

# Canterbury 2019

An Overview



A strong  
regional economy  
with resilient,  
connected communities  
and a better  
quality of life for all.



## Introduction

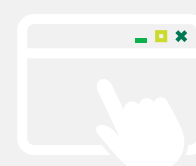
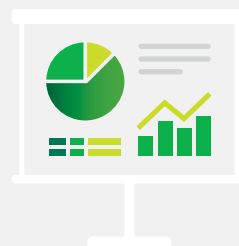
This overview of Canterbury region has been prepared for members of the Canterbury Mayoral Forum following local body elections in October 2019. It presents high-level information on current state and trends to inform Mayoral Forum priorities, engagement with central government and development of a Canterbury Regional Development Strategy for the 2020–22 local government term.

### The overview is structured around:

- the ‘four wellbeings’ (environmental, economic, social and cultural) that were reinstated into the Local Government Act 2002 (ss.3, 5, 10, 14, 101 and Schedule 10) in May 2019
- the ‘four capitals’ of the NZ Treasury’s Living Standards Framework.<sup>1</sup>

Where data permit this, the report includes regional indicators presented on the Treasury’s Living Standards Dashboard.<sup>2</sup>

The data and information in this overview are current as at 10 June 2019.



<sup>1</sup> <https://treasury.govt.nz/information-and-services/nz-economy/living-standards>

<sup>2</sup> <https://nztreasury.shinyapps.io/lstdashboard/>

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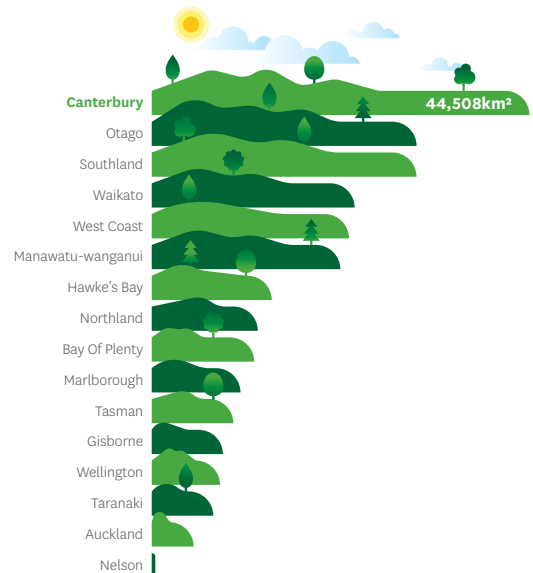
# Land

- Canterbury is New Zealand’s largest region by land area (44,508 km<sup>2</sup>), spanning the territory of 10 local authorities and 10 Ngāi Tahu papatipu rūnanga.<sup>3</sup>
- North to south, the region extends from Kekerengu Point, north of the Clarence River, to the Waitaki River catchment. West to east, the region extends from the Southern Alps to the coast and 12 nautical miles seaward to the limit of New Zealand’s territorial waters.
- Canterbury has diverse landscapes, abundant water and large areas of flat land suitable for agriculture, with 21% of New Zealand’s highest quality soils.<sup>4</sup> Almost 2.6 million hectares of land in Canterbury was used for farming in 2016 – 18.6% of the total area farmed in New Zealand.<sup>5</sup>
- Canterbury’s 800 km of coastline and 11,620 km<sup>2</sup> of coastal marine area includes a considerable range of land and seascapes and several coastal settlements, including Kaikōura, Christchurch City and Timaru.<sup>6</sup>

## Key indicators

- In 2017, 64% of New Zealand’s total irrigated land area was in Canterbury (507,420 ha). This covers a large part of the Canterbury plains. Irrigation is used to support intensive land use. Farming intensification improves productivity and increases pressures on the environment (increased demand for water and land use impacts on water quality and biodiversity).<sup>7</sup>
- The area of urban land in New Zealand increased by 10% between 1996 and 2012 to approximately 228,000 hectares. The largest expansion was in Auckland (up 4,211 hectares), followed by Waikato (up 3,900 hectares) and Canterbury (up 3,829 hectares).<sup>8</sup>
- Between 1990 and 2008, 29% of new urban areas were on versatile (highly productive) land. Versatile land is important for food production. The greatest areas of conversion from high-class land to urban use were in Canterbury (4,800 hectares) and Auckland (2,600 hectares).<sup>9</sup>

## Land area by region (km<sup>2</sup>)



Canterbury is New Zealand’s largest region by land area



3 Department of Internal Affairs, <http://www.localcouncils.govt.nz/>

4 Environment Canterbury, <https://ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-regional-policy-statement/>, Introduction.

5 Statistics New Zealand, Agriculture statistics (Infoshare).

6 Environment Canterbury, Regional Coastal Environment Plan (Apr 2019), 3.1–3.2.

7 Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, p. 55; Ministry for the Environment / Statistics New Zealand, Environment Aotearoa 2019, p. 77.

8 Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, pp. 58, 75; Environment Aotearoa 2019, p. 41.

9 Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, pp. 58–59; Environment Aotearoa 2019, p. 41.

## Land Cover Class

Data table – Canterbury region land cover state (2012)

## Area

ha %



### Forest

Indigenous forest  
Exotic forest



**495,336** **11%**  
323,804 7%  
171,532 4%



### Scrub/shrubland

Indigenous scrub / shrubland  
Exotic scrub / shrubland



**381,826** **8%**  
307,902 7%  
73,924 2%



### Grassland / other herbaceous vegetation

Exotic grassland  
Tussock grassland  
Other herbaceous vegetation



**2,714,426** **60%**  
2,031,717 45%  
670,648 15%  
12,062 <1%



### Cropland

Cropping / horticulture



**252,905** **6%**



### Urban / bare / lightly vegetated surfaces

Natural bare / lightly vegetated surfaces  
Urban area  
Artificial bare surfaces



