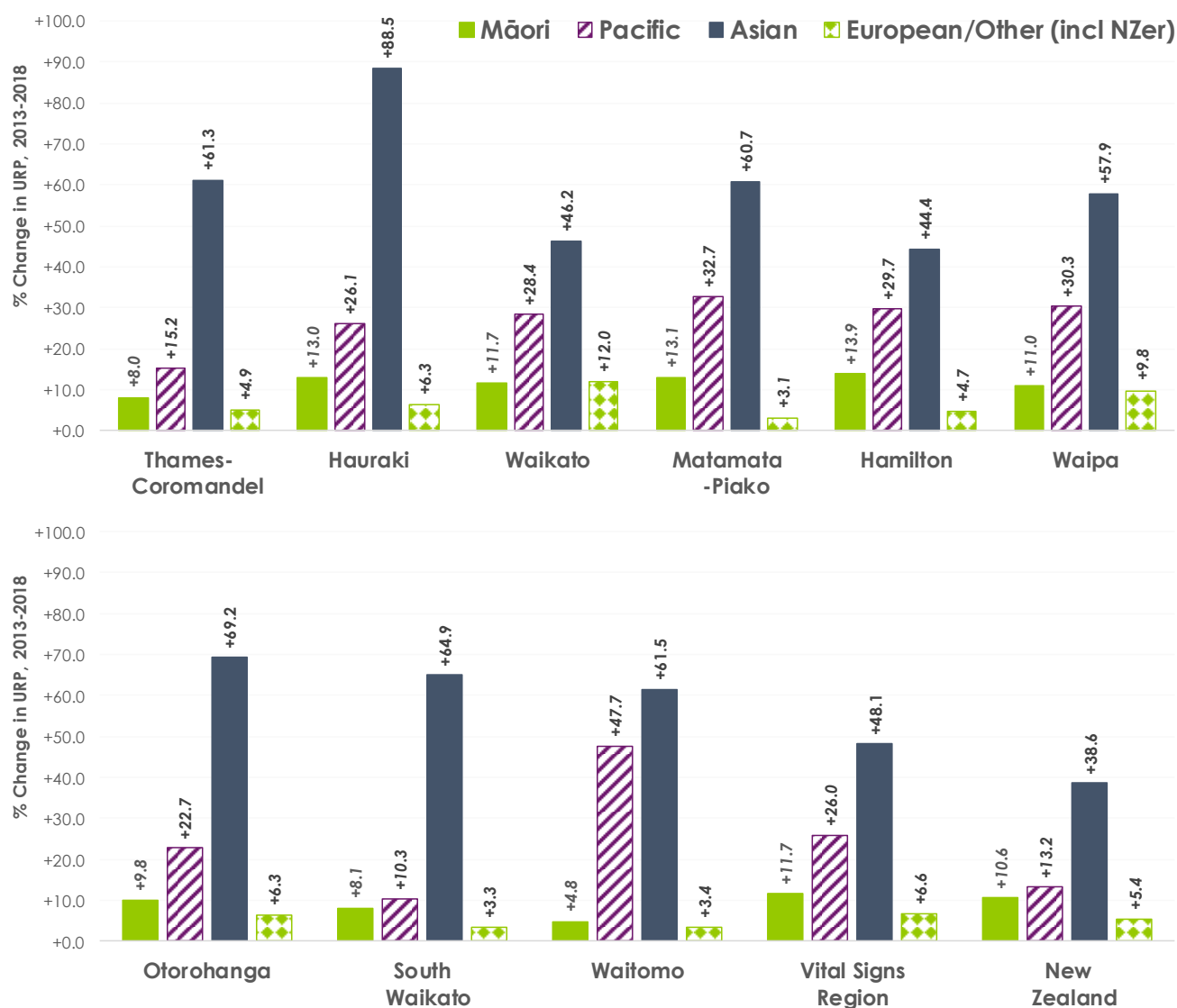
Differing Age-sex structures

Another important demographic characteristic to note is the very different age-sex structures (age composition) of these four broad ethnic groups. Māori and Pacific Islanders have a much younger population with a substantially higher proportion of the resident population aged less than 25 years – over half of the residents are children and youth compared to around one-third for the other two groups, Asian and European/Other.

These disparities clearly show that Māori and Pasifika will make a much higher proportion of the region's workforce over the next two decades and therefore increasing access to education for young Māori and Pacific Islanders is of critical importance – not just to build social capital and well-being for these two ethnic groups, but for the region as a whole.

Figure A-10: Age-sex structure of the four broad ethnic groups, Vital Signs Region, Census 2018
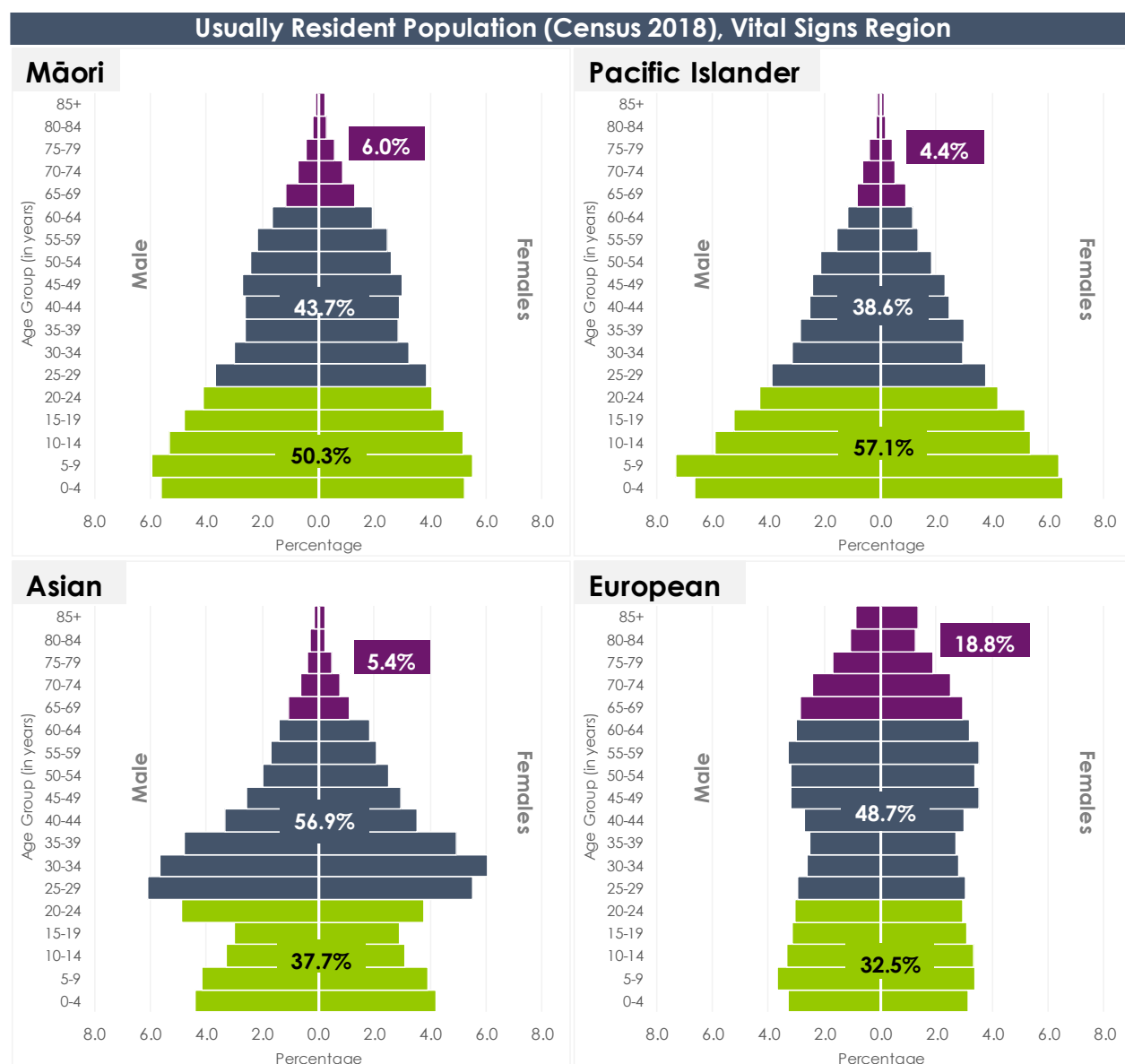
1.1.5 Socio-economic index of deprivation

Figure A-11 shows the proportion of the resident population living in areas categorised as NZDep 9 and 10 (high socio-economic deprivation as defined by the New Zealand Index of Deprivation).

Approximately just over a quarter (25.8 per cent) of the Vital Signs Region's population lives in areas categorised as high deprivation, which is higher than the national average of 20.7 per cent. South Waikato has the highest proportion of residents living in high deprivation areas (56.5 per cent) followed by Waitomo (49.6 per cent). Compared to the national average, six of the nine TAs in the Vital Signs Region have a higher proportion of residents living in areas categorised as NZDep 9 & 10

Figure A-11: Proportion of the usually resident population of 2018 living in areas categorised as NZDep 9 & 10 (2018 Census based)

Thames-Coromandel (29,600) [-3.9%]

Hauraki (20,900) [+1.5%]

Hauraki (20,900) [+1.5%]

Waikato (87,200) [+12.1%]

Matamata-Piako (36,500) [+2.8%]

Hamilton (193,500) [+16.6%]

Waipa (59,900) [+9.3%]

South Waikato (23,800) [-4%]

Otorohanga (11,000) [+5.8%]

Waitomo (9,650) [+0.8%]
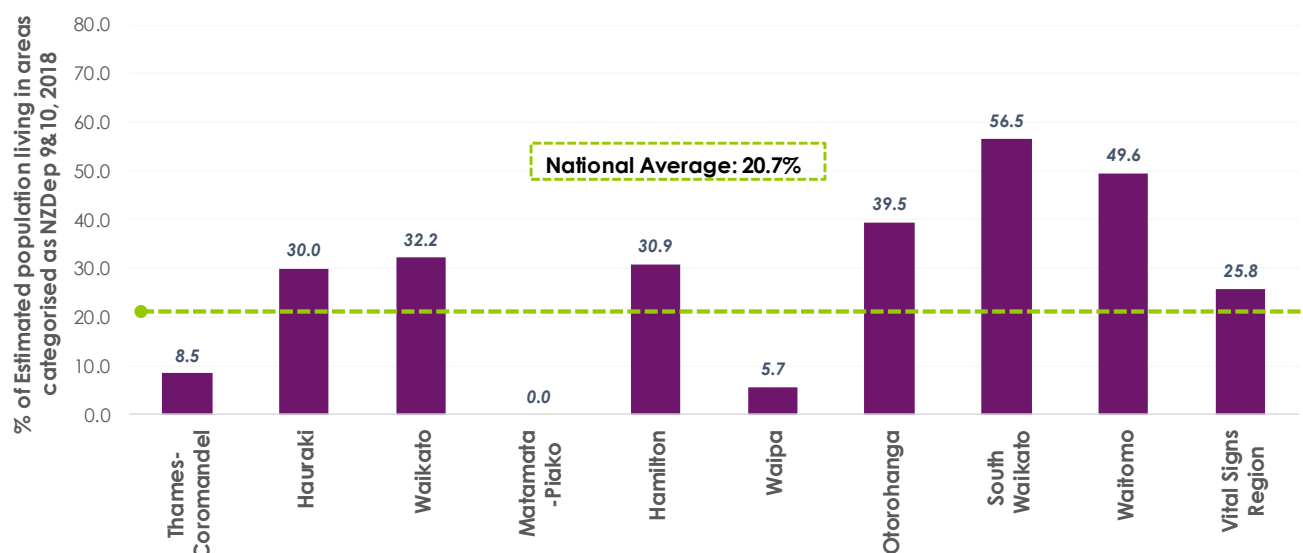
( ) : Projected population in 2028
[ ] : Change 2018-2028
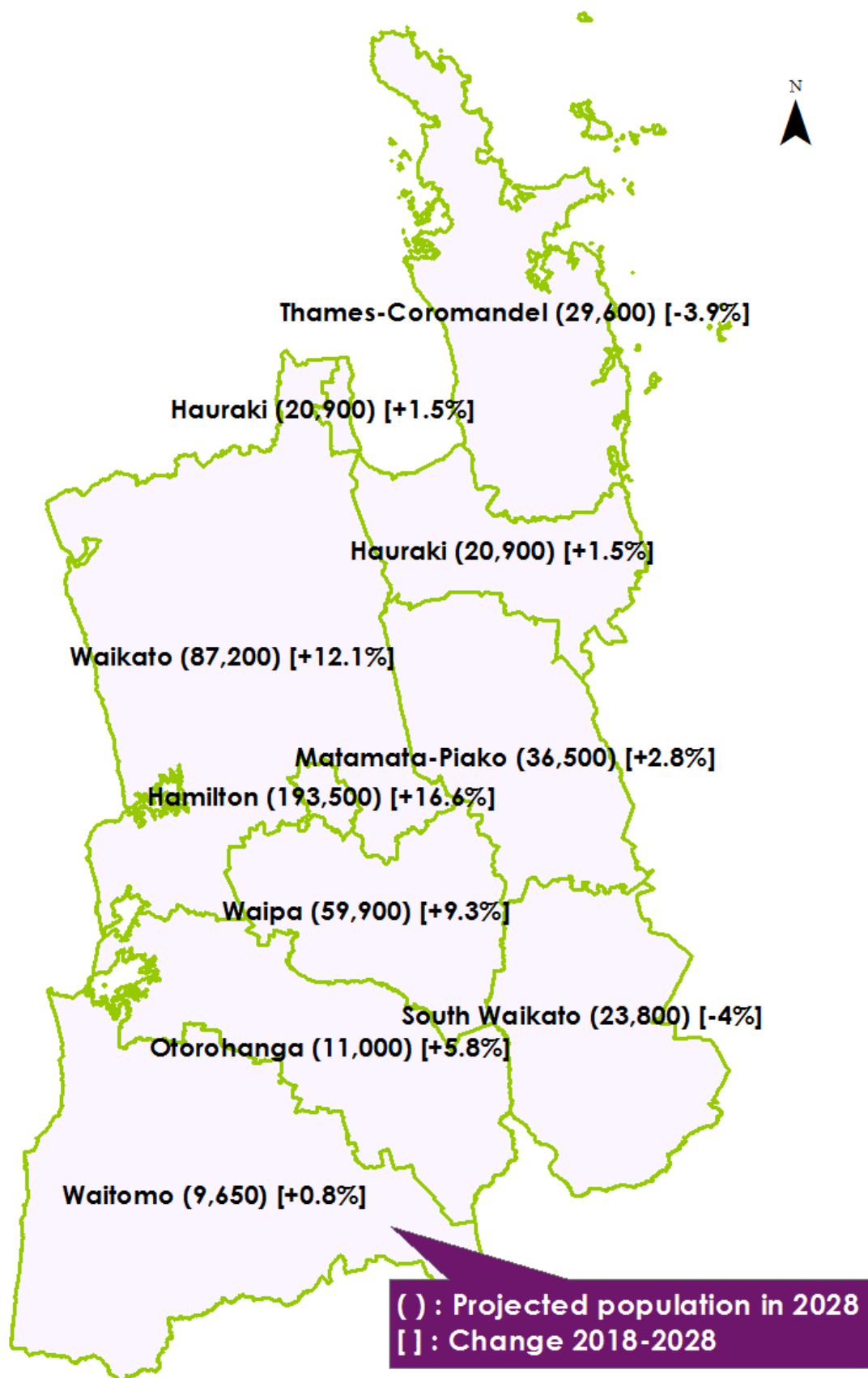
Figure A-12: Projected resident population of each TA in the Vital Signs Region in 2028, and percentage change over 2018-2028 period

1.2.1 Overall projected change

This section looks at the change in population projected over the 2018-2028 period for the Vital Signs Region and its component TAs. These analyses are based on the 2013 Census based projections as the more up to date 2018 Census based projections are not expected to be available before mid-2020.

Figure A-13 illustrates that over the next decade, the resident population of the Vital Signs Region is projected to grow by around 9.7 per cent, which is slightly lower than the increase estimated for New Zealand as a whole. Across the region, the highest growth is estimated for Hamilton City and the Waikato District while the population of Thames-Coromandel and South Waikato is expected to decline.

Figure A-13: Percentage change in population projected for the 2018-2028 period
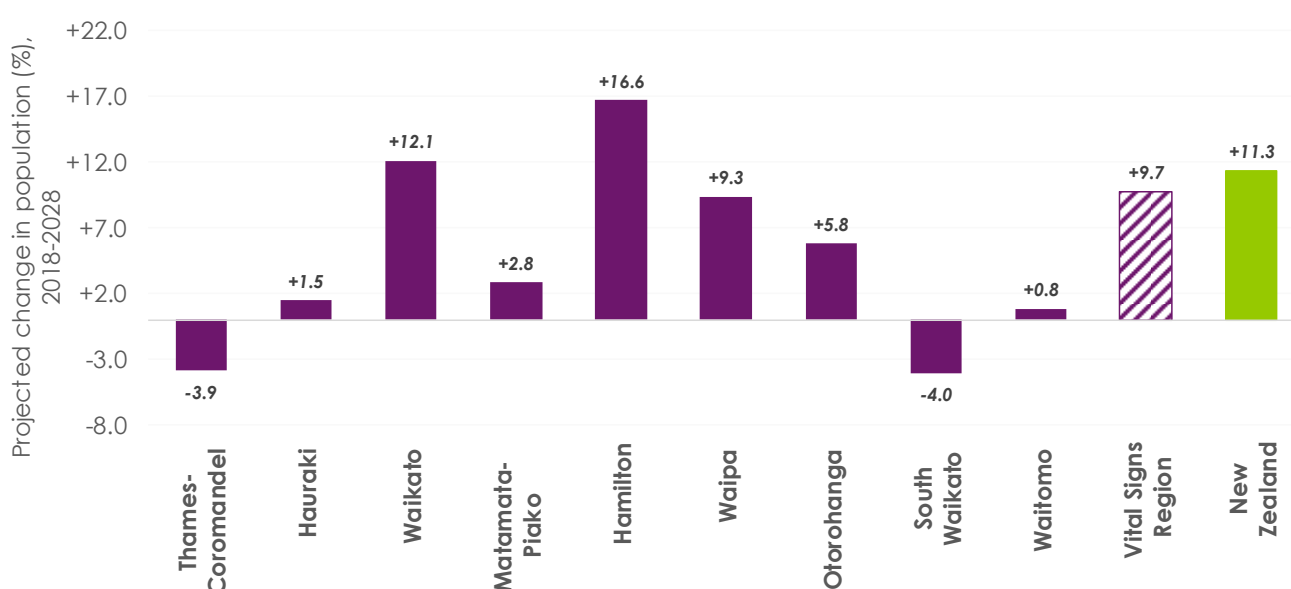
1.2.2 Projected changes by age group

The overall growth projected for the region is not uniformly distributed across the age groups, with more substantial increases expected in the population of elderly over the coming decade. Overall, in the Vital Signs Region, the population of 65+ year olds is likely to increase by over 40 per cent in the next ten years while all other age groups combined are estimated to increase by only 5 per cent. As discussed in the previous section 1.1.3, this is demographically referred to as **numerical ageing** where the number of elderly set to increase substantially across all TA areas across the region.

Figure A-14 shows that apart from Waikato, Hamilton and Otorohanga, the population of children and youth (under 25 year olds) is likely to decline within each TA area over the 2018-2028 period.

Figure A-14: Projected change in the resident population of each broad age group over the 2018-2028 period
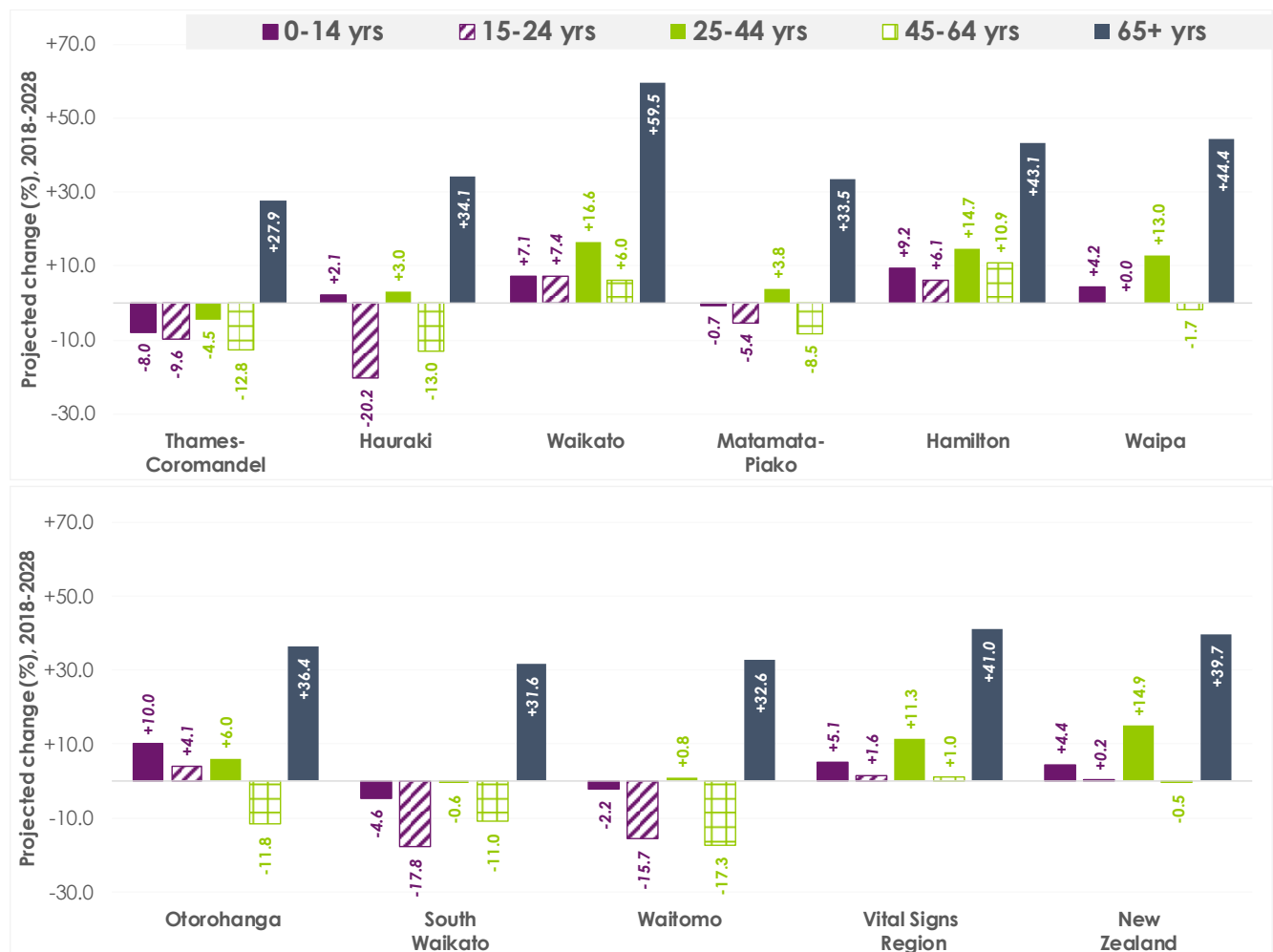
The age composition of the population will also change as seen in Figure A-15 and Figure A-16. By 2028, one out of every five residents (20 per cent) in the Vital Signs Region will be aged 65 years or more, which is an increase from the 16 per cent recorded in 2018 (See Figure A-6). This trend is mirrored in TAs across the region with increased proportion of elderly among residents, with the Thames-Coromandel and Hauraki Districts having the oldest age profiles (see Figure A-16). This is demographically referred to as structural ageing (as discussed previously in section 1.1.3).

It is important here to distinguish clearly between structural ageing and numerical ageing. Structural ageing is an increase in the proportion of the population that is old and is primarily caused by declining birth rates. In New Zealand, structural ageing has been accelerated by the loss of large numbers of people at the working ages through out-migration, especially to Australia. Numerical ageing is the increase in the numbers of elderly and is primarily due to improvements in life expectancy and longevity. Because of these different drivers, numerical and structural ageing can occur independently.

Figure A-15: Projected age-sex structure in 2028, Vital Signs Region and New Zealand
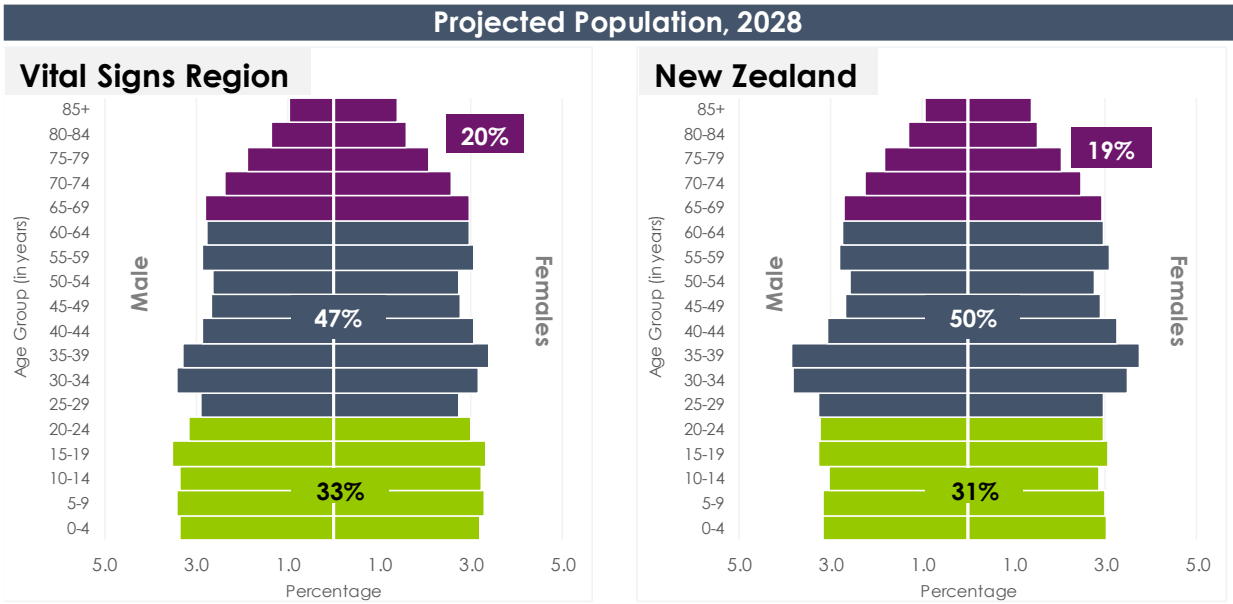
Figure A-16: Projected age-sex structure of each TA within the Vital Signs Region in 2028

| Projected Population 2028 |
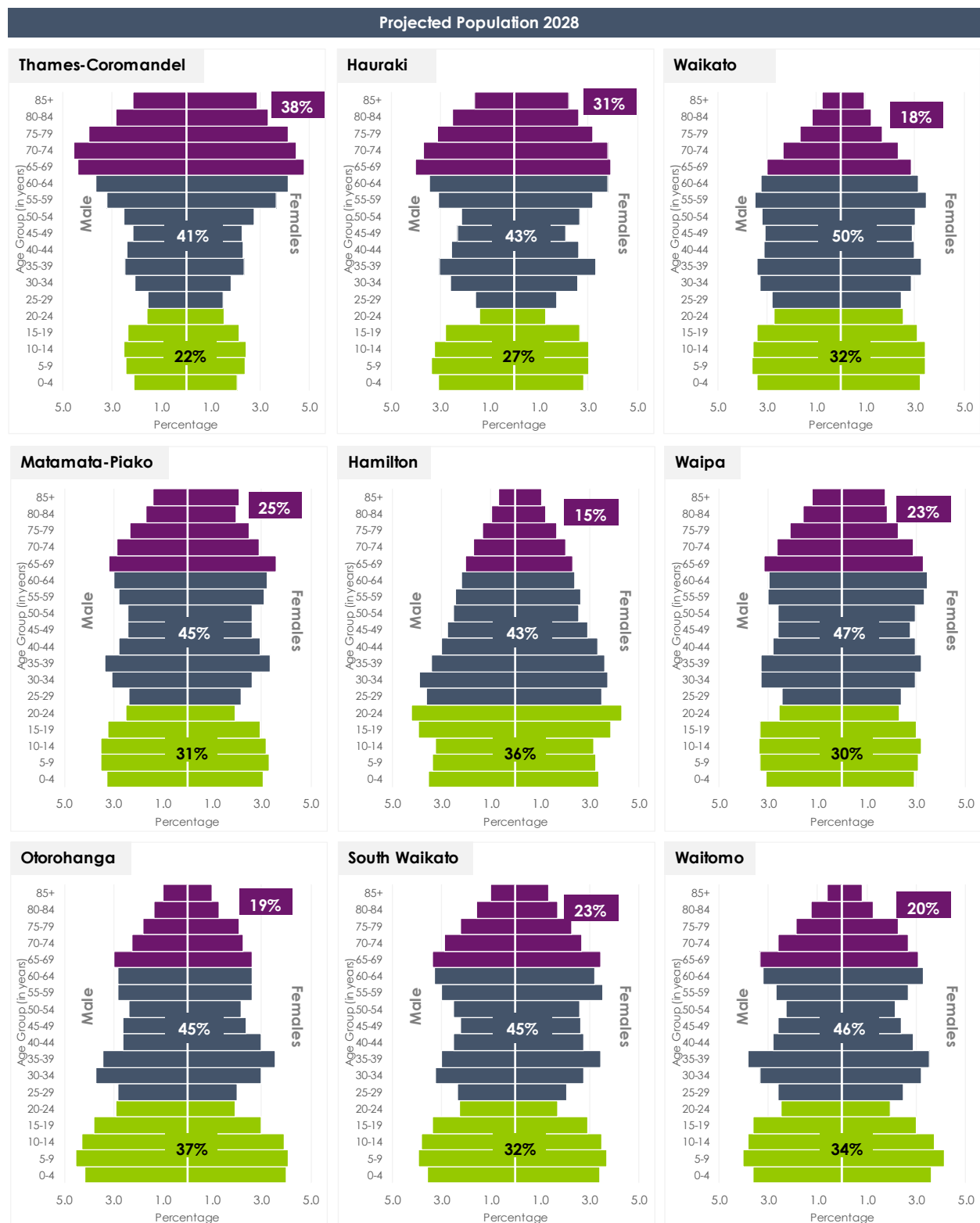
1.2.3 Projected changes by ethnic group

Figure A-17 shows the projected change in the population of each of the four ethnic groups over the 2018-2028 period. As discussed in section 1.1.4, the four groups have differing growth rates. The highest projected growth is for the Asian and Pasifika populations across the region followed by Māori. In comparison, the European/Other population group is likely to see very little to no growth over the next ten years.

Figure A-17: Projected change in the resident population of each broad ethnic group over the 2018-2028 period

Figure A-18 shows the projected age-sex structures (age composition) of the four broad ethnic groups in 2028.

Figure A-18: Projected age-sex structure of the four broad ethnic groups in 2028, Vital Signs Region

1.3   Selected socio-demographic measures from the Census

This section presents some selected socio-demographic measures for the TAs in the Vital Signs Region along with comparative data for New Zealand. The 2018 Census data used to calculate these measures were sourced from NZStats via customised data requests. The usually resident population who did not respond to the Census or did not provide a valid response to a particular Census question(s) from which the variable(s) is derived, has been excluded for the purpose of calculating the measures presented in the socio-demographic snapshot.

Please refer to the glossary for definitions or detailed information of some of the variables presented.

Figure A-19: Socio-demographic snapshot 1

Measure	Thames-Coromandel	Hauraki	Waikato	Matamata-Piako	Hamilton	Waipa	Otorohanga	South Waikato	Waitomo	Vital Signs Region	New Zealand
Resident population											
2013 (estimated)	27,300	18,600	66,500	32,900	150,200	48,700	9,590	23,200	9,340	386,330	4,442,100
2018 (estimated)	30,800	20,600	77,800	35,500	165,900	54,800	10,400	24,800	9,570	430,170	4,841,000
2028 (projected)	29,600	20,900	87,200	36,500	193,500	59,900	11,000	23,800	9,650	472,050	5,389,700
Median Age (in years)	53.6	46.8	37.6	40.8	32.2	40.5	36.3	37.9	38.2	37.4	37.4
Projected numerical change (%), 2018-2028											
Overall	-3.9	+1.5	+12.1	+2.8	+16.6	+9.3	+5.8	-4.0	+0.8	+9.7	+11.3
Population aged 65+ years	+27.9	+34.1	+59.5	+33.5	+43.1	+44.4	+36.4	+31.6	+32.6	+41.0	+39.7
Population aged 0-14 years	-8.0	+2.1	+7.1	-0.7	+9.2	+4.2	+10.0	-4.6	-2.2	+5.1	+4.4
Māori Population	+13.9	+17.4	+20.1	+21.4	+25.7	+19.7	+14.5	+11.1	+6.8	+20.4	+18.2
Projected compositional change (2018-2028)											
Proportion aged 0-14 years											
2018 (estimated)	23%	29%	35%	32%	38%	32%	35%	35%	35%	34%	33%
2028 (projected)	22%	27%	32%	31%	36%	30%	37%	32%	34%	33%	31%
Proportion aged 65+ years											
2018 (estimated)	31%	24%	13%	20%	12%	18%	15%	16%	16%	16%	15%
2028 (projected)	38%	31%	18%	25%	15%	23%	19%	23%	20%	20%	19%
Proportion Māori											
2018 (estimated)	18%	23%	25%	17%	22%	15%	28%	34%	42%	22%	16%
2028 (projected)	20%	26%	26%	19%	24%	16%	30%	39%	46%	24%	17%
Dependency Ratio (number of dependents per 100 working age population)											
2018 (estimated)	76	71	56	65	49	60	57	65	60	57	53
2028 (projected)	106	97	63	80	54	72	78	80	75	66	60
Labour Market Entry:Exit Ratio (number of entrants per 100 exiting labour force)											
2018 (estimated)	43	66	101	97	187	97	109	104	95	118	122
2028 (projected)	45	53	88	80	167	84	99	74	89	107	108
Proportion living in high deprivation areas (NZDep2013)	8.5%	30.0%	32.2%	0.0%	30.9%	5.7%	39.5%	56.5%	49.6%	25.8%	20.7%

Figure A-20: Socio-demographic snapshot 2

Measure	Thames-Coromandel	Hauraki	Waikato	Matamata-Piako	Hamilton	Waipa	Otorohanga	South Waikato	Waitomo	Vital Signs Region	New Zealand
Number of private dwellings											
Occupied	12,924	7,914	25,026	12,921	55,068	19,581	3,519	8,538	3,411	148,902	1,664,313
Unoccupied	12,600	1,314	2,649	924	3,096	1,254	723	1,134	831	24,525	191,649
Under Construction	231	30	273	48	285	189	9	12	12	1,089	15,972
Total private dwellings	25,755	9,258	27,948	13,893	58,449	21,024	4,254	9,687	4,251	174,519	1,871,934
Households with no access to telecommunications	1.6	1.4	1.1	1.2	1.4	0.7	1.6	1.6	2.8	1.3	1.1
Households with no motor vehicle(s) (%)	5.4	4.7	3.3	4.2	7.0	3.7	3.4	6.6	6.4	5.3	6.6
Population born overseas (%)											
Census 2018	16.7	13.2	16.1	14.5	27.2	18.6	11.4	13.7	10.6	20.1	27.4
Census 2013	16.0	12.0	14.4	13.1	24.0	17.5	10.4	14.1	9.3	18.1	25.2
Birthplace of resident population born overseas (%), Census 2018											
Asia	14.4	18.6	20.2	27.1	46.7	15.6	20.2	20.9	22.6	33.6	37.8
UK, Ireland, Rest of Europe	55.0	52.6	42.5	43.0	19.2	52.1	40.3	38.1	32.2	32.2	28.7
Pacific Islands	3.9	5.5	8.7	5.0	11.6	3.5	9.0	18.5	16.7	9.5	13.5
Middle East, Africa, Other	7.6	7.7	12.4	10.0	12.7	14.0	11.9	8.5	10.2	12.0	9.1
Australia	12.6	11.0	10.7	9.3	5.4	9.6	14.3	11.1	13.9	7.9	6.0
North America	5.6	3.7	4.1	2.7	2.3	4.1	2.4	2.0	3.4	3.0	3.1
Other	0.9	0.8	1.4	3.0	2.2	1.2	1.3	0.8	0.9	1.8	1.9
Recent migrants (arrival <5 years ago) among resident population born overseas (%), Census 2018											
Census 2018	15.7	16.1	15.5	20.6	30.0	20.9	24.7	16.2	30.1	24.4	25.2
Census 2013	16.7	12.2	17.8	19.9	27.9	19.2	20.7	15.4	31.3	23.1	22.9
Te Reo Māori speakers (%, excluding too young to speak/no language)											
Census 2018	3.9	4.5	7.4	3.8	6.0	3.2	7.0	7.4	11.3	5.7	4.0
Census 2013	3.8	4.7	7.3	3.6	5.7	2.9	6.8	7.5	11.1	5.5	3.8

Figure A-21: Socio-demographic snapshot 3

Measure	Thames-Coromandel	Hauraki	Waikato	Matamata-Piako	Hamilton	Waipa	Otorohanga	South Waikato	Waitomo	Vital Signs Region	New Zealand
Highest qualification of 15+ year population (%), Census 2018											
No qualifications	24.9	30.0	20.8	27.8	16.5	20.1	26.0	29.6	28.9	21.2	18.2
Level 1-5 Certificate/Diploma	59.9	59.3	59.6	59.9	56.4	59.6	61.2	60.4	59.3	58.5	57.0
Bachelor's degree or higher	15.2	10.7	19.6	12.4	27.0	20.3	12.6	10.0	11.7	20.3	24.8
Work and Labour Force Status (%)											
Employed (full or part time)	54.2	56.8	68.1	64.4	63.6	66.9	67.1	58.3	67.3	63.7	64.7
Unemployed but actively seeking work	2.5	4.1	4.1	3.2	5.6	3.0	3.6	6.3	3.9	4.4	4.0
Not in the labour force	43.3	39.2	27.9	32.4	30.8	30.1	29.3	35.4	28.8	31.9	31.3
Employment status of the employed 15+ year population (%), Census 2018											
Self-employed & without employees	19.7	15.1	12.6	12.2	6.6	11.9	13.9	7.2	12.2	10.5	10.2
Employer	9.9	7.6	8.1	8.5	3.9	7.9	11.1	6.3	6.9	6.6	5.6
Paid employee	67.5	74.1	76.4	76.5	88.8	78.1	70.3	84.4	77.0	81.0	82.7
Unpaid family worker	2.9	3.2	2.8	2.8	0.7	2.1	4.6	2.0	4.0	2.0	1.5
Median Personal Income, Census 2018											
Total	$24,906	$24,565	$34,728	$32,442	$30,175	$35,534	$30,167	$24,920	$27,310	N/A	$31,824
Female	$22,628	$22,015	$25,934	$24,728	$24,572	$27,281	$24,395	$21,145	$22,729	N/A	$25,212
Male	$30,100	$31,400	$44,700	$42,700	$37,800	$46,100	$38,000	$35,500	$36,000	N/A	$40,400
Māori	$22,967	$22,620	$23,803	$25,156	$23,015	$27,965	$20,660	$21,701	$22,152	N/A	$24,272
Pacific Peoples	$23,911	$21,328	$25,531	$26,208	$22,764	$28,366	$17,753	$21,325	$26,688	N/A	$24,302
Asian	$29,298	$26,164	$32,415	$31,430	$26,616	$29,097	$32,650	$30,613	$33,033	N/A	$28,374
European	$24,998	$24,684	$37,573	$33,432	$34,198	$36,359	$33,494	$26,356	$30,594	N/A	$34,507
Middle Eastern/Latin American/African	$20,041	$26,452	$36,069	$34,971	$17,171	$39,716	$42,725	$19,116	$41,023	N/A	$25,390

Figure A-22: Socio-demographic snapshot 4

Measure	Thames-Coromandel	Hauraki	Waikato	Matamata-Piako	Hamilton	Waipa	Otorohanga	South Waikato	Waitomo	Vital Signs Region	New Zealand
Source of Personal Income (%), Census 2018											
No source of income during that time	3.6	5.0	6.7	5.0	6.7	5.8	6.2	6.5	5.0	6.1	6.3
Wages, salary, commissions, bonuses etc paid by my employer	43.0	47.8	59.0	55.5	63.6	58.8	55.5	54.9	58.4	58.3	60.6
Self-employment or business I own and work in	21.8	18.8	19.7	18.8	10.0	18.9	23.9	11.5	17.7	15.5	14.8
Interest, dividends, rent, other investments	23.2	14.5	15.2	17.3	13.7	19.3	15.8	10.4	12.8	15.6	16.8
Regular payments from ACC or a private work accident insurer	2.1	2.2	2.0	2.1	1.6	1.8	2.2	2.2	2.6	1.9	1.6
New Zealand Superannuation or Veteran's Pension	34.3	27.9	15.0	23.1	13.7	20.5	17.5	20.2	18.6	18.4	17.3
Other superannuation, pensions, or annuities	3.8	2.3	1.7	2.0	2.1	2.3	1.3	1.9	1.7	2.2	2.4
Other government benefits	11.7	15.7	14.3	12.2	19.9	11.0	15.0	21.0	16.4	16.2	14.4
Occupation (%), Census 2018											
Managers	22.2	23.8	22.4	25.3	14.1	22.1	31.8	19.0	23.2	19.6	18.0
Professionals	16.0	12.3	19.7	13.1	25.8	20.5	12.2	12.8	10.3	20.3	23.0
Technicians and Trade workers	13.8	11.7	12.9	12.1	13.0	12.8	10.3	11.8	10.1	12.7	12.1
Community and Personal Service Workers	10.8	11.8	7.7	7.7	9.9	8.8	8.1	9.3	8.8	9.2	9.5
Clerical and Administrative workers	9.7	8.9	10.6	9.2	11.2	11.1	8.5	8.7	8.3	10.4	10.9
Sales Workers	9.8	8.1	7.1	7.4	10.4	8.0	6.4	7.1	5.9	8.7	9.2
Machinery Operators and Drivers	4.4	8.3	7.4	7.9	5.4	5.8	7.0	11.2	8.1	6.5	6.0
Labourers	13.4	15.2	12.0	17.4	10.1	10.9	15.7	20.1	25.4	12.6	11.3

Figure A-23: Socio-demographic snapshot 5

Measure	Thames-Coromandel	Hauraki	Waikato	Matamata-Piako	Hamilton	Waipa	Otorohanga	South Waikato	Waitomo	Vital Signs Region	New Zealand
Industry of employment (Top 5), Census 2018	Construction	Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	Health Care and Social Assistance	Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing	Manufacturing	Professional, Scientific and Technical Services
	Retail Trade	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Construction	Manufacturing	Manufacturing	Manufacturing	Agriculture, Forestry and Fishing	Manufacturing
	Accommodation and Food services	Health Care and Social Assistance	Construction	Construction	Professional, Scientific and Technical Services	Health Care and Social Assistance	Construction	Health Care and Social Assistance	Construction	Health Care and Social Assistance	Health Care and Social Assistance
	Health Care and Social Assistance	Retail Trade	Education and Training	Retail Trade	Education and Training	Professional, Scientific and Technical Services	Professional, Scientific and Technical Services	Education and Training	Education and Training	Construction	Construction
	Manufacturing	Construction	Health Care and Social Assistance	Education and Training	Retail Trade	Manufacturing	Retail Trade	Retail Trade	Accommodation and Food services	Retail Trade	Retail Trade

PART B:
Waikato Vital Signs Theme Areas and Selected Indicators

Vital Sign:
Children & Youth

"Positive social and economic transitions by youth and young adults, including completion of school and beginning of employment careers, and the establishment of relationships and households, are critical for lifetime stocks of human, social, and economic capital. At the same time, these are ages of higher health and social risk" (Cooke & Guimond, 2008).