**581,823** **13%**  
546,781 12%  
33,558 1%  
1,484 <1%



### Water

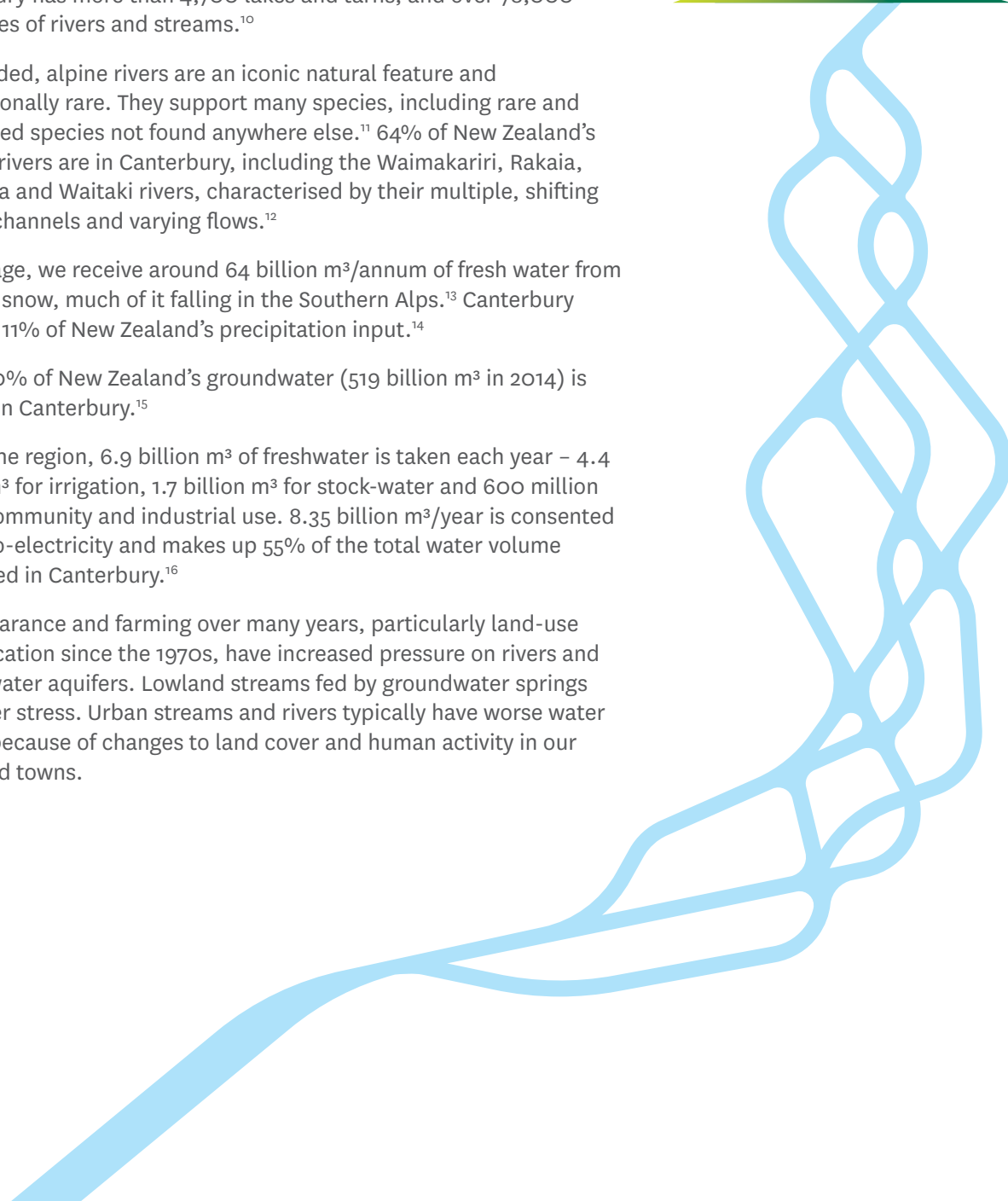
Water bodies



**94,403** **2%**

# Water

- Canterbury has more than 4,700 lakes and tarns, and over 78,000 kilometres of rivers and streams.<sup>10</sup>
- Our braided, alpine rivers are an iconic natural feature and internationally rare. They support many species, including rare and threatened species not found anywhere else.<sup>11</sup> 64% of New Zealand's braided rivers are in Canterbury, including the Waimakariri, Rakaia, Rangitata and Waitaki rivers, characterised by their multiple, shifting shingle channels and varying flows.<sup>12</sup>
- On average, we receive around 64 billion m<sup>3</sup>/annum of fresh water from rain and snow, much of it falling in the Southern Alps.<sup>13</sup> Canterbury receives 11% of New Zealand's precipitation input.<sup>14</sup>
- About 70% of New Zealand's groundwater (519 billion m<sup>3</sup> in 2014) is located in Canterbury.<sup>15</sup>
- Across the region, 6.9 billion m<sup>3</sup> of freshwater is taken each year – 4.4 billion m<sup>3</sup> for irrigation, 1.7 billion m<sup>3</sup> for stock-water and 600 million m<sup>3</sup> for community and industrial use. 8.35 billion m<sup>3</sup>/year is consented for hydro-electricity and makes up 55% of the total water volume consented in Canterbury.<sup>16</sup>
- Land clearance and farming over many years, particularly land-use intensification since the 1970s, have increased pressure on rivers and groundwater aquifers. Lowland streams fed by groundwater springs are under stress. Urban streams and rivers typically have worse water quality because of changes to land cover and human activity in our cities and towns.



<sup>10</sup> Ministry for the Environment, <http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/Regional%20information%20for%20setting%20draft%20targets%20for%20swimmable%20lakes%20and%20rivers-final.pdf>, p. 77.

<sup>11</sup> Ministry for the Environment / Statistics New Zealand, Environment Aotearoa 2019, pp. 18–19.

<sup>12</sup> Ministry for the Environment / Statistics New Zealand, Environment Aotearoa 2019, p. 80.

<sup>13</sup> LAWA, <https://www.lawa.org.nz/explore-data/canterbury-region/water-quantity/>

<sup>14</sup> Ministry for the Environment, <https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/surface-water-components-of-nzs-national-water-accounts.pdf>, p. 9.

<sup>15</sup> Ministry for the Environment / Statistics New Zealand, Environment Aotearoa 2019, p. 45.

<sup>16</sup> LAWA, <https://www.lawa.org.nz/explore-data/canterbury-region/water-quantity/>

## Key indicators

### Surface waters

- In 2018, the Ministry for the Environment reported that overall grading of primary contact recreation showed that 86% of rivers and 81% of lakes in Canterbury are considered ‘swimmable’. (Nationally, 68.6% of rivers are ‘swimmable’, and 71.2% of rivers and lakes combined.)<sup>17</sup>
- In Canterbury, the physical and chemical water quality of rivers and streams is typically poorer in lowland areas than in high-country areas, generally because of the greater intensity of land use in the warmer, flat low country and the accumulation of contaminants in groundwater, which re-emerge in lowland streams. A 2018 trend analysis of nine water quality attributes measured at 156 Canterbury river monitoring sites shows more of these sites have improving water quality trends than declining trends. The nine attributes include measures for nitrogen, phosphorus, sediment turbidity and *E.coli*. All but one attribute (turbidity) showed improvement over the past 10 years, with a probability of 67% or greater.<sup>18</sup>

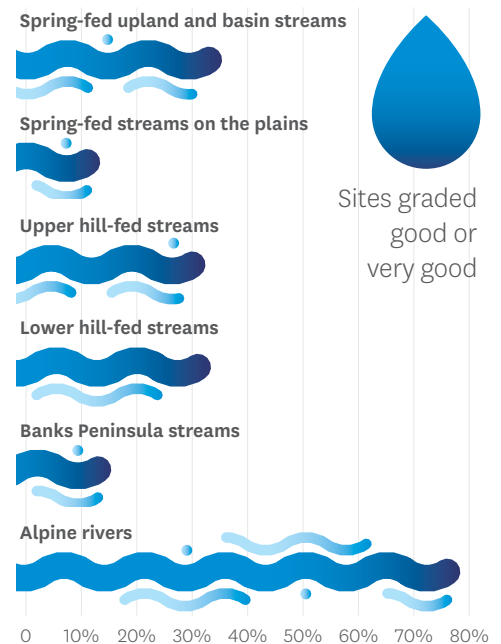
### Groundwater

- Nitrate in groundwater can affect its quality for drinking-water supply and the quality of streams fed by groundwater. Areas in Canterbury around and downstream of intensive agricultural land use tend to have higher nitrate concentrations in the groundwater than other areas. Nitrate concentrations are highest in groundwater near the water table and decrease with depth.

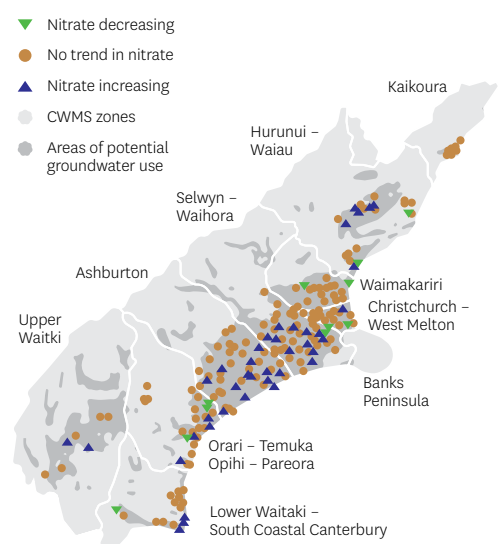
### Drinking water

- In 2018, the Canterbury Chief Executives Forum commissioned a stocktake of all Canterbury’s council-owned and operated registered drinking water supplies. This indicated that of 127 drinking-water supplies in Canterbury:
  - 47 supplies (37%) are fully compliant with current Drinking Water Standards, servicing 88% of Canterbury’s population (478,738 people). (In New Zealand in 2017, 81% of the population was served with drinking water that met all standards.)
  - 80 supplies (63% of total supplies) are partially compliant or non-compliant, servicing 12% of Canterbury’s population (63,724 people).

## Water Quality Index results by site type, 2017/18<sup>19</sup>



## 10-year trends (2009–18) in nitrate concentrations in annual survey wells<sup>20</sup>



<sup>17</sup> Ministry for the Environment, <http://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/Regional%20information%20for%20setting%20draft%20targets%20for%20swimmable%20lakes%20and%20rivers-final.pdf>

<sup>18</sup> Environment Canterbury, <https://ecan.govt.nz/reporting-back/water-quality-in-our-monitored-rivers-and-streams/>; <https://ecan.govt.nz/get-involved/news-and-events/2018/water-quality-trends-in-canterbury-august-2018/>; <https://ecan.govt.nz/document/download?uri=3469532>

<sup>19</sup> Environment Canterbury, Water Quality Index 2017/18.

<sup>20</sup> Environment Canterbury. (2018). *Annual groundwater quality survey, Spring 2018*. Report No. R19/20. ISBN 978-1-98-859315-9 (print). 978-1-98-859316-6 (web). <https://www.ecan.govt.nz/get-involved/news-and-events/2019/groundwater-quality-survey-released/>

## Air

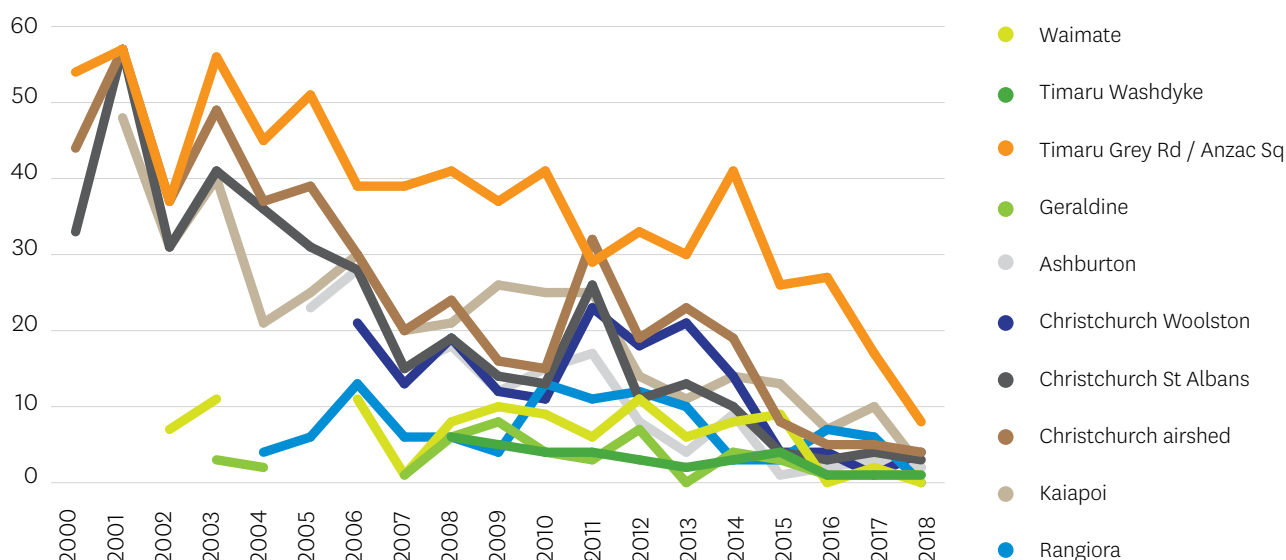
- Air pollution can be an issue in Canterbury towns and cities, mainly during the coldest months, from the burning of wood and coal for heating. Rural areas are periodically affected by burn-offs and other rural practices. Vehicle emissions play a relatively minor role in air quality in our region.
- Monitoring of air quality by Environment Canterbury focuses on eight airsheds: Christchurch, Rangiora, Kaiapoi, Ashburton, Washdyke, Timaru, Geraldine and Waimate.<sup>21</sup>

### Key indicators

- Air quality is improving in the cities and towns Environment Canterbury monitors, but pollution levels still sometimes exceed national health-based environmental standards.<sup>22</sup>



Number of high pollution nights  
2000 – 2018 <sup>23</sup>



<sup>21</sup> Environment Canterbury, <https://ecan.govt.nz/your-region/your-environment/air-quality/>

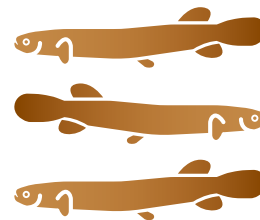
<sup>22</sup> Environment Canterbury, <https://ecan.govt.nz/your-region/your-environment/air-quality/>; LAWA, <https://www.lawa.org.nz/explore-data/canterbury-region/air-quality/>

<sup>23</sup> Number of days Particulate Matter (PM<sub>10</sub>) exceeds 50 µg/m<sup>3</sup> at monitored sites in Canterbury 2000–18  
<https://www.ecan.govt.nz/your-region/your-environment/air-quality/the-science-behind-our-air-quality/data-from-past-years/>