To be able to address some of the current regional and national concerns, such as supporting an ageing population and economic insecurity, we need to ensure that Waikato's young people are healthy, educated and fully engaged in society.

This section focuses on some of issues that beset New Zealand and the Waikato region's young people. Four indicators have been selected; youth suicide, as a measurement of youth mental health; teen fertility, which affect educational achievement and can lead to low income levels; youth not in education, employment or training which indicates some of the most vulnerable youth, and child abuse; those children who have been reported as being neglected or ill-treated.

2.1.1 Child abuse

Definition: **Number (annual per 10,000) of concerns of abuse or neglect reported to Oranga Tamariki for children and young people requiring further action.**

This indicator measures the number of distinct children and young people[6] (per 10,000) for whom the report of concern received from members of the public, family or whanau or sector workers, including police, teachers and health workers were found to be substantiated and required further action.[7]

Relevance: Abuse is harmful to children. Children may experience a range of emotional, psychological and physical problems and trauma as a result of being abused or neglected. All forms of abuse are likely to result in emotional problems for the child, in particular, a lack of self-esteem and distrust of adults. The longer the abuse goes on, the more serious are the effects. Abused and neglected children are more likely than other children to be self-destructive or aggressive, to abuse drugs and/or alcohol, or become young offenders or "street kids". In some situations, abuse and neglect may result in permanent physical damage. Abused children come from all levels of society, although most abused children who are reported to authorities are from families where there is high mobility, a lack of education, loneliness, poverty, unemployment, inadequate housing or social isolation.

Findings:

As per the Children, Young Persons, and their Families Act 1989, child abuse means the harming (whether physically, emotionally, or sexually), ill-treatment, abuse, neglect, or deprivation of any child or young person. A report of concern can be received from members of the public, family or whānau, the Police, schools, health professionals, or other government or community agencies about the wellbeing of a child or young person. These reports indicate children or young people who may require support. All reports of concern are assessed by an Oranga Tamariki social worker in order to decide if further action is required. This indicator looks at the number (per 10,000) of children and young people in a year for whom the report of concern received was found to be substantiated and required further action.

Oranga Tamariki has 55 Care and Protection sites/sub-sites which are grouped into 11 Care and Protection regions. For the purpose of this analysis, North and West Auckland, Central Auckland and South Auckland regions have been grouped together as 'Auckland'. The 'Waikato' care

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[6] Children and young people before 1 April 2017 included everyone aged 0 to 16 years. After that it included all aged 0-17 years.

[7] In case there were more than one report of concern requiring further action for a child or young person in a year, only the first instance has been included.

and protection region includes all the Vital Signs Region's TA areas except South Waikato, which is included in the 'Bay of Plenty' region.

In the Waikato Region, approximately 355 per 10,000 children/young people had a report of concern for abuse or neglect, which required further action. This is higher than the national average of 307 per 10,000 recorded for the year ending June 2019.

 The Waikato Region ranks third after Te Tai Tokerau[8] and Bay of Plenty[9] for the worst rate of child abuse as defined by this indicator.

Figure B-1: Number (annual per 10,000) of concerns of abuse or neglect reported to Oranga Tamariki for children and young people requiring further action disaggregated by Oranga Tamariki care and protection regions
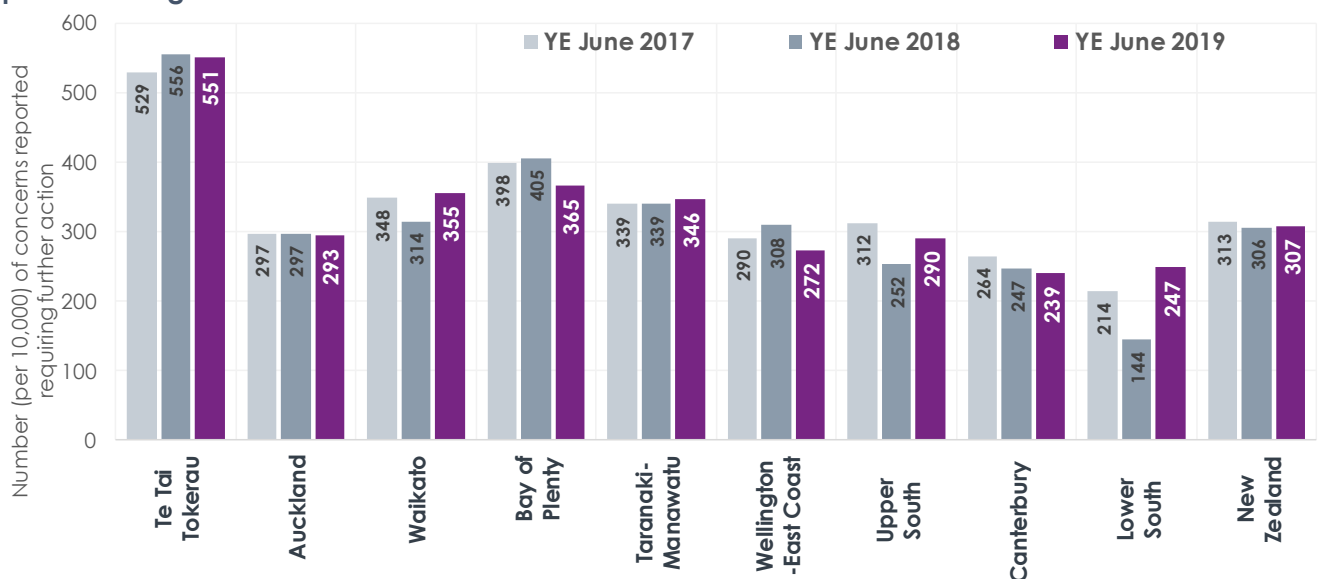
Māori children and young people have a much higher rate in terms of instances of reports of concern requiring further action. In the year ending June 2018, approximately 658 per 10,000 Māori tamariki aged between 0 and 17 years had a concern of abuse or neglect reported that required further action. This is three times the rate for non- Māori, 189 per 10,000.

As per a 2017 UNICEF report, the wellbeing of New Zealand's children places us 34th out of 41 developed countries. The report tracks the progress on goals such as reducing child poverty, inequality and deprivation and improving things like education and health for children. Unicef said New Zealand's presence in the bottom end of the rankings is proof that "high national income is no guarantee of a good record in sustaining child wellbeing." [10]

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8 Includes Far North, Kaipara and Whangarei TA areas.
9 Includes South Waikato, Taupo, Rotorua, Kawerau, Opotiki, Tauranga, Western Bay of Plenty and Whakatane TA areas
10 Retrieved from https://www.stuff.co.nz/national/93583589/unicef-report-wellbeing-of-kiwi-kids-languishes-behind-other-developed-countries

Technical information:

Data source(s): Oranga Tamariki and Stats NZ

Geography: Oranga Tamariki Care and Protection regions and New Zealand

Data caveats and limitations: The data are for financial year ending June. The child abuse rates reported here are an under-estimate of the actual prevalence because of two factors:

1. Not all cases of child abuse are reported. Under-reporting means the actual rates of child abuse are higher than those reported.
2. The child abuse statistics do not include any person who is or has been married or in a civil union. However, the estimated population of 0-16 or 0-17 year olds used to calculate the child abuse rate (per 10,000) includes everybody in this age group irrespective of their marital or partnership status. Consequently, the calculated rates are lower than expected for the recorded cases of abuse.

2.1.2 Teen fertility

Definition: **Number of live births per 1,000 mean estimated female population aged under 20 years.**

Relevance: About three-quarters of teen births are unintended. Children born to teen mothers are more likely to be born prematurely, to be born at a low birth weight, and to die as infants, compared with children born to mothers in their twenties and early thirties. They generally have poorer academic and behavioural outcomes than do children born to older mothers, and are more likely themselves to initiate sex at an early age and to have a teen birth themselves.

Teenage parents can face many challenges and risks, for themselves and their children. Recent research shows clear links between being a teenage mother and living in poor socio-economic circumstances. Challenges for teenage parents – including individual stigmatisation and discrimination, barriers to accessing needed services and limited opportunity to build education or vocations, and negative societal and community attitudes – are significant when faced with raising a child at a young age (Oranga Tamariki—Ministry for Children, 2019).

Findings:

The teenage fertility rate (19 per 1,000 women aged less than 20 years) across the Waikato DHB area as recorded in 2017 remains higher than that for total New Zealand (15 per 1,000). It ranked eighth among DHB areas with high teen fertility. Nationally, the teen fertility rates for the 15-19 year age group have dropped from 33 per 1,000 in 2008 to 13.4 per 1,000 in 2018.

The teen fertility rates were highest in the Tairawhiti DHB area (41 per 1,000) and Whanganui (32 per 1,000) and lowest in Auckland and Capital and Coast DHB area (6 per 1,000 and 8 per 1,000 women respectively).

Figure B-2: Number of live births per 1,000 women aged under 20 years

Y-axis: Birth rate per 1,000 women aged less than 20 years, 2017 (0.0 to 45.0)

National Average: 15.0

Categories (left to right): Auckland, Capital & Coast, Waitemata, Canterbury, Southern, Taranaki, Nelson Marlborough, MidCentral, West Coast, South Canterbury, Counties Manukau, Hutt Valley, Waikato (19.5), Wairarapa, Bay of Plenty, Hawke's Bay, Northland, Lakes, Whanganui, Tairāwhiti
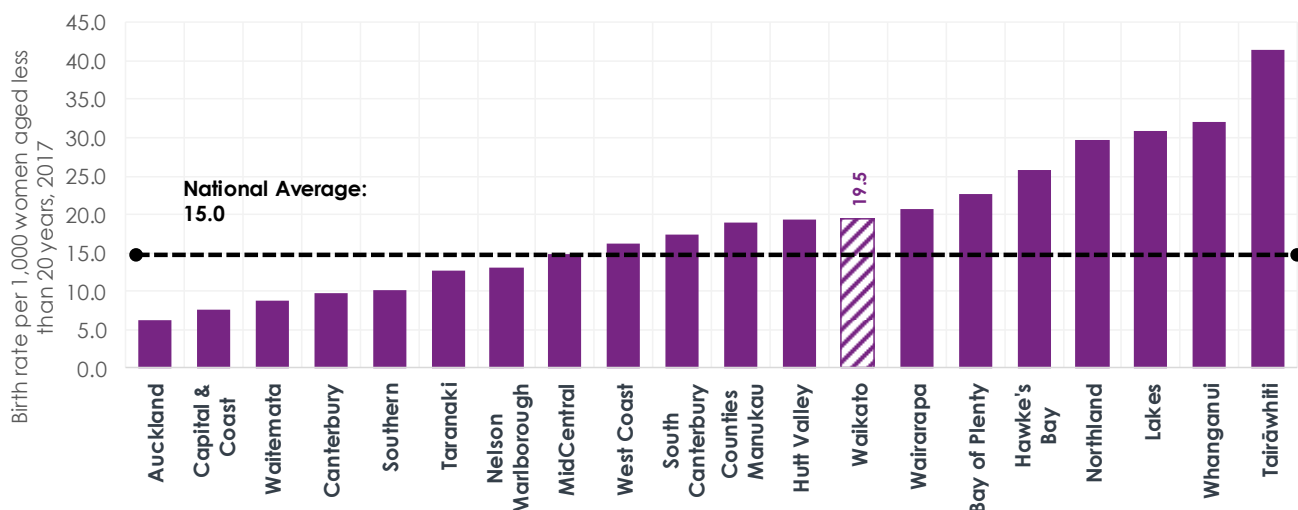
Note: Rates based on the DHB area of residence of the mother.

Other related findings

The Māori teenage birth rate in 2019 was 33.8 births per 1,000 women aged 15-19 years, down from 70.0 births in 2010. Data sourced from Statistics New Zealand, of teenage birth rates for Māori and for the total population (see Figure B-3), show that while teenage birth rates have always been higher for Māori, they are declining at a similar rate to the total population.

As per a Ministry of Health Report (Ministry of Health, 2017), 3.9 per cent of all women giving birth in 2017 were aged less than 20 years, a decline from the 8.2 per cent recorded in 2008.

Figure B-3: Number of live births per 1,000 Māori teens aged 15-19 years compared to all women in this age group

Y-axis: Age specific fertility rates - live births per 1,000 women (15-19 years) (0.0 to 80.0)

Legend: Māori (solid purple line), Total (dashed green line)

Māori values: 70.0 (2010), 61.4 (2012), 49.1 (2014), 41.0 (2016), 33.8 (2019)
Total values: 29.4 (2010), 25.7 (2012), 20.6 (2014), 16.7 (2016), 13.4 (2019)

X-axis: 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019
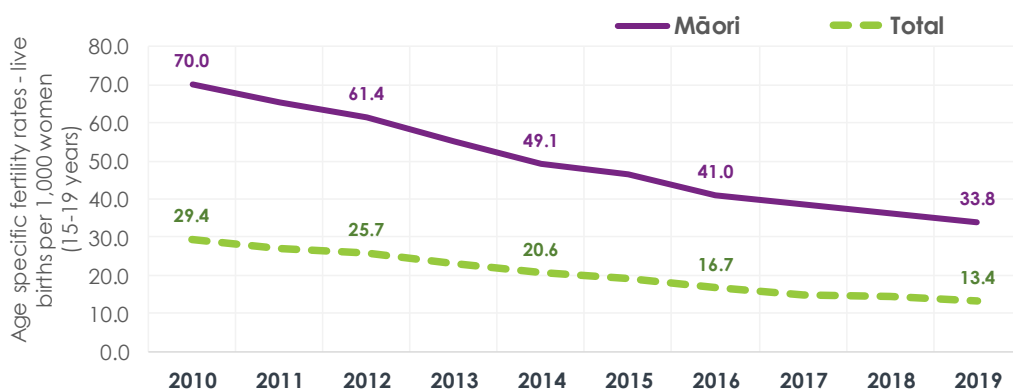
Looking at international comparisons, as per United Nations data sourced from the World Bank, New Zealand ranks 7th among OECD countries with high fertility rates for the 15-19 year age group.

Figure B-4: Adolescent fertility rate (births per 1,000 women aged 15-19), 2017
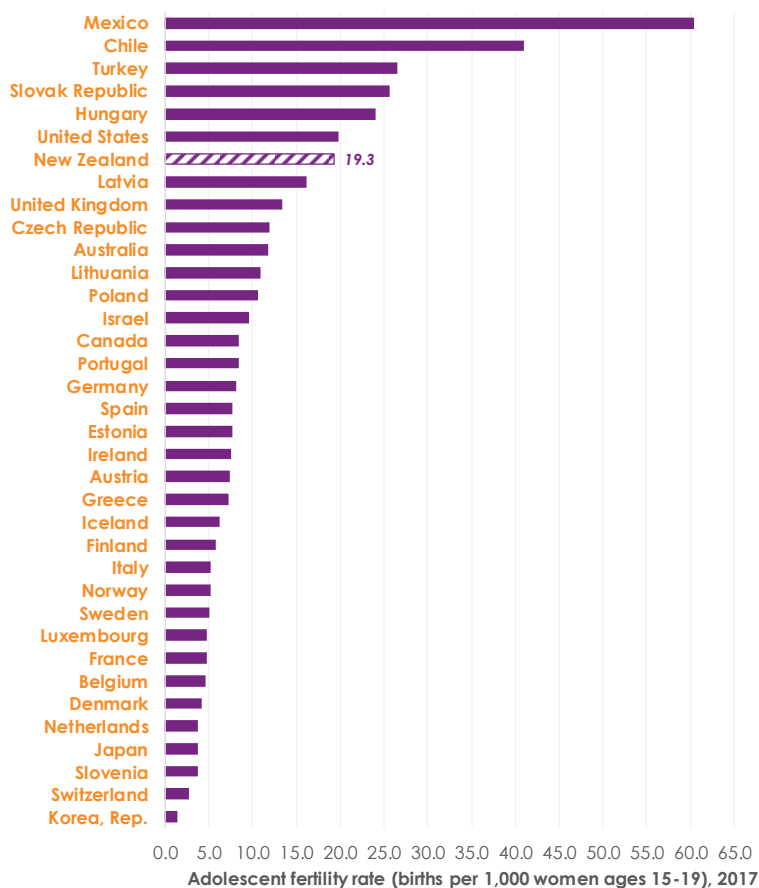
Source: The World Bank, United Nations Population Division

Technical information:

Data source(s): Birth registration data sourced from Stats NZ portal Infoshare; Ministry of Health data related to the 'Report on Maternity 2017' report (maternity data sourced from the National Maternity Collection)

Geography: Waikato DHB and New Zealand

Data caveats and limitations: To minimise annual fluctuations the age specific fertility rates are calculated based on a three-year average (e.g. 2013 based on the annual average number of live births during the three-year period 2012–2014). Estimated resident population at 30 June. Rates for women under 20 years are calculated using the population aged 15–19 years.

2.1.3 Youth not in education, employment or training (NEET)

Definition: **Proportion of the youth (15-24 years) who are not in employment, education or training (NEET).**

Relevance: Participation in employment, education or training is important for youth to become established in the labour market and achieve self-sufficiency. A NEET is a young person who is not in education employment or training. NEET rate is a proxy measure for youth inactivity and youth categorised as NEET are considered to be disengaged from both, work and education. The NEET rate indicator has the potential to highlight a broad array of vulnerabilities among youth, touching on issues of unemployment, early school leaving and labour market discouragement. Young people who are NEET are at risk of becoming socially excluded, poor and without the skills to improve their economic situation.

Findings:

This indicator presents the share of young people who are not in employment, education or training (NEET), as a percentage of the total number of young people in the corresponding age group. The NEET rate for the 15-24 year combined age group has declined over the 2010-2019 period for both, Waikato Region as well as New Zealand as a whole. As per the survey data for the year ending June 2019, around 12.3 per cent of the youth aged 15-24 years resident in the Waikato Region, were not engaged in education, employment or training.

Figure B-5: Proportion of the youth (15-24 years) who are not in employment, education or training (NEET)
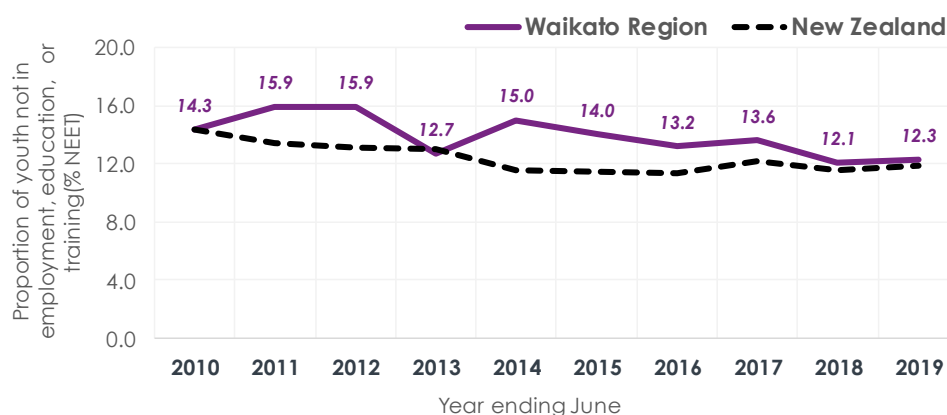
Disaggregation by broad ethnic groups shows that NEET rates are highest among Māori and Pacific youth. The NEET rates for Māori and Pasifika have seen a noticeable decline over the last ten years, with the Māori rate in 2019 only marginally higher than that for Pacific youth.

Figure B-6: NEET rates disaggregated by broad ethnic groups
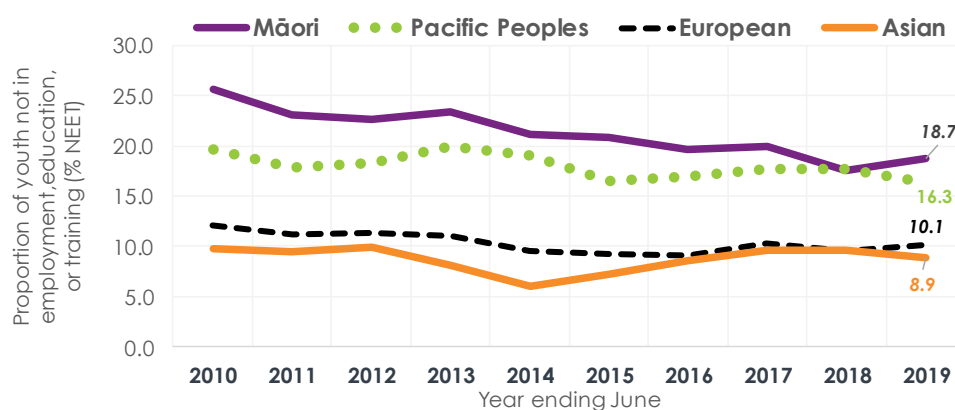
Other related findings

Research shows that countries with high unemployment rates also have high NEET rates (Pastore, 2018). That's because NEET is what we used to call the "hidden unemployed" or "discouraged workers". It occurs because unemployed people perceive there to be so few jobs for them that they become discouraged from actively seeking work (they are therefore not counted in the unemployment rate). They are not in training either, for example, because they can't afford to be a student or feel that they don't have the ability to successfully complete training.

It is important to note that these statistics are "snapshots" at a point in time and give no information about how "entrenched" the situation is for any given individual. Research shows that young people, who were NEET, remained disadvantaged in their level of educational attainment 10 and 20 years later. There is a 'scarring effect' on economic activity which is also evident in the occupational positions that NEET young people take up, if they entered employment. NEET experiences are associated with a higher risk of poor physical health and a higher risk of poor mental health after 10 and 20 years (Scottish Longitudinal NEET Study, 2015).

For the 15-19 age group, New Zealand (5.1 per cent) ranked 17th among the OECD countries with the lowest NEET rates, lower than the OECD average of 6.3 per cent. For the older 20-24 year group, New Zealand ranks a little higher, 14th, with a NEET rate of 12.4 per cent (again lower than the OECD average of 15.1 per cent.

Figure B-7: NEET rates for 15-19 and 20-24 year olds; OECD countries

NEET Rate (15-19 years), 2018 or latest available year

Country	Value
Turkey	
Mexico	
Chile	
Italy	
Estonia	
United Kingdom	
Israel	
Spain	
Greece	
United States	
France	
Sweden	
Hungary	
Slovak Republic	
OECD Average	6.3
Ireland	
Canada	
Australia	
Austria	
New Zealand	5.1
Finland	
Switzerland	
Portugal	
Belgium	
Iceland	
Japan	
Denmark	
Poland	
Germany	
Netherlands	
Latvia	
Lithuania	
Norway	
Czech Republic	
Slovenia	
Luxembourg	

NEET Rate (20-24 years), 2018 or latest available year

Country	Value
Turkey	
Italy	
Mexico	
Greece	
Spain	
Chile	
France	
Israel	
Portugal	
Hungary	
OECD Average	15.1
United States	
Slovak Republic	
Belgium	
Lithuania	
Poland	
Finland	
United Kingdom	
Latvia	
Ireland	
Canada	
Austria	
New Zealand	12.4
Estonia	
Slovenia	
Denmark	
Australia	
Germany	
Norway	
Japan	
Luxembourg	
Switzerland	
Sweden	
Czech Republic	
Netherlands	
Iceland	

Technical information:

Data source(s): Household Labour Force Survey data sourced from Stats NZ portal Infoshare (Table reference: HLF200AA and HLF156AA)

Geography: Waikato Region and New Zealand

Data caveats and limitations: It is important to note that NEET numbers come from the Household Labour Force Survey (HLFS). This is a sample survey, which - like all surveys - is subject to sampling errors. The smaller the group of interest (and NEET is a relatively small group), the greater the potential error. So, while the broad trends in the statistics give meaningful information, small changes in numbers must be interpreted with caution.

2.1.4 Youth suicide

Definition: **Number of youths (15-24 years) committing suicide per 100,000 population.**

Relevance: Suicide is a serious health and social issue. Suicide rates are a sign of the mental health and social well-being of the population. Suicide and suicidal behaviours continue to be a major public health issue. Suicide affects people from all communities and walks of life but some populations such as Māori, youth, men and people who use mental health and addiction services are more likely to die by suicide. New Zealand suicide deaths reached their highest level since records began 12 years ago. In the year ending June 2019, there were 685 suicides, 17 more than the previous year. Youth suicide rate also rose dramatically with 73 people aged 15- 19 years dying by suicide, up from 53 last year. [11] Youth suicide is a big issue in New Zealand as we have one of the highest rates of youth suicide in the world.

Findings:

Age specific suicide rates for youth have declined over the 1996-2016 period. The youth rate for males also decreased significantly however, for most of the time period, the rate for youth-aged males remained at least twice as high as the rate for youth-aged females.

Of all the life-stage groups, youth generally had the highest rate of suicide from 1996 to 2016. Over this period, the rate for youth decreased significantly by 35 per cent, from 25.9 per 100,000 in 1996 to 16.8 per 100,000 in 2016.

As per the Ministry of Health' published statistics, two in every five (41.0 per cent) male deaths in the youth age group (15–24 years) was by suicide. Almost one in three female deaths (27 per cent) in the youth age group was by suicide.

Figure B-8: Age specific rate (per 100,000) of youth (15-24 years) suicide disaggregated by sex

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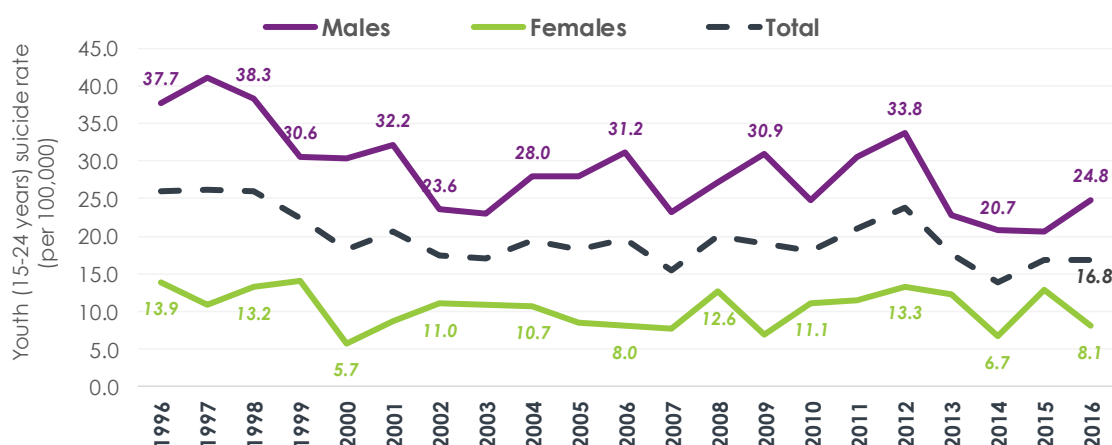
[11] Retrieved from https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12262081

Other related findings

As per the latest available data findings published by Ministry of Health, the difference in rates of suicide between Māori and non-Māori was most notable in the youth age group (15–24 years). In 2016, the **rate for Māori youth was almost three times that for non-Māori youth**. The trend was true for both Māori male and females in this age group. One in two Māori male deaths (51 per cent) in the youth age group was by suicide.

In 2016, the rate of suicide for male Māori youth was higher than the rate for female Māori youth. Although rates of suicide fluctuated year-on-year, rates for female Māori youth increased from 1996 to 2016, while rates for male Māori youth decreased (these differences in rates over time were not significant).

For the aggregated 5-year period, 2012-2016, the age standardised suicide rate (per 100,000 population) for the four broad ethnic groups was:

- Māori : 17.1
- Pacific: 8.1
- European: 11.3
- Asian: 4.2

New Zealand has the highest death rate for teenagers and young people among 19 of the world's developed, wealthy countries. Comparing across DHB areas, Waikato Regions overall age-standardised suicide rate was just over the national average.[12]

Figure B-9: Age standardised suicide rate per 100,000 by DHB area; aggregated 2012-2016 data

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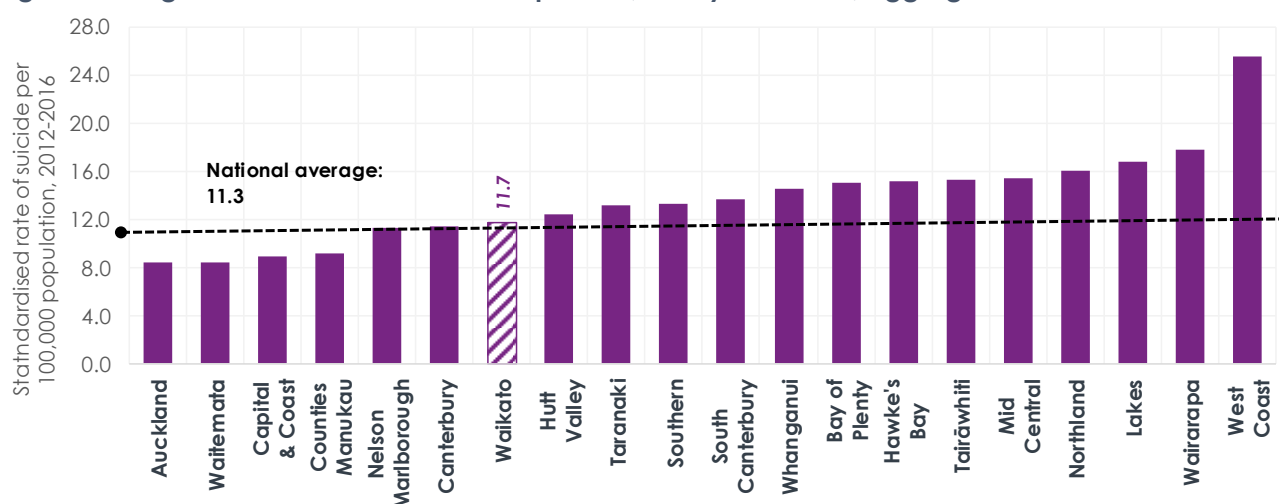
[12] Rates at the DHB level are not calculated for youth. Most DHB regions had too few youth suicide deaths over the five-year period and/or a youth population that is too small to produce stable rates.

Technical information:

Data source(s): Suicide Facts: Deaths and intentional self-harm hospitalisations, Ministry of Health (Suicide data extracted from the New Zealand Mortality Collection).

Geography: Waikato DHB and New Zealand

Vital Sign:
Community

The way in which people interact and perceive their community can affect their health, wellbeing and quality of life. For many people social connectedness, the relationships they have with their friends, family, at work and in the community, help people to feel they belong and provide enjoyment and support. Caring and volunteering within the community contributes to the social wellbeing of others when time and skills are volunteered to a range of organisations. Feeling safe in the community is important with threats ranging from accidental injury to deliberate violence. Physical injury reduces a victim's quality of life, often restricting their ability to participate in activities they enjoy. Motor vehicle casualties also indicate premature death or injury and can have a devastating effect on victims, their families and their communities. Road crashes are a risk that can potentially be avoided.

A good community indicator is overall satisfaction with life as people have a number of ways of quantifying this, including good health, stable employment and positive relationships. Within the community participation in civil and political decision-making by voting helps to ensure democratic representation both locally and nationally and high voter turnout shows that people see New Zealand's political institutions as meaningful to their lives (Ministry of Social Development, 2010).

This section has nine indicators, including caring and volunteer work, community engagement, community pride, crime, overall life satisfaction, perception of safety, motor vehicle casualties, social connectedness, and voter turnout. These indicators reflect different aspects of community life and belonging.

2.2.1 Caring and volunteer work

Definition: **Proportion of the population aged 15 years or more who are involved in either looking after a member of own or another household who is ill or has a disability, or doing other helping or voluntary work for or through an organisation, group or marae.**

Relevance: Social care and health care faces unprecedented pressures with increasing demands and decreasing funding. Unpaid caring and volunteering work is a way to ease some of this pressure. The amount of caring and volunteering activity happening is also a proxy measure of community engagement and social connectedness. It helps increase social cohesion and supports economic activity in addition to alleviating the pressure on health and social services.

Findings:

Across New Zealand, a quarter of the population aged 15 years or more reported being involved in some form of caring and volunteer work at the 2018 Census; either looking after a member of their own or another household who is ill or has a disability, or doing other helping or voluntary work for or through an organisation, group or marae. This proportion is slightly higher in the Vital Signs Region (26.5 per cent). However, both, regionally as well as nationally, the proportion of people involved in unpaid caring and volunteer work has marginally declined over the 2013-2018 inter-censal period.

Comparing across TA areas, Waitomo had the highest proportion of 15+ year residents involved in unpaid caring and volunteering work, 32.0 per cent, well above the national average. Hamilton had the lowest at 24.8 per cent.

Figure B-10: Proportion of the usually resident population aged 15 years or more who reported being involved in unpaid caring and volunteering work
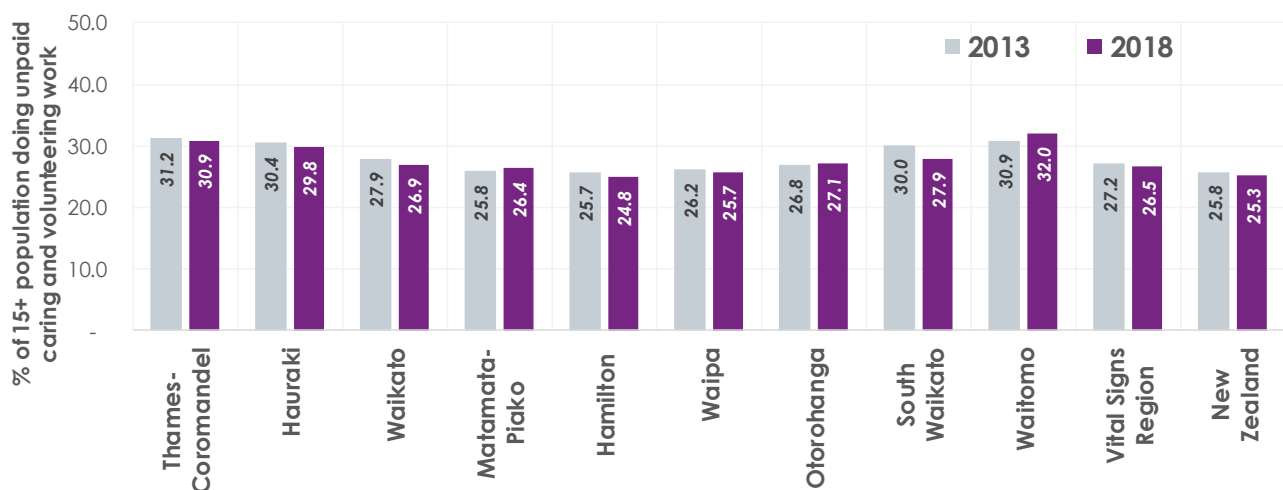
Other related findings:

Māori followed by the residual ethnic group 'Other' and Pacific Islanders are most likely to be looking after a member of their own or another household who is ill or has a disability, or doing other helping or voluntary work for or through an organisation, group or marae. Asians have the lowest rate of participation in caring and volunteering work.

When disaggregated by sex, women have higher rate of involvement and caring and volunteering work than men.

People aged between 45–54 years and 65+ year olds were most likely to be involved in unpaid caring and volunteer work, well above the national average. The lowest participation is among youth (15-24 years).

Figure B-11: Proportion of the usually resident population aged 15 years or more who reported being involved in unpaid caring and volunteering work disaggregated by demographic characteristics

% of 15+ population doing unpaid caring and volunteering work,
Vital Signs Region, Census 2018
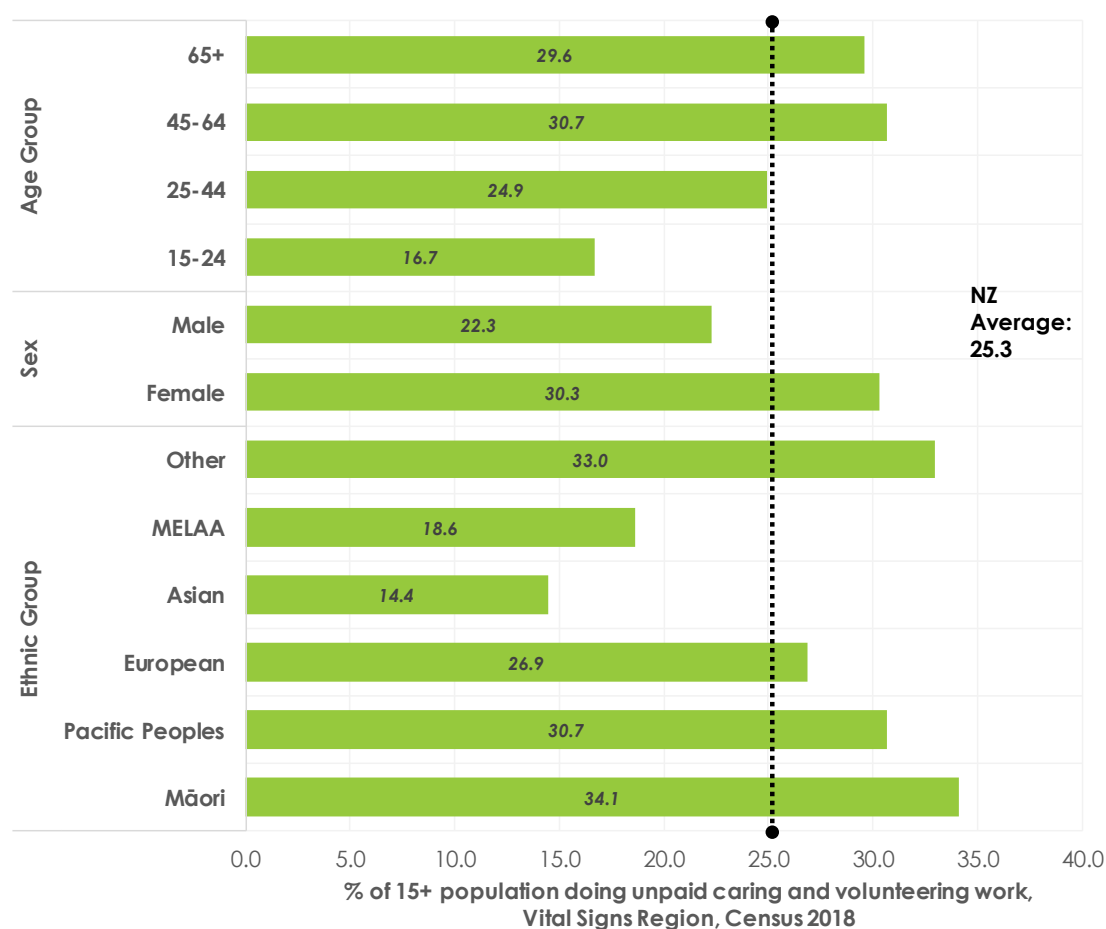
Technical information:

Data source: Statistics New Zealand, Census data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Excludes the population who did not respond to the Census as well as the Census respondents who did not provide a valid response to the Census question from which this variable is derived.