# Biodiversity<sup>24</sup>

- Biodiversity (biological diversity) includes ecosystem diversity, species diversity and genetic diversity. Biodiversity is a major issue nationally and globally. More than 4,000 native plant and animals are at risk of extinction in New Zealand.
- The Canterbury high country has iconic landscapes including tall tussock grasslands, native shrublands and largely unmodified alpine environments with extensive screes, bare rock, permanent icefields and glaciers.
- Canterbury has large areas of mountain beech forest, including in the catchments of the Ahuriri, Dobson/Hopkins, Rakaia and Waimakariri rivers, Craigieburn Forest Park and Arthur's Pass National Park.
- Naturally rare limestone areas occur in North and South Canterbury, which provide 'habitat islands' that support specialised plant communities.
- Like the rest of New Zealand, there have been significant losses in indigenous biodiversity in Canterbury. This has primarily occurred through loss and modification of habitat because of deforestation, burning, drainage, settlement and development, and the introduction of invasive pests. The most significant losses in indigenous habitat and biodiversity have occurred in lowland and coastal environments (<400m), where development has been, and continues to be, most intensive. A key challenge is the ongoing loss of habitats that support indigenous flora and fauna, especially in lowland and montane parts of the region.
- Canterbury has a number of culturally and ecologically significant river mouths, estuaries and coastal lagoons. Banks Peninsula Marine Mammal Sanctuary was New Zealand's first marine mammal sanctuary, to protect the nationally endangered Hector's dolphin/upokohue.
- Wetlands provide habitat for a diverse range of plants and animals and once covered large areas of lowland Canterbury. Wetlands are now some of our rarest and most-at-risk ecosystems, with over 90% of Canterbury's lowland wetlands lost in the last 150 years. Examples that remain include:
  - estuaries; for example, the Heathcote and Avon Rivers/Ihutai, and the Ashley River/Rakahuri mouth
  - coastal lagoons such as Wainono Lagoon and Te Waihora/Lake Ellesmere
  - freshwater swamps such as Travis wetland in Christchurch City
  - margins of the Ashburton lakes, and ephemeral kettlehole tarns in the glacial moraines of the high country.



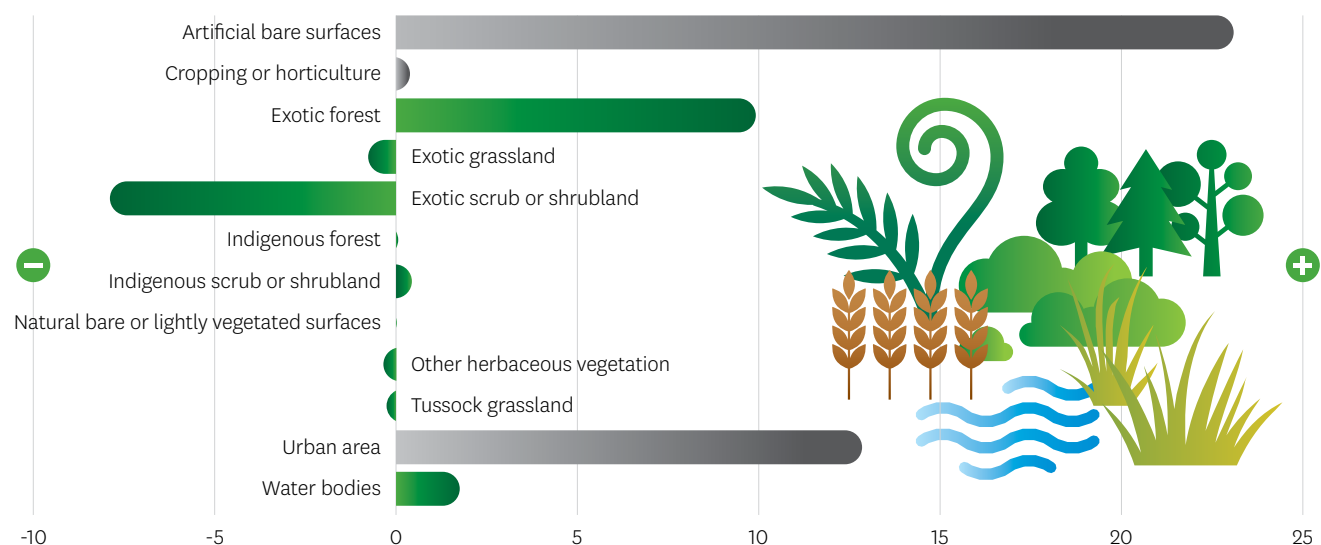
<sup>24</sup> Environment Canterbury, *Canterbury biodiversity strategy*, <https://ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-biodiversity-strategy/>; <https://apps.canterburymaps.govt.nz/SOE/Biodiversity.html>

- Some of the world’s rarest bird species are found in our region, including Hutton’s shearwater, orange-fronted parakeet/kakariki, black stilt/kaki, white-flipped penguin/kororā, yellowhead/mohua and great spotted kiwi/roroa.
- Wilding conifers present a challenge in high-country pastoral land and on public conservation areas in Canterbury. The conifers can dominate indigenous species, reduce the value of productive land, reduce water availability, affect soil carbon, facilitate the establishment of other alien species, compete with native plants and animals, and alter the natural character of landscapes.<sup>25</sup>
- Climate change is likely to impact on ecosystems and biodiversity. The main potential effects on biodiversity are gradual change in habitat, changes in species’ distribution, increased threats from pests and disease due to changes in disease vector distribution, and habitat loss from sea-level rise, for example, coastal wetlands.

## Key indicators

- The expansion of urban land in Canterbury is reflected in changes in land cover between 1996 and 2012. Exotic scrub or shrubland decreased by 8%; exotic forest increased by 10%.
- Mapping of wetland loss between 2001 and 2016 showed that during this period New Zealand lost 214 wetlands (nearly 1,250 hectares), with a further 746 wetlands declining in size. The regions with the greatest number of wetlands lost or under decline were Canterbury (231 wetlands), West Coast (135 wetlands), Southland (97 wetlands), and Auckland (94 wetlands).<sup>26</sup>

## Area change (%) in land cover, Canterbury 1996–2012<sup>27</sup>



25 Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, pp. 50, 92.

26 Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, p. 89; Environment Aotearoa 2019, p. 34.

27 Ministry for the Environment, <https://data.mfe.govt.nz/tables/category/environmental-reporting/land/habitats/>. New Zealand Land Cover Database.

# Climate

- Canterbury has five main climate zones:
  - The plains, with prevailing winds from the northeast and south-west, low rainfall, and a relatively large annual temperature range by New Zealand standards.
  - The eastern foothills and southern Kaikōuras, with cooler and wetter weather, and a high frequency of north-westerlies.
  - The high country near the main divide, with prevailing north-west winds, abundant precipitation, winter snow and some glaciers particularly towards the south.
  - Banks Peninsula and the coastal strip north of Amberley, with relatively mild winters, and rather high annual rainfall with a winter maximum.
  - The inland basins and some sheltered valleys, where rainfall is low with a summer maximum, and diurnal and annual temperature ranges are large.<sup>28</sup>
- Climate change is likely to impact significantly on Canterbury.
  - Higher temperatures, less rainfall and greater evapotranspiration are likely to cause increased pressure on water resources, particularly in North Canterbury. Droughts are likely to become more frequent and more extreme.
  - Strong winds, combined with high temperatures, low humidity and seasonal drought may result in increased fire risk in some areas, and a longer fire season.
  - Sea-level rise and coastal erosion will impact on coastal settlements and some papatipu rūnanga marae. Christchurch is likely to face increased flooding in some areas, particularly around the lower Avon River.
  - A changing climate will affect the spread of pests and weeds. There may also be an increased threat to native species from changed distribution of disease vectors.
  - Extreme weather events, coastal erosion and sea-level rise will impact on coastal defence infrastructure, buildings, transport infrastructure, water infrastructure and flood protection infrastructure.
  - Warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops.<sup>29</sup>



<sup>28</sup> NIWA, <https://www.niwa.co.nz/our-science/climate/publications/regional-climatologies/canterbury>

<sup>29</sup> Ministry for the Environment, <http://www.mfe.govt.nz/climate-change/likely-impacts-of-climate-change/how-could-climate-change-affect-my-region/canterbury>; LGNZ, Vulnerable: The quantum of local government infrastructure exposed to sea level rise, <https://www.lgnz.co.nz/assets/Uploads/d566cc5291/47716-LGNZ-Sea-Level-Rise-Report-3-Proof-FINAL-compressed.pdf>

# Natural hazards

- Flooding is a natural hazard of significant concern in Canterbury, from river flooding, surface flooding from local run-off and coastal over-topping. Climate change is likely to exacerbate this, as extreme weather events are expected to become more frequent.
- Canterbury sits across the boundary of the Pacific Plate and the Australian Plate. The impacts of the 2010/11 Canterbury earthquakes and the 2016 Kaikōura earthquake have been well documented.
- The 2016 Hurunui/Kaikōura earthquake sequence triggered up to 20,000 landslides over 10,000 square kilometres, uplifted coastal areas up to 3 metres, exposing the seabed, and triggered the biggest local-source tsunami in New Zealand since 1947 (nearly seven metres at Goose Bay).<sup>30</sup>
- The Alpine Fault has a high probability (estimated at 30%) of rupturing in the next 50 years. The rupture is expected to produce one of the biggest earthquakes since European settlement of New Zealand, and it will have a major impact on the lives of many people.<sup>31</sup>
- Past land use (including, for example, closed landfills, former gasworks, fuel service stations, horticulture, timber treatment and sheep dips) has left a legacy of contaminated and potentially contaminated land sites.<sup>32</sup>

## Asset cost and benefit value

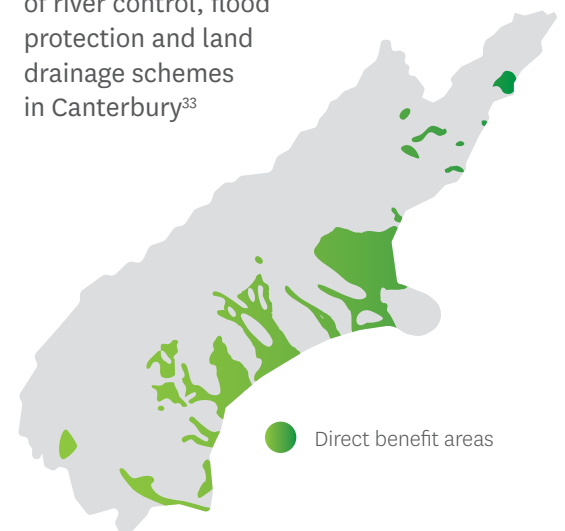
### Asset Cost

**\$0.7** billion

### Benefit Value

**\$108** billion

Asset cost (capex and opex) and Net Present Value of river control, flood protection and land drainage schemes in Canterbury<sup>33</sup>



<sup>30</sup> Ministry for the Environment, <http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>, p. 28.

<sup>31</sup> GNS Science, <https://www.gns.cri.nz/Home/Learning/Science-Topics/Earthquakes/Major-Faults-in-New-Zealand/Alpine-Fault>

<sup>32</sup> Environment Canterbury, <https://www.ecan.govt.nz/your-region/your-environment/hazardous-land-use/potentially-contaminated-land/>

<sup>33</sup> Source: Tonkin and Taylor, 2018

# Infrastructure

- The region is well-connected nationally and internationally and is a gateway to Antarctica. Canterbury has the South Island's major international airport (Christchurch), a regional airport (Timaru), two sea ports (Timaru, Lyttelton) and inland ports at Rolleston.
- Major infrastructure projects that are either proposed, in progress or completed include:
  - completion of the Christchurch Southern Motorway and Northern Arterial Motorway
  - earthquake recovery investment in Kaikōura and Hurunui districts – completing the rebuild of SH1 and the local road network, and Kaikōura horizontal infrastructure rebuild
  - Christchurch Hospital upgrade, upgrades and new builds at the three Christchurch prisons and rebuilding and renewing a total of 115 schools following the 2010–11 earthquakes
  - construction of Tūranga (Christchurch City Library), Te Pae (Christchurch Convention and Exhibition Centre), Taiwhanga Rehia (metro sports facility), Ngā Puna Wai Sports Hub and the Christchurch Stadium
  - Orion networks electricity network upgrades
  - progressing the upgrade of Hereford, High, Victoria and Montreal Streets (Christchurch – \$22m of projects) and progressing the major cycleway networks and access improvements along Brougham Street (Christchurch).<sup>34</sup>



34 Ministry of Business, Innovation and Employment, Provincial Development Unit.

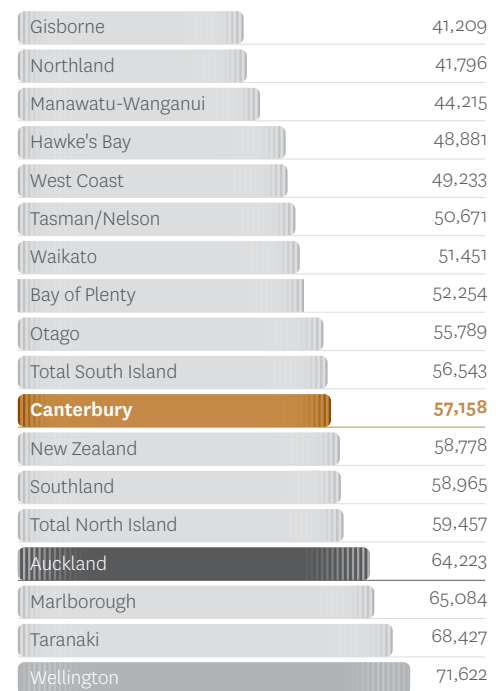
# Regional Gross Domestic Product (GDP)



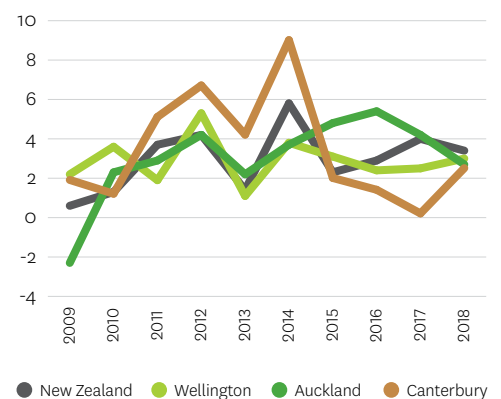
As the earthquake rebuild has eased off, Canterbury’s economic growth rate and regional share of GDP has dropped and is now lagging behind Wellington and Auckland regions. Construction and manufacturing are the ‘heavy lifters’, but agriculture (especially dairy farming) and associated economic activity undergirds the economy of Canterbury.