2.2.2 Community engagement

Definition: Level of agreement among surveyed residents on how much influence the public has on the decisions the Council makes.

Relevance: Local government wields significant influence over the lives of citizens and affects them in many ways on a daily basis. Engaging with the community is a critical aspect of democracy in New Zealand in terms of the important role of the Council in local representation, participation and decision-making. Community involvement is critical for effective local governance and an effective partnership involves consultation with the community to develop shared visions and goals.

Findings:

This indicator is based on the results from a two-yearly Quality of Life survey carried out by the Waikato Regional Council in-line with the collaborative local government Quality of Life Research Project, which measures residents' perceptions across a range of measures that impact on New Zealanders' quality of life.[13] The survey respondents were asked the question "*Overall, how much influence do you feel the public has on the decisions the Council makes?*", and the responses were recorded using a five-point scale: no influence, small influence, some influence, large influence and don't know.

The proportion of respondents who believed that the public has some or a large influence on the decisions of the council has declined substantially in the Waikato Region from 62.0 per cent recorded in 2006 to only 36.0 per cent in the survey carried out in 2018. This trend is recorded for Hamilton City as well. Decline in perceived community engagement among survey respondents (compared to the survey in 2016) is seen across all TA areas within the region (with the exception of Otorohanga and Waitomo, where there is no survey data prior to 2018).

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[13] The Quality of Life survey replaces the MARCO survey carried out by the Waikato Regional Council. This indicator has therefore changed accordingly from 'Level of agreement of surveyed residents (aged 18 years or more) on whether they have enough say in what their council does' as defined in the 2016 Vital Signs Indicator Report. Consequently, findings from the 2016 Vital Signs Indicator report are not comparable.

Figure B-12: Proportion of survey respondents who believe that the public has some or a large influence on the decisions that the council makes
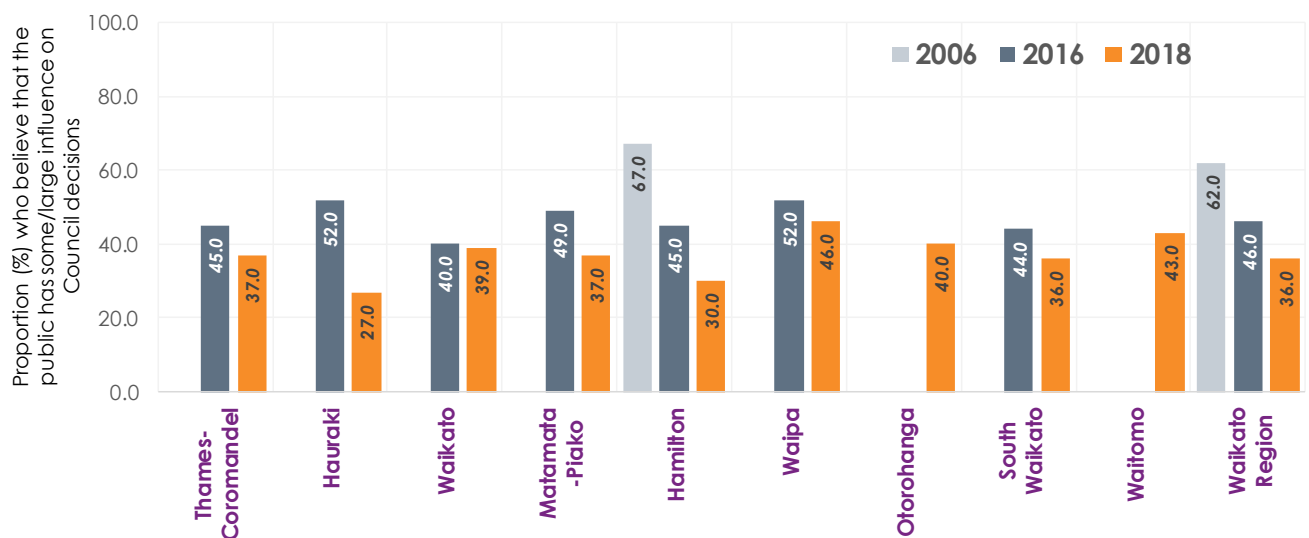
Technical information:

Data source: Quality of Life Survey by the Waikato Regional Council; data sourced from the Waikato Progress Indicator (WPI) dataset provided by Waikato Regional Council.

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo and Waikato Region

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error. These errors are even more significant at the TA level.

2.2.3 Community pride

Definition: **Level of agreement among the surveyed population on whether they feel a sense of pride in the way their city/town looks and feels.**

Relevance: Residents who feel a strong sense of pride in the city or district where they live are key to building strong, thriving and sustainable communities. They help promote the positive aspects by being advocates for their region and contribute towards improving their neighbourhood and surroundings. Community pride is also about social connectedness and is likely to increase participation and investment in the city/district.

Findings:

This indicator is based on the results from a two-yearly Quality of Life survey carried out by the Waikato Regional Council in-line with the collaborative local government Quality of Life Research Project, which measures residents' perceptions across a range of measures that impact on New Zealanders' quality of life.[14] The survey respondents were asked the question "*How much do you agree or disagree with the following statement: "I feel a sense of pride in the way my city/town looks and feels?*", and the responses were recorded using a five-point scale: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree.

In the Waikato Region, six in ten (62.0 per cent) respondents agree or strongly agree they feel a sense of pride in the way their city or local area looks and feels. This proportion declined from 70.0 and 68.0 per cent recorded in 2006 and 2016 respectively. Across all TAs except Thames-Coromandel and Matamata-Piako, the regional trend is mirrored with the proportion of respondents who agree declining over the inter-survey period, 2016-2018 (for Otorohanga and Waitomo there is no survey data prior to 2018).

The TAs with the highest proportion feeling a sense of pride in the way their city/town feels and looks are Otorohanga and Waipa and the lowest proportion is noted for Waikato and Hamilton.

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[14] The Quality of Life survey replaces the MARCO survey carried out by the Waikato Regional Council. Although the methodology of collecting responses to this question has changed, the question asked and therefore the indicator as defined in the 2016 Vital Signs Indicator Report) remains unchanged. However, the results are not directly comparable due to methodological changes in response collection and therefore not comparable to the 2016 Vital Signs Report findings for this indicator.

Figure B-13: Level of agreement of the surveyed population on whether they feel a sense of pride in the way their city or district looks and feels
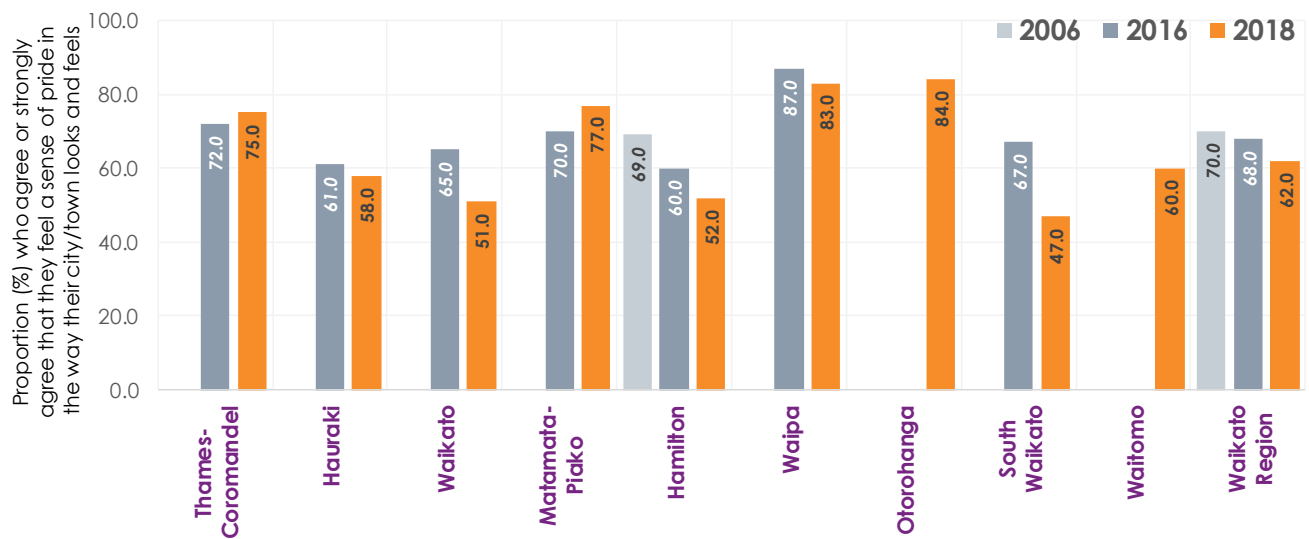
Technical information:

Data source: Quality of Life Survey by the Waikato Regional Council; data sourced from the Waikato Progress Indicator (WPI) dataset provided by Waikato Regional Council.

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo and Waikato Region

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error. These errors are even more significant at the TA level.

2.2.4 Crime

Definition: Number of crime victimisations reported annually per 10,000 population[15].

Relevance: Crime is a topic of considerable public interest. Rising levels of reported crime are perceived as a threat to safety, property and people's sense of wellbeing. This can influence people's decisions on where and how they live. Crime victimization can impact an individual's ability to perform across a variety of roles, including those related to parenting, intimate relationships, and occupational and social functioning.

Male victims of violent crime experience poorer employment prospects following victimisation; older victims of violent crime report a deterioration in mental health for two years after the event; women face reduced, persistent prospects of marriage/co-habitation following crime victimization; and there is strong evidence of a negative impact of victimisation on life satisfaction measures (Velamuri & Stillman, 2008).

Higher levels of crime may also lead to increased pressure on support systems and other resources (for example, physical and mental healthcare services, financial assistance from the government or charities) (Source: Waikato Progress Indicators – Crime).

Findings:

'Victimisation' refers to an instance of a person, organisation or premises being victimised for a given type of offence. A person, organisation or premises may be recorded as a victim of multiple offences in a single report to police. The victimisation population is the measure involving counting a person, organisation or premises *once within each criminal incident*[16] for each ANZSOC[17] Division in which they are recorded as being a victim of an offence (New Zealand Police, 2016).

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[15] StatsNZ no longer publishes the 'number of offences recorded' dataset. On 28 November 2014, New Zealand Police, in collaboration with Statistics New Zealand, began publishing a new statistical collection on victims of crime – the New Zealand Recorded Crime Victims Statistics (NZ RCVS). This new statistical collection is based on the equivalent Australian standard, managed by The National Crime Statistics Unit within the Australian Bureau of Statistics (ABS). Consequently, the definition of this indicator changed from 'Number of offences recorded annually per 10,000 population' as defined in the 2016 Vital Signs Indicator Report. Therefore, findings from the 2016 Vital Signs Indicator report are not comparable.

[16] Where a victim is linked to multiple offences in a given ANZSOC Division in the criminal incident, one offence is selected as the principal offence.

[17] Australian and New Zealand Standard Offence Classification

The number of victimisations reported annually per 10,000 population in the Vital Signs Region is similar to the national average and has increased marginally over the 2015-2019 period. Mirroring the regional trend, across all TAs there is a slight increase in reported rate over the 2015-2019 period with the exception of Matamata-Piako where it has slightly declined.

Comparing across the TAs, the highest rate of crime victimisation in the year ending June 2019 is in Hamilton (612 persons/organisations/premises victimised per 10,000 resident population) and the lowest in Waipa (273 per 10,000).

Figure B-14: Number of crime victimisations reported annually per 10,000 population
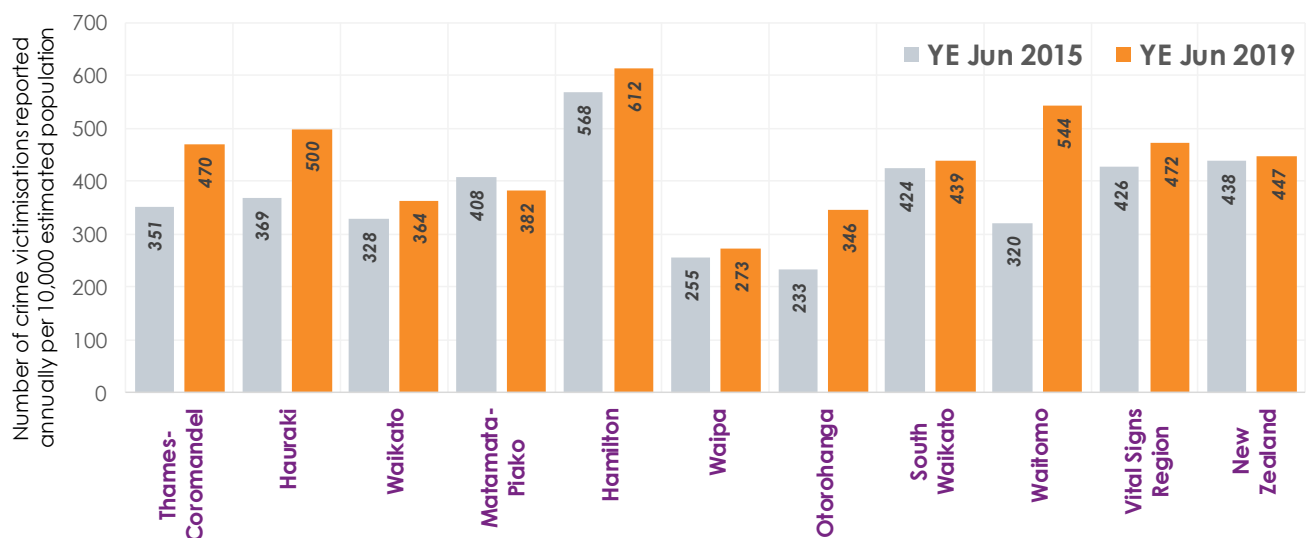
Technical information:

Data source: Data and Statistics portal *police.govt.nz* by New Zealand Police

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Reported offences do not necessarily reflect the extent of actual crime in New Zealand. These statistics provide only a partial picture of crime in New Zealand because not all crime committed or experienced is reported to Police.

2.2.5 Motor vehicle casualties

Definition: Number of people seriously injured or killed in motor vehicle crashes as a proportion (per 100,000) of the total population.

Relevance: People should be able to live in a society free from the risk of avoidable death or injury. The leading cause of avoidable injury and death is motor vehicle crashes especially among younger age groups. Death, injury and disability resulting from motor vehicle crashes inflict pain and suffering on individuals, families and communities, and can also result in significant financial hardship. Major motor vehicle crashes also impact on other road users, emergency service providers, health workers and others.

Findings:

Compared to the national average, the Vital Signs Region has a higher proportion of the total population either seriously injured or killed in a motor vehicle accident (Figure B-15). The road casualty rate has slightly increased over the 2013-2018 period both regionally and nationally. This trend is seen across all TAs with the exception of Waikato and Waipa, where the rate has decline marginally, and Hamilton, where the 2018 rate is similar to that recorded in 2013.

Comparing across the region, the highest rate of serious and fatal road casualties is recorded for the Waitomo District – 251 per 100,000, which is four times the national average, followed by South Waikato and Hauraki. The lowest rates are noted for Hamilton (40 per 100,000) and Waipa (58 per 100,000). Road casualty rates are relatively higher in rural areas, particularly those with state highway corridors, due to the increased speed of vehicles involved (Ministry of Social Development, 2010).

Figure B-15: Number of people seriously injured or killed in motor vehicle crashes as a proportion (per 100,000) of the total population
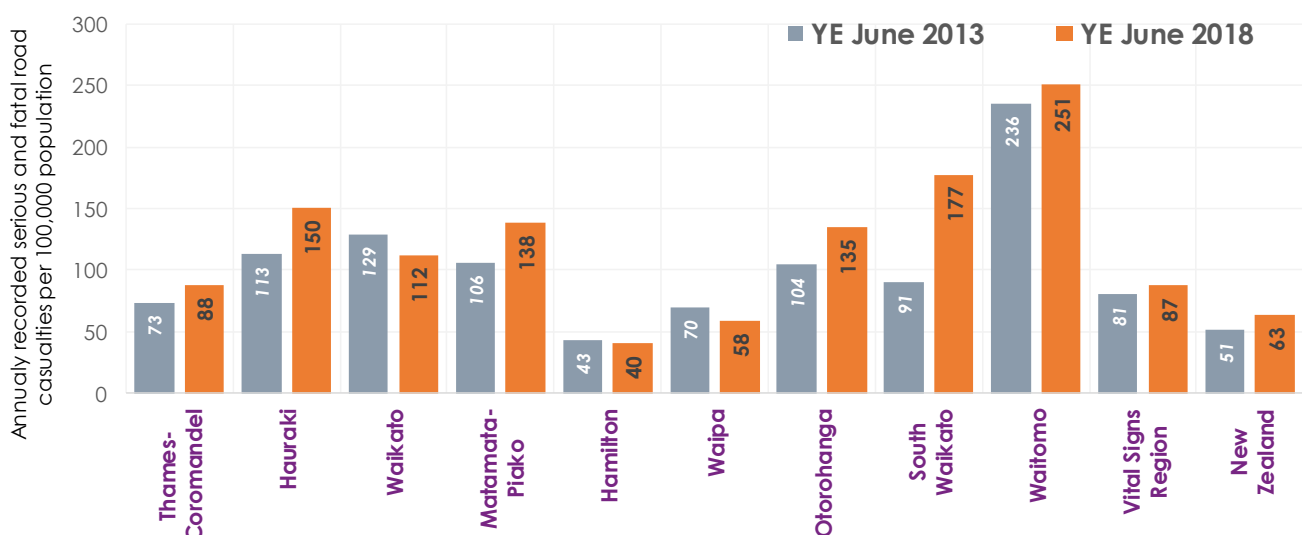
Other related findings

Among the 34 OECD countries[18] shown in Appendix Figure 1, New Zealand had the fourteenth highest fatality rate (57.0 per 1,000,000 habitants) in 2013. By 2017, New Zealand has moved up the ranks, with the fourth-highest fatality rate in the OECD world (78.9 per 1,000,000 habitants).

Figure B-16 looks at the injuries and deaths to road users in New Zealand in 2016 disaggregated by five-year age groups and compares it to the resident population in each of these groups. Youth and young adults aged 15-29 years are substantially over represented (as compared to their proportion in the resident population) among the injuries and deaths related to road users. Drivers aged 15–19 make up just 4.6 percent of all licensed car drivers; yet, between 2014 and 2016, 15–19 year-old drivers accounted for 9 percent of all drivers involved in minor injury crashes, 10 percent of drivers in serious injury crashes, and 7 percent of drivers involved in fatal crashes[19]. Similarly, 20–24 year-old drivers make up 8.6 percent of licensed car drivers but, between 2014 and 2016, they accounted for 15 percent of drivers involved in minor injury crashes, 14 percent of drivers in serious injury crashes, and 12 percent of drivers involved in fatal crashes (Ministry of Transport, 2017)

Of all young drivers (15–24 years old) involved in fatal crashes between 2014 and 2016, 80 percent were male. Males accounted for 70 percent of young drivers involved in serious injury crashes and 62 percent of those involved in minor injury crashes over the same period. A young driver has the primary responsibility for about three-quarters (74 per cent) of all the crashes involving young drivers and for about two-thirds (65 per cent) of the crashes that also involve other road users. Alcohol/drugs, losing control and speed are the major contributing factors for young drivers involved in fatal crashes.

The fatality rate for 80+ years olds, who are more likely to be the passengers in the vehicles involved in the accident, is also relatively high

The social cost of a road crash or a road injury is defined as the total cost that occurs as a result of the road crash or injury. In New Zealand, the social cost of a road crash or a road injury includes the following components: loss of life and life quality, loss of output due to temporary incapacitation, medical costs, legal costs and vehicle damage costs. The average social cost of fatal reported crashes in the Waikato Region is $5,106,000 which is higher than the national average of $4,916,000 and that for serious crashes is $923,000 (see Appendix Figure 2), (Ministry of Transport, 2017).

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[18] Data for Chile was not available

[19] Injuries that result in death within 30 days of the crash

Figure B-16: Injuries and deaths among road users in each age group as a proportion of all injuries and deaths among road users in New Zealand, 2016
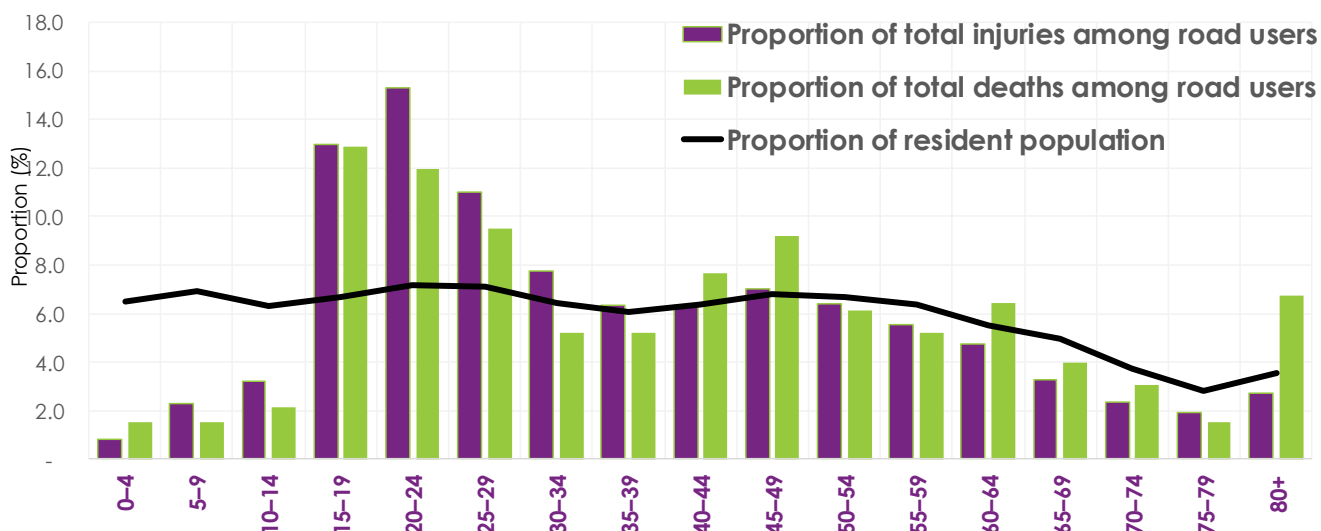
Māori are more likely than non-Māori to die as a result of a motor vehicle traffic crash (Ministry of Social Development, 2016). In 2012, the age standardised motor vehicle traffic crash death rate was 17.6 per 100,000 population for Māori and 5.6 per 100,000 population for non-Māori.

Technical information:

Data source(s): New Zealand Transport Agency and Statistics New Zealand

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: The law requires that all road traffic accidents that involve a motor vehicle and result in someone being injured be reported. However, not all road traffic injuries are reported to the police. Under-reporting is most evident amongst single vehicle crashes, motorcycle accidents and crashes involving alcohol. Those that are not reported will not be included in the analysis presented.

2.2.6 Overall life satisfaction

Definition: Proportion of the population aged 15 years or more who self-reported to be satisfied with their life.[20]

Relevance: Overall life satisfaction is a way to measure well-being. It is a subjective or self-assessed measure gauging how satisfied people are with their lives. If a person's perception of their overall quality of life is high, then this tends to relate positively to their personal well-being. Self-assessed overall life satisfaction can measure the gap between a person's hopes and expectations and their current situation.

Circumstances that may influence life satisfaction include health, education, employment, income, personality, family and social connections, civil and human rights, levels of trust in others, and opportunities for democratic participation.

Findings:

Across New Zealand, 81.1 per cent self-reported feeling satisfied with their life in 2018 which is a slight decline from the 82.6 per cent recorded in 2014. This decline is mirrored across five of the six broad regional groupings, excluding 'Rest of South Island' where this proportion has marginally increased. 'Rest of North Island' of which Waikato Region is a part, is one of the two regions where the proportion reporting satisfaction (80.9 per cent) is lower than the national average (the other is Auckland).

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[20] Prior to 2014 respondents were asked, in a single question, how they felt about their life as a whole (at the time of the interview). Respondents chose from: very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, very dissatisfied. After 2014, respondents were asked how they felt about their lives overall on a scale of 0-10 (completely dissatisfied to being completely satisfied). Scales '7 to 10' have ben grouped into a single category representing 'Satisfied'. Consequently, the definition of this indicator has changed from 'Proportion of the surveyed population aged 15 years or more who self-reported to be satisfied or very satisfied with how they feel about their life as a whole' as defined in the 2016 Vital Signs Indicator Report. Therefore, findings from the 2016 Vital Signs Indicator report are not comparable.
In addition, the regional data is no longer disaggregated for the 16 regions but split into six broad regional groupings. Waikato Region falls under the grouping 'Rest of New Zealand'.

Figure B-17: Proportion of the population aged 15 years or more who self-reported to be satisfied with their life
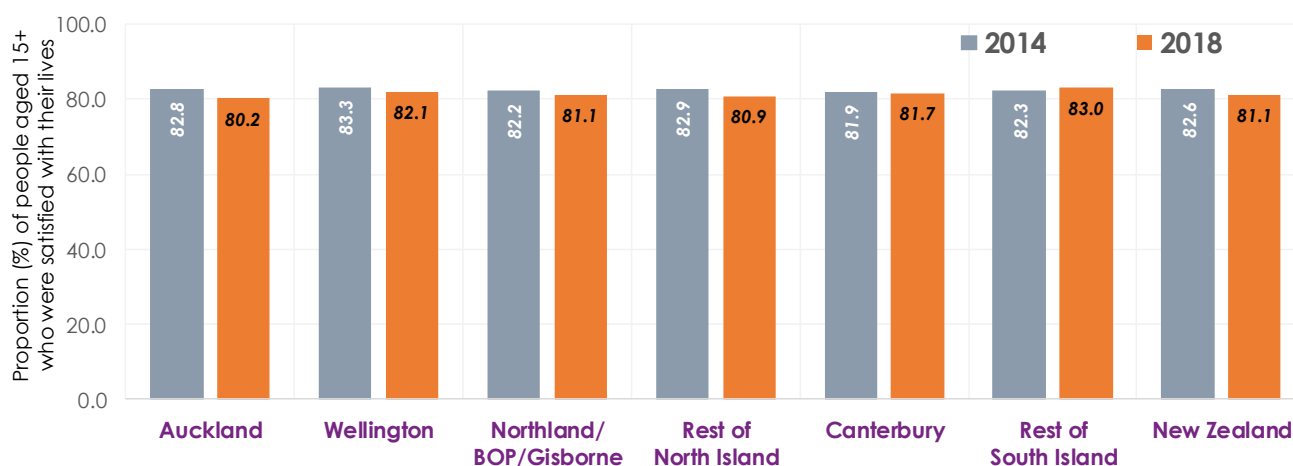
Other related findings:

People's experience in four key aspects of life – loneliness, income, health, and housing quality – historically have a strong relationship with overall life satisfaction. Self-rated overall life satisfaction is generally lower for those with fewer good outcomes and higher for those with multiple good outcomes in these key life aspects.

According to OECD data[21], the OECD average score measuring overall life satisfaction was 6.5 as per recent data available (3-year average, 2015-17)[22]. New Zealand ranks 9th out of the 36 OECD countries with a score of 7.3 (countries ranked top two were Norway: 7.6 and Finland: 7.6).

Looking at the NZGSS data disaggregated by age groups, older people in New Zealand (65+ years) are more likely to feel satisfied with their life while those aged between 45 and 64 years rate their perception of overall life satisfaction the lowest. Older people may be more satisfied with their life for a number of reasons. They are generally more financially secure, have raised their children, have become grandparents, or have a better balance between paid work and their recreational time. On the other hand, middle aged people manage a challenging mix of

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[21] OECD Better life Index - This Index allows you to compare well-being across OECD countries, based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life.

[22] The indicator considers people's evaluation of their life as a whole. It is a weighted-sum of different response categories based on people's rates of their current life relative to the best and worst possible lives for them on a scale from 0 to 10, using the Cantril Ladder (known also as the "Self-Anchoring Striving Scale").

family, work, and financial commitments, which may be reflected in this group's lower levels of satisfaction with their lives (Statistics New Zealand, 2015).

Self-reported life satisfaction is slightly higher among females (81.4 per cent) compared to males (80.8 per cent). People identifying with the Māori and Pasifika ethnic groups have the lowest proportion of respondents who are satisfied or very satisfied in terms of life satisfaction (76.9 and 76.7 per cent respectively). Europeans had the highest self-rated well-being rates of all the major ethnic groups. The differences in self-rated well-being across ethnic groups could be related to many factors, including the differences in each group's age structure. Māori and Pacific population groups have a much younger age profile, and given that self-rated life satisfaction is lower among younger age groups, this might partially explain the lower proportion feeling satisfied with their life as a whole.

Figure B-18: Proportion of the population aged 15 years or more who self-reported to be satisfied with their life disaggregated by sex, broad age and ethnic groups, New Zealand 2018
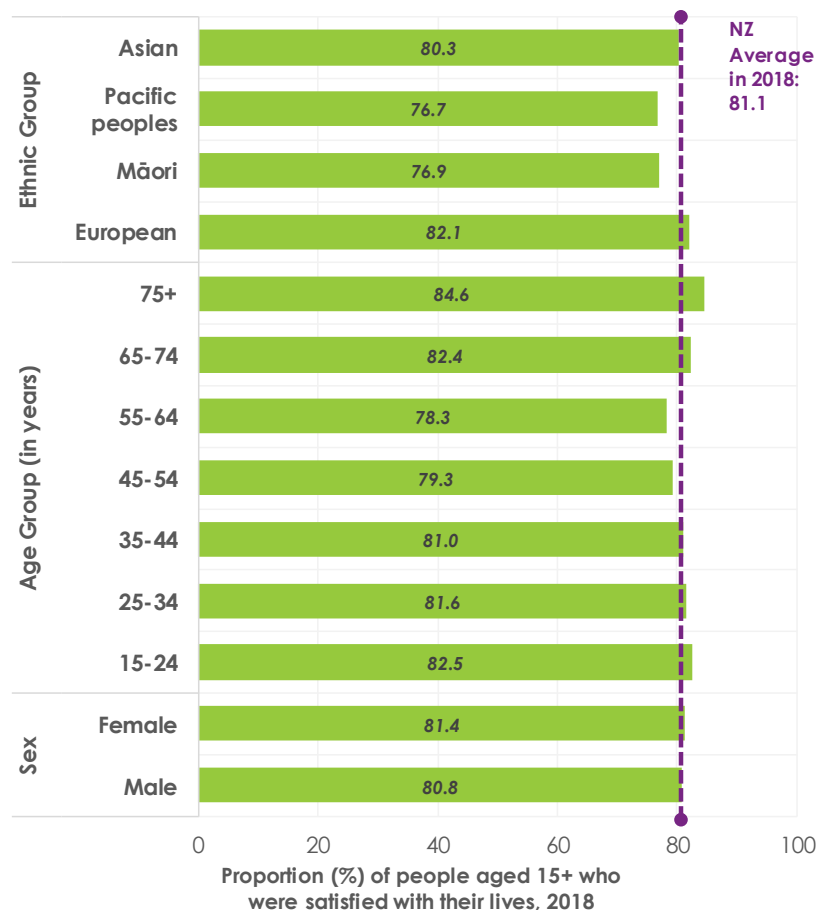
NZ Average in 2018: 81.1

	Proportion (%) of people aged 15+ who were satisfied with their lives, 2018
Ethnic Group	
Asian	80.3
Pacific peoples	76.7
Māori	76.9
European	82.1
Age Group (in years)	
75+	84.6
65-74	82.4
55-64	78.3
45-54	79.3
35-44	81.0
25-34	81.6
15-24	82.5
Sex	
Female	81.4
Male	80.8

Technical information:

Data source(s): New Zealand General Social Survey (NZGSS) data sourced from Stats NZ portal 'Wellbeing data for New Zealanders – Indicators Aotearoa New Zealand'

Geography: Auckland, Wellington, Northland/BOP/Gisborne, Rest of North Island, Canterbury, Rest of South Island and New Zealand

Data caveats and limitations: Measuring feelings can be very subjective, but is nonetheless a useful complement to more objective data when comparing quality of life. Subjective data can provide a personal evaluation of an individual's health, education, income, personal fulfilment and social conditions. Surveys, in particular, are used to measure life satisfaction and happiness.

2.2.7 Perception of safety

Definition: Proportion of the population aged 15 years or more who feel safe or very safe walking alone in their neighbourhood after dark.[23]

Relevance: Assessment of how safe people feel walking in their neighbourhood at night can be a useful way to gauge how safe people think they are in their locality. People feeling unsafe may be less likely to talk to their neighbours, trust others living in the area, use public transport, use public amenities and generally participate in their community. Anxiety and worries about victimisation can detract from wellbeing, and may cause people to alter their behaviours to avoid being victimised. This limits people's options and can reduce their freedom.

Findings:

Across New Zealand, 61.9 per cent reported feeling safe or very safe walking alone in their neighbourhood at night in 2018, marginally more than the 60.9 per cent recorded in 2014. Increase over the 2014-2018 period is noted for all broad regional groupings with the exception of 'Rest of North Island' (of which Waikato Region is a part) and 'Rest of South Island' where the proportion reporting feeling safe has slightly declined.

Comparing across regions, the 'Rest of North Island' (of which Waikato Region is a part) has the lowest proportion of people reporting feeling safe (57.2 per cent in 2018). The highest proportion is in 'Rest of South Island' (68.1 per cent).

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[23] In the 2016 Vital Signs Indicator Report, this indicator was based on the MARCO survey conducted by the Waikato Region Council at the TA level. However, this survey has since been discontinued and data from the NZ General Social Survey has been used here. Consequently, the definition of this indicator has changed from 'Safeness index measuring how safe the surveyed population aged 15 years or more feel safe walking alone in their neighbourhood at night' as defined in the 2016 Vital Signs Indicator Report. Therefore, findings from the 2016 Vital Signs Indicator report are not comparable.
In addition, the regional data is no longer disaggregated for the 16 regions but split into six broad regional groupings. Waikato Region falls under the grouping 'Rest of New Zealand'.

Figure B-19: Proportion of the population aged 15 years or more who self-reported feeling safe or very safe walking alone in their neighbourhood after dark
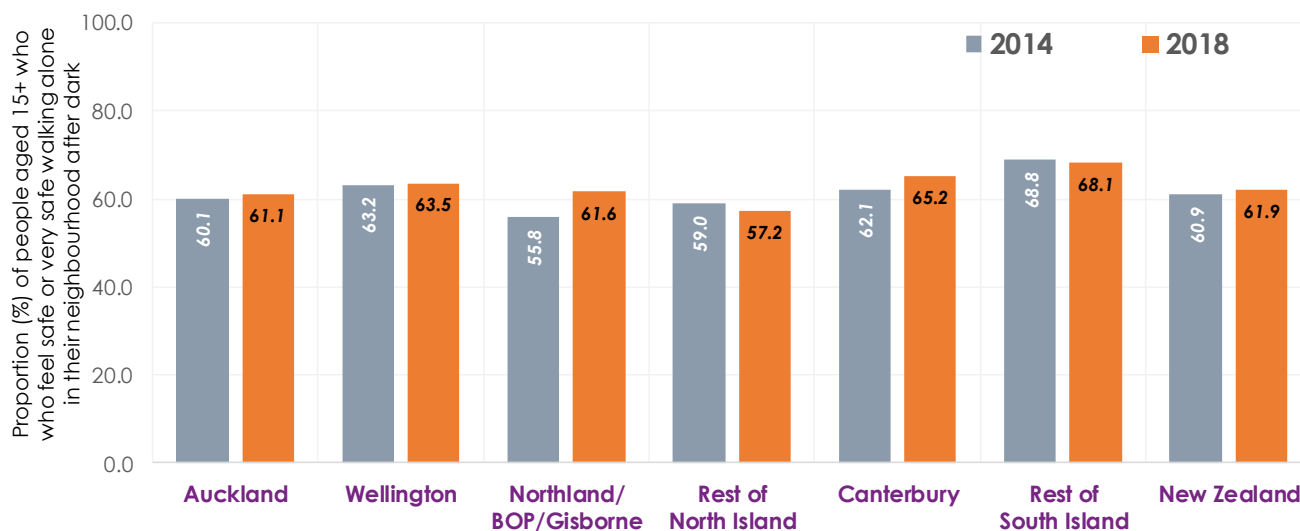
Other related findings

According to recent OECD data[24], about 68.4 per cent of people in OECD countries say they feel safe walking alone at night[25]. New Zealand ranks 26th out of the 36 OECD countries with 65.7 per cent feeling that they feel safe, substantially lower than the countries ranked top three (Norway: 90.1 per cent, Slovenia: 86.1 per cent and Iceland: 86.0 per cent).

Looking at the NZGSS data disaggregated by sex, females were much less likely than males to feel safe or very safe walking alone in their neighbourhoods after dark (45.6 percent of females compared with 77.7 percent of males in 2018).

When compared across age groups, people in the two oldest groups were least likely to feel safe or very safe walking alone in their neighbourhood after dark (59.3 and 53.6 per cent among 65-74 and 75+ year olds respectively).

There is no noticeable difference between the four broad ethnic groups in the perception of safety with similar proportion (close to the national average) reporting feeling safe or very safe walking alone in their neighbourhood after dark.

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[24] OECD Better life Index - This Index allows you to compare well-being across OECD countries, based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life.

[25] The indicator is based on the question: "Do you feel safe walking alone at night in the city or area where you live?" and it shows people declaring they feel safe.

Figure B-20: Proportion of the population aged 15 years or more who self-reported feeling safe or very safe walking alone in their neighbourhood after dark disaggregated by sex, broad age and ethnic groups, New Zealand 2018
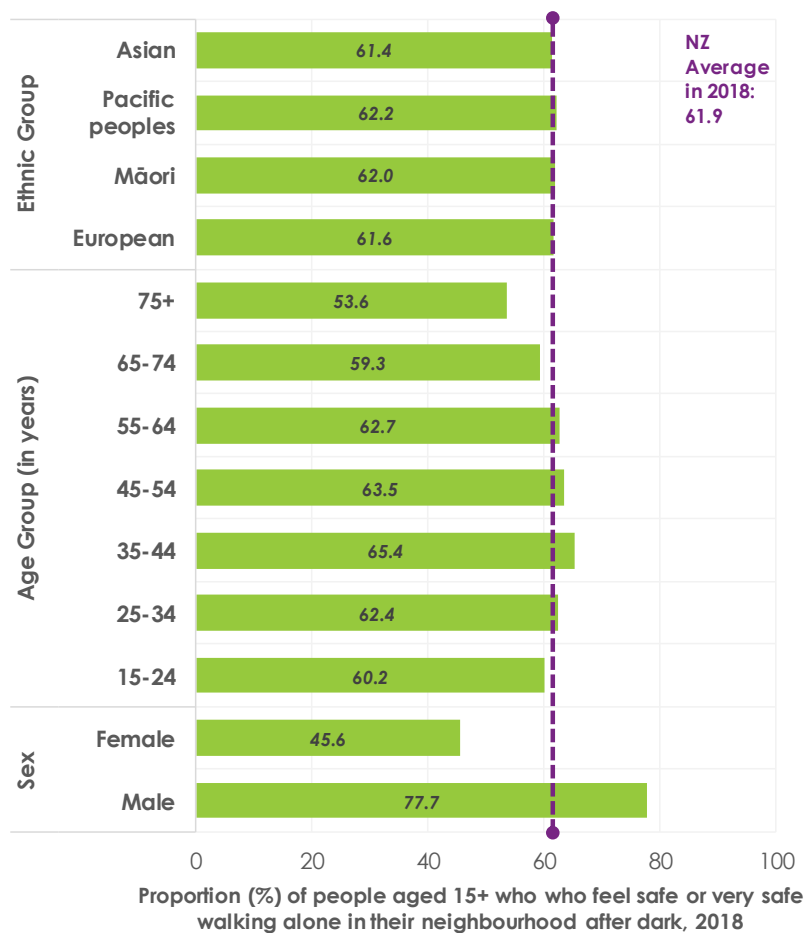
Proportion (%) of people aged 15+ who who feel safe or very safe walking alone in their neighbourhood after dark, 2018

Technical information:

Data source(s): New Zealand General Social Survey (NZGSS) data sourced from Stats NZ portal 'Wellbeing data for New Zealanders – Indicators Aotearoa New Zealand'

Geography: Auckland, Wellington, Northland/BOP/Gisborne, Rest of North Island, Canterbury, Rest of South Island and New Zealand

Data caveats and limitations: Measuring feelings can be very subjective, but is nonetheless a useful complement to more objective data when comparing quality of life. Subjective data can provide a personal evaluation of an individual's health, education, income, personal fulfilment and social conditions.

2.2.8 Social connectedness

Definition: **Proportion of the population aged 15 years or over who self-reported feeling lonely all the time, most of the time or some of the time over a four-week period.**

Relevance: Social contact is fundamentally important to people: humans are social creatures. Family and friends are the primary source of care and support for most people. Staying in touch with family and friends, helps maintain social connectedness between households and across geographical boundaries. Self-assessed loneliness is a proxy indicator of social connectedness, which can gauge whether people are happy with the amount and quality of social contact they have. As well as being an undesirable state in itself, loneliness may also contribute to poor outcomes in other areas including adverse health problems such as stress, anxiety and depression.

Findings:

Nationally in the 2018 survey, 16.5 per cent of the population aged 15 year or over reported feeling lonely all the time, most of the time or some of the time, which is an increase from the 13.9 per cent recorded in 2014. This increase in the proportion reporting a feeling of loneliness is noted for all the broad regional groupings.

Comparing across regions, 'Rest of North Island' (of which Waikato Region is a part) and Northland/BOP/Gisborne had the highest proportion (18.8 per cent) who reported feeling lonely all the time, most of the time or some of the time.

Figure B-21: Proportion of the population aged 15 years or more who self-reported feeling lonely all the time, most of the time or some of the time over a four-week period
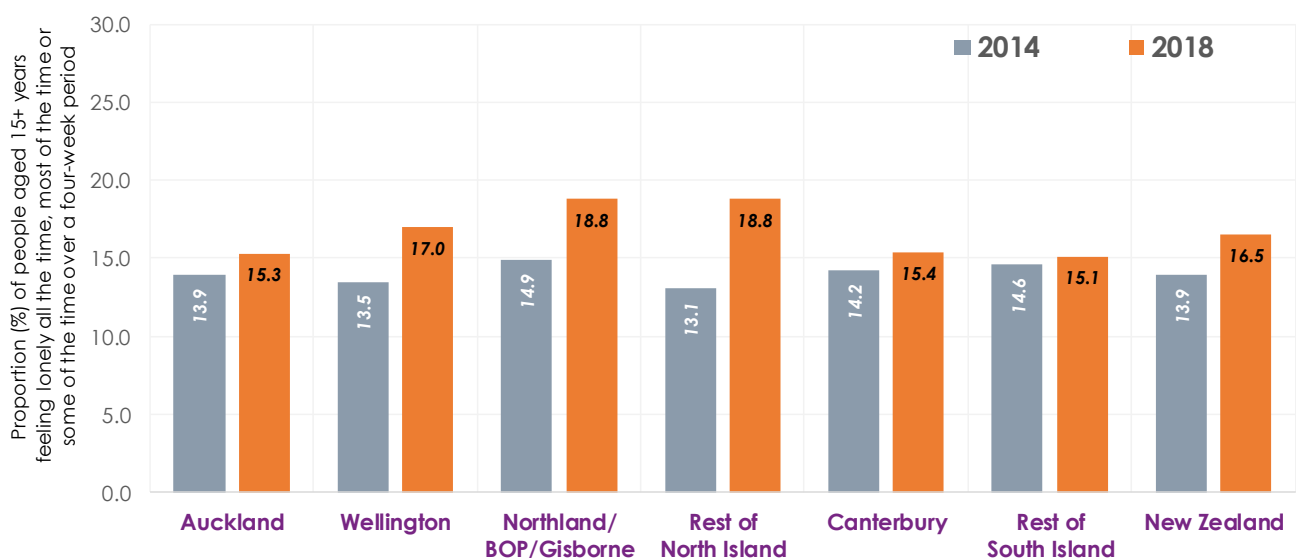
Other related findings

When disaggregated by age group, the level of reported loneliness decreases as age increases. Those aged 15–24 years had the highest levels with almost a quarter (24.0 per cent) reporting feeling lonely while those aged 65–74 had the lowest levels (10.3 percent).

In 2018, females were more likely than males to report feeling lonely - around one in five (19.1 per cent) compared to only 13.1 per cent among males.

When compared across the four broad ethnic groups, Asians had the highest levels of self-reported loneliness with almost a quarter (23.5 per cent) reporting feeling lonely sometimes, most of the time, or always, during the last four weeks. This proportion was the lowest people identifying with the Pasifika ethnic group.

Figure B-22: Proportion of the population aged 15 years or more who self-reported feeling lonely all the time, most of the time or some of the time over a four-week period disaggregated by sex, broad age and ethnic groups, New Zealand 2018
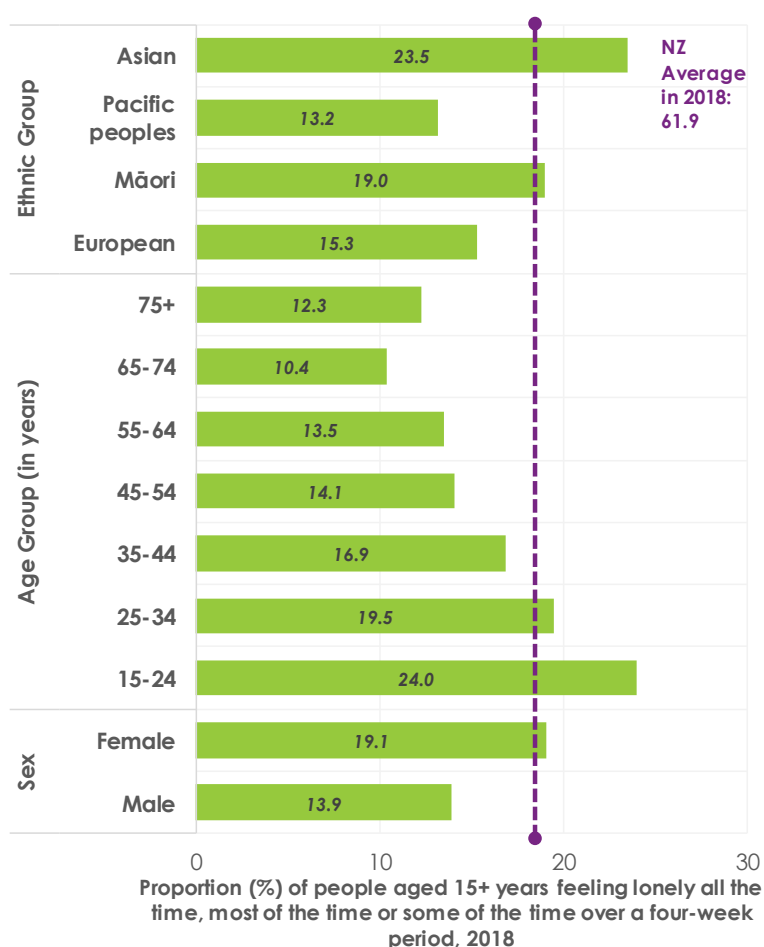
A strong social network, or community, can provide emotional support during both good and bad times as well as access to jobs, services and other material opportunities. A weak social network can result in limited economic opportunities, a lack of contact with others, and eventually, feelings of isolation (OECD, n.d.). New Zealand ranks second (after Iceland) in the OECD Better life Index that measures perceived social network support[26] - 96% of New Zealanders believe that they know someone they could rely on in a time of need, more than the OECD average of 89% (based on the OECD Better Life Index[27]).

Based on the Quality of Life Survey conducted by the Waikato Regional Council, 62.0 per cent of the surveyed population agreed that they experienced a sense of community with others in their neighbourhood. Comparing across the TA areas, Hamilton recorded the lowest proportion in 2018 (48.0 per cent agreeing) and Thames-Coromandel the highest (83.0 per cent). It should be noted here that survey errors are more significant at the TA level because of small numbers.

Figure B-23: Proportion of the population aged 15 years or more who agree that they experience a sense of community with others in their neighbourhood

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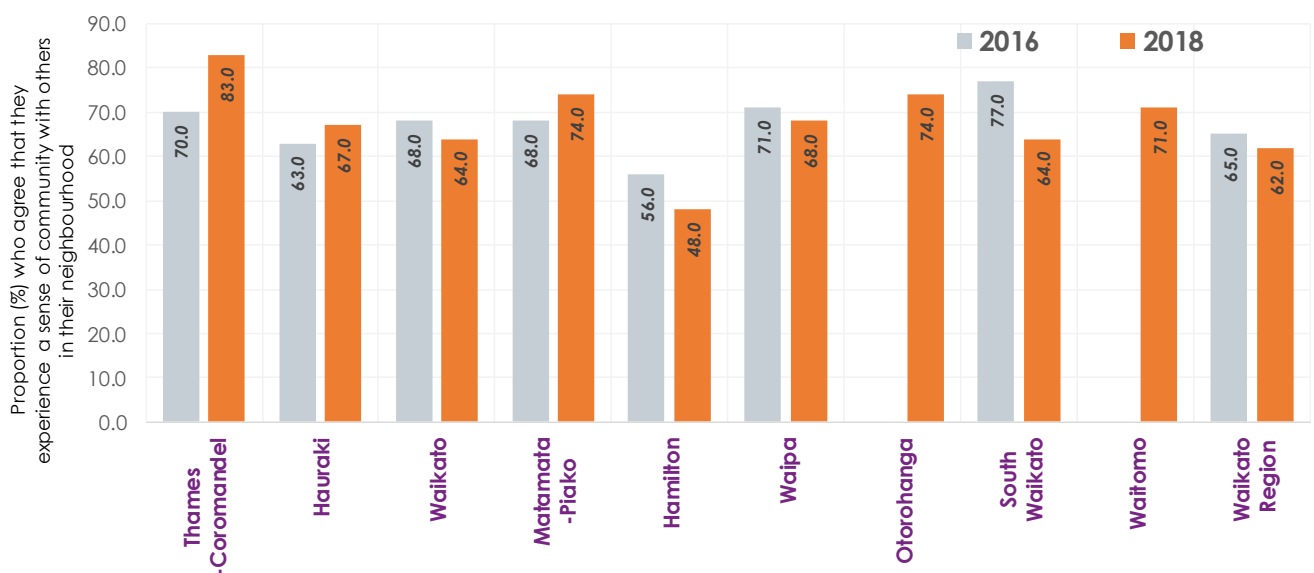
[26] The indicator is based on the question: "If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?" and it considers the respondents who respond positively.

27 This Index allows you to compare well-being across OECD countries, based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life.

Technical information:

Data source(s): New Zealand General Social Survey (NZGSS) data sourced from Stats NZ portal 'Wellbeing data for New Zealanders – Indicators Aotearoa New Zealand' and the Quality of Life Survey data from the WPI dataset provided by Waikato Regional Council.

Geography: Auckland, Wellington, Northland/BOP/Gisborne, Rest of North Island, Canterbury, Rest of South Island and New Zealand

Data caveats and limitations: The NZGSS asks people, "In the last four weeks, how often have you felt lonely?". The response options are: 'all of the time', 'most of the time', 'some of the time', 'a little of the time' and 'none of the time'. Given this is a subjective question; the resulting measure is one of loneliness rather than an objective measure of social isolation.

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.2.9 Voter turnout

Definition: **Percentage of all enrolled electors who cast a vote in local authority elections.**

Relevance: Voting is a fundamental way for people to express their political will. Citizens participating in the political process and in civic affairs is a sign of a healthy democracy. It also reflects people's sense of connection with and investment in the issues that affect the society in which they live. Low voter turnout can affect the degree to which a politician or a political institution can be seen as truly representing what people in their electorate want for their region and for New Zealand. Measuring voter turnout can indicate where more work needs to be done to better engage the voting public to enable an improved connection between the community and local and central government.

Findings:

Voter turnout has declined over the 2013-2016 period for local authority elections held for the Waikato Regional Council and the Matamata-Piako, Hamilton, Otorohanga and Waitomo District/City Councils.

Comparing across the region, the highest voter turnout in the 2016 local authority elections was in Thames-Coromandel (52.9 per cent) and the lowest in Waikato District and Hamilton with only one-third of enrolled electors casting a vote.

Figure B-24: Proportion of electors casting a vote in local authority (district council, city council or regional council) elections
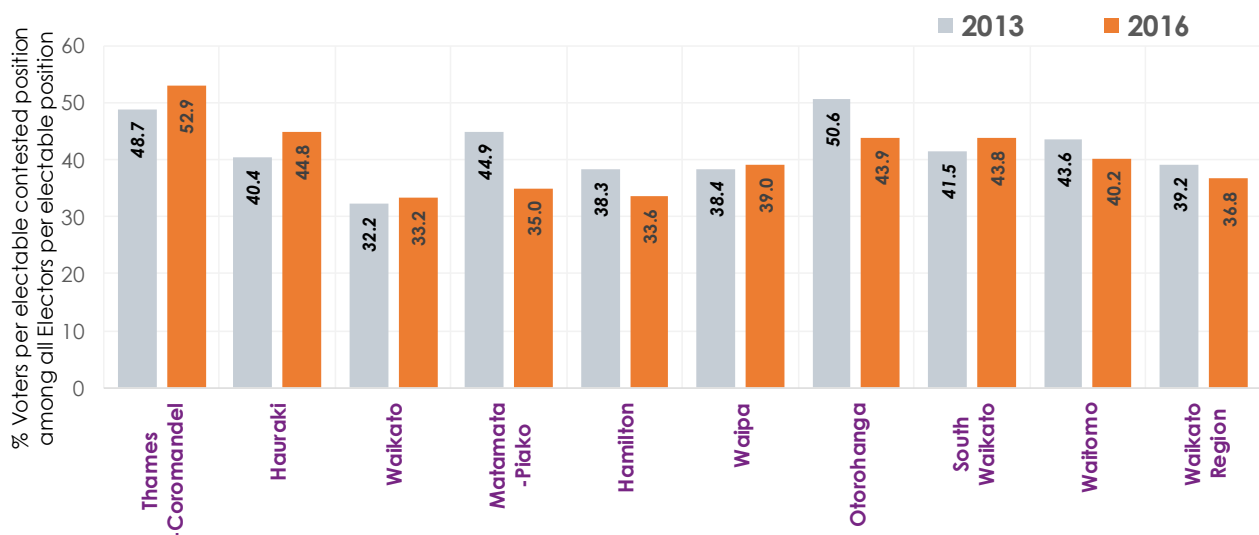
Trust in government is essential for social cohesion and well-being. Today, more than ever, citizens demand greater transparency from their governments. Information on the who, why and how of decision making is essential to hold government to account, maintain confidence in public institutions and support a level playing field for business. Greater transparency is not only key to upholding integrity in the public sector; it also contributes to better governance. Indeed, openness and transparency can ultimately improve public services by minimising the risk of fraud, corruption and mismanagement of public funds (OECD, n.d.). High voter turnout is a measure of citizens' participation in the political process.

New Zealand ranks eighth (out of 36) in the OECD Better life Index[28] that measures voter turnout rate[29] - 80 per cent rate recorded for New Zealand in 2018 compared to the OECD average of 68 percent. The countries with the highest recorded voter turnout rates were Luxembourg and Australia (91 per cent).

Research has shown that more educated people are more likely to vote than those less educated, and that older people are more likely to vote than younger people. There is little difference in the voting rate between men and women in most OECD countries.

Technical information:

Data source(s): Electoral Commission/Department of Internal Affairs data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, and Waikato Regional Council

Data caveats and limitations: Voter turnout figures do not include votes cast in Māori electorates, and there is no feasible method of estimating the number of Māori enrolees or votes by electorate or region. For this reason, the estimates of voter turnout are understated, and this is likely to be most pronounced in regions with a relatively high proportion of Māori among the total population.

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28 This Index allows you to compare well-being across OECD countries, based on 11 topics the OECD has identified as essential, in the areas of material living conditions and quality of life.

29 Voter turnout here is defined as the ratio between the number of individuals that cast a ballot during an election (whether this vote is valid or not) to the population registered to vote. As institutional features of voting systems vary a lot across countries and across types of elections, the indicator refers to the elections (parliamentary or presidential) that have attracted the largest number of voters in each country.

Vital Sign:
Culture & Arts

Speaking te reo Māori gives access to te ao Māori (the Māori world) and to Māori world views. Te reo Māori helps develop cultural identity and make a connection to a rich cultural heritage. It also helps to provide access to social networks, providing support for shared hopes and values.

Being involved in the arts can improve an individual's wellbeing as well as providing opportunities for social connectedness through participation and attendance. There are many forms of arts; performing arts, such as theatre and ballet; literary arts, including poetry and book readings; craft and object arts, including ceramics and quilting; visual arts, including sculpture and painting; Pacific arts, including weaving and tapa making; Māori arts, including carving and kapa haka.[30]

Two indicators were selected for this section, the first to show the level of attendance and participation in the arts in the Waikato and the second to indicate the number of people identifying with the Māori ethnic group who can speak te reo Māori.

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[30] For a fuller definition go to

http://www.creativenz.govt.nz/assets/paperclip/publication_documents/documents/391/original/new_zealand_and_the_arts_research_publication_-_final.pdf?1437364227

2.3.1 Engagement with the arts

Definition: Proportion of the population aged 15 years or more who have either attended or participated in the following art forms in the last 12 months: Visual arts, Craft and object art, Performing arts, Literary arts, Pacific arts and Māori arts.

Relevance: This indicator provides information on the attitudes and level of involvement of the people in the arts and is a measure of participation of the wider community. Participation in the arts can be a proxy measure of social connectedness; it builds social cohesion and reduces loneliness and isolation. Involvement in arts and culture can enhance well-being. People attend arts events or actively participate in the arts for many reasons: for enjoyment and entertainment, as a means of creative expression, for personal growth and the pursuit of excellence, to learn new skills, to meet new people, and to celebrate cultural traditions.

Findings:

Eight in ten (80 per cent) New Zealanders have engaged with the arts in the last 12 months (of the 2017 survey) and this proportion is higher than that recorded in previous survey years. As per the Creative NZ Survey report, there is a strong correlation between attending the arts and participating in them - a large proportion of high attendees (47 per cent) are also frequent participators. Conversely, a high proportion of non-attendees (75 per cent) are also non-participators.

Figure B-25: Proportion of the surveyed population aged 15 years or more who either attended or participated in at least one arts event in the 12 months preceding the survey
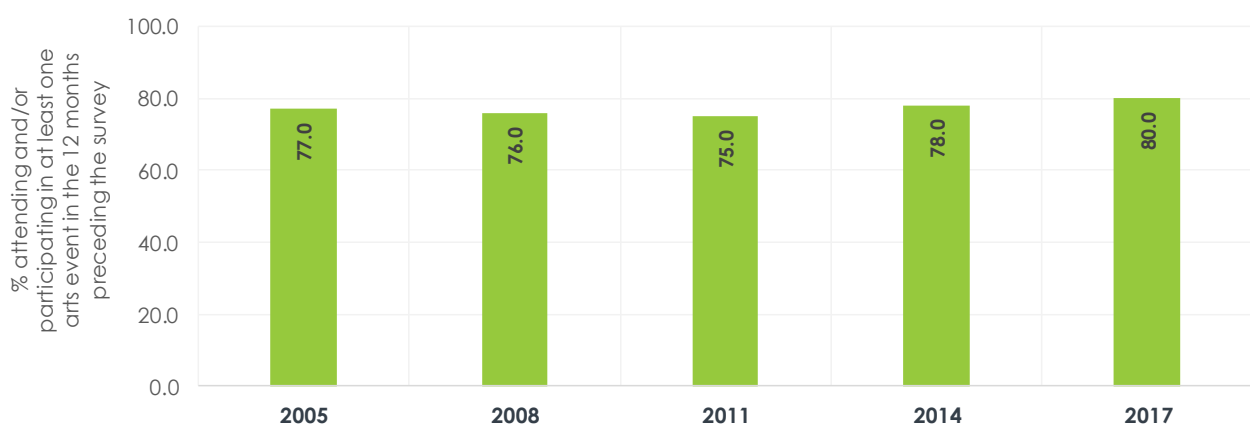
Other related findings

Demographic subgroups <u>more likely</u> than average to be engaged with the arts include:

- Those living in Wellington city (87 per cent)
- Māori people (86 per cent)
- Women (85 per cent)
- High income households, with an annual income of $120,000 or more (85 per cent).

Demographic subgroups <u>less likely</u> than average to be engaged with the arts include:

- Asian New Zealanders (77 per cent)
- Men (75 per cent)
- Low income households, with an annual income of up to $30,000 (75 per cent)

The Creative New Zealand report (Creative New Zealand, 2018) also showed that, compared to the national average, attendance and participation in the arts is lower in the Waikato Region. Only 67 per cent of the survey respondents in the Waikato region reported attending at least one arts event (compared to 73.0 per cent nationally) and only 45 per cent reported participation (compared to 52 per cent nationally).

Technical information:

Data source(s): Arts Council of New Zealand

Geography: New Zealand

Data caveats and limitations: The Creative New Zealand Survey asks respondents specifically about their attendance at and their participation in six separate art forms. There are no overall questions that measure attendance or participation in the arts at an overall level. Engagement with the arts is a nett calculation based on the respondents who said they attended or participated in at least one art form in the last 12 months.

Due to the change in survey methodology in 2017, the findings for the previous survey waves were reweighted to enable a more meaningful comparison. This however means that the above data for this indicator is not comparable with the previous 2014 Vital Signs report.

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.3.2 Te reo Māori speakers

Definition: **The proportion of the Māori population who reported in the Census that they could hold a conversation about everyday things in te reo Māori.**

Relevance: The Māori language, te reo Māori, is a crucial component of collective Māori identity and is part of what makes Māori as a people, and Aotearoa New Zealand as a country, unique. Te reo is protected under the Treaty of Waitangi and, since 1987, has been recognised as an official language (the others being English and New Zealand sign language). The Māori Language Commission states that "*the Māori language is a taonga that gives our country its distinct and unique cultural identity. For Māori to thrive as a language of everyday use, we must encourage its use in our homes and communities as much as possible*."

Findings:

In the Vital Signs Region a slightly higher proportion (22.8 per cent) of Māori residents reported in the 2018 Census that they could hold a conversation about everyday things in te reo Māori compared to the national average of 21.3 per cent. The proportion of Māori language speakers declined markedly over the last century, particularly following the rapid urbanisation of the Māori population in the 1950s and 1960s. It was not until the 1980s that major Māori language recovery initiatives began.[31] In spite of these initiatives the rates of te reo speakers among the total as well as the Māori population has steadily declined over the last three Censuses.

Measuring the number of Māori language speakers within a population can indicate how connected Māori and non-Māori living in our region are with regional and New Zealand history; our indigenous heritage and people; and each other. Of the 186,339 people who could hold a conversation in te reo across the country (around 4.0 percent of the total New Zealand population[32]) in 2018, 85.7 percent identified as Māori.

A similar trend of declining te reo rates is noted for all TAs across the region with the exception of Waipa where the proportion of Māori residents speaking te reo has increased marginally over the 2013-2018 period. The smallest proportion of te reo speakers among the resident Māori population is in the Hauraki District (17.4 per cent) and the highest in the Waikato District (26.8 per cent).

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[31] See www.nzhistory.net.nz/culture/Māori-language-week/history-of-the-Māori-language
[32] Excludes population who did not answer the question in the Census and the ones who are too young to speak.

Figure B-26: Proportion of the Māori population who reported that they could hold a conversation about everyday things in te reo Māori
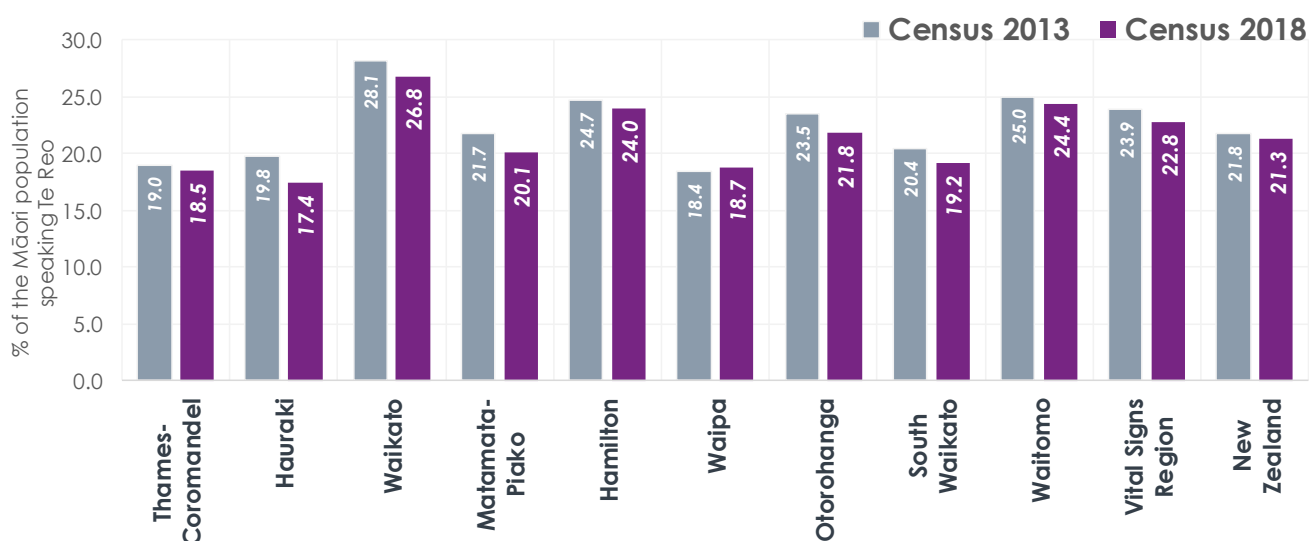
Note: Rates calculated excluding 'Not Elsewhere Included' and 'No Language'

Other related findings

As per the 2018 Census, Māori females were slightly more likely than Māori males to be able to converse in Māori – 22.4 per cent compared to 20.1 per cent te reo rate recorded for males..

Disaggregating the data by age group, older Māori are more likely than younger Māori to be able to converse about everyday things in Māori. As per the 2018 Census, the proportion of te reo speakers declines with age

Figure B-27: Proportion of te reo Māori speakers in the Māori population disaggregated by age groups
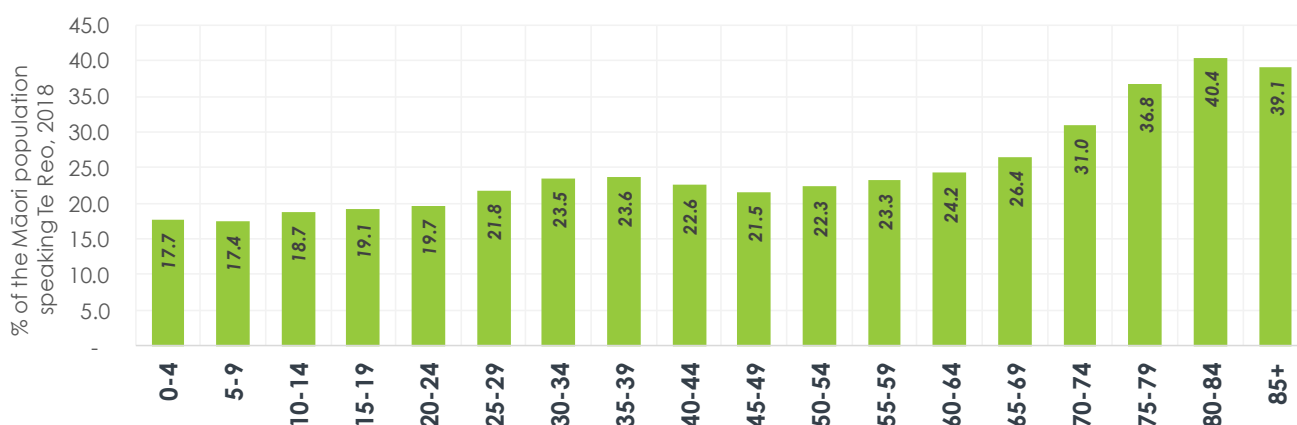
Note: Rates calculated excluding 'Not Elsewhere Included' and 'No Language'

Technical information:

Data source(s): Statistics New Zealand, Census Data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Excludes the population who did not respond to the Census as well as the Census respondents who did not provide a valid response to the Census question(s) from which this variable is derived. Also excludes the population who are too young to speak.

Vital Sign:

Economy

The economy is a set of production and consumption activities that help to decide how resources are allocated within a designated area, such as a country or region. Measuring the economy usually relates to the overall economic viability and sustainability of an area and the contribution that area makes in the broader national and/or international context.

Economic living standards concern the actual circumstances in which people live, the goods and services they are able to purchase and the economic resources they have access to, such as an adequate income. Basic necessities such as enough food, clothing and access to housing are essential to wellbeing. Homeownership indicates what proportion of people live in an owned or partly owned home and represents financial stability and security for individuals and families. Household crowding has been linked to the prevalence of some infectious diseases as well as poor educational achievement (Ministry of Social Development, 2010).

Income inequality compares high incomes (80th percentile) with low incomes (20th percentile) and high income inequality may indicate lower levels of overall life satisfaction. Unemployment can isolate people from society which in turn reduces wellbeing and may mean a loss of self-confidence. Research has shown that unemployment is associated with lower levels of physical and mental health (Ministry of Social Development, 2010).

This section has six indicators to measure economic standard of living: gross domestic product, home ownership, household crowding, housing affordability, income inequality and unemployment. These indicators provide a view on different aspects of economic standards of living, including an overview of the equality of resource distribution and the adequacy of people's incomes.

2.4.1 Gross domestic product (GDP)

Definition: Ratio of Waikato Region's nominal GDP per capita to that of total New Zealand.

Relevance: The gross domestic product (GDP) is one of the primary indicators used to gauge the health of a country's economy. It represents the total dollar value of all goods and services produced over a specific time period and can be thought of as the size of the economy. Regional GDP is a geographic breakdown of national GDP which indicates the size and structure of regional economies and provides a benchmark for measuring changes to regional economies over time.

The ratio of Waikato Region's nominal GDP per capita to that of total New Zealand measures how well the region is doing in terms of productivity compared to the national average. A ratio of less than one indicates lower productivity per capita.

Findings:

Figure B-28 shows the ratio of Waikato Region's nominal GDP per capita to that for total New Zealand. A ratio of less than one indicates that the region's GDP is lower than for New Zealand, and greater than one indicates higher GDP per capita for the Waikato Region compared to the national average.

The ratio of the nominal GDP per capita for the Waikato Region to that for New Zealand has declined over the 2014-2018 period.

Figure B-28: Ratio of Waikato Region's nominal GDP per capita to that for total New Zealand
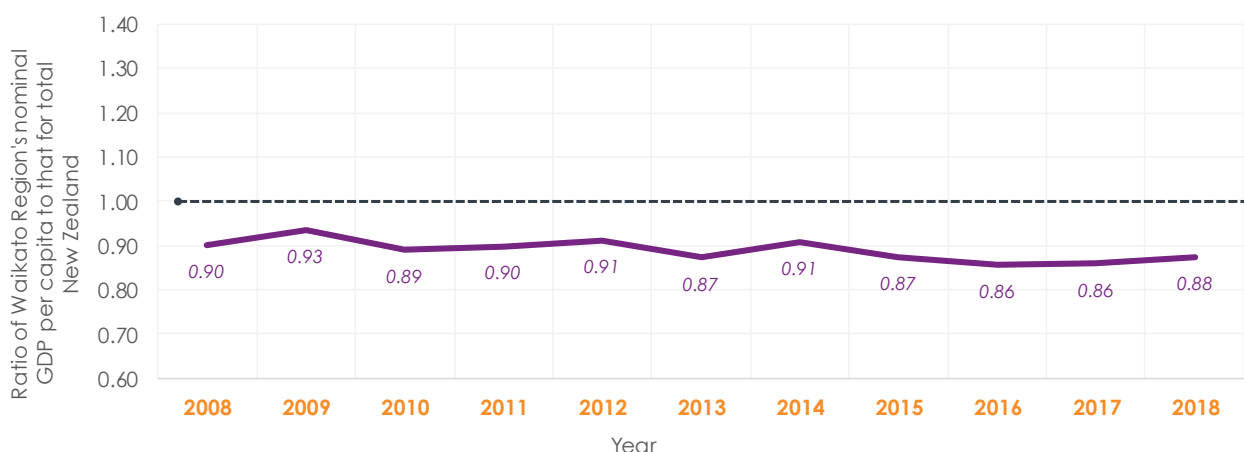
Technical information:

Data source(s): Statistics New Zealand

Geography: Waikato Region and New Zealand

Data caveats and limitations: It should be noted that GDP was not designed to measure social wellbeing and is incapable of assessing quality of life. GDP must be relegated to the purpose for which it was originally designed – as a simple quantitative measure of the size of the economy. The following limitations of using GDP as a progress indicator should be taken into account (Ministry of Social Development, 2004):

- counts the depletion of a country's natural wealth as if it were economic gain;
- makes no qualitative distinctions, so that crime, sickness, accidents, pollution, disasters, war and other liabilities may spur economic growth and contribute to "progress";
- excludes the value of unpaid voluntary and household work;
- ignores the value of free time, leading to the anomaly that overwork and stress spur economic growth and are therefore mistakenly counted as signs of progress;
- fails to account for equity and distributional issues.

2.4.2 Home ownership

Definition: **Proportion of the population aged 15 years or more who live in owned or partly owned residences.**

Relevance: A home is often a family's greatest financial asset and homeownership is an important factor for neighbourhood stability and civic participation. 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.

Homeownership has been linked to better educational outcomes – and, thus, future income prospects – for resident children as well as broader societal benefits

Findings:

Over half (52.0 per cent) of the resident population of the Vital Signs Region aged 15 years or more live in houses they own or partly own or hold in a family trust across the Vital Signs Region, similar to the national average recorded at the 2018 Census. This proportion has increased since the 2013 Census for all TA areas in the region with the biggest increases noted for Waikato District, Thames-Coromandel and Hauraki.

Comparing across TAs, Thames-Coromandel has the highest proportion of the resident population living in owned or partially owned houses (older age profile of this district along with the smaller proportion of Māori, Pacific and MELAA ethnic groups among its residents is a contributing factor). Lowest rate of home ownership is in Hamilton (a high student population and younger age profile of the city are contributing factors). Factors affecting home ownership are both demographic as well as economic. Rising cost of housing, increasing participation in alternative forms of long-term investment, a high level of student debt, larger number of students or a more transient population and people forming families later in life can be some possible factors.

Figure B-29: Proportion of the population aged 15 years or more living in owned or partly owned residences
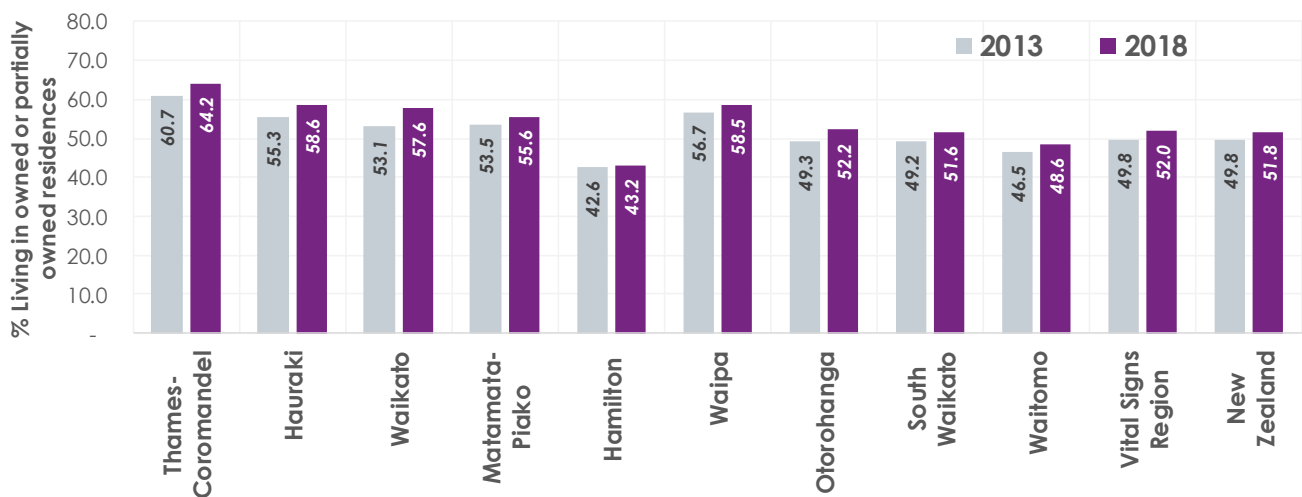
Other related findings

Europeans and people from the residual 'Other' ethnic group were most likely to own or partly own their home (55-57 per cent) followed by Asians (39.5 per cent). The lowest rates of home ownership are noted for Pacific Islanders (23.9 per cent), people identifying with the MELAA ethnic group (25.0 per cent) and Māori (29.0 per cent).

There is no noticeable difference between the two sexes in the likelihood of living on owned or partially owned residences – females recorded with a slight higher rate of home ownership than males at the 2018 Census.

Middle-aged and older people are more likely to live in homes they own.

Figure B-30: Home ownership disaggregated by demographic characteristics, Vital Signs Region
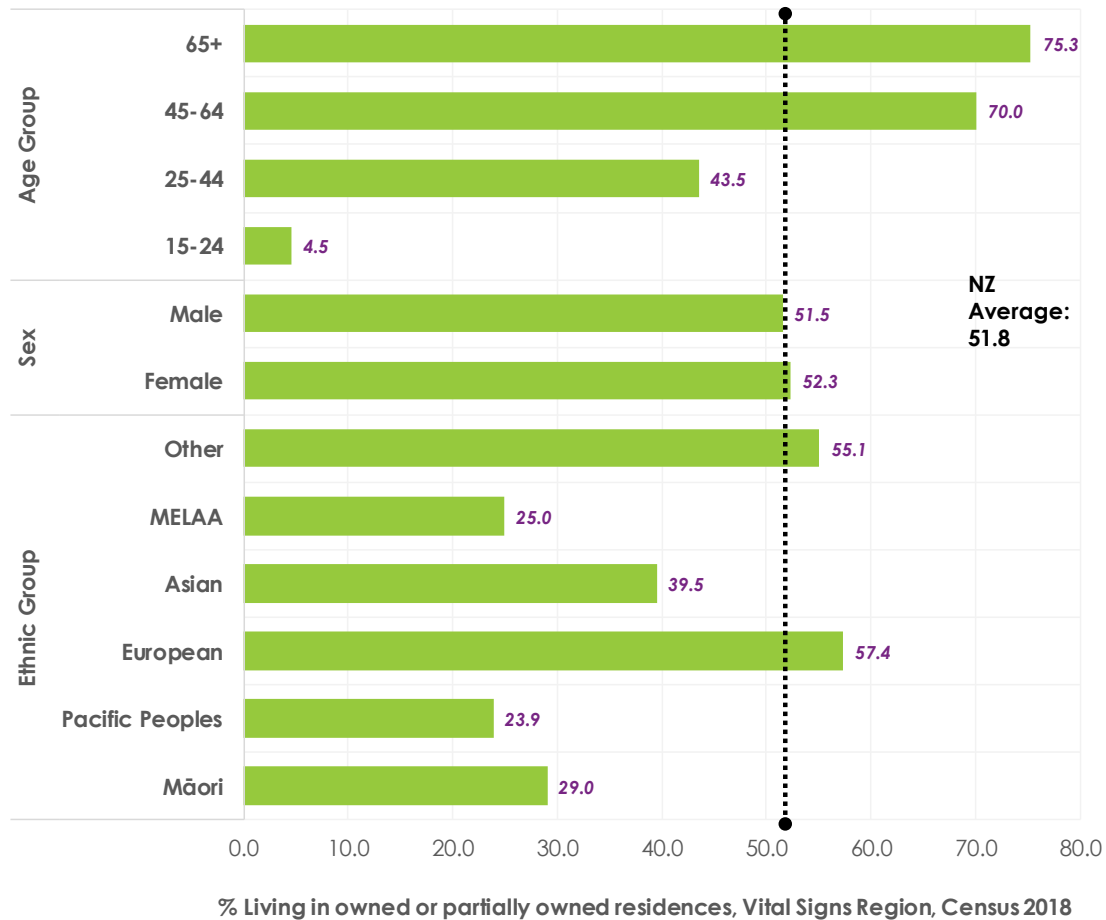
% Living in owned or partially owned residences, Vital Signs Region, Census 2018

Technical information:

Data source(s): Statistics New Zealand, Census Data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Excludes the population who did not respond to the Census as well as the Census respondents who did not provide a valid response to the Census question(s) from which this variable is derived.

2.4.3 Household crowding

Definition: **Proportion of the population (in private occupied dwellings) living in crowded* conditions.**

*Crowding is defined when one or more additional bedrooms are required in a household.

Relevance: Crowding in households relates to situations where the number of people residing in a household exceeds the capacity of the household to provide adequate shelter and services to its members. Freedom from crowding is one of the six dimensions of housing adequacy. Housing space adequate to meet the needs and desires of a family is a core component of quality of life. Household crowding is a good proxy measure of the economic standard of living of a household.

Household crowding is linked to a number of health conditions including rheumatic fever, meningococcal disease, respiratory infections including pneumonia and skin infections (e.g., cellulitis), as well as elevated blood pressure and increased risk of childhood injuries (Maani, Vaithianathan, & Wolfe, 2006; Baker, Barnard, & Kvalsvig, 2012) . Research also show an association of household crowding with poor educational attainment and psychological distress (Thomson, Thomas, & Sellstrom, 2013).

Findings:

Figure B-31 shows what proportion of the resident population of each of the 20 DHB areas across New Zealand lives in crowded conditions, as measured at the 2006 and 2013 Census. The Waikato DHB area ranks ninth, with 8.9 per cent of the resident population living in crowded households in 2013. This is lower than the national average of 10.1 per cent and has declined from the level recorded in 2006.