- Canterbury’s GDP in the year ended March 2018 (latest available) was \$35.4 billion. This represents 12.4% of national GDP (cf. 16.9% of land area and 12.8% of national population).<sup>35</sup>
- Earthquake rebuild activity resulted in strong GDP growth in Canterbury between 2012 and 2015 but while this remains positive, the growth rate has slowed since 2015. Canterbury’s GDP grew by 4.6% in the year to March 2018, lagging behind growth rates in Wellington (4.7%) and Auckland (5.3%) and the national GDP increase of 5.5%.
- Despite the stimulus of earthquake rebuild, Canterbury’s percentage change in GDP over the five years 2013–18 of 27.9% also lagged behind the national percentage change of 30.9%—behind Auckland (38.5%) but ahead of Wellington (23.3%).
- In the year ended March 2017 (latest available), manufacturing contributed 11% of regional GDP. Of this, primary manufacturing contributed 59%, other manufacturing 41%. The manufacturing sector has faced challenges retaining staff, as the earthquake rebuild drove a shift from manufacturing to the construction sector.
- Construction contributed 9.3% of regional GDP, and professional, scientific and technical services 7.9% in the year ended March 2017.
- Canterbury’s GDP per person (March 2018) was \$57,158, lower than national GDP per capita (\$58,778) and much lower than GDP per person in Auckland (\$64,223) and Wellington (\$71,622). Over the decade 2008–18, however, average annual per cent growth in GDP per person was higher in Canterbury (3.4%) than in Auckland (3.0%), Wellington and NZ (2.9%).

GDP per person by region, year to March 2018<sup>36</sup>



GDP per person, year to March



<sup>35</sup> Statistics New Zealand, Regional GDP.

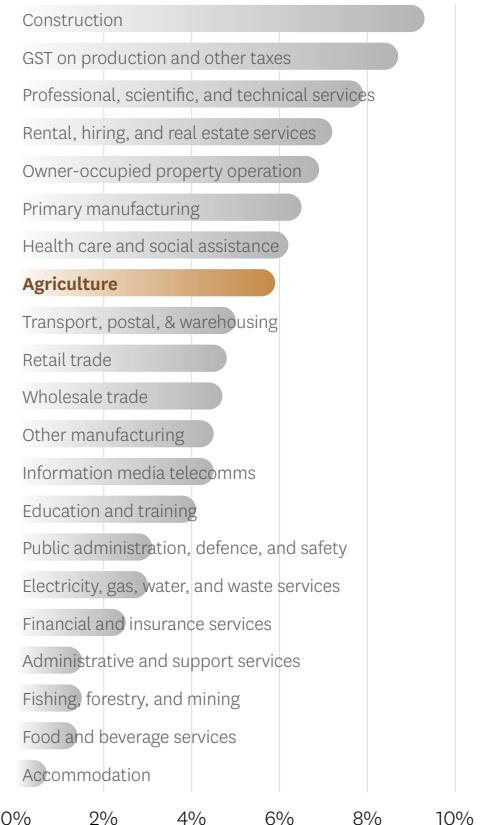
<sup>36</sup> Source: Statistics New Zealand. Tasman and Nelson regions have been combined to maintain data quality standards. Chatham Islands has been combined with Canterbury to maintain data quality standards. Gross domestic product is based on the year ended March. Population estimates are based on the year ended June.

## Agriculture

- Agriculture contributed 5.9% of regional GDP in the year to March 2018 but generates a significant amount of related economic activity from primary manufacturing; other manufacturing; professional, scientific and technical services; owner-occupied property operation; transport and warehousing; financial and insurance services, etc.
- Agriculture plays a significantly more important role in Canterbury's economy than in the economies of Auckland and Wellington regions, contributing \$2 billion to Canterbury's regional GDP in 2017 (Auckland \$318 million, Wellington \$213 million).
- Dairy cattle farming is by far the largest generator of primary industries GDP in Canterbury, followed by sheep, beef, cattle and grain farming. In 2016, over 7,660 people were employed in the dairy industry in Canterbury.<sup>37</sup>
- As at June 2018, there were 7,317 farm holdings in Canterbury, covering a total of 2,544,208 hectares (19% of farmed land in NZ).<sup>38</sup>
- In June 2018 (latest available), Canterbury with 16.9% of NZ's land area had:
  - 1,327,000 dairy cattle (up 1.4% on 2017) – 21% of NZ's dairy cattle
  - 512,000 beef cattle (up 9.6% on 2017) – 14% of NZ's beef cattle
  - 4,423,000 sheep (down 1.1% on 2017) – 16% of NZ's sheep
  - 185,900 pigs (up 5.6% on 2017) – 65% of NZ's farmed pigs
  - 253,000 deer (up 6.1% on 2017) – 30% of NZ's farmed deer.
- In Canterbury in the year to 31 March 2018 (latest available):
  - 2,700 hectares of exotic timber were harvested (down 11.5% on 2017) – 4% of NZ's total hectares harvested)
  - 1,275,300 m<sup>3</sup> of exotic timber were harvested (down 0.2% on 2017) – 4% of NZ's total m<sup>3</sup> harvested
  - 2,200 hectares of exotic timber were re-planted (up 37.8% on 2017) – 5% of NZ's total hectares replanted).
- In Canterbury in the year to 30 June 2018:
  - 303,600 tonnes of wheat were harvested (down 12.6% on 2017) – 82% of NZ's total wheat harvested
  - 245,800 tonnes of barley were harvested (up 25.3% on 2017) – 65% of NZ's total barley harvested.
- In the year to 30 June 2017 (latest available), 57% of horticultural land in Canterbury was planted in potatoes (4,332 hectares), and 23% in wine grapes (1,769 hectares), followed by 13% in onions (1,001 hectares).<sup>39</sup>



## Sector per cent of regional GDP



<sup>37</sup> Ministry of Business, Innovation and Employment, Provincial Development Unit.

<sup>38</sup> Statistics New Zealand, Industry sectors, Agriculture.

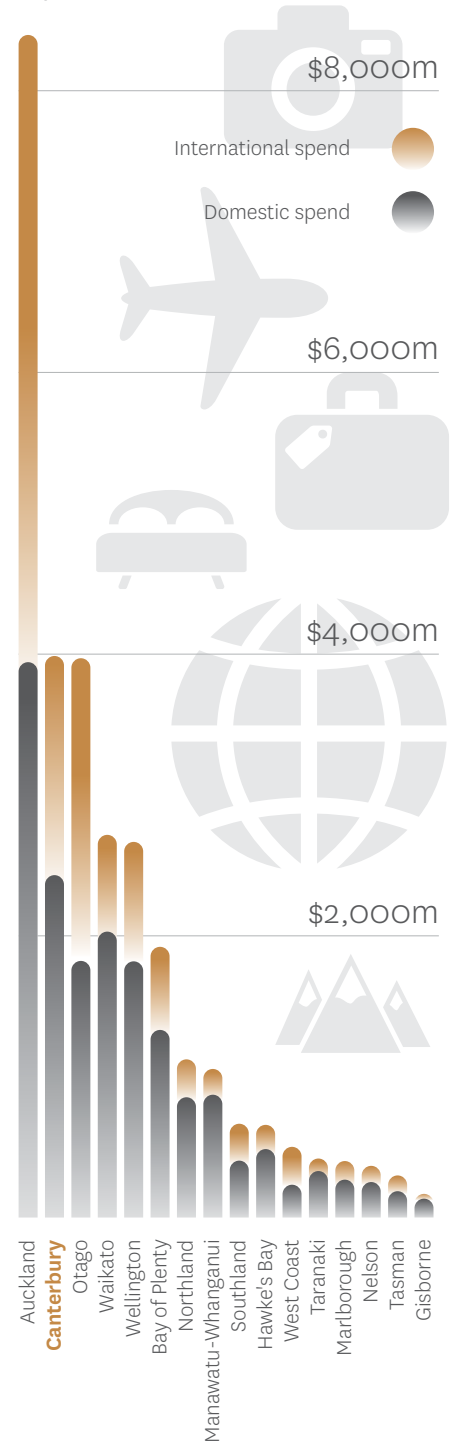
<sup>39</sup> Statistics New Zealand, Agricultural production.



## Visitors

- Over the last 20 years, New Zealand’s total number of international visitor arrivals for the year ended March has increased by 61%, from 2.4 million in 1999 to 3.9 million in 2019. The largest growth in visitor numbers came from China, up from 16,325 in 1999 to 434,323 in the March 2019 year. China is now the second-largest source country for visitor arrivals to New Zealand after Australia – 1.5 million Australians visited in the year to March 2019.<sup>40</sup>
- In the year to March 2019, 550,000 international visitors arrived in New Zealand at Christchurch Airport. Of these, around 5% came on business, 25% to visit friends and relatives, and 65% on holiday.<sup>41</sup> MBIE has estimated that there were over 1.2 million international visitors to Canterbury in 2018. 118 cruise ship visits were scheduled for the 2018–19 cruise ship season.<sup>42</sup>
- Estimated visitor spending in Canterbury in the year to April 2019 totalled \$3,987 million, an increase of 6% on the previous year. Of this, domestic visitors contributed 61% (\$2,431 million) and international visitors 39% (\$1,556 million). Compared to other regions, Canterbury ranked second (after Auckland) for domestic visitor spend, and third (after Auckland and Otago) for international visitor spend.<sup>43</sup>
- Total visitor spend equates to around 11% of regional GDP, across accommodation services, transport services, food and beverage services, cultural, recreation and gambling services and retail sales, and excluding international education receipts.
- In the year to April 2019, Christchurch City attracted 65% of estimated tourist spending in Canterbury. Within the region, Kaikōura and Mackenzie districts have a greater international than domestic visitor spend—Christchurch City and all other districts have a greater domestic than international visitor spend. The greatest percent change in the year to April 2019 was in Kaikōura (a 30% increase in total spend), as tourism has recovered from the November 2016 earthquake. Strong growth in total visitor spend 2018–19 has also been evidenced in Selwyn (13%) and Waimakariri (12%) districts.<sup>44</sup>

## Estimated visitor spend by region, year to April 2019



<sup>40</sup> Statistics New Zealand, International visitor arrivals, annual March.

<sup>41</sup> Statistics New Zealand, International visitor arrivals, annual December.

<sup>42</sup> Ministry of Business, Innovation and Employment, Provincial Development Unit.

<sup>43</sup> Ministry of Business, Innovation and Employment, Monthly regional tourism estimates.

<sup>44</sup> Ministry of Business, Innovation and Employment, Monthly regional tourism estimates.

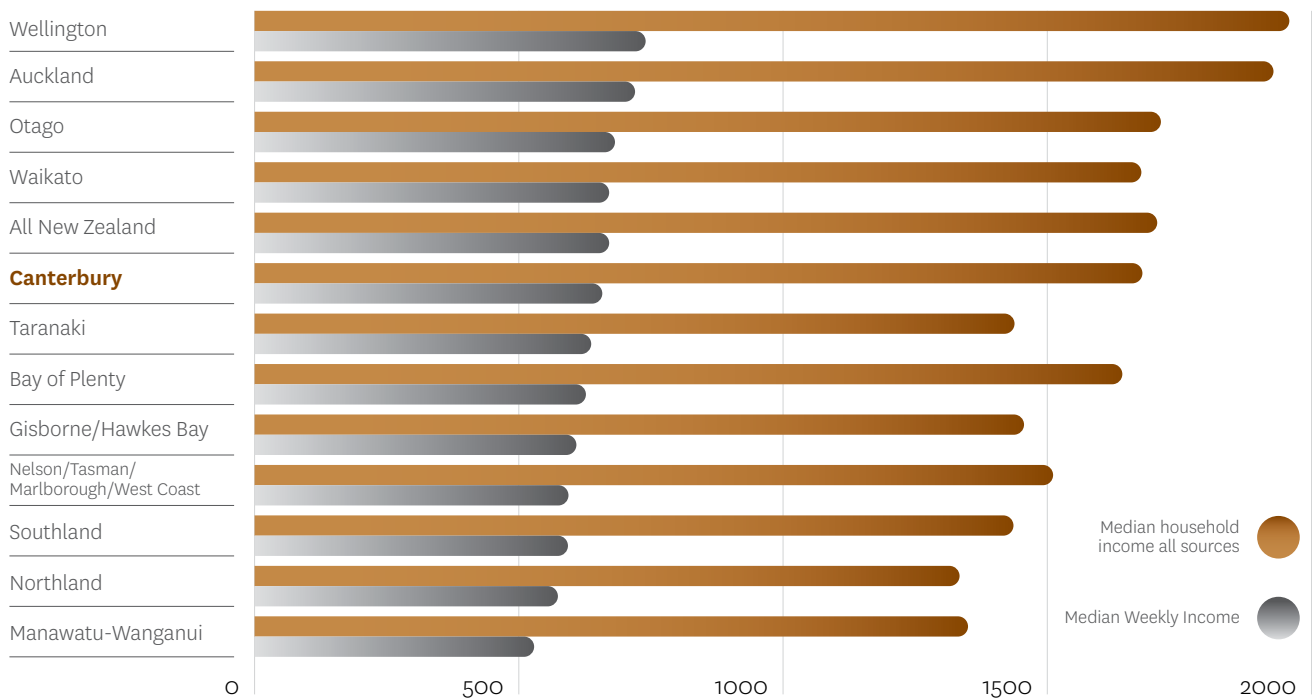


# Income

- Median weekly income in Canterbury (June 2018) was \$658 (NZ \$671). Median household weekly income from all sources (June 2018) was \$1,680 (NZ \$1,708). This difference is not explained by the proportion of the population aged 65+ years (Canterbury 16.0%; New Zealand 15.3%) – 16.6% of Otago region’s population is aged 65+ years but in 2018 median weekly income in Otago was \$682 (Canterbury \$658).
- In Canterbury, median weekly income increased by 35% between 2008 and 2018 (not adjusted for inflation), compared to NZ 40%, Auckland 38% and Wellington 33%.
- In Canterbury, median hourly earnings in full-time work in June 2018 were \$26.37 (NZ \$26.37) and \$20.00 in part-time work (NZ \$19.50).<sup>45</sup>
- In the NZ General Social Survey, self-reported income adequacy is slightly higher in Canterbury than in the country as a whole. In 2016 (latest available), 72% of respondents reported that they have more than enough or enough income (NZ 64%), and 9% reported that they do not have enough income (NZ 11%).<sup>46</sup>