As per a report released by the Ministry of Health (2014), household crowding is relatively uncommon for most populations in New Zealand, with the exception of some sociodemographic groups, particularly Māori, Pacific peoples and children. Over half of crowded households have two or more children (at least one child aged between 5 and 14 years) living in them. Two in five Pacific people (38 per cent) and one in five Māori (20 per cent) and 18 per cent Asian people live in crowded households. This compares to 1 in 25 Europeans (4 per cent). Additionally, of the people living in crowded households nationally, 9 per cent live in households that do not use any form of heating in their houses.

Figure B-31: Proportion of the population (in private occupied dwellings) living in crowded conditions

Legend:
- 2013
- 2006

Region	
NEW ZEALAND	10.1
WAIKATO	8.9

x-axis: 0.0, 5.0, 10.0, 15.0, 20.0, 25.0

% of population living in crowded conditions

Regions (top to bottom): NEW ZEALAND, Southern, South Canterbury, Canterbury, West Coast, Nelson Marlborough, Wairarapa, Capital & Coast, Hutt Valley, MidCentral, Hawke's Bay, Whanganui, Taranaki, Tairawhiti, Lakes, Bay of Plenty, WAIKATO, Counties Manukau, Auckland, Waitemata, Northland
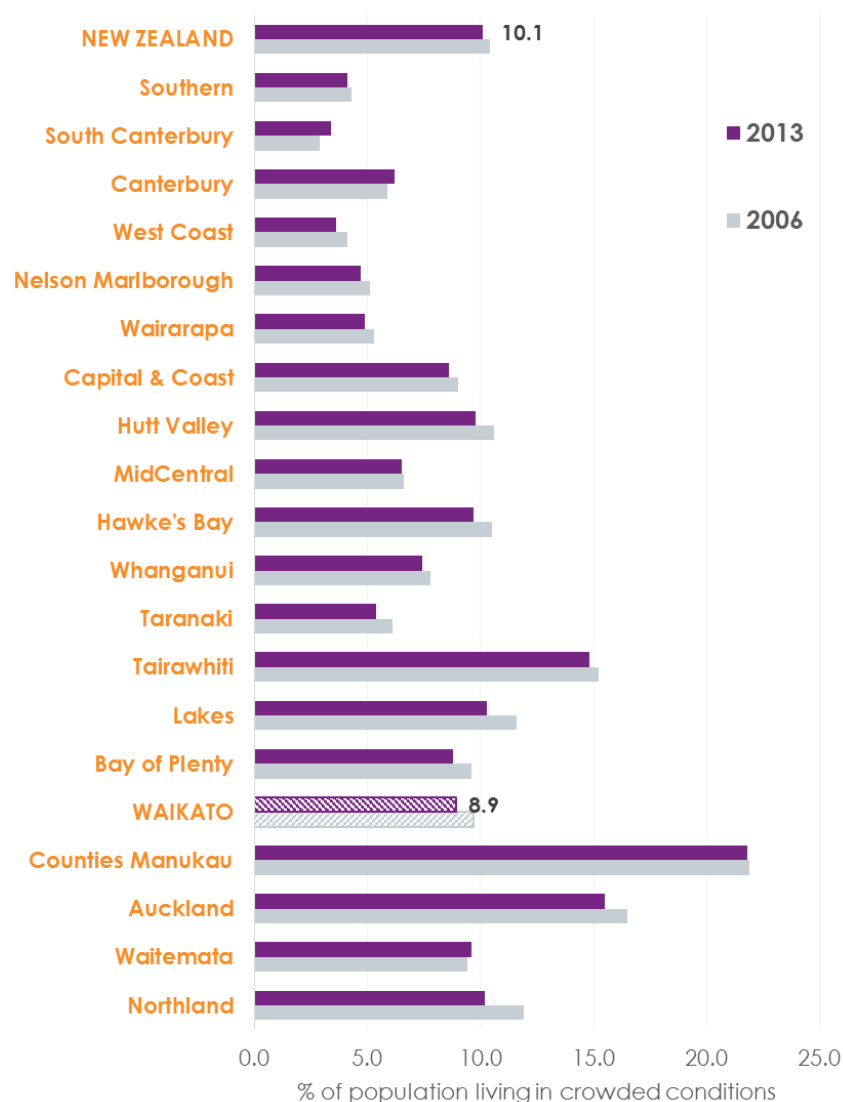
Technical information:

Data source(s): Statistics New Zealand, Ministry of Health report 'Analysis of Household Crowding based on Census 2013 data'

Geography: Waikato DHB and New Zealand

Data caveats and limitations: Crowding is shown as a percent and is calculated using the Canadian National Occupancy Standard (CNOS). It includes all people in households who responded to the occupancy question in the Census as opposed to the total population. People in non-private dwellings and those in visitor only dwellings are excluded. Absentees are included.

Excludes people living in non-private dwellings, such as boarding houses and night shelters because household and room data has not been collected for these dwellings.

2.4.4 Housing affordability

Definition: **Proportion of households spending more than 30 percent of their total household income on housing costs.**

Relevance: Housing costs take up a large share of the household budget and represent the largest single expenditure for many individuals and families, by the time you add up elements such as rent, gas, electricity, water, furniture and repairs. Affordable housing is important for people's wellbeing. For lower-income households especially, high housing costs relative to income are often associated with severe financial difficulty, and can leave households with insufficient income to meet other basic needs such as food, clothing, transport, medical care and education.

Housing affordability relates to the ability of households to rent or purchase housing in a locality of choice at a reasonable price, the capacity to meet ongoing housing costs and the extent to which discretionary income is available to achieve an acceptable standard of living. Affordable housing should leave enough residual income to cover other basic living costs and allow households to save for irregular but unavoidable costs (Source: Waikato Progress Indicators, Waikato Regional Council).

Findings:

Latest data from the Household Economic Survey shows that 22 per cent of New Zealand households spent more than 30 per cent of their total household income on housing costs in 2018. Disaggregating the data by tenure holder status of the household (not shown here), a much higher proportion of households who lived in rental dwellings (dwelling not owned by usual residents) spent more than 30 per cent of their household income on housing expenses; 34.6 per cent compared to only 15.7 per cent for households that owned or partly owned the dwelling.

Housing costs include expenditure on rents and mortgages, property rates, and building-related insurance. Household income is from total regular and recurring income sources, and is gross (before tax) income.

Figure B-32: Proportion of the population spending more than 30 per cent of their household income on housing costs
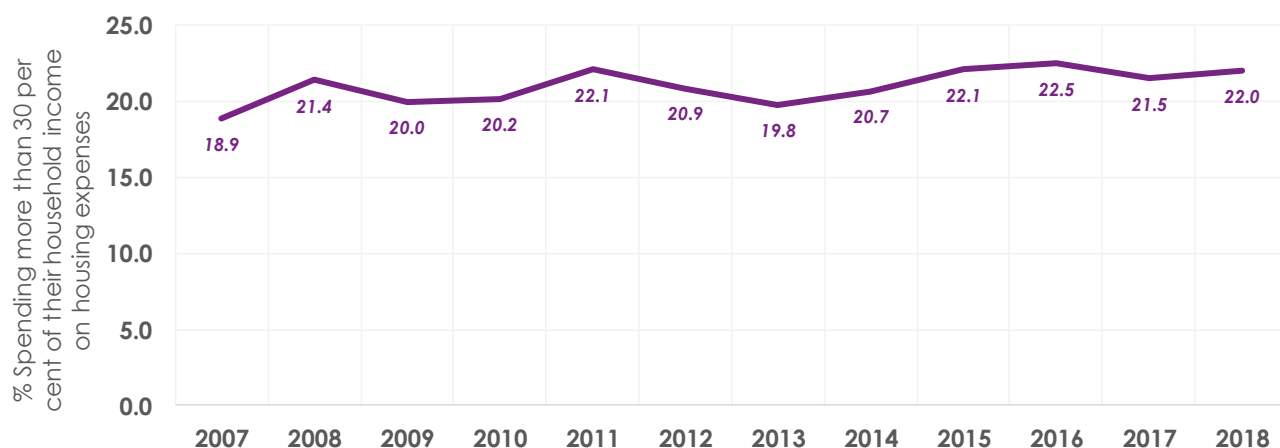
When disaggregated geographically, residents of Auckland spend the highest proportion of their household income on housing related expenses (18.1 per cent) and lowest in Wellington (13.9 per cent). In the 'Rest of North Island' (of which Waikato Region is a part), this proportion recorded for 2018 is 15.5 per cent, marginally lower than the national average of 16.3 per cent.

Figure B-33: Ratio (expressed as percentage) of housing costs to total household income
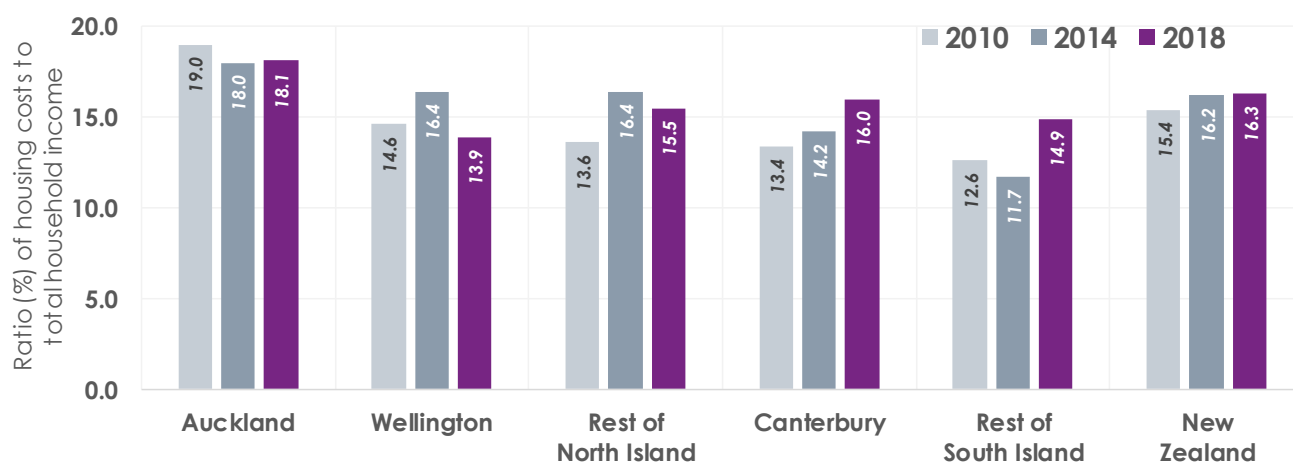
Other related findings

In the OECD, households on average spend around 20 per cent of their gross adjusted disposable income on keeping a roof over their heads. New Zealand along with the United Kingdom ranks first among OECD countries for households who spend the highest proportion of their income on housing related costs (rent, gas, electricity, water, furniture and repairs) and Korea the last at 15.0 per cent.

Technical information:

Data source(s): Statistics New Zealand, Household Economic Survey which provides income and expenditure information for households, and demographic data on households and individuals in New Zealand.

Geography: Broad geographical groupings and New Zealand

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.4.5 Income inequality

Definition: **Income inequality in New Zealand as assessed by the P80/P20 ratio and Gini coefficient.**

Relevance: The level of income inequality is often seen as a measure of the fairness of the society we live in. A high level of inequality may also mean the population is less socially connected as a whole. Research suggests a negative relationship between income inequality and other factors with an influence on well-being such as trust, social mobility, health outcomes, and the rate of imprisonment.

The P80/20 ratio is a measure of the inequality between high-income and low-income households, after adjusting for household size and composition. The higher the ratio, the greater the level of income inequality.

The Gini coefficient is also a measure of income inequality where zero expresses perfect equality (for example, where everyone has the same income) and a score of one expresses maximal inequality (for example, where only one person has all the income or consumption, and all others have none).

Findings:

The P80/P20 ratio compares the income of households at the 80th percentile (a household who is at the top 20 per cent of the income distribution) with those at the 20th income percentile (a household who is at the bottom 20 per cent of the income distribution). In the Waikato Region, income inequality, as measured by the P80/P20 has increased slightly over the 2007-2017 period. In 2017, the equivalised disposable income of a household at the 80th percentile was 3.4 times that for a household at the 20th percentile, similar to the national average (back in 2007, the ratio was 3.0 in the Waikato Region).

Figure B-34: P80/20 ratio before housing costs; Waikato Region and New Zealand
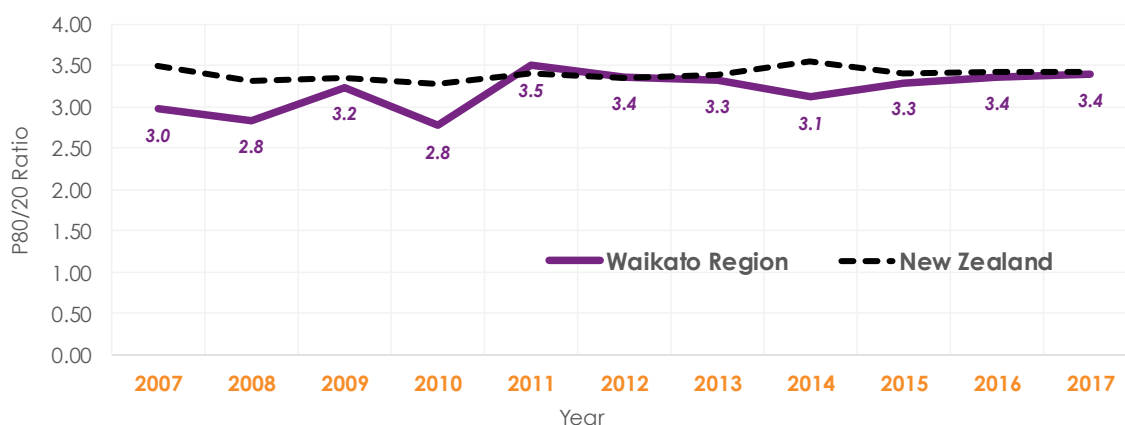
Other related findings

Income inequality is one of the most visible manifestations of differences in living standards within each country. High income inequalities typically imply a waste of human resources, in the form of a large share of the population out of work or trapped in low-paid and low-skilled jobs. New OECD research shows that when income inequality rises, economic growth falls. One reason is that poorer members of society are less able to invest in their education. Rising inequality is estimated to have wiped off a third off New Zealand's economic growth in the past 30 years (OECD, Directorate for Employment, Labour and Social Affairs, 2014).

Comparisons with other OECD countries are most commonly reported using a different measure, the Gini coefficient. Gini coefficients measure income inequality taking all incomes into account, with a score of one indicating complete inequality (one household has all the income) and a score of 0 indicating complete equality (all households have the same income).

In terms of the Gini coefficient, New Zealand ranks eighth among most unequal countries with a Gini coefficient of 0.35, which is higher than the OECD average of 0.32 and also higher than the 0.33 recorded in 2014. As per the Waikato Progress Indicators data sourced from Stats NZ, the Gini coefficient[33] for Waikato Region was 0.42 in 2017, considerable higher than the 0.37 recorded in 2007.

Until the 1980s, New Zealand was one of the most equal countries in the world (although that equality didn't extend to all groups). But in the two decades from the mid-1980s on, the gap between the rich and the rest increased faster than anywhere else in the developed world. In 1986, the top 10 per cent took home 26.5 per cent of New Zealand's income. In 1999, it was 37.8 per cent and in 2004, it was 33.2 per cent (Source: Inequality: A New Zealand Conversation[34]). The distribution of wealth among households in New Zealand is skewed heavily in favour of those at the top of the income spectrum. As per a 2017 report[35], the wealthiest 20 per cent of households in New Zealand hold 70 per cent of the wealth, while the top 10 per cent hold half the wealth. At the other end of the household wealth spectrum, the bottom 40 per cent of households account for just 3 per cent of total wealth.

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[33] Household equivalisation uses Revised Jensen Scale, where equivalisation takes into account age and role in family. After housing costs - expenditure on housing (2009 Stats NZ standard) is deducted from equivalised disposable income. Gini coefficients program sourced from Stats NZ.
[34] Retrieved from http://www.inequality.org.nz/understand/
[35] Retrieved from https://www.stuff.co.nz/business/88455171/the-truth-about-inequality-in-new-zealand

Figure B-35: Gini coefficient; OECD countries, 2017 or latest available year

Chile
Mexico
Turkey
United States
Lithuania
United Kingdom
Korea
NEW ZEALAND — 0.35
Latvia
Israel
Spain
Japan
Greece
Portugal
Australia
Italy
OECD Average — 0.32
Estonia
Canada
Ireland
Luxembourg
Switzerland
Germany
France
Netherlands
Austria
Poland
Hungary
Sweden
Finland
Belgium
Norway
Denmark
Iceland
Czech Republic
Slovenia
Slovak Republic

0.00   0.10   0.20   0.30   0.40   0.50

Gini coefficient - 2017, or latest available year

Technical information:

Data source(s): Gini Coefficient data produced by StatsNZ sourced from the WPI dataset and the OECD Income Distribution Database

Geography: Waikato Region and New Zealand

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.4.6 Unemployment

Definition: **Proportion of the people in the labour force who are unemployed.**

Unemployment is defined as being without paid work, where a person was available for work and actively seeking work.

Relevance: The unemployment rate reflects labour market and overall economic conditions and gives a sense of how easily people can become employed. Unemployment represents an underutilisation of labour resources, and has the potential to constrain growth and restrict prosperity. At an individual and family level, unemployment is associated with financial insecurity, stress, poor health outcomes, and a wide range of social problems. These issues can worsen if a person remains unemployed for a sustained period.

Findings:

In New Zealand, the unemployment rate measures the number of people actively looking for a job as a percentage of the labour force.

The unemployment rate across the Waikato Region has fallen over the 2014-2019 period and follows a similar trajectory as that nationally. Comparing the unemployment rate in 2018 for the OECD countries (see Appendix Figure 3), New Zealand ranks 14th among countries with lowest unemployment rates: 4.3 per cent, which is lower than the OECD average of 5.3 per cent. On the other hand, New Zealand ranks 17th for youth (15-24 years) unemployment rate in 2018 (11.5 per cent), marginally higher than the OECD average of 11.1 per cent.

Figure B-36: Unemployment rate (annual June), Waikato Region and New Zealand; 2000-2019
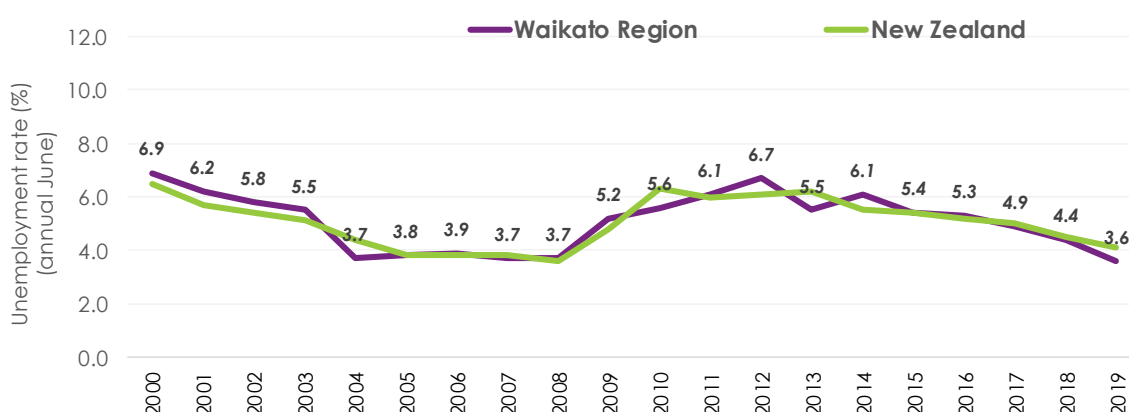
Other related findings

The unemployment rates have declined for all four major ethnic groups over the 2017-2018 period as seen in Figure B-37. Māori and Pacific groups have the highest unemployment rates and NZ Europeans the lowest.

Figure B-37: Unemployment rate (annual June) in the Waikato Region by major ethnic groups; 2017, 2018 and 2019
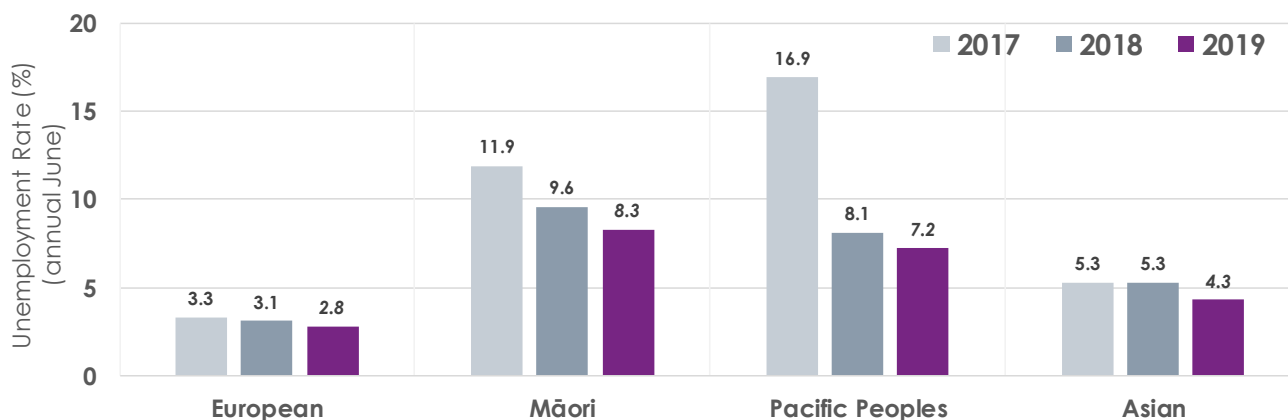
Looking at the work and labour force status derived from the Census data, the proportion of the labour force who reported being unemployed is the highest in South Waikato and lowest in Waipa and Thames-Coromandel.

Figure B-38: Unemployment rate (proportion of the labour force who is unemployed) as recorded at the Census
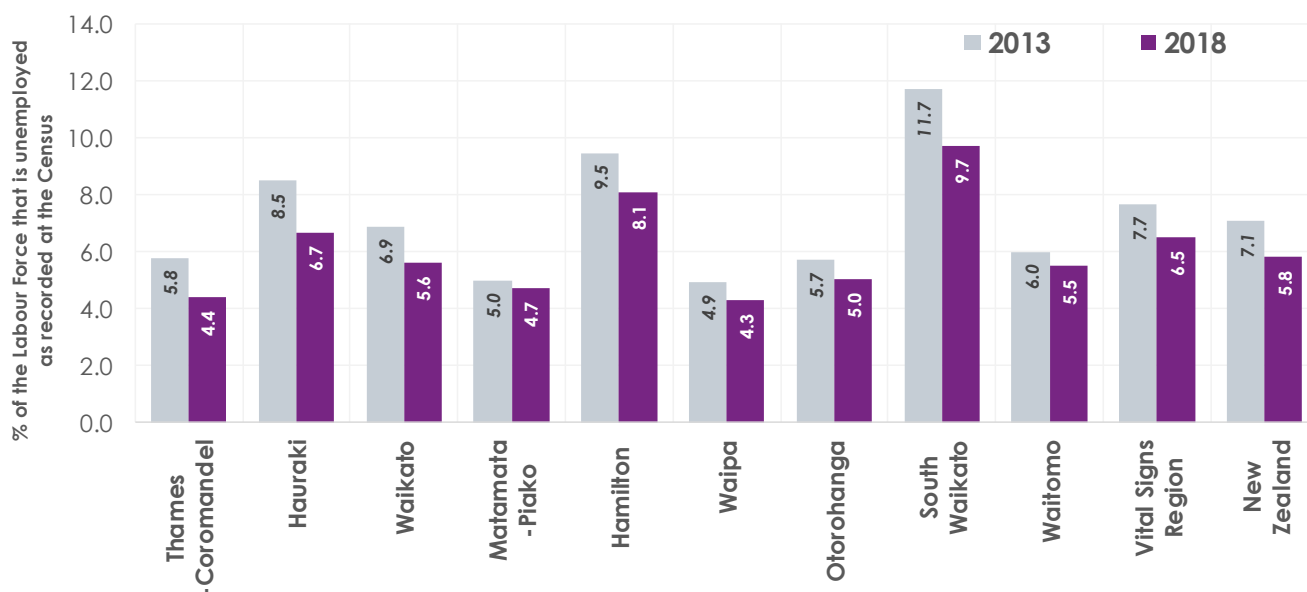
Technical information:

Data source(s): Household Labour Force Survey (HLFS), Statistics New Zealand

Geography: Waikato Region and New Zealand

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

Vital Sign:
Education

Education improves people's ability to meet their basic needs, shapes their life direction and expands the options available to them in all walks of life. The knowledge and skills people have gained can also enhance their feelings of self-worth and belonging. Many people define themselves by what they 'do', either at work or in other parts of their lives.

Access to information and proficiency with technology are becoming increasingly important in today's society, which means people will need higher levels of skills and knowledge. Gaining skills and knowledge can come from education and training but also through everyday life. Learning a sport and parenting children are good examples.

Education also relates directly to employment decisions and career choices. Those people with few educational qualifications have limited work opportunities and low incomes and are more likely to be unemployed which will in turn affect their standard of living.

Three indicators were selected for this section; participation in early childhood education, school leaver qualifications and tertiary qualifications. Each provides a snapshot of the attainment of skills and knowledge in the education continuum.

2.5.1 Educational attainment

Definition: **The proportion of the population aged 25-34 years who have completed a level 4 or higher-level qualification.**

Relevance: The level of formal educational qualifications is a commonly used proxy for human capital. A higher level of human capital can improve economic efficiency by providing organisations and individuals with knowledge and skills for economic development. Higher levels of formal education contribute to higher skills and better jobs for individuals and boosts economic growth by increasing productivity. Educational attainment is also important for participation in society and personal satisfaction.

The Government had set a target that 55 per cent of 25 to 34 year olds will have a qualification registered on the New Zealand Qualifications Framework at level 4 or above by 2017. This target was raised subsequently raised to 60.0 per cent having a qualification registered on the New Zealand Qualifications Framework at level 4 or above by 2018 (see Better Public Services: Boosting skills and employment).

Findings:

Across the Vital Signs Region, the proportion of the adult population aged 25-34 years with a level 4 or higher qualification is a little over half (53.2 per cent) as per the 2018 Census, well below the national average of 58.1 per cent. This proportion has increased over the 2013-2018 inter-censal period across the region as well as nationally. This trend is also mirrored across all nine TA areas with the biggest increase in the level of educational attainment since the last Census noted for Otorohanga and South Waikato.

Comparing across the region, as well as the three TAs. Hamilton City has the highest proportion (59.8 per cent) of 25-34 year olds with at least a Level 4 qualification, higher than the national average; and Hauraki, South Waikato and Waitomo have the lowest, around 39.5 per cent.

Figure B-39: Proportion of the population aged 25-34 years who have completed a level 4 or higher-level qualification
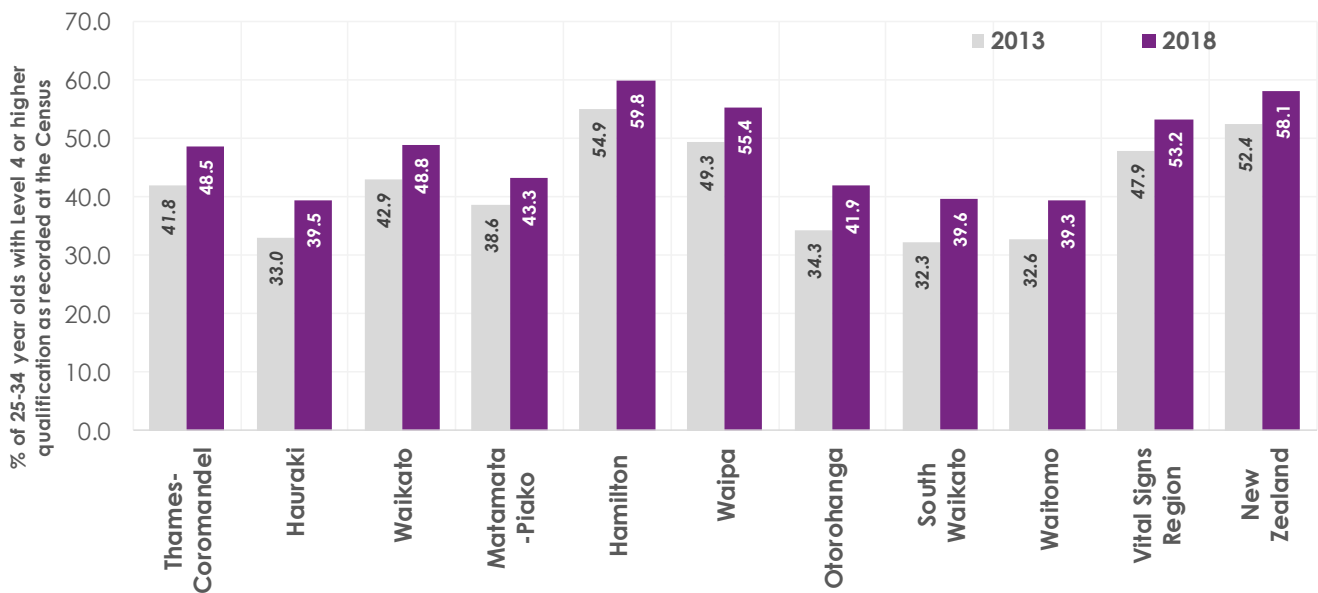
Other related findings

Disaggregating the data by sex, females aged 25-34 years across the Vital Signs Region (as well as nationally) are more likely than males to attain a level 4 or higher qualification, 56.2 per cent compared to only 50.0 per cent among males as recorded at the 2018 Census.

Māori and Pacific population aged 25-34 years have the lowest levels of educational attainment and Asians have the highest.

Figure B-40: Proportion of 25-34 year olds with a level 4 or higher-level qualification disaggregated by sex and ethnic group, Census 2018
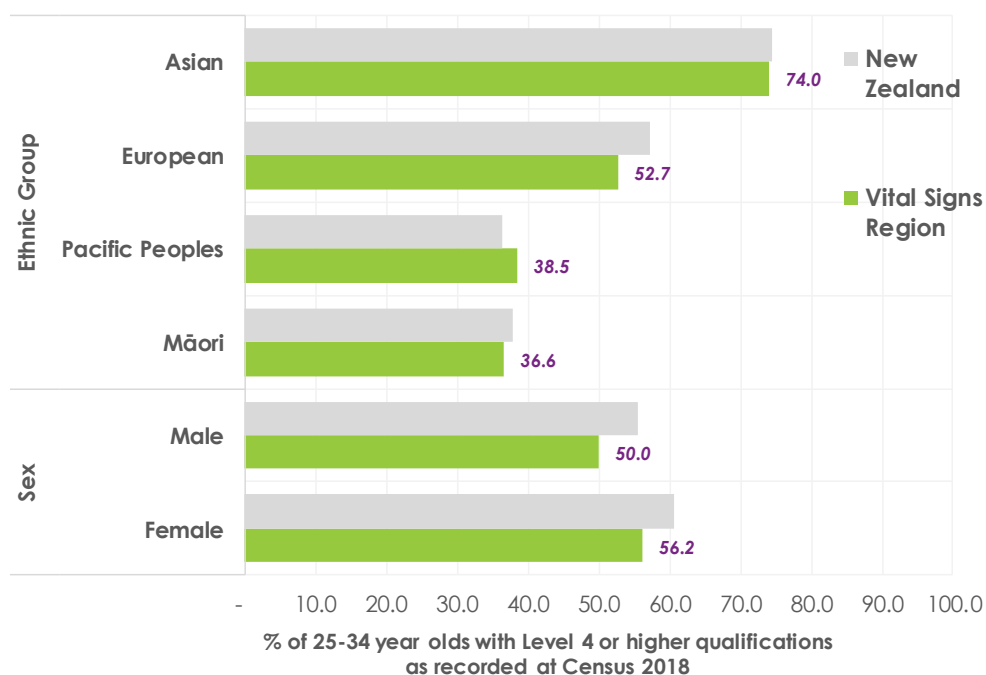
Technical information:

Data source(s): Statistics New Zealand, Census Data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Includes people aged 25-34 years who reported having a level 4-6 qualification, bachelor's degree or level 7 qualification or a postgraduate, honours, masters or doctorate degree. Excludes the population who did not respond to the Census as well as the Census respondents who did not provide a valid response to the Census question(s) from which this variable is derived.

2.5.2 No qualification

Definition: **The proportion of the adult population aged 25-34 years with no formal qualifications.**

Relevance: The acquisition of a tertiary qualification provides individuals with a higher level of skills and knowledge to participate in the labour market. Research shows that people from socially disadvantaged backgrounds are at a higher risk of leaving school with no qualifications. Young people without qualifications are at increased psychosocial risk. A number of studies have pointed to a cause and effect linkage in which leaving school without qualifications may increase subsequent risks of criminal behaviours, substance use and adjustment problems. Specifically, it has been proposed that educational underachievement and failure leads to decreased social bonds to the school and communities, which in turn leads to increased risks of crime and delinquent behaviours (Fergusson, Swain-Campbell, & Horwood, 2002).

Findings:

Compared to the national average of 9.1 per cent, a higher proportion of the adult population aged 25-34 years across the Vital Signs Region reported having no formal qualifications (11.6 per cent). This proportion has declined since the last Census nationally, regionally, as well across all TA areas.

South Waikato has the highest proportion (18.1 per cent) of the 25-34 year population with no formal qualifications. Hamilton City has the lowest at 9.1 per cent.

Figure B-41: Proportion of the usually resident population aged 15 years or more with no qualifications
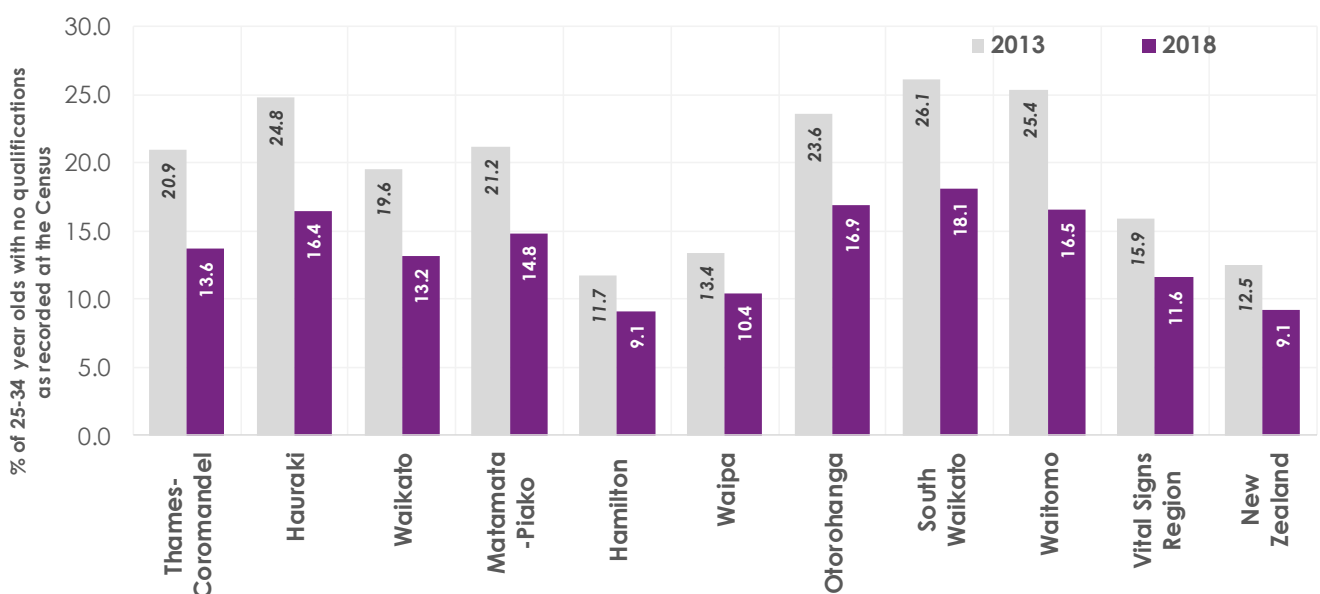
Other related findings

A very high proportion of the Māori (19.2 per cent) and Pasifika (16.8 per cent) population in the Vital Signs Region aged 25-34 years reported having no formal qualifications at the 2018 Census. Asians had the lowest proportion with no qualifications among those aged 25-34 years, under 5.0 per cent.

Males had a higher proportion with no qualifications (13.4 per cent) compared to females (9.9 percent)

Across all groups, the proportion with no qualifications was higher in the Vital Signs Region than it was nationally.

Figure B-42: Proportion of 25-34 year olds with no qualifications disaggregated by sex and ethnic group, Census 2018
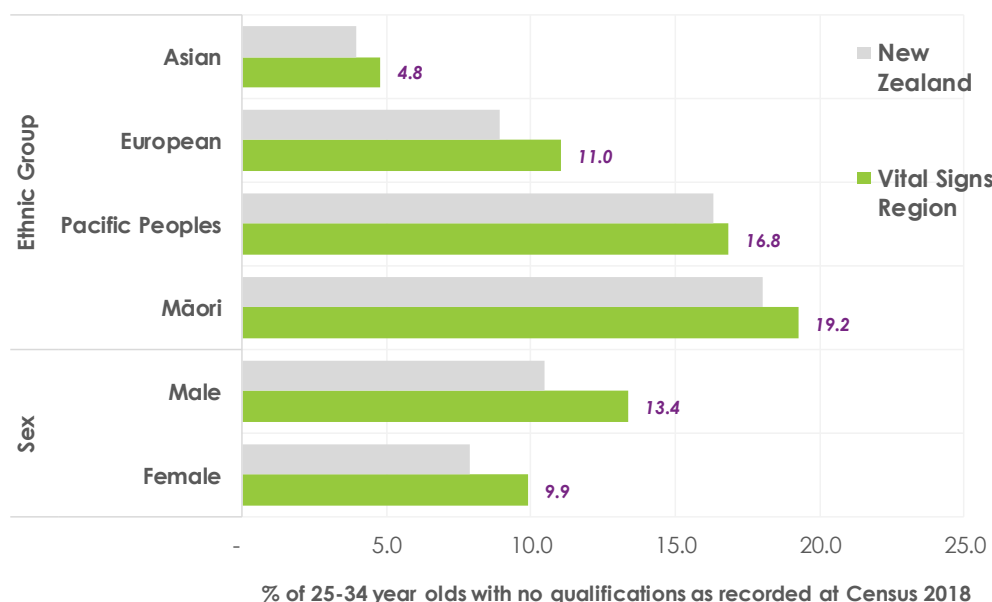
% of 25-34 year olds with no qualifications as recorded at Census 2018

Technical information:

Data source(s): Statistics New Zealand, Census Data

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

Data caveats and limitations: Excludes the population who did not respond to the Census as well as the Census respondents who did not provide a valid response to the Census question(s) from which this variable is derived.

2.5.3 Participation in early childhood education

Definition: **The proportion of children who regularly attended early childhood education (ECE) in the six months prior to starting Year 1.**

Relevance: The early childhood years are fundamental to a child's development and future ability to learn. Both New Zealand and international research has shown that quality early childhood programmes prepare young children socially, physically and academically for primary education. Early childhood education can also assist in narrowing the achievement gap between children from low income families and those from families with higher income levels.

The education children get before they start school may help their literacy, numeracy, and problem-solving skills. It benefits students well into their teenage years. High quality early childhood education (ECE) can lead to higher levels of achievement and better social outcomes. (See Education counts – Publications[36])

Findings:

The proportion of children in the Waikato Region who regularly attended early childhood education (ECE) six month prior to starting school is similar to the national average of 97.0 per cent and has increased over the 2014-2019 period. This upward trend is mirrored across all TAs except Otorohanga. The lowest rates of ECE participation in 2019 are noted for Otorohanga and Waitomo, and the highest in Hamilton and Waipa.

Figure B-43: Proportion of children starting school (Year 1) who regularly attended early childhood education (ECE) in the six months prior

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[36] https://www.educationcounts.govt.nz/publications
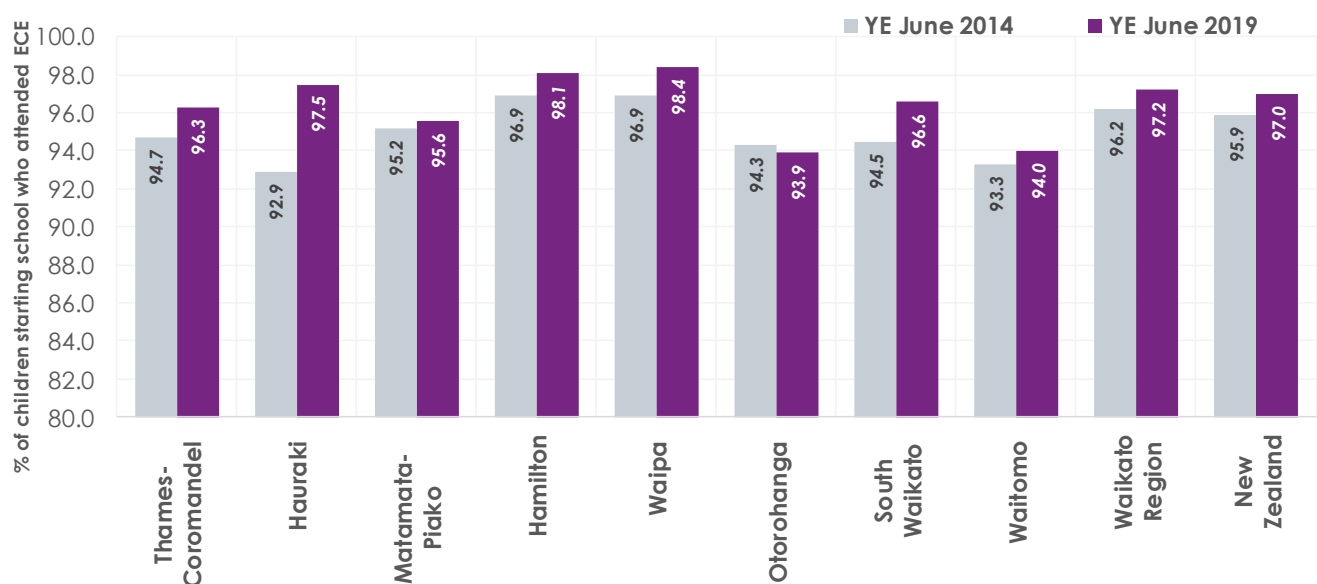
Other related findings

There are some ethnic differences in the proportion of children starting school who had attended early childhood education. Asian and European children had eh highest participation rates. Pacific children had the lowest proportion at 93.0 percent, followed by Māori (95.5 percent)

There is no difference between male and female children starting school in the proportion attending ECE six months prior.

School deciles are a measure of the socio-economic status of the community schools draw students from, and as such are a proxy measure of the socio-economic status of students, although there will be a mix of students in schools. Deciles range from 1 to 10, with Decile 10 schools being the least disadvantaged and Decile 1 schools the most disadvantaged[37]. It is more likely that a child starting at a high decile school would have regularly attended ECE (98.9 per cent) than it is for a child attending a low decile school (94.0 per cent).

Figure B-44: Proportion of children starting school (Year 1) who regularly attended early childhood education (ECE) in the six months prior disaggregated by demographic characteristics

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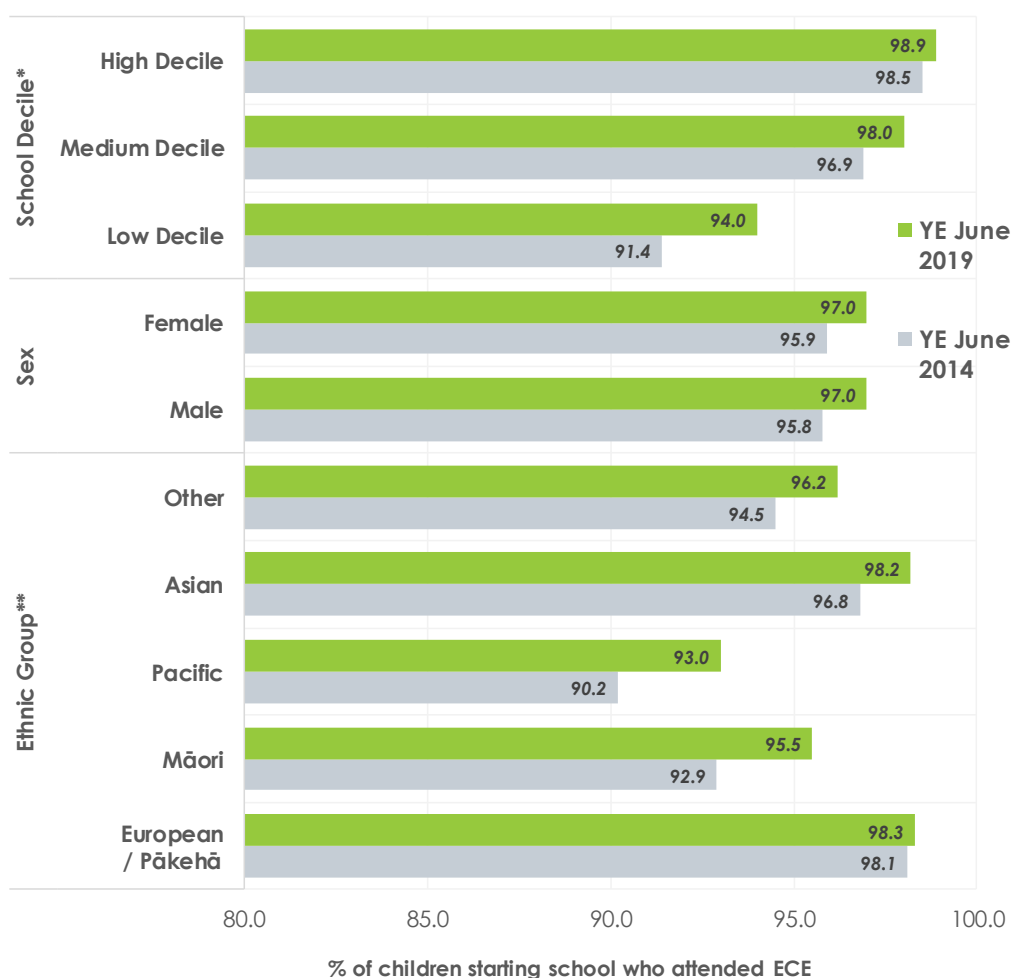
[37] Funding deciles are ratings used by the Ministry of Education to determine some of the funding a school receives. It is important to understand that decile ratings are for funding purposes only – they are not an indication of the performance or quality of education delivered at a school.

As per a Ministry of Education report, early childhood education has a range of forms in New Zealand, and our participation and expenditure rates are well above OECD averages. Older children are more likely to be enrolled than younger children, and our teacher-child ratios are among the lowest in the OECD. For most people, their education begins in early childhood. This is very common in New Zealand, where we have high levels of enrolment in early childhood education compared to other OECD countries.[38] New Zealand is ranked 11th within the OECD for the rate of children aged 3-5 years-old enrolled in either early childhood or primary education (95.0 per cent), and we are well above the OECD average of 87.0 per cent (Ministry of Education, 2019).

Technical information:

Data source(s): Ministry of Education, Education Counts

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Waikato Region and New Zealand

Data caveats and limitations: This measure does not provide information on the length of participation or on the quality of the programmes, both of which are important for positive educational outcomes.

The number of students with unknown prior ECE attendance has been excluded (from both the numerator and denominator) when calculating participation rates.

* The school decile of the school that the Year 1 child is enrolled in. It is a measure of socio-economic status, so the higher its value, the better is the socio-economic status of the area where the school is located. The total includes those children attending home schooling, the Correspondence School and students whose school campus has no decile information available.

** Students who identify with more than one ethnic group are counted in each group they identified with. Students with unknown ethnicity arte included in the totals.

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[38] In the New Zealand context, 'enrolments' is combination of attendances during the 2017 ECE Census week as captured in our Early Learning Information (ELI) system, as well as enrolments collected from services that do not use ELI. There is no information on the length of time per day/week that a child spends at early childhood education within the Education at a Glance indicators.

2.5.4 Qualification of school leavers

Definition: The proportion of secondary school leavers who leave school with a qualification at National Certificate of Educational Attainment (NCEA) Level 2 above.

Relevance: Upper secondary education provides preparation for higher (post-secondary) learning and training opportunities as well as direct entry into the work force. Those who leave school early with few or no qualifications have an increased risk of unemployment or vulnerability in the labour market, as well as having low incomes.

The main qualification available to secondary school students in New Zealand is the NCEA, which encompasses a wide range of learning. NCEA enables students to undertake multilevel study to attain credits towards levels 1, 2 and 3. NCEA level 2 is considered to be minimum level required for future education and employment prospects.

Findings:

Across the Waikato Region, 77.7 per cent of the students who left school in 2018 had a qualification of NCEA Level 2 or above; lower than the national average of 79.4 per cent. This proportion has increased over the 2014-2018 period nationally as well as all TAs across the region with the exception of Waitomo and Matamata-Piako. The biggest increase was recorded for Hauraki District while Waitomo experienced the biggest decline.

For the 2018 school year, Waipa had the highest proportion of school leavers with NCEA Level 2 or above and Waitomo the lowest.

Figure B-45: Proportion of secondary school leavers who leave school with a qualification at National Certificate of Educational Attainment (NCEA) Level 2 or above
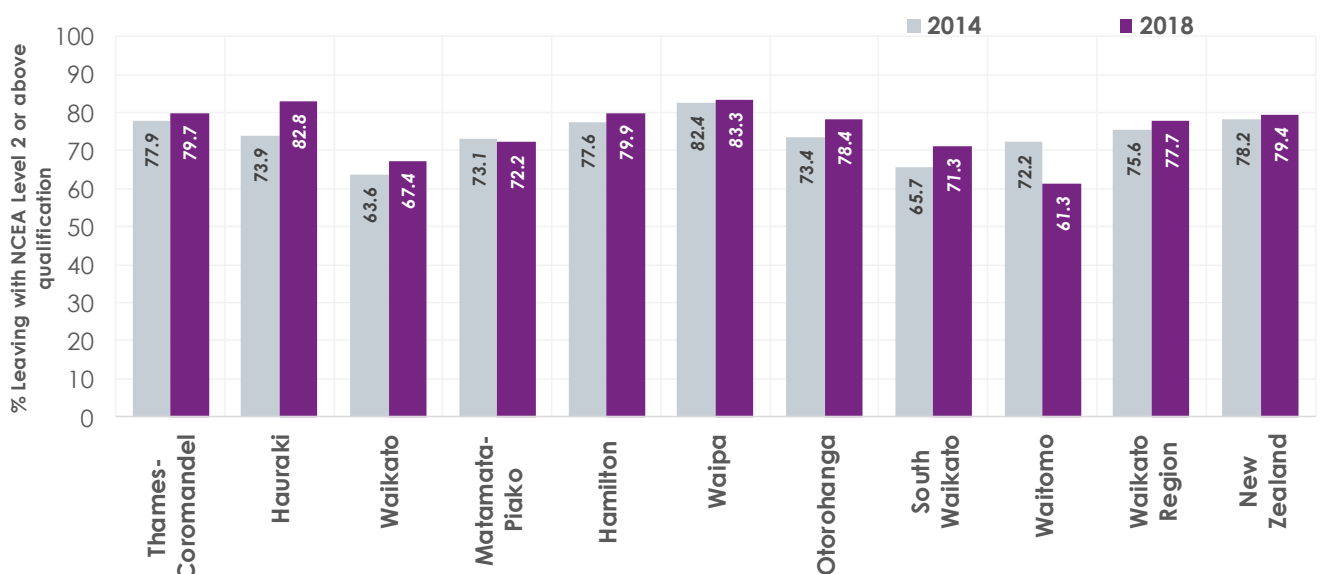
Other related findings

The proportion of school leavers with NCEA Level 2 and above varies significantly between ethnic groups. For the 2018 school year, students in the Asian ethnic group had the highest proportion at 90.6 per cent, followed by Middle Eastern/Latin American/African (MELAA) (83.7 per cent) and European students (82.4 per cents). Lowest achievement rates were recorded for Māori (65.8 per cent) and Pacific students (74.6 per cent), well below the national average.

When disaggregated by sex, female students (82.3 per cent) were more likely than male students (76.7 per cent) to leave secondary school with a qualification of NCEA Level 2 or above.

The impact of socio-economic status can be clearly seen using the decile/quintile rating of the school children are attending. Schools in the lowest quintile (Quintile 1) draw their students from communities with the highest degree of socio-economic disadvantage. Students from low-decile schools are less likely than other students to attain NCEA Level 2 or above; 66.5 per cent for Quintile 1 schools compared to 91.5 per cent for Quintile 5 schools.

Figure B-46: Proportion of secondary school leavers leaving school with a qualification at National Certificate of Educational Attainment (NCEA) Level 2 or above, disaggregated by demographic characteristics
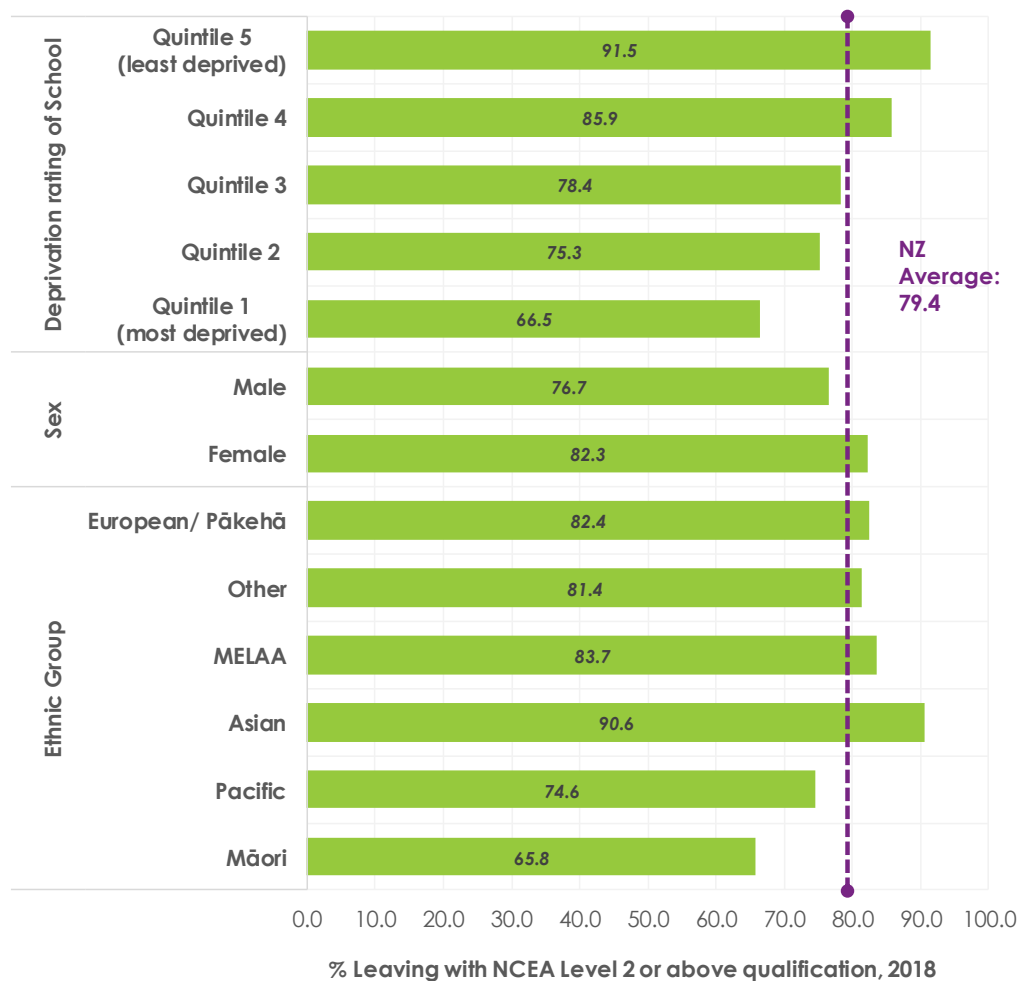
% Leaving with NCEA Level 2 or above qualification, 2018

Technical information:

Data source(s): Ministry of Education, Education Counts

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Waikato Region and New Zealand

Data caveats and limitations: School leavers are identified from the Ministry of Education's ENROL system, while the highest qualification status for each leaver is obtained from NZQA. Where a student achieved a non-NQF qualification, highest attainment information is obtained directly from their school. School leavers in 2018 (and likewise for other years) are students who permanently left school to enter the workforce and/or undertake further education and training sometime between 1 March 2018 and the last day of February 2019 (inclusive).

Vital Sign:
Environment

New Zealanders wish to enjoy all the New Zealand environment has to offer, such as a temperate climate and clean water and beaches. There is extensive use in New Zealand of the land and marine environments for both personal and commercial purposes.

The condition of our land is important as this may affect productivity in terms of agriculture and other land-based industries. Some protected areas have less than 10 per cent indigenous cover remaining which indicates they are acutely threatened (Waikato Regional Council, 2013).

Our economy also depends on a plentiful supply of fresh water for tourism, agriculture and hydroelectricity generation. For Māori, especially in the Waikato region, fresh water is taonga and essential to life and identity. The availability of recycling facilities is seen as important in the region as well as whether the local ecological environment has improved.

Five indicators were selected for this section. The first assesses people's underlying ecological views and attitudes using the New Ecological Paradigm (NEP) scale (see glossary). The River Quality indicator measures the quality of water in the Waikato Region's rivers and streams, as an average across all sites measured. The Waste recycling indicator measures people's perception of the quality of recycling services in their area. Soil Quality indicator measures whether selected sites are meeting set targets while the threatened environments indicator measures chronically and acutely threatened legally protected areas in the Waikato.

2.6.1 Environmental attitudes

Definition: **Proportion of the surveyed population found to be pro-ecological, mid-ecological or anti-ecological on the 6-item New Ecological Paradigm (NEP) scale.**

Relevance: This indicator measures the level of positive environmental attitudes expressed by people in the Waikato region measured using the average regional NEP (New Ecological Paradigm) scale score. Understanding people's positive or negative attitudes towards protecting the Waikato region's environment helps councils to focus their activities aimed at achieving this. Monitoring people's environmental attitudes means gauging how much support there is for proposed actions, policies and rules related to protecting the environment. People's comments may also reveal which areas in the region are experiencing the most pressures (Source: Waikato Progress Indicators, Waikato Regional Council).

Findings:

The NEP scale is a measure of endorsement of a "pro-ecological" worldview and is designed to measure the environmental concern of groups of people using a survey instrument constructed of six statements. Respondents are asked to indicate the strength of their agreement or disagreement with each statement. Responses to these six statements are then used to construct various statistical measures of environmental concern. The NEP scale is considered a measure of environmental worldview or paradigm (framework of thought) (Source: Waikato Progress Indicators, Waikato Regional Council). Compared to 2013, the proportion of the surveyed population assessing themselves to be pro-ecological or mid-ecological in their attitude towards the environment has declined marginally from 89.0 per cent in 2013 to 87.0 per cent in 2019.

Figure B-47: Attitude of the surveyed 15+ year population towards the environment, measured on the 6-item New Ecological Paradigm (NEP) scale
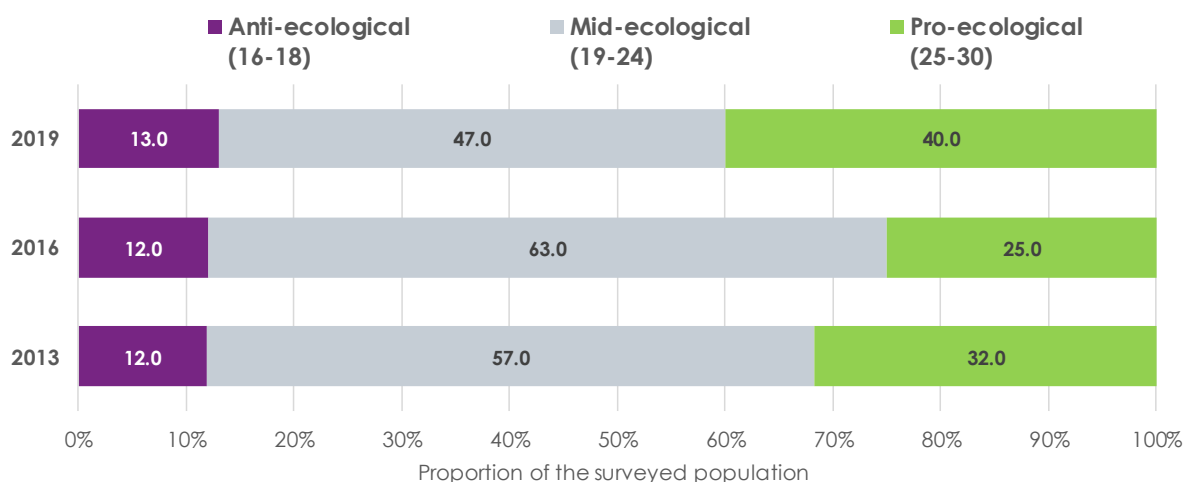
Technical information:

Data source(s): Environmental Awareness, Attitudes and Action (EAAA) and the New Ecological Paradigm (NEP) surveys, Waikato Regional Council

Geography: Waikato Region

Data caveats and limitations: 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. (Source: Waikato Progress Indicators, Waikato Regional Council)**.**

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error. There are two limitations to using telephone questionnaires to assess people's environmental perceptions: (1) Telephone questionnaires are biased towards people owning landline telephones, and therefore may miss some people in the community. (2) Many factors influence people's attitudes to their local environment, including where and how people live, what news media items they have recently seen and who they are. These influences are not measured by quantitative questionnaires. It should also be noted that people's responses may be affected by what they are doing at the time they received the survey telephone call – i.e. whether they are distracted or busy.

2.6.2 River water quality

Definition: The percentage of unsatisfactory river water samples for ecological water quality in the Waikato Region's rivers and streams, as an average across all sites measured.

Relevance: Monitoring a representative cross-section of rivers and streams across the Waikato region helps councils to assess the suitability of their water quality for native water plants and animals to live in (ecological water quality). Water quality not only affects the surrounding habitat; it can also impact elsewhere, because 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. Contamination at one site in a river can flow to other sites further down the catchment.

Monitoring these sites helps councils to identify and manage issues so they can protect or improve water quality in these areas. Land use and what people do in terms of river water use are two key areas influencing water quality. Sharing this information with people in the region can encourage them to consider the impact of their activities on water quality. They may also become motivated to work together with councils and other people in their community to keep the Waikato Region's water quality and its environment protected now and in the future (Source: Waikato Progress Indicators, Waikato Regional Council).

Findings:

Monthly monitoring of water quality in the Waikato River began in 1980, with a more comprehensive programme beginning in 1987. Waikato Regional Council now samples water quality regularly at ten sites along the river.

The proportion of satisfactory river water samples for ecological water quality remains largely unchanged over the 2008-2017 period – around 72 per cent. 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 Waikato Region.

During the past 20 years, measured levels of total nitrogen have increased at several sites along the river. This is probably a result of land use changes over recent decades. Pressures from wastewaters have generally decreased 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 (Source: Waikato Progress Indicators, Waikato Regional Council).

Figure B-48: River quality measured at various Waikato river sampling sites between 2008 and 2017

Legend:
- ☺ Important improvement
- ☺ Slight improvement
- u Uncertain
- ☹ Slight deterioration
- ☹ Important deterioration
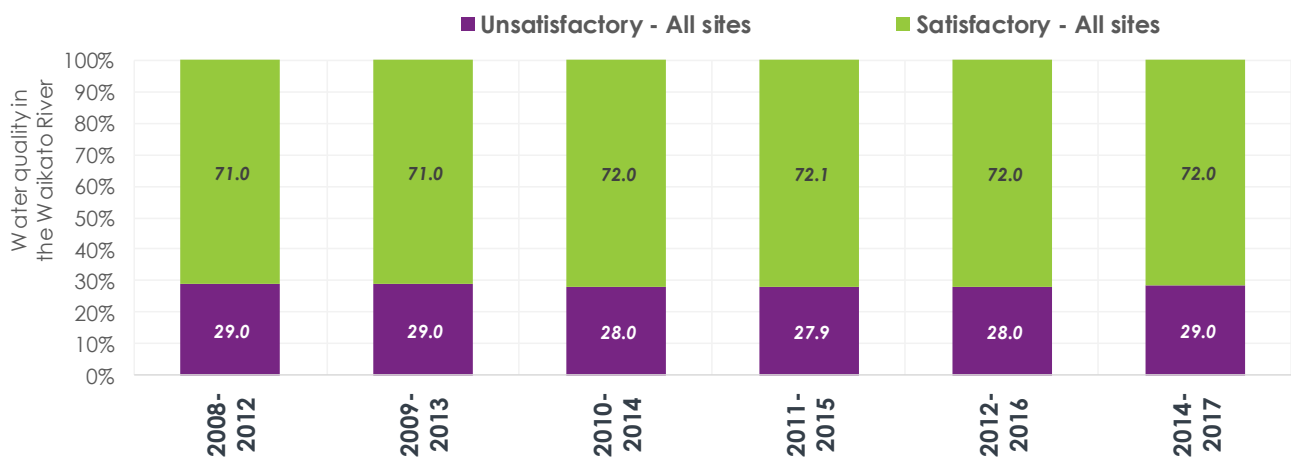
	Taupo	Ohaaki	Ohakuri	Whakamaru	Waipapa	Narrows	Horotiu	Huntly	Mercer	Tuakau
Temperature	Slight deterioration	Slight improvement	Slight deterioration	u	u	u	Slight improvement	u	Slight improvement	Slight improvement
Dissolved oxygen	u	Slight improvement	u	u	Slight deterioration	Slight deterioration	u	u	Slight deterioration	Slight deterioration
Visual clarity	nd	Slight deterioration	Slight deterioration	u	Slight deterioration	Slight improvement	Slight improvement	u	nd	Slight deterioration
Turbidity	Important deterioration	Important deterioration	Slight deterioration	u	u	u	u	u	Important deterioration	Important deterioration
Arsenic	Important deterioration	Important improvement	Slight improvement	u	Slight improvement	Slight improvement	Slight improvement	Slight improvement	Important improvement	Important improvement
Ammonia	u	Important improvement	Important improvement	u	u	Slight improvement	Important improvement	Important improvement	u	u
Total nitrogen	u	Important deterioration	Important deterioration	Important deterioration	Important deterioration	Important deterioration	Important deterioration	Important deterioration	Important deterioration	Important deterioration
Total phosphorus	Important improvement	Important improvement	u	u	u	Slight improvement	Important improvement	Important improvement	Slight improvement	Important improvement
Chlorophyll *a*	u	u	u	u	Important improvement	Important improvement	Important improvement	Important improvement	Important improvement	Important improvement
E. coli	Important deterioration	Slight improvement	Important deterioration	Important deterioration	u	u	u	u	Important deterioration	Important deterioration

Note: 'nd' means data not available.

Technical information:

Data source(s): Water quality trends in the Waikato River (using methods in Waikato Regional Council Technical Report 2013/20), data sourced from the Waikato Progress Indicator (WPI) dataset provided by Waikato Regional Council.

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'. The figures reported here relate to average number of unsatisfactory samples across ALL monitoring sites, as provided by the Waikato Regional Council Water Quality Scientist.

Geography: Specific sites on the Waikato River and other rivers throughout the region.

2.6.3 Soil quality

Definition: **The estimated percentage of soil quality monitoring sites in the Waikato Region meeting five or more soil quality targets.**

Relevance: Measuring soil quality for four main land use types in the Waikato Region helps councils assess whether they are suited to the activities they support. These activities include dairy farming, dry-stock farming (sheep, beef, deer etc.), horticulture and cropping, and plantation forestry. Good quality soils are those whose key characteristics are in good condition for their current land use.

Monitoring these sites helps councils to identify and manage issues so they can protect or improve soil quality in these areas through their policies and plans, regulation and education. This includes working directly with people involved in activities or industries that can have a significant impact on the land, to ensure our region's soils remain viable now and in the future (Source: Waikato Progress Indicators, Waikato Regional Council).

Findings:

Good quality soils are those whose key characteristics are in good condition for the current land use, mainly dairy farming, dry stock farming (sheep, beef, deer etc.), horticulture and cropping, and plantation forestry. Soils need to hold water and nutrients where they are readily available for plant roots to take them up, suppress pests and weeds, sequester carbon from the atmosphere, filter clean the water that flows through it into rivers, lakes, and aquifers, and prevent flooding by acting as a sponge during heavy rain. Good quality soils are full of beneficial organisms from microbes to earthworms that have important roles in natural recycling, inhibiting disease-causing organisms and soil formation (especially soil organic matter).

Between 2009 and 2018, the percentage of monitoring sites in the Waikato Region which met five or more soil quality targets has marginally increased from 80.2 per cent to 81.5 per cent. About 11 percent of productive sites across the region had satisfactory soil quality for their current land use in 2018. This compares with 18 percent being satisfactory in 2010 and 43 per cent in 2005. The main soil quality issues in the Waikato Region are soil compaction, excessive nutrients and loss of soil organic matter (SOM) with the associated decrease in biological activity of microorganisms (Source: Waikato Progress Indicators, Waikato Regional Council).

Figure B-49: Proportion of the monitoring sites across the Waikato Region meeting five or more soil quality targets
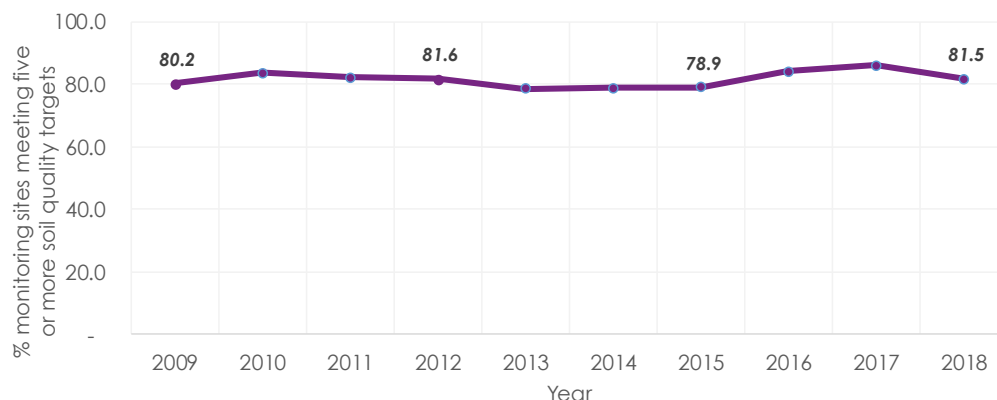
Key findings for the four main types of land uses (Source: Waikato Progress Indicators, Waikato Regional Council):

- Over 95 per cent of sites under dairy farming had soil quality that is of concern, with excessively high fertility and/or soil compaction affecting about 85 percent of the sites.
- More than 90 percent of sites under dry stock farming had soil quality that is of concern. About 70 per cent of the sites are affected by soil compaction and/or excessive fertility, while about 24 percent of sites are affected by low fertility.
- Nearly 90 percent of sites under cropping and horticulture has soil quality that is of concern. About 55 percent of the sites are affected by excessively high fertility while about 70 percent of the sites under cropping have low stability of aggregates. Nearly all cropping sites show loss of soil organic matter compared to other land uses.
- Over 60 percent of the land under forestry has soil quality measurements outside targets.

Technical information:

Data source(s): Waikato Progress Indicators (WPI) dataset provided by the Waikato Regional Council (soil quality monitoring programme)

Geography: Waikato Region

Data caveats and limitations:

Waikato Regional Council monitors soil quality sites throughout the region against seven targets agreed by the National Land Monitoring Forum: total carbon (organic matter), total nitrogen (N), mineralised N, soil pH (acidity/alkalinity), phosphorous (P), soil density and macro-porosity (a measure of the ability for air to penetrate the soil) (Source: Waikato Progress Indicators, Waikato Regional Council).

2.6.4 Threatened environments

Definition: **Percentage of the legally protected areas that are acutely (less than 10% indigenous cover left) or chronically (10-20% indigenous cover left) threatened.**

Relevance: The native plants and trees of New Zealand are unique, having evolved in isolation for millions of years. Protecting land is one way we can preserve and regenerate our native vegetation in a sustainable way and retain an area's natural character. Areas of protected land also provide a valuable place for our native animals to live in. Small sections of protected land such as forest fragments can also provide a 'corridor' between larger areas of protected land, providing indigenous links for native birdlife to move between areas of native vegetation. Identifying and monitoring our areas of protected land enables councils, individuals and environmental groups to work together to manage and preserve these areas for future generations (Source: Waikato Progress Indicators, Waikato Regional Council).

Findings:

Protected areas are defined as "A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Source: WPI, Waikato Regional Council). Legally protected areas are internationally recognised as important tools for conserving species and ecosystems, and they include both publicly and privately owned land (Source: Waikato Progress Indicators, Waikato Regional Council).

Most of the Waikato region's land area is in non-indigenous cover with approximately 28 per cent covered by indigenous (native) vegetation. 17 per cent of this area (399,459.2 ha) is legally protected for conservation and biodiversity protection purposes (399,459.2 ha, which is 59 per cent of the region's indigenous cover). As of March 2014, the legally protected area of the region's most threatened environments was 17,781.47 ha. The protection of these environments varies across districts.

In 2007, the Government released a statement of national priorities for protecting rare and threatened biodiversity on private land (Ministry for the Environment & Department of Conservation, 2007), where acutely (less than 10 per cent indigenous cover left) and chronically (10-20 per cent indigenous cover left) environments are categorised as National Priority 1 Environments. The priorities are also relevant to public land. As specified by the Ministry of Environment, 20 per cent is a critical threshold for measuring ecosystem vulnerability - the rate of biodiversity loss increases dramatically when the amount of available habitat drops below 20 per

cent of its original extent. Therefore, National Priority 1 Environments are the habitats most in need of protection (Source: Waikato Progress Indicators, Waikato Regional Council).

Figure B-50: Percentage of the legally protected land area with indigenous cover that is chronically or acutely threatened
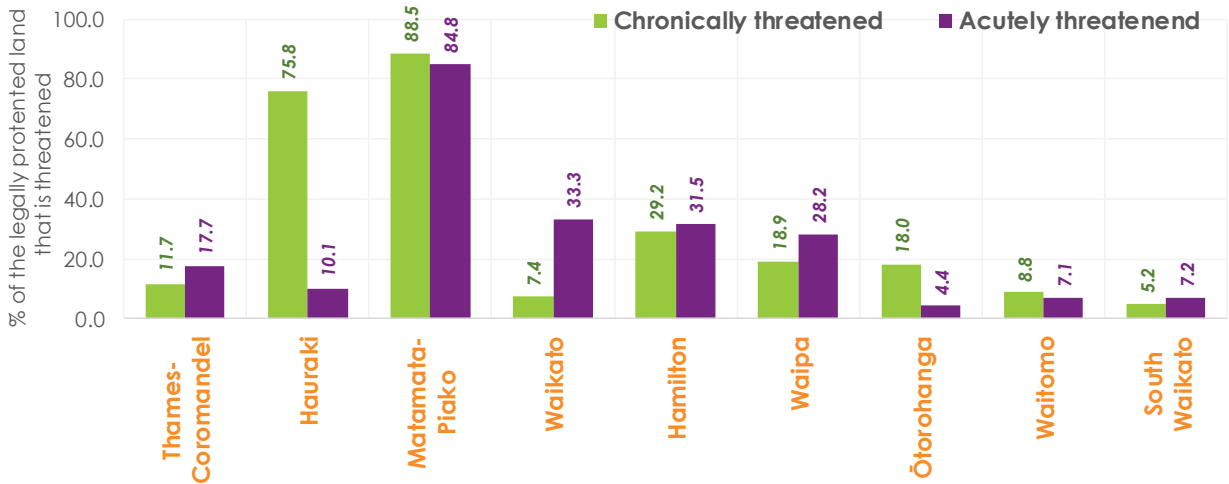
Technical information:

Data sources: Waikato Progress Indicators (WPI) dataset provided by the Waikato Regional Council. For more information on these data go to

2.6.5 Waste recycling

Definition: Proportion of the surveyed adults who think that the availability of waste recycling services and facilities in their area has become little or much better in the last few years.

Relevance: With increasing population, the estimated amount of waste going into landfills in the Waikato Region is also increasing. When waste ends up in our landfills, it can indicate how efficiently or inefficiently we are using our resources. This is particularly concerning when discarding reusable and recyclable materials such as paper, plastic, organic waste, glass and metal. It is not just the inefficient use of resources that is of concern. Some forms of waste produce greenhouse gases (which can affect climate change) and others can have significant health impacts on humans and animals. We also need to manage our waste effectively to avoid it polluting the Waikato Region's waterways, air and land (Source: Waikato Progress Indicators, Waikato Regional Council).

Looking at people's assessment of the availability of waste recycling services and facilities in their area can be useful in identifying whether extra support is needed to make recycling easier for people.

Findings:

In 2019 only a quarter of the surveyed population thought availability of waste recycling services and facilities has become a little better (16 per cent) or much better (9 per cent) over the past few years. This is much lower than the 42-43 per cent reported in the previous two survey years. Conversely, the proportion of the respondents feeling that the services have become a little or much worse has more than doubled.

Figure B-51: Assessment by surveyed respondents on the quality of waste recycling services and facilities in their area over the past few years

The proportion of the surveyed population who thought availability of waste recycling services and facilities has become a little better or much better over the past few years has decline across all TAs since the last survey in 2016. Hamilton recorded the lowest proportion (only 18% agreeing that services are better) and Waitomo the highest.

Figure B-52: Proportion of respondents in each TA who thought that the waste recycling services were little or much better in their area over that past few year
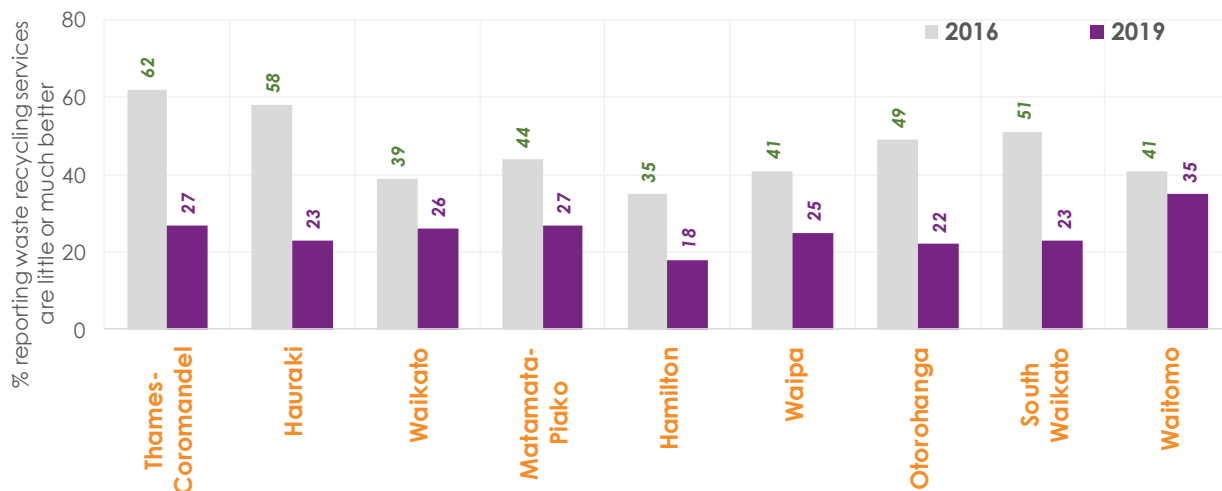
Technical information:

Data source(s): 'Your Environment - What matters', three-yearly survey of residents of the Waikato Region by Waikato Regional Council

Geography: Waikato Region

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

For 2019, findings from 1,250 surveys conducted with residents of the Waikato Region were analysed to track residents' perceptions about their local environment, areas of concern, and actions that have been taken to support environmental wellbeing. The work was completed via a mixed-method approach to data collection to ensure a range of residents were canvassed throughout the engagement process. Broad quotas were placed on key demographic groups and TAs; weighting was also applied to ensure the final dataset was representative of the Waikato Region's population. The sample size for the individual TAs ranged from 282 in Hamilton to 80 in Waitomo. The small sample sizes mean that the TA level findings should be interpreted with caution.

Vital Sign:
Health

Health is a vital dimension of wellbeing. Poor health means people are less able to enjoy life, their opportunities will be more limited and levels of overall contentment are likely to be reduced. Good health has two major components, how long people live (life expectancy) and the quality of their lives. Living a long life free from disability and pain is an aim we can all share.

Some people need further support because of illness, injury or disability. This support may be from families or from the government to help them participate more fully in society and improve their social wellbeing.

People with disabilities, illness (both mental and physical) or injury may find there are barriers to their participation in education, training and employment which would reduce their economic standard of living. These barriers may also decrease social interactions and leisure pursuits which could lead to feelings of isolation and frustration.

In this section five indictors have been selected. These were chosen to provide a snapshot of current health in the Waikato Region and cover life expectancy, cigarette smoking, obesity, mental health – psychological distress (diagnosed) and access to primary health care.

Life expectancy relates to the current state of the region's health. It measures how long people live and is an indicator of fatal health outcomes. Cigarette smoking and obesity, are predictors of future health outcomes. Both are linked by research to poor health outcomes such as an increased risk for heart attacks and cancer. The fourth indicator, prevalence of psychological distress, gives an indication of the social wellbeing of the population of the Waikato Region. The new indicator, unmet need for primary health care measures access services which is central to improving the health of all New Zealanders and reducing health inequalities between different groups

2.7.1 Smoking

Definition: **Percentage of current smokers (age-standardised rate) among the population aged 15 years or more.**

People are considered to be current smokers if they smoke at least monthly, and have smoked more than 100 cigarettes in their lives.

Relevance: Smoking is a major risk factor for at least two of the leading causes of premature mortality - circulatory disease and cancer, increasing the risk of heart attack, stroke, lung cancer, and cancers of the larynx and mouth. In addition, smoking is an important contributing factor for respiratory diseases. Smoking is a leading cause of preventable morbidity and mortality in New Zealand and is also linked to socio-economic disadvantage. Around 5,000 people die each year in New Zealand because of smoking or second-hand smoke exposure.