## Income by region, June 2018

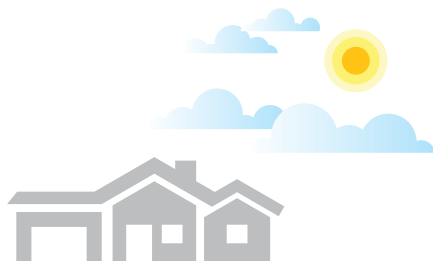


45 Statistics New Zealand, Incomes tables.

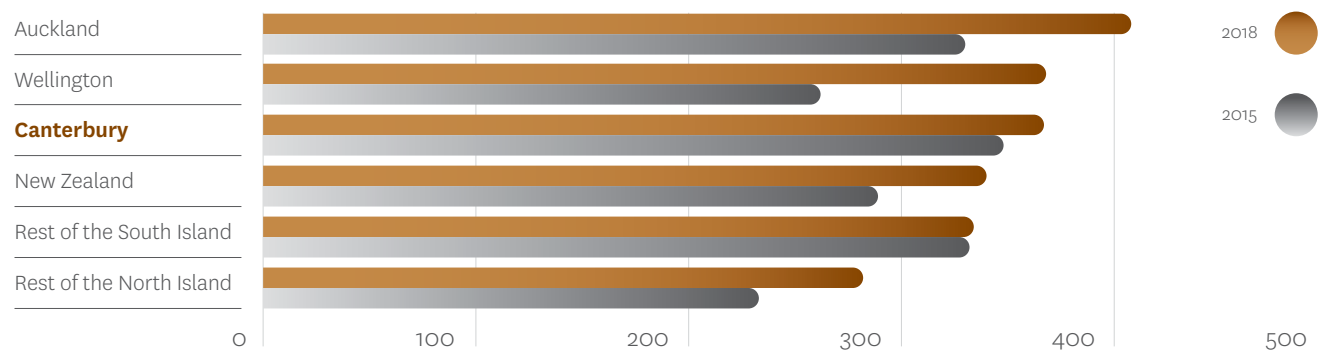
46 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

# Housing

- In Census 2013, 55% of total households stated indicated that they lived in a dwelling they owned or partly owned (NZ 50%, Auckland 46%, Wellington 42%). Home ownership rates have dropped from 71% in Canterbury in 2001 (NZ 68%, Auckland 64%, Wellington 67%).<sup>47</sup>
- The median house price in Canterbury at June 2018 was \$434,000 (NZ \$560,000, Wellington \$595,000, Auckland \$850,000). Annual median household income (all sources) for the same period as a percentage of median house price was 20.1% in Canterbury (Wellington 17.1%, NZ 15.9%, Auckland 11.8%). That is, housing is generally more affordable in Canterbury.<sup>48</sup>
- Housing satisfaction in Canterbury (as measured in the NZ General Social Survey) is generally high and similar to that in Wellington, Auckland and New Zealand as a whole, but in Canterbury, housing satisfaction declined slightly between 2010 and 2012 while it increased slightly across the country as a whole. This may reflect the impact of the Canterbury earthquakes in 2010–11.<sup>49</sup>
- Median household net worth in Canterbury grew from \$348,000 in 2015 to \$367,000 in 2018. This is higher than median net worth for the country as a whole (\$340,000 in 2018), but lower than median net worth in both Auckland and Wellington regions and it is growing at a significantly lower rate.<sup>50</sup>



## Median household net worth



47 Statistics New Zealand, Census 2013.

48 Statistics New Zealand, Incomes tables June 2018; REINZ residential property report June 2018.

49 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

50 Statistics New Zealand, Incomes tables, net worth.

# Regional confidence

- The Westpac-McDermott Miller Regional Economic Confidence survey (March 2019 quarter) saw a decline in confidence in eight of eleven regions. Some of the biggest falls were in Auckland (a 25% drop in confidence) and Canterbury (a 17% drop), but for different reasons. Housing affordability is increasingly cited as a key issue in Auckland. In Canterbury, the key factor is the slowing earthquake rebuild.<sup>51</sup>
- The ANZ-Roy Morgan Consumer Confidence Index rose 1 point to 126 for New Zealand as a whole in April 2019. By region, the South Island outperformed, with Canterbury up 5 points to 126 and the rest of the South Island up 10 points to 125. Auckland retained a one-year high at 124. House price inflation expectations lifted a tick to 2.8%, driven by higher expectations outside of Canterbury (1.8%) and Auckland (1.3%).<sup>52</sup>
- The ASB Regional Economic Scorecard (March 2019 quarter) ranked Canterbury as 14 of 16 regions, down 10 spots from 4 in the previous quarter. The scorecard rates regions using the latest quarterly regional statistics on employment, wages, house prices/sales, retail sales, new car sales and construction. The report noted that Canterbury is still working through the transition from past strong construction growth to the traditional drivers, with employment 'soggy' after five years of robust growth, and retail spending 'subdued'. While house prices have been weak, sales turnover growth was third fastest over the year and the number of homes for sale has fallen over the past six months.<sup>53</sup>



<sup>51</sup> Westpac-McDermott Miller Regional Economic Confidence survey, <https://www.westpac.co.nz/assets/Business/Economic-Updates/2019/Bulletins-2019/Q1-Regional-Economic-Confidence-March-2019.pdf>

<sup>52</sup> ANZ-Roy Morgan Consumer Confidence Index, <https://www.anz.co.nz/about-us/economic-markets-research/consumer-confidence/>

<sup>53</sup> ASB Regional Economic Scorecard, <https://www.asb.co.nz/documents/economic-research/regional-economic-scoreboard.html>

# Canterbury's population

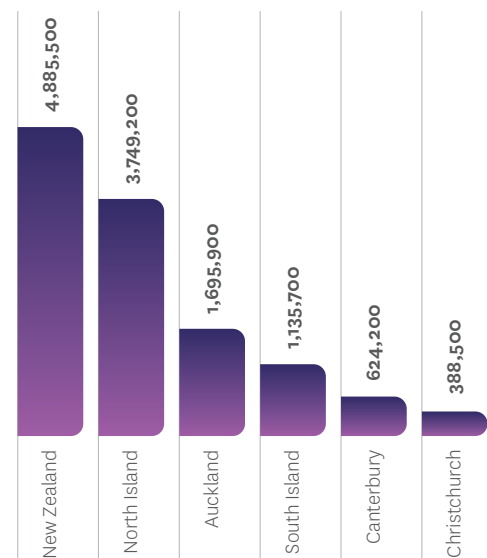


- Canterbury is New Zealand's second-largest region by population after Auckland, with an estimated resident population (June 2018) of 624,200.<sup>54</sup>
- Population density in Canterbury is 12.1 people per km<sup>2</sup