Tobacco kills nearly 6 million people each year, of whom more than 5 million are from direct tobacco use and more than 600 000 are non-smokers exposed to second-hand smoke. It is a major risk factor for at least two of the leading causes of premature mortality, cardio-vascular diseases and cancer. Smoking remains the largest avoidable risk factor for health in OECD countries and worldwide(OECD Fact book[39]).

Findings:

As measured at the New Zealand Health Survey, one out of every five people (19.5 per cent) aged 15 years or more across the Waikato Region reported being a current smoker in the 2014/17 pooled year period. This is lower than the proportion recorded in 2011/14 (23.0 per cent) for the region but higher than the national average of 17.2 per cent recorded for 2014/17.

The Waikato Region ranks 11th among the 16 regions in terms of high percentage of population reporting as being current smokers.

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[39] https://www.oecd-ilibrary.org/sites/factbook-2015-en/index.html?itemId=/content/publication/factbook-2015-en

Figure B-53: Proportion of the 15+ year population who reported being a current smoker (age-standardised rate)
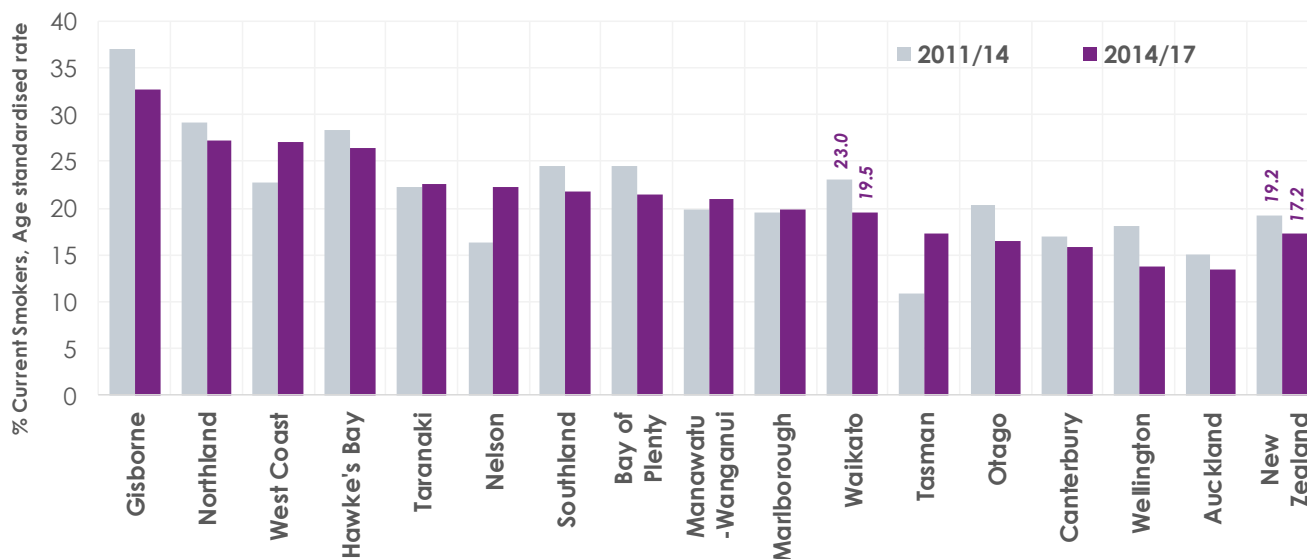
Other related findings

There were large differences in the prevalence of smoking for different ethnic groups. In 2014/17, 38.2 per cent of Māori adults in the Waikato Region were current smokers, compared with 18.2 per cent of Pacific peoples and only 7.0 per cent for Asians. Not shown here, but this pattern of differences between ethnic groups is also present in previous years.

Across the Waikato Region, males were more likely than females to be current smokers (21.8 per cent of males compared with 17.3 per cent of females).

Rate of smoking tobacco is highest among the prime working age population (25-44 years) with a quarter (24.4 per cent) reporting to be current smokers; and lowest among those aged 65 or more (10.4 per cent). Not shown here, but in all age groups, smoking rate is higher for males than it is for females.

A greater proportion of people living in the most deprived areas were current smokers (31.8 per cent) compared with people living in the least deprived areas (10.4 per cent). The smoking rate increased as the level of neighbourhood deprivation increased.

Figure B-54: Proportion of current smokers among 15+ year olds disaggregated by demographic characteristics
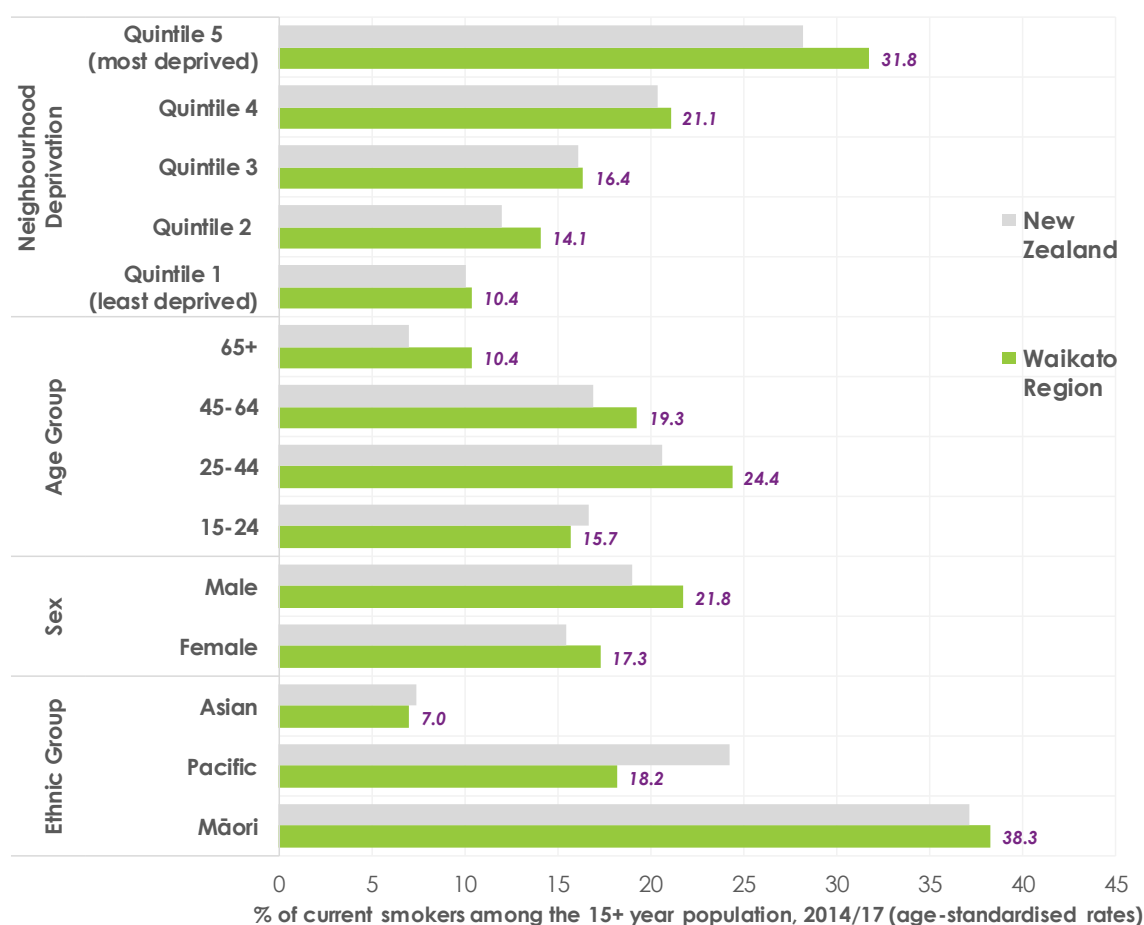
Technical information:

Data source(s): New Zealand Health Survey, Ministry of Health
(https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update)

Geography: Waikato Region and New Zealand

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

The New Zealand Health Survey survey has a multi-stage sampling design that involves randomly selecting a sample of small geographic areas, households within the selected areas, and individuals within the selected households. One adult aged 15 years or older and one child aged 14 years or younger (if any in the household) were chosen at random from each selected household.

Survey respondents are selected from the 'usually resident' population of all ages living in private dwellings, aged-care facilities and student accommodation (99 per cent of the usually resident population). For practical reasons, the survey did not include: people living in institutions (such as long-term hospital care, hospital- and dementia-level care in aged-care facilities and prisons), the homeless, short-term visitors and tourists. The 2014-2017 pooled data contains 40,900 adult respondents and 14,100 children.

Sample sizes for most regions are not sufficient to produce reliable estimates for single years. However, reliable regional level statistics can be produced by pooling annual data to improve the range and statistical quality of analyses that can be undertaken at that level. Pooling annual NZHS data sets can also improve the statistical precision of estimates for Māori and ethnic minorities (including Pacific and Asian ethnic groups).

2.7.2 Life expectancy

Definition: Life expectancy at birth

Relevance: Life expectancy at birth is defined as how long, on average, a newborn can expect to live, if current death rates do not change. That is, it measures the average length of life at birth. Life expectancy at birth is one of the most frequently used health status indicators. Gains in life expectancy at birth can be attributed to a number of factors, including rising living standards, improved lifestyle and better education, as well as greater access to quality health services (OECD, 2016). This indicator is presented as a total and also disaggregated by sex, and is measured in years.

Findings:

As per the Stat NZ Life Tables[40], New Zealand women have life expectancy at birth of 83.7 years, higher than that for men who are likely to live until 80.3 years on average. Lowest life expectancy at birth among women as well as men is recorded for the Waitomo and South Waikato TA areas.

Figure B-55: Life expectancy at birth for males and females
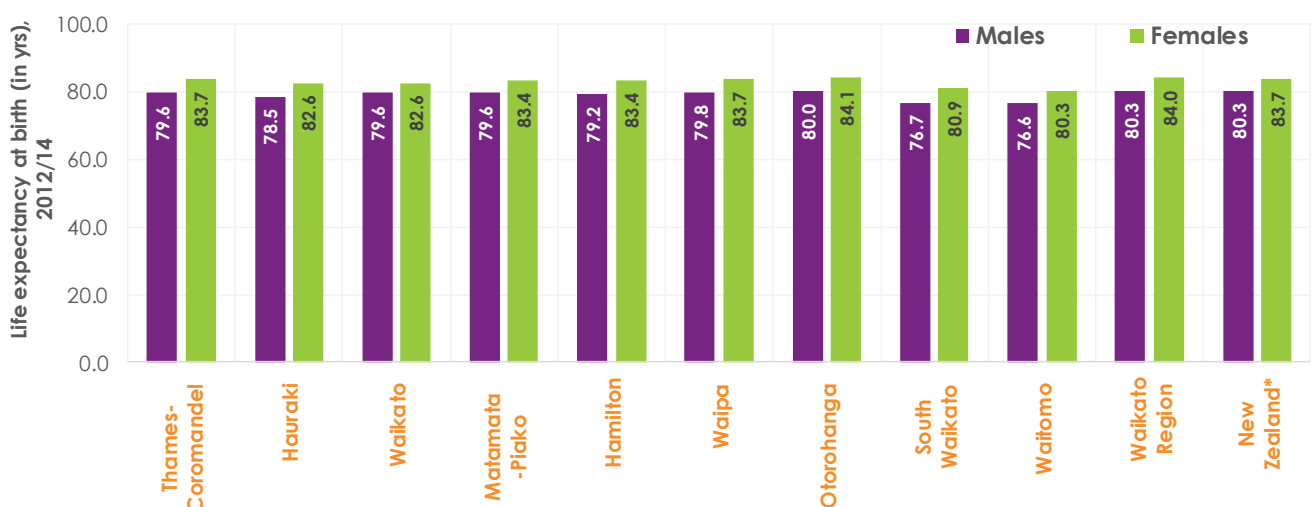
The life expectancy at birth for New Zealand is sourced from the 2016/18 period life tables. Sub-national period life tables for 2016/18 were not available at the time of completing this report.

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[40] Life tables are a basic demographic tool for analysing mortality and survival. They show death and survivorship rates at each age of life

Other related findings

The life expectancy at birth for the Māori population, both males and female, is significantly lower than that for non-Māori.

Figure B-56: Life expectancy at birth for Māori and non-Māori
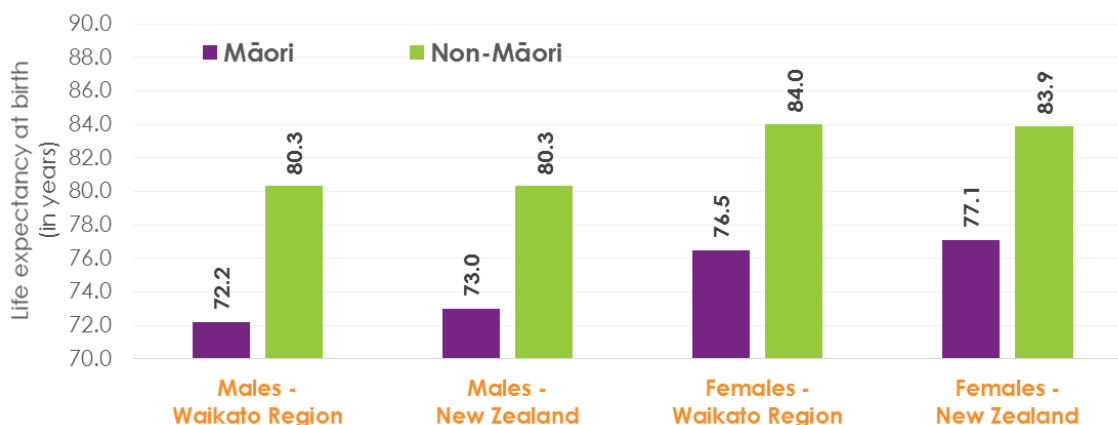
Most OECD countries have enjoyed large gains in life expectancy over the past decades, thanks to improvements in living conditions, public health interventions and progress in medical care. Life expectancy at birth for NZ women stands at 83.63 years – ranked 21st among the OECD countries with highest life expectancy.

NZ men have a life expectancy at birth of 80.2 years, ranked 11th among the OECD countries with highest life expectancy.

Higher life expectancy is generally associated with higher health care spending per person, although many other factors have an impact on life expectancy (such as living standards, lifestyles, education and environmental factors) (Source: OECD Better Life Index).

Independent life expectancy (ILE) is a measure of health expectancy that both the Ministry of Health and the Ministry of Social Development use as a 'headline' or 'peak' health indicator. ILE is defined as the average number of years that a person can be expected to live independently, either free of any disability (functional limitation) or with functional limitations that they can manage without assistance (Ministry of Health, 2013).

The following findings have been concluded from the results of the 2013 Disability Survey and the 2012–2014 period life tables:

- Males have shorter lives than females but spend a higher proportion of their lives in good health.
- Māori males have the lowest ILE and live longest with dependency.
- At the age of 65 years, New Zealanders can expect to live half of their remaining lives independently (54.1% for males and 49.5% for females).

Figure B-57: Life expectancy for OECD countries, 2017 or latest recorded year

WOMEN	MEN

Life Expectancy at birth (in years), 2017 or latest available year

New Zealand (Women): 83.6
New Zealand (Men): 80.2
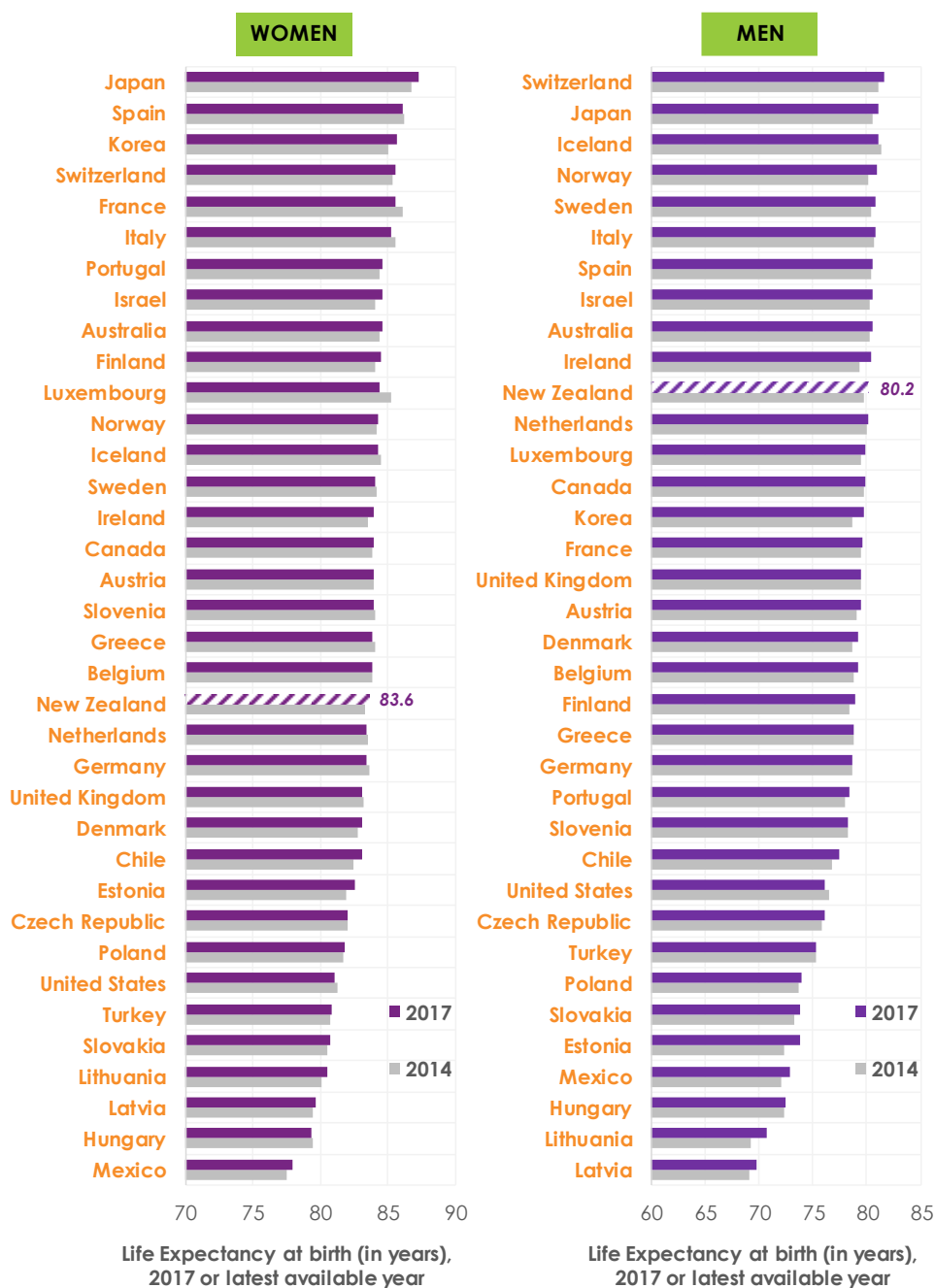
Technical information:

Data source(s): Statistics New Zealand – Period Life Tables, OECD Data Bank

Geography: Thames-Coromandel, Hauraki, Waikato, Matamata-Piako, Hamilton, Waipa, Otorohanga, South Waikato, Waitomo, Vital Signs Region and New Zealand

2.7.3 Obesity

Definition: **The age-standardised prevalence of obesity in the population aged 15 years or more.**

Obesity is defined as having a Body Mass Index (BMI) of 30 or greater for population aged greater than 18 years or the IOTF[41] equivalent for those aged 15-17 years.

Relevance: Rising obesity is a pressing global public health problem responsible for rising health care costs and in some countries one of the leading causes of preventable deaths. There is substantial evidence that obese people are less likely to be employed and, when employed, earn lower wages. There is now a considerable body of evidence linking obesity with a wide range of health issues. It is associated with heart disease, diabetes, strokes, high blood pressure and some cancers. The increase in the prevalence of obesity has been identified as a major cause of the projected increase in diabetes. There are also a range of adverse social and emotional effects associated with obesity and being overweight, including discrimination, lower quality of life, and susceptibility to depression.

Findings:

As measured at the New Zealand Health Survey for the 2014/17 pooled data year, over one-third (35.1 per cent) of the population aged 15 years or more across the Waikato Region is obese, higher than the national average of 30.5 per cent. The obesity rate in the region has remained similar to that recorded for 2011/14 whereas nationally the rate has increased.

Waikato Region ranks 6th among the 16 regions in terms of high obesity rates among the resident population aged 15+ years.

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[41] BMI cut-off points developed by the International Obesity Taskforce (IOTF) used to define underweight (or thinness in children), healthy weight, overweight, and obese.

Figure B-58: Age standardised prevalence of obesity in the population aged 15 years or more
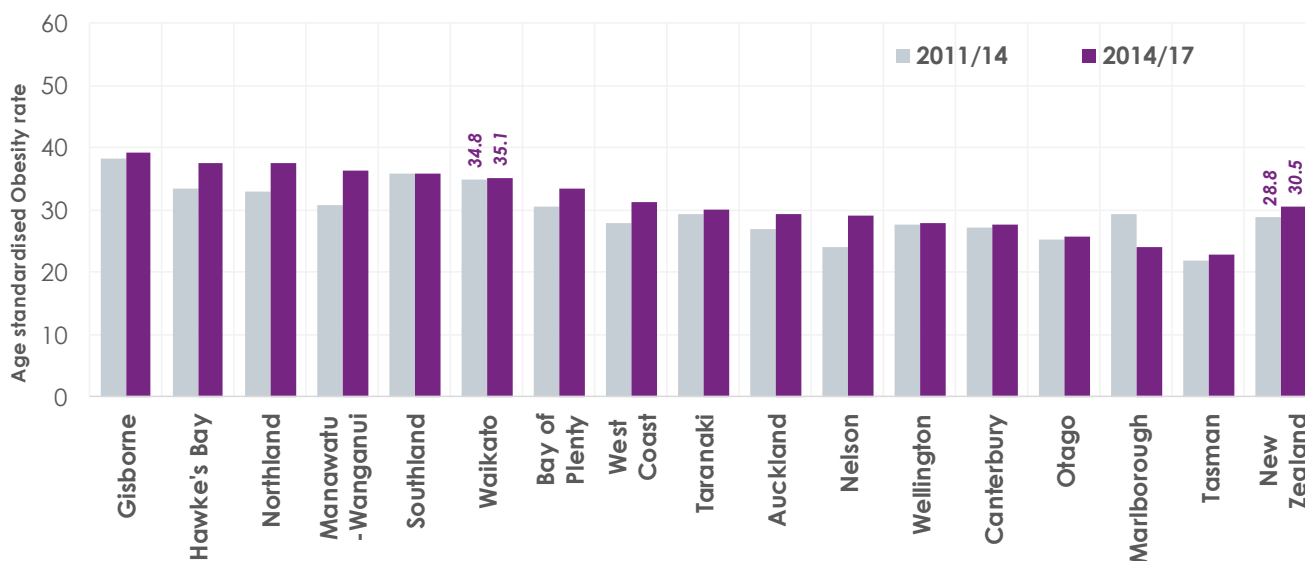
Other related findings

There were large differences in the prevalence of obesity for different ethnic groups. In 2014/17, over half of Māori (51.1 per cent) and Pacific (53.3 per cent) adults in the Waikato Region were obese, compared with only 10.3 per cent for Asians. Not shown here, but this pattern of differences between ethnic groups is also present in previous years.

Across the Waikato Region, similar proportions of male and female adults were obese.

For adults aged between 15-64 years, the obesity prevalence rates increased with age. Youth and young people aged 15-24 years had the lowest obesity rate with just over one in five categorised as obese.

Over two in five (42.8 per cent) adults living in the most deprived areas were obese, substantially higher than the proportion recorded for low deprivation areas (28.8 per cent). The prevalence of obesity increased as the level of neighbourhood deprivation increased.

Figure B-59: Obesity prevalence among 15+ year olds disaggregated by demographic characteristics

Obesity prevalence among 15+ year population, 2014/17 (age-standardised rates)

Legend: New Zealand (grey), Waikato Region (green)

Values (Waikato Region):
- Neighbourhood Deprivation:
  - Quintile 5 (most deprived): 42.8
  - Quintile 4: 37.4
  - Quintile 3: 31.6
  - Quintile 2: 29.2
  - Quintile 1 (least deprived): 28.8
- Age Group:
  - 65+: 35.7
  - 45-64: 42.2
  - 25-44: 37.3
  - 15-24: 22.5
- Sex:
  - Male: 35.0
  - Female: 35.3
- Ethnic Group:
  - Asian: 10.3
  - Pacific: 53.3
  - Māori: 51.1
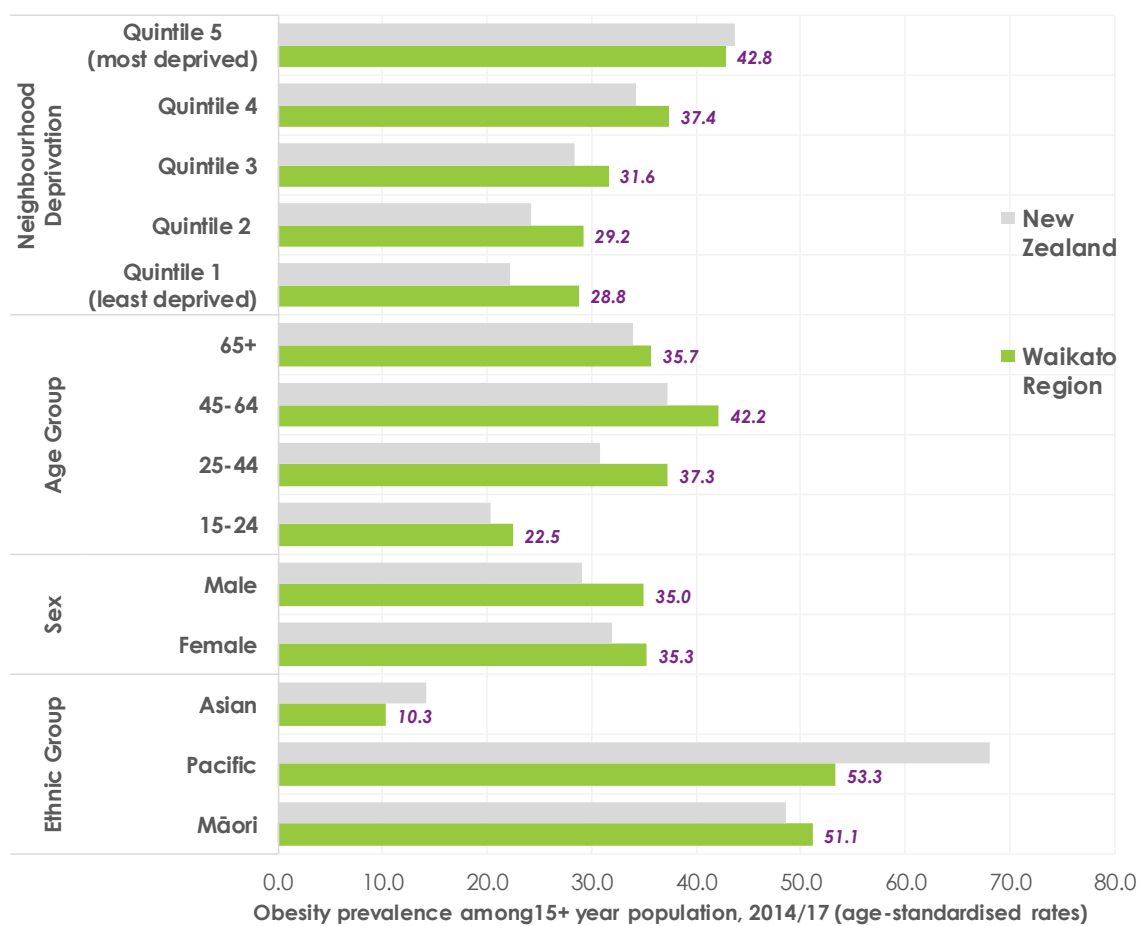
As per a 2017 OECD report[42], more than one in five adults and nearly one in six children are overweight or obese in the OECD area. The obesity epidemic has spread further in the past five years, although at a slower pace than before. Despite this, new projections show a continuing increase of obesity in all studied countries. New Zealand ranks 4th among the OECD countries with high obesity rates among adults aged 15+ years (below United States, Chile and Mexico).

As per the 2017 Obesity Update, education and socio-economic background affect obesity. Reciprocally, obesity damages labour market outcomes that, in turn, contribute to reinforcing existing social inequalities (Devaux & Sassi, 2015). Obese people have poorer job prospects compared to normal-weight people, they are less likely to be employed and have more difficulty re-entering the labour market. Obese people are less productive at work due to more sick days and fewer worked hours, and they earn about 10% less than non-obese people. Addressing obesity and the associated negative labour market outcomes would help break the vicious circle of social and health inequalities.

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[42] https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf

Technical information:

Data source(s): New Zealand Health Survey, Ministry of Health
(https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update)

Geography: Waikato Region and New Zealand

Data caveats and limitations: Body mass index (BMI) was calculated by dividing weight in kilograms by height in metres squared (kg/m²). For adults aged 18 years and over, the following BMI categories are used:

- underweight: BMI < 18.50
- healthy weight: BMI 18.50–24.99
- overweight: BMI 25.00–29.99
- obese: BMI 30+

- obese class 1: BMI 30.00–34.99
- obese class 2: BMI 35.00–39.99
- obese class 3: BMI 40+.

These categories are based on the World Health Organization (WHO) BMI cut-off points for adults aged 18 years and over (WHO 2007).

For those aged 15–17 years, BMI cut-off points developed by the International Obesity Taskforce (IOTF) were used to define underweight (or thinness in children), healthy weight, overweight, and obese (Cole et al 2000, 2007). The IOTF BMI cut-off points are sex- and age-specific and have been designed to coincide with the WHO BMI cut-off points for adults at age 18 years.

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.7.4 Psychological distress

Definition: **Age standardised rate of psychological distress in the population aged 15 years or more**

Psychological distress measured as having a high or very high probability of anxiety or depressive disorder (Kessler-10 score ≥ 12)[43].

Relevance: Mental disorders account for one of the largest and fastest growing categories of the burden of disease worldwide. Mental ill-health can have devastating effects on individuals, families and communities, with one in every two people experiencing a mental illness in their lifetime. As many as 80 per cent of those with a common mental disorder, and up to 50 per cent of those with a severe mental disorder, do not seek or receive treatment. Mental ill-health also weighs heavily on societies and economies; the economic burden of mental ill-health can rise to up to 4 per cent of GDP, and those with mental illness have poorer educational and work outcomes than those in good mental health. Good mental health is fundamental to the well-being of individuals, their families and the population as a whole.

Psychological distress is a sign of mental illness and refers to a person's experience of symptoms such as anxiety, confused emotions, depression or rage.

Findings:

As measured at the New Zealand Health Survey for the 2014/17 pooled data year, 8.5 per cent of the population aged 15 years or more across the Waikato Region reported suffering from high or very high levels of psychological distress as measured by the Kessler-10 (K-10) scale, higher than the national average of 7.3 per cent. The prevalence of psychological distress in the region has increased substantially from 5.4 per cent recorded for 2011/14 compared to 8.2 for 2014/17. This trend is mirrored across almost all regions (except in Wellington and Gisborne).

Waikato Region ranks 4th among the 16 regions in terms of high rates of psychological distress sufferers among the resident population aged 15+ years.

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[43] Kessler Psychological Distress Scale (K10). People who score 12 or more on the K10 have experienced high or very high levels of psychological distress in the past four weeks and have a high probability of having an anxiety or depressive disorder.

Figure B-60: Age standardised prevalence of psychological distress in the population aged 15 years or more
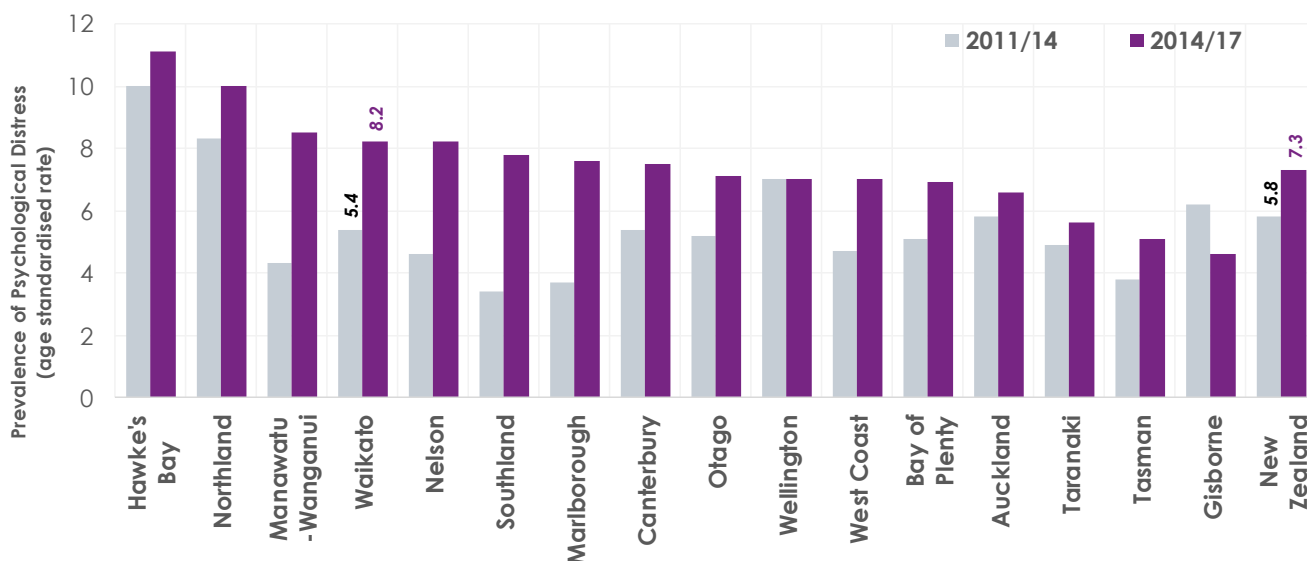
Other related findings

There were large differences in the prevalence of psychological distress for different ethnic groups. In 2014/17, over one in ten Māori adults (11.8 per cent) reported suffering from high or very high levels of psychological distress as measured by the Kessler-10 (K-10) scale. This is much higher than the levels recorded for Pacific peoples (8.2 per cent) and Asians (4.9 per cent).

Across the Waikato Region, the proportion of females who reported experiencing high or very high levels of psychological distress (10.4 per cent) is substantially higher than for males (6.0 per cent).

The prevalence of psychological distress is similar among young people and adults aged less than 65 years. It is lowest among the oldest population group of 65+ year olds.

Rates increased as the level of neighbourhood deprivation increased - 8.7 per cent of people living in high deprivation neighbourhoods reported experiencing high or very high levels of psychological distress compared to only 3.1 per cent among people living in the affluent areas.

Figure B-61: Prevalence of psychological distress among 15+ year olds disaggregated by demographic characteristics
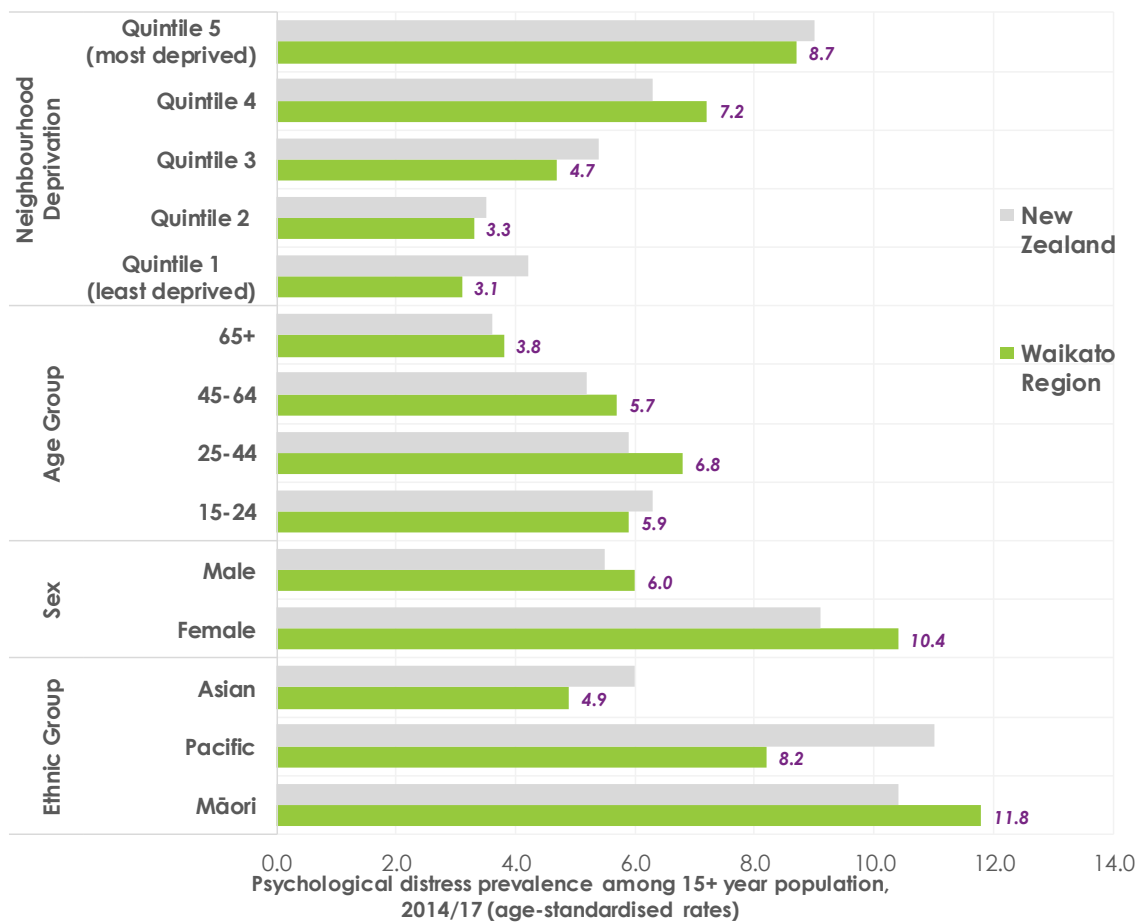
Technical information:

Data source(s): New Zealand Health Survey, Ministry of Health (https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update)

Geography: Waikato Region and New Zealand

Data caveats and limitations: Kessler Psychological Distress Scale (K10) is a 10-item questionnaire (each question with a five-level response scale) intended to yield a global measure of distress based on questions about anxiety and depressive symptoms that a person has experienced in the most recent 4-week period.

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

2.7.5 Unmet need for primary health care

Definition: Age standardised rate of unmet need for primary health care in the past 12 months

Unmet need for primary health care is defined for adults (aged 15+ years) as having experienced one or more types of unmet need for a GP, nurse or other health care worker in the past 12 months at their usual medical centre, or after-hours services, because of cost or transport.

Relevance: Primary health care covers a broad range of health services, including diagnosis and treatment, health education, counselling, disease prevention and screening. Having good access to healthcare is defined as people being able to access affordable care within an appropriate timeframe. As societies age and the burden of chronic disease grows, people need care that is centred on increasingly complex care needs, co-ordinated across the care pathway, and accessible (financially, geographically and around the clock). This makes good primary health care ever more vital. Effective primary care has the potential to improve health, reduce socio-economic inequalities in health and make health care systems people-centred while making better use of health care resources.

Equitable access to primary care has proved difficult to achieve even in well-developed countries with advanced health service. Minority population groups, and those who are poor, are often disadvantaged in access to health services. These groups are likely to have financial, geographical, language, and cultural barriers that prevent them from getting the health services they need. A strong primary health care system is central to improving the health of all New Zealanders and reducing health inequalities between different groups.

Findings:

As measured at the New Zealand Health Survey for the 2014/17 pooled data year, around one-third (32.7 per cent) of the surveyed population aged 15 years or more across the Waikato Region experienced one or more types of unmet need for a GP, nurse or other health care worker because of cost or transport. This rate is higher than the national average of 28.8 per cent (statistically significant difference), and has marginally declined from the rate of unmet need recorded for the region in the previous 2011/14 pooled year.

Waikato Region ranks 5th among the 16 regions in terms of high rate of unmet need for primary health care among the resident population aged 15 years or more.

Figure B-62: Age standardised rate of unmet need for primary health care in the population aged 15 years or more
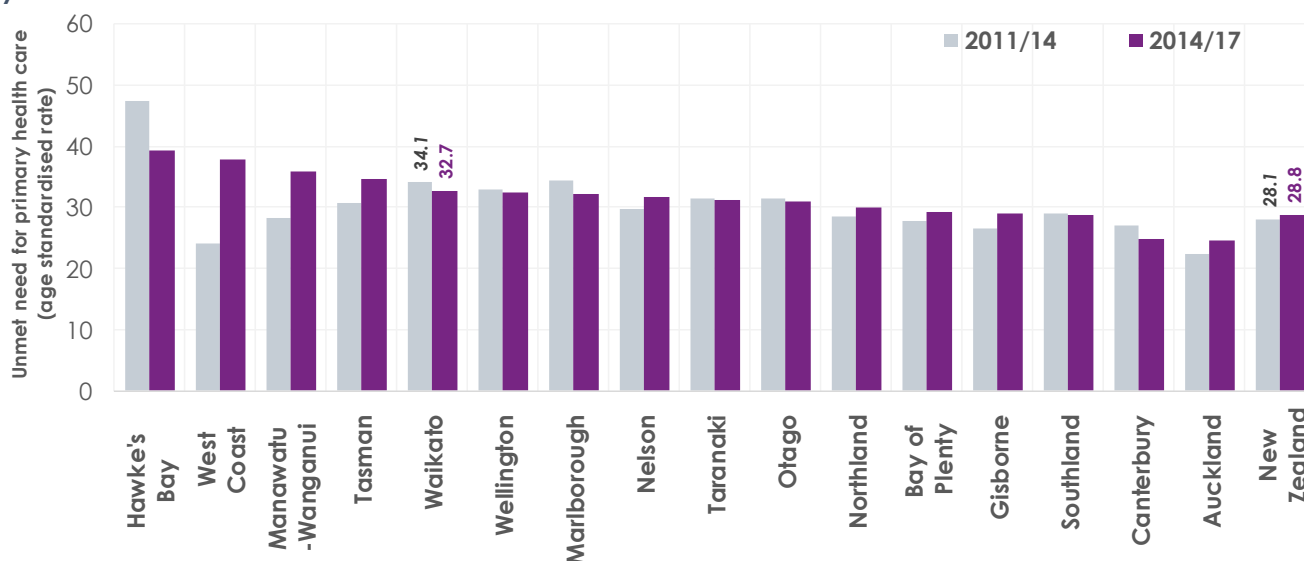
Other related findings

Comparing across ethnic groups, Māori had a much higher proportion reporting unmet need for primary care services compared to the Pacific Islanders and Asians.

Across the Waikato Region, two in five females (40.4 per cent) reported having experienced one or more types of unmet need for a GP, nurse or other health care worker in the past 12 months at their usual medical centre, or after-hours services, because of cost or transport. In comparison, less than a quarter (24.7 per cent) of the males surveyed reported unmet need for primary care services.

Respondents in the youngest (15-24 years) and oldest (65+ years) age groups had the lowest prevalence of unmet need.

Looking at the disaggregation by socio-economic deprivation, the prevalence of unmet need for primary health care services increased as the level of neighbourhood deprivation increased.

A recent study[44] reported cost as the main barrier to accessing health services. Overall, one in five people reported not visiting a GP or nurse due to cost in the last 12 months. This increased to 37 per cent for respondents aged 15 – 44 years. Respondents who also reported having a long-

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[44] Findings from responses given by over 72,000 patients who responded to a survey about their experiences with New Zealand health services (part of the new Atlas of Healthcare Variation on health service access released by the Health Quality & Safety Commission). It aims to understand patients' experience of accessing and using health services and investigate whether there are differences by location and/or patient demography.

term condition were more likely to report being unable to get care than those without a long-term condition. One in five Māori and Pacific peoples reported not collecting a medicine due to cost in the past year. At all ages, people who reported a long-term condition were more likely to report not collecting a prescription due to cost.

Figure B-63: Age standardised rate of unmet need for primary health care in the population aged 15 years or more disaggregated by demographic characteristics

Prevalence of unmet need for primary health care among 15+ year population, 2014/17 (age-standardised rates)
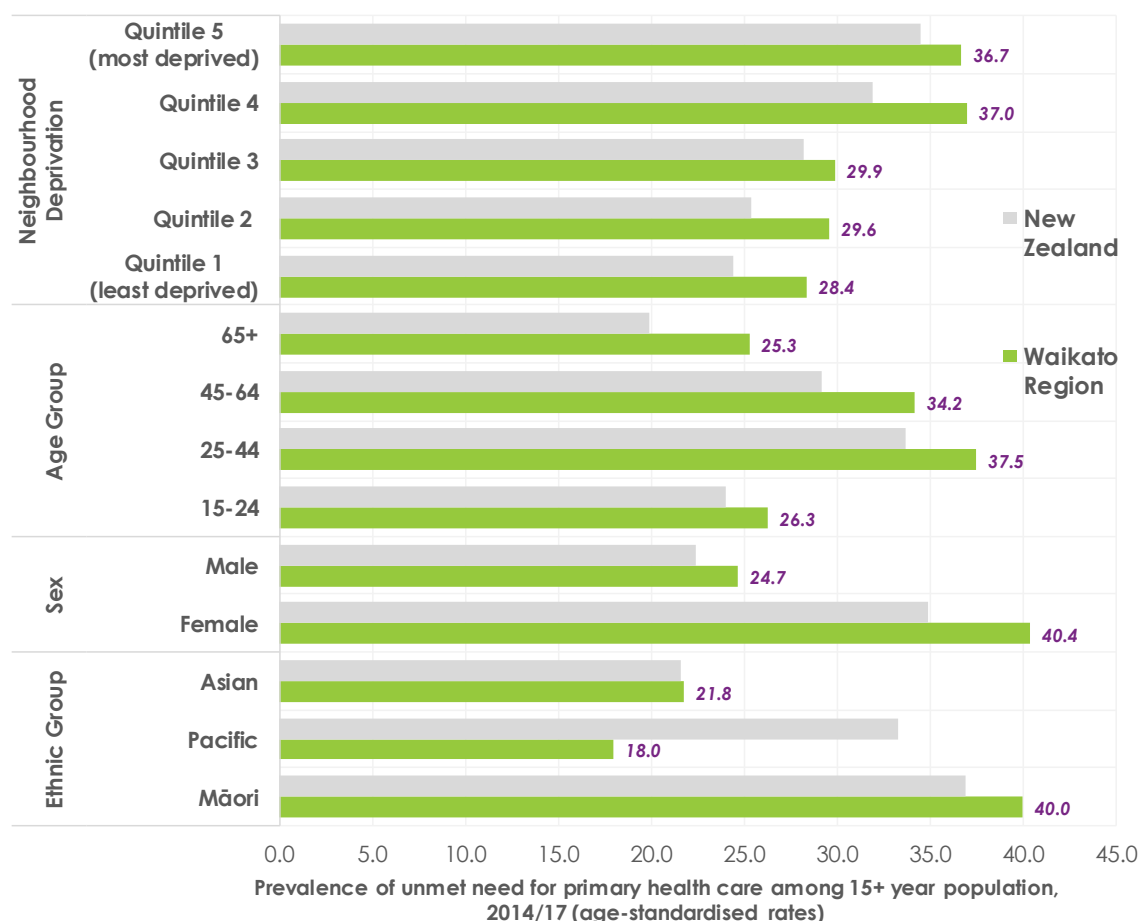
As per an OECD report 'Realising the Full Potential of Primary Health Care'[45], across EU countries, 26 per cent of patients suffering from some chronic conditions did not receive any recommended preventive tests in the past twelve months. Avoidable admissions for chronic conditions that should be treated in primary health care were equivalent to 6.1 per cent of hospital bed days in 2016, costing at least US$ 835 million on average across OECD countries. Low-income people, homeless or minority groups often have poorer health, have multiple risk factors for diseases and face a higher number of barriers in accessing health care services, notably preventive health care services.

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[45] http://www.oecd.org/health/health-systems/OECD-Policy-Brief-Primary-Health-Care-May-2019.pdf

Technical information:

Data source(s): New Zealand Health Survey, Ministry of Health
(https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update)

Geography: Waikato Region and New Zealand

Data caveats and limitations: Unmet need for primary health care indicator data is extracted from the responses given by respondents in the New Zealand Health Survey to seven questions related to accessing primary health care services, types of services accessed and the barriers to access.

Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

Vital Sign:
Recreation

For many people, active participation in physical recreation improves both their mental and physical health. Physical activity can be anything from involvement in a sport, a walk in the park or playing with children or grandchildren. Research has shown that increased physical activity can mean fewer health issues, better productivity at work and increased social connectedness.

The single indicator in this theme measures people's participation in physical activity and how active they are. Moderate physical activity has been shown to improve health outcomes.

2.8.1 Physical activity

Definition: **Proportion (age-standardised rate) of the population aged 15 years and over who are physically active.**

Physical activity is defined as doing at least 30 minutes of brisk walking or moderate-intensity physical activity (or equivalent vigorous activity), for at least 10 minutes at a time, at least five days a week.[46]

Relevance: Physical inactivity has been estimated to cost the Waikato regional economy $106 million every year. Participation in physical activity has positive benefits for people's physical fitness and mental wellbeing, as well as being a source of enjoyment and entertainment. According to the New Zealand Heart Foundation, an active lifestyle can help reduce the risk of preventable diseases, including coronary heart disease, stroke, type 2 diabetes, obesity and some cancers. Increased physical activity can lead to fewer health problems and higher productivity at work, especially when combined with a balanced diet and a healthy lifestyle. It can also contribute to personal growth and development, and is a source of social interaction (i.e. a good way to meet new people).

Findings:

As measured by the New Zealand Health Survey, the age-standardised proportion of people meeting the physical activity guidelines (reporting they have been physically active for at least 30 minutes a day on five or more days in the past week) was just under half (48.8 per cent) in the Waikato Region as per the 2014/17 pooled year data. This is only marginally lower than the national average of 50.3 per cent. In the region, the rate has remained similar to that recorded in the previous 2011/14 period while nationally there is a small decline.

Comparing regions for the highest proportion of residents who reported being physically active, Waikato Region ranks 10th. It is interesting to note that the top six regions are all in the South Island.

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[46] Examples of moderate-intensity physical activity include golf, heavy gardening (such as manual lawn mowing), heavy housework (such as cleaning windows) and occupations such as plumbing. Examples of vigorous activity include running, touch rugby and vigorous work such as chopping wood.

Figure B-64: Proportion (age-standardised rate) of the population aged 15 years and over who reported meeting the physical activity guidelines
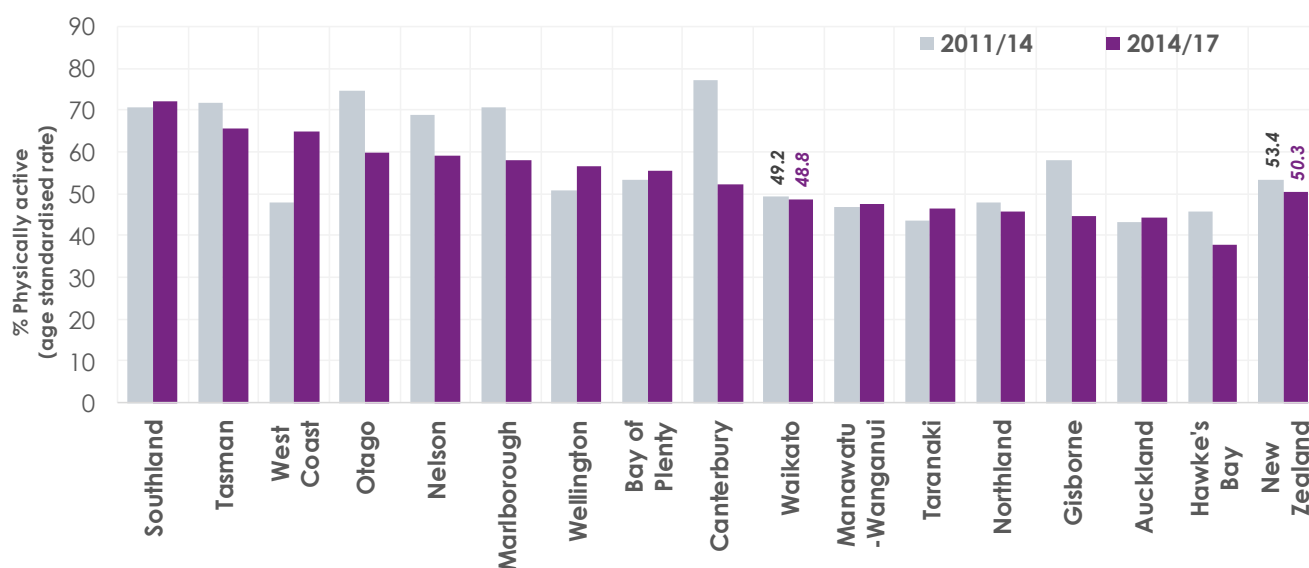
Other related findings

In 2014/17, people in the Asian ethnic group (44.3 percent) and Pacific peoples (49.6 percent) were less likely to meet physical activity guidelines compared with Māori (54.5 percent). Across the region, comparing to the previous period (not shown here) all three ethnic groups increased in the proportion of people who reported meeting the guidelines with the biggest increase noted for the Asian ethnic group.

Across the Waikato Region, males were more likely than females to meet the physical activity guidelines with well over half (51.5 per cent) reporting being physically active compared to (46.2 per cent for females. Not shown here, but this disparity was noted in the previous period as well.

The level of physical activity is lowest among youth/young people and older people. The age-specific rate of physical activity is much lower for youth and young people in the Waikato Region (42.3 per cent) compared to the national average of 50.2 per cent as recorded by the New Zealand Health Survey for the 2014/17 pooled year. The rate for the 15-24 year group has noticeably declined from the previous period. On the other hand, the proportion of those aged 65 and over meeting the physical activity guidelines has increased over the 2011/14-2014/17 period.

Residents living in the most and least deprived neighbourhoods had the lowest proportion who reported meeting the recommended guidelines for physical activity as recorded for the 2014/17 pooled year. This trend is observed in the previous 2011/14 year as well (not shown here).

Figure B-65: Proportion (age-standardised rate) of the adult population who reported being physically active disaggregated by demographic characteristics
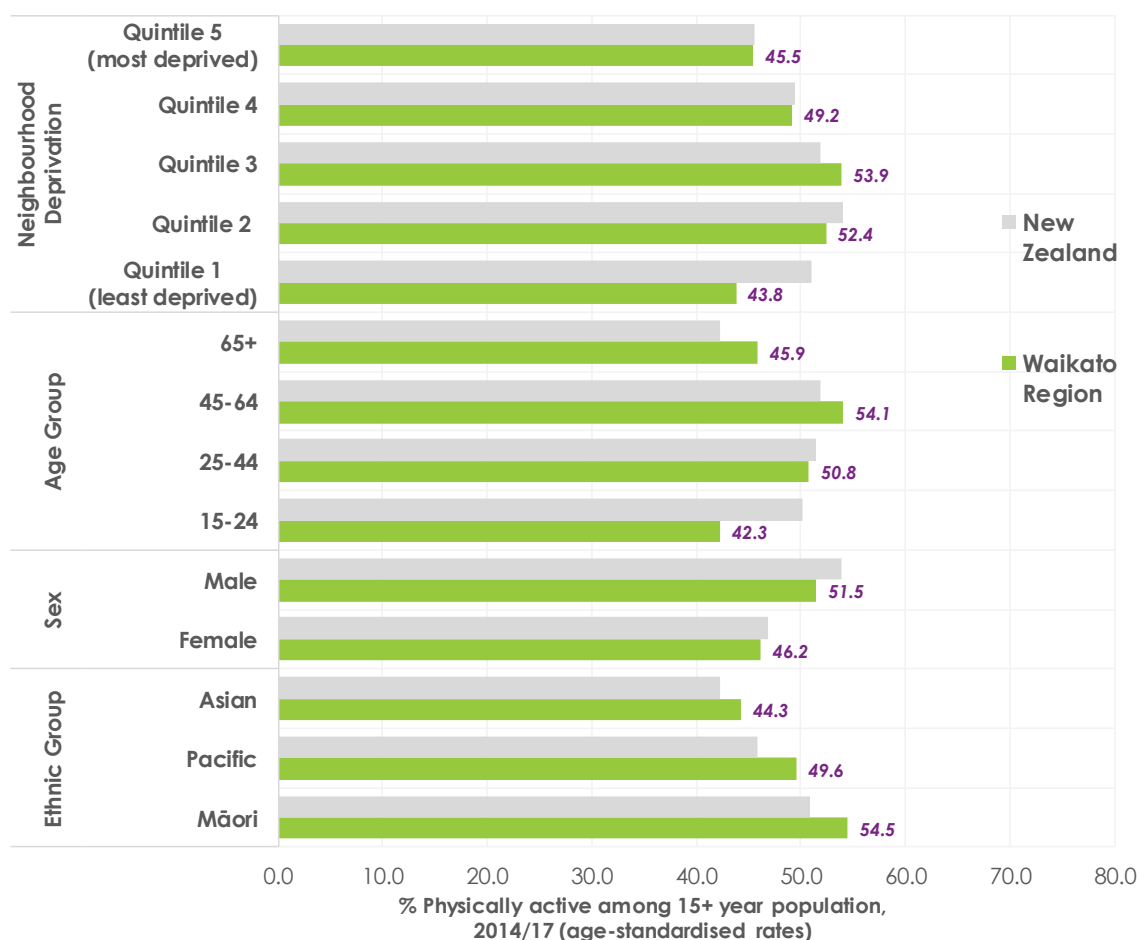
Technical information:

Data source(s): New Zealand Health Survey, Ministry of Health

(https://minhealthnz.shinyapps.io/nz-health-survey-2014-17-regional-update)

Geography: Waikato Region and New Zealand

Data caveats and limitations: Survey data is subject to four types of errors – sampling error, measurement error, coverage error and non-response error.

Glossary

Access to telecommunication systems	The ability of residents in a private dwelling to communicate, through cell-phone, telephone, fax, or the Internet, with people outside the dwelling and to use services provided through these media. The device(s) and connection(s) must be in working order. This data provides information on access to telecommunication systems at the household level. It does not show whether a particular household member has access to those amenities. In some cases, not every member of a household may have equal access to particular telecommunication systems such as a cell phone or the Internet.
Birthplace	Birthplace refers to the country where a person was born, and uses the name of the country at the time of the Census. Country is the current, short or official name of a country, dependency, or other area of particular geopolitical interest.
Canadian National Occupancy Standard (CNOS)	The Canadian National Occupancy Standard (CNOS) is one of several indicators available that is used to evaluate the extent of crowding in New Zealand. CNOS has been developed by the Canada Mortgage and Housing Corporation to help determine the number of bedrooms a dwelling should have to provide freedom from crowding and is based on the number, age, sex and interrelationships of household members. The CNOS states that: • no more than two people shall share a bedroom • parents or couples may share a bedroom • children under 5 years of age of the same or opposite sex may share a bedroom • children under 18 years of age of the same sex may share a bedroom • a child from 5 to 17 years of age should not share a bedroom with a child under 5 years of age of the opposite sex • single adults 18 years of age and over and any unpaired children require separate bedrooms.
Census of Population and Dwellings	The five-yearly Census of Population and Dwellings is the official count of population and dwellings in New Zealand, providing a snapshot of society at a point in time. The 2018 Census of Population and Dwellings was taken on Tuesday 6 March 2018, and the official time for the Census to be taken was midnight of that day.
Demographic changes	Changes to the structure of the population such as the age, gender or ethnic composition.
Dependency Ratio	Age dependency ratio is the ratio of dependents (population younger than 15 and older than 65 years) to the working age population (those aged 15-64 years), expressed as the number of dependents per 100 working-age population (Source: World Bank). Dependency ratios indicate the potential effects of changes in population age structures for social and economic development, pointing out broad trends in social support needs. As populations grow older, increases in old-age dependency ratios are indicators of the added pressures that social security and public health systems have to withstand (Source: United Nations). Dependency ratios do not allow for the fact that some people in the working-age population may not be in the

	workforce, while some people aged 65+ may be in the workforce. In the case of those aged 65+, the term 'dependency' does not necessarily imply financial or economic dependency, as those aged 65+ are generally living longer, are healthier, and are working longer.
District health boards (DHBs)	District health boards (DHBs) are organisations responsible for providing or purchasing health services in a particular district of New Zealand (although some health services are funded and purchased nationally by the Ministry of Health). There are 20 DHBs in New Zealand, with DHB populations ranging from 30,000 to over 1 million people.
Dwelling	A structure, part of a structure, or group of structures that is used, or intended to be used as a place where people reside. A dwelling may be permanent or temporary and may function as private or non-private.
Estimated resident population (ERP)	The ERP is an estimate at a given date (usually 30 June) of all the people who are usually resident in the country. This estimate includes all residents present in New Zealand and counted by the Census Usually Resident Population (URP), residents who are temporarily overseas (who are not included in the Census), and an adjustment for residents missed or counted more than once by the Census (net Census undercount). Visitors from overseas are excluded. The estimated resident population also includes an update for births, deaths, and net migration (arrivals less departures) of residents during the period between Census night and the given date.
Ethnicity	The ethnic group(s) that people identify with or feel they belong to. It is a measure of cultural affiliation rather than race, ancestry, nationality, or citizenship.
Gini Coefficient	The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Gini coefficient of zero represents perfect equality and 1, perfect inequality.
Gross domestic product (GDP)	A measure of the value-added of all goods and services produced in New Zealand. Changes in GDP measure growth or contraction in economic activity or output. GDP can be measured on either an expenditure or production basis and in either real or nominal terms.
GDP (nominal)	The value-added of goods and services produced in the economy expressed in current prices.
Household	In Census statistics, one person who usually resides alone, or two or more people who usually reside together and share facilities (such as eating facilities, cooking facilities, bathroom and toilet facilities, and a living area), in a private dwelling.
Kessler-10 Scale	The Kessler Psychological Distress Scale (K10) – a set of 10 questions used to screen for serious mental illness in the general population. A K10 score of 12 or more indicates high or very high levels of psychological distress. Where people have these levels of psychological distress there is a high or very high probability that they have an anxiety or depressive disorder. The K10 was developed for use in the US National Health Interview Survey.

Labour force	Members of the working-age population (15+ years), who during the survey reference week, were classified as 'employed' or 'unemployed'.
Labour Market Entry to Exit Ratio	Number of people entering the labour market (population aged 15-29 years) per 100 exiting (population aged 55-69 years). The entry to exit ratio is a good indicator of population ageing and has important implications for the labour market as well as educational demand.
Multi-stage sampling	Multi-stage sampling is a sample that is selected by stages, where the sampling units at each stage are subsampled from the larger units chosen at the previous stage. For example, for a survey of individuals (the population units), a country may be divided into physical areas (the first-stage units). In the areas selected, dwellings are identified and some selected (the second-stage units). In the households selected, people are identified and some selected (the third stage and population units). (SNZ, A guide to good survey design, 4th ed, 2015).
NCEA	National Certificate of Education Achievement. A qualification on the National Qualification Framework based on credits from all unit and achievement standards. NCEAs are registered between levels 1 and 3, and are open to anyone assessed through an accredited provider.
NEET rate	The rate is calculated as the total number of youth (aged 15–24 years) who are not in education, employment, or training (NEET), as a proportion of the total youth working-age population.
NZDep Index of Deprivation	NZ Deprivation Index is a measure of the relative socio-economic deprivation of an area. The index combines nine variables from the 2018 Census which reflect eight dimensions of deprivation (income, communication, employment, qualifications, home ownership, support, living space and transport) and provides a score for each mesh-block. In its ordinal form the index ranges from 1 to 10, where 1 represents areas of lowest socio-economic deprivation and 10 the areas of highest. Thus a score of 10 indicates that the area is in the most deprived 10 per cent areas in New Zealand. It should be noted that NZDep scores apply to areas and not individual people.
OECD	The Organisation for Economic Co-operation and Development (OECD) which aims at promoting policies that will improve the economic and social well-being of people around the world. New Zealand in the OECD provides an easily understood statistical comparison of New Zealand with other Organisation for Economic Co-operation and Development (OECD) countries.
P80/20 Ratio	P80/20 ratio shows the difference between high household incomes (those in the 80th percentile) and low household incomes (those in the 20th percentile).
Rotating panel survey	Surveys where the same respondents are interviewed for a number of consecutive occasions and then replaced, on a rotating basis, by a new set of respondents.
Social cost (road crashes)	A measure of the total cost of road crashes to the nation. It includes: loss of life and life quality; loss of productivity; and medical, legal, court, and property damage costs.

Status in employment	Status in employment classifies employed people aged 15 years and over according to whether they were working for themselves or for other people in their main job.
Tenure holder	Tenure holder describes whether a person owns or partly owns the dwelling they usually live in.
Territorial Authority (TA)	City and district councils, defined by aggregations of meshblocks or area units. When defining the boundaries of territorial authorities, the Local Government Commission placed considerable weight on the 'community of interest'. Most harbours and fiords, and some offshore islands, are included in territorial authority boundaries. At the 2013 Census, there were 67 territorial authorities in New Zealand.
Age standardised rates/ prevalence	Prevalence is the percentage of the population who have the condition or outcome of interest, at one point in time. Unadjusted prevalence is where the rates have not been age standardised. Age-standardisation adjusts the subgroup prevalence to account for differing age structures.
Usually resident population (URP)	The Census usually resident population count of New Zealand is a count of all people enumerated by Census, who usually live in New Zealand, and were present in New Zealand on Census night. A person is considered 'present in New Zealand' if on Census night, they were: on New Zealand soil, on a vessel in New Zealand waters, travelling between New Zealand ports. The Census usually resident population count is as at midnight on Census night.
Work and Labour Force status	Work and labour force status classifies a person aged 15 years and over by their inclusion or exclusion from the labour force. For an employed person, it distinguishes between full-time employment (30 hours or more per week) and part-time employment (fewer than 30 hours per week). A person who was not employed is classified as either 'Unemployed' or 'Not in the labour force'.

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Appendix

Appendix Table 1: Surveys used as a data source for the Waikato Vital Signs indicators and measures

Creative New Zealand	Creative New Zealand is a national survey on public attitudes, attendance and participation carried out by Colmar Bunton on behalf of the Arts Council of New Zealand. In 2005, the Arts Council of New Zealand initiated a project exploring New Zealander's views towards the Arts. The research comprises two separate surveys (one of adults aged 15+; and one of young people aged 10-14). The surveys are repeated every three years. Up until 2017, the survey was primarily conducted over the phone by calling randomly generated landline numbers. This was supplemented with a face-to-face boost of Māori, Pacific peoples and Asian New Zealanders. In 2017 the decision was made to change the core methodology to an online panel. There are two components of the 2017 study: Online survey of 6,101 New Zealanders aged 15+ (this sample size has a maximum margin of error of +/- 1.3 per cent) and telephone survey of 250 New Zealanders aged 15+ (maximum margin of error of +/- 6.2%).
'Your environment – What matters?' Survey by Waikato Regional Council	Waikato Regional Council (WRC) recognises that sustainable resource management requires an understanding of the region's residents' perceptions of the environment in which they live in. To assist in developing this understanding, WRC undertakes surveys which track residents' awareness, attitudes, and actions towards the environment (Environmental Awareness, Attitudes, and Actions Survey) and also one which provides a perspective on the balance between the environment and the economy (New Ecological Paradigm Survey). Since 2006, these surveys have been run under a combined project. The 2019 survey method changed to a mixed method approach to data collection. A total n=1,250 surveys were completed across all sources. This survey also used the new ecological paradigm (NEP) scale as a means of assessing people's ecological and environmental views. The Waikato Regional Council has, since 2000, been using a NEP survey every four years, although until 2013/14 this was carried separately. From 2008 the NEP scale was expanded from the original six items to 15 to form the Expanded Ecological Values score (Ecological Values Scale).

	6-item NEP Scale	15-item EEV Score
Number of scale items	6	15
Lowest possible score	6	15
Highest possible score	30	75
Anti-ecological	6 – 18	15 – 45
Mid-ecological	19 – 24	46 – 60
Pro-ecological	25 – 30	61 – 75

Household Labour Force Survey	This survey is administered by Statistics New Zealand every quarter and measures average levels of employment and unemployment and non-participation in the labour force and any changes that occur during the timeframe (Statistics New Zealand, 2015). The target population is working-age population of New Zealand and responses are collected from 15,000 households, equating to about 30,000 individuals aged 15 and over.

In 2014 a sample of 20,165 was selected with a 76 per cent response rate. A rotating panel survey method was used and households are selected using a multi-stage clustered design. There are two stages of clustering; in the first stage a random sample is selected from designated area (primary sampling unit) and in the second stage sample of households is selected from each PSU. Two separate questionnaires (personal and household) were given out to each household and the first interview was conducted face-to-face using computer assisted personal interviewing (CAPI). Second interviews were conducted over the telephone using CATI. The overall weighting of each household was accomplished over several stages and was based on PSU and household selection size as well as a non-response adjustment and calibration. These adjustments make the sample representative of the New Zealand population. Imputation for missing data from the questionnaire was attributed for sex, age and full-time employment variables only. Sampling errors were calculated using 95 per cent confidence intervals each quarter for employed, unemployed and not in the labour force estimates. |
| **Quality of Life Survey** | This survey is undertaken by Waikato Regional Council in parallel with the national Quality of Life project. The Quality of Life Project was initiated in 1999 in response to growing pressures on urban communities and the effects of these on community wellbeing. It was initially a collaboration between councils represented in Local Government New Zealand's (LGNZ's) Local Government Metro Sector forum.
The first Quality of Life Survey was undertaken in 2003, repeated in 2004 and has since been undertaken every two years with a varying number of participating councils. Hamilton city has participated in every survey round except 2012 and 2014. The Waikato region has previously collected data for the areas outside of Hamilton city in parallel with the 2006 and 2016 surveys.
The survey sought a minimum of 50 responses for each territorial local authority (TLA) in the Waikato region (Source: Quality of Life Survey 2018: Waikato Results). |
| **New Zealand General Social Survey** | The New Zealand General Social Survey (NZGSS) provides information on the well-being of New Zealanders aged 15 years and over and is carried out every two years by Statistics New Zealand. It covers a broad range of social and economic outcomes and shows how well-being varies across different population groups (Statistics New Zealand, 2013a).

Respondents are selected at random using a multistage sample design and in 2014, 8,795 individuals answered the NZGSS questionnaire achieving a |

response rate of 80.3 per cent. Imputation for non-response is also used in the NZGSS but only for the variables age, income and labour force status with all other variables coded as non-response. Sampling errors in the 2012 NZGSS were high; for 10,000 people relative sampling errors were estimated to be 43.9 per cent. In the 2014 NZGSS Statistics New Zealand advised that sampling errors of 30 to 49.9 per cent should be treated with caution and over 50 per cent to be considered as unreliable. Consequently, results and analysis should to be treated with caution.

|	
New Zealand Health Survey	The New Zealand Health Survey (NZHS) is an important data collection tool that is used to monitor population health and provide supporting evidence for health policy and strategy development. The Health and Disability Intelligence group, within the Ministry of Health's (the Ministry's) Health System Improvement and Innovation business unit, is responsible for designing, analysing and reporting on the NZHS. The NZHS collects information that cannot be obtained more effectively or efficiently through other means, such as by analyses of hospital administrative records, disease registries or epidemiological research. The NZHS comprises a set of core questions combined with a flexible programme of rotating topic modules. The questionnaire is administered (face to face and computer assisted) to adults aged 15 years and older, as well as to children aged 0–14 years, generally through their primary caregiver, who acts as a proxy respondent. The NZHS has a multi-stage, stratified, probability-proportional-to-size (PPS) sampling design. The survey is designed to yield an annual sample size of approximately 14,000 adults and 5,000 children. A dual-frame approach has been used, whereby respondents are selected from an area-based sample and a list-based electoral roll sample. The aim of this approach is to increase the sample sizes for Māori, Pacific and Asian ethnic groups. In 2018/19, the final weighted response rate was 80 percent for adults and 79 percent for children. (Source: Methodology Report 2018/19, New Zealand Health Survey, Ministry for Health).

Appendix Figure 1 Fatality rates in motor vehicle crashes as a proportion (per 100,000) of the total population; OECD countries
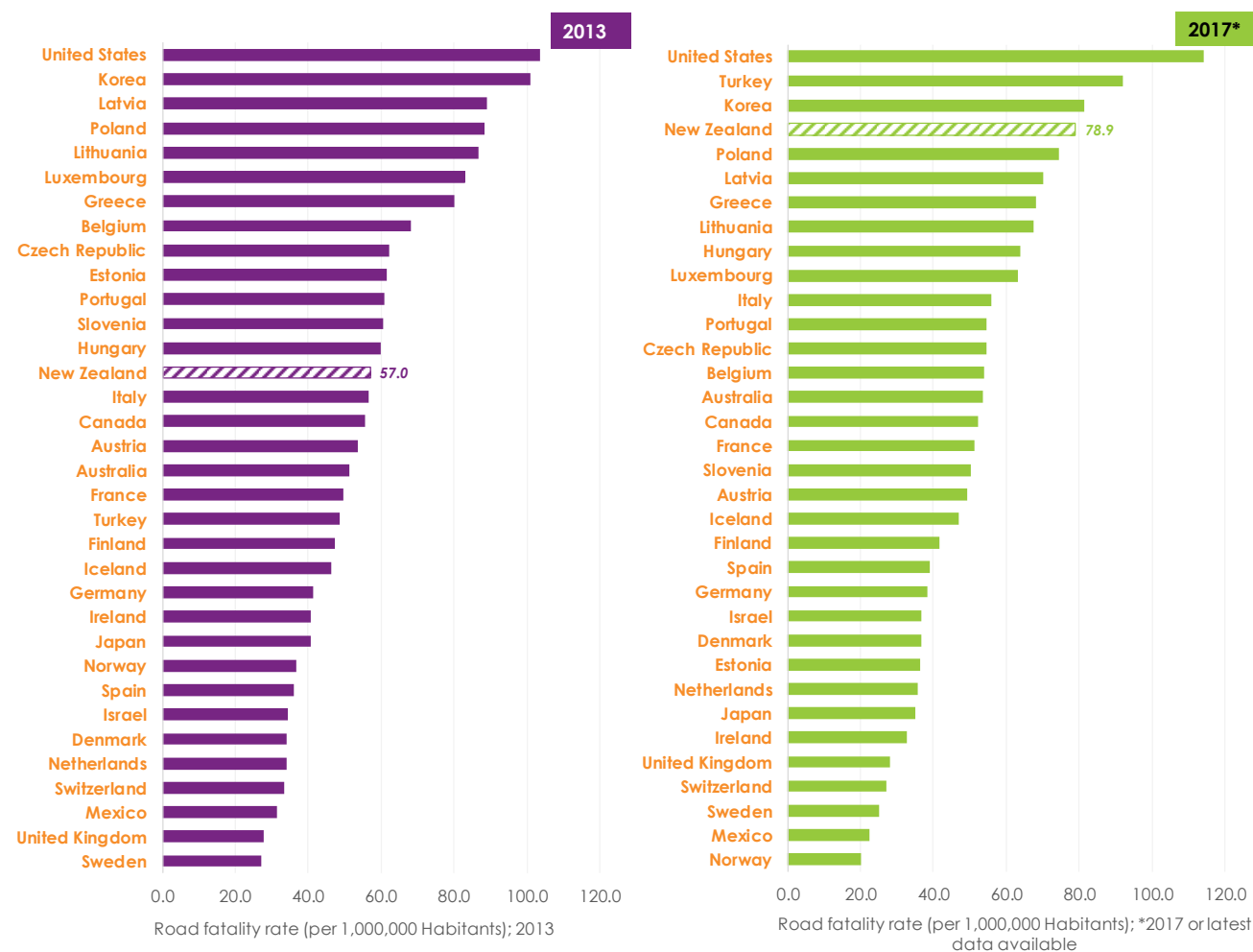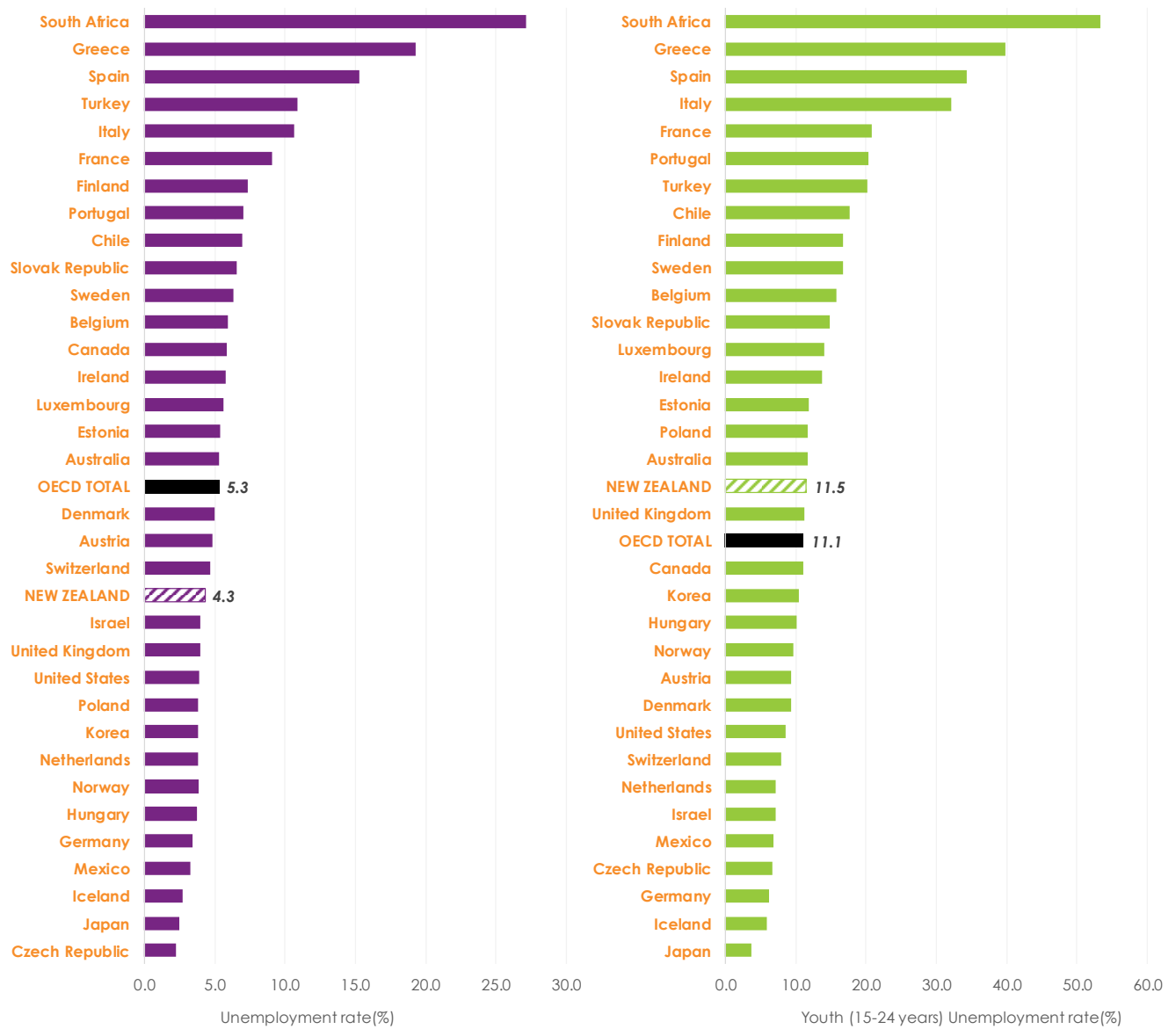

Source: OECD Data library

Appendix Figure 2 Average social cost of fatal and serious reported crashes disaggregated by region, 2017
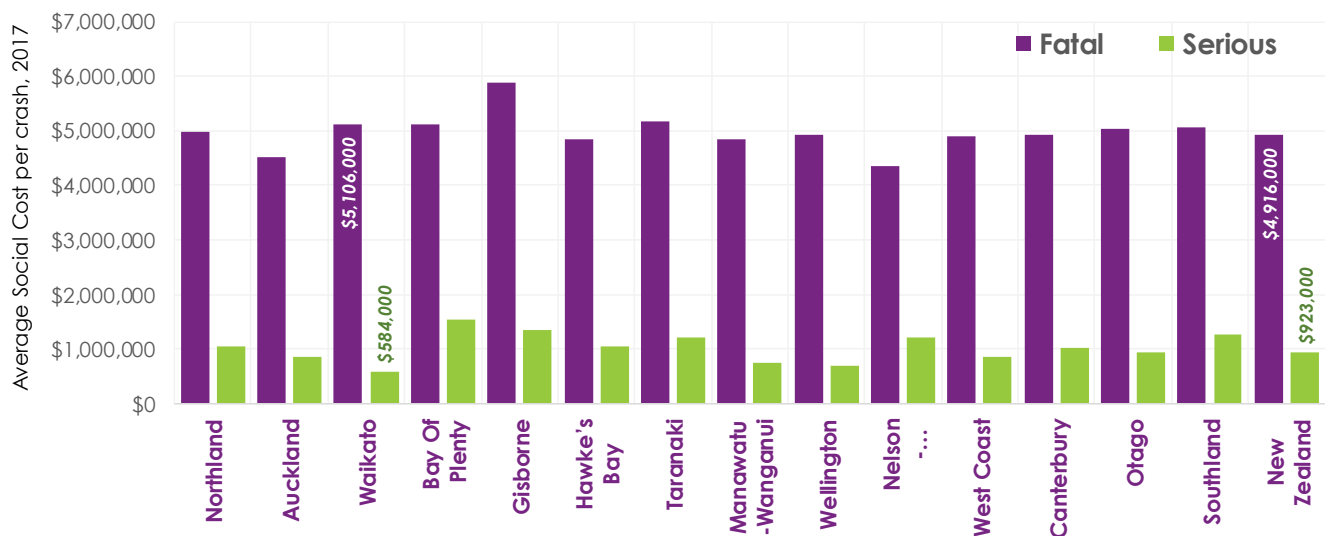
Appendix Figure 3 Annual unemployment rate, Total and for youth aged 15-24 years, OECD countries, 2018

Unemployment rate(%)

Youth (15-24 years) Unemployment rate(%)

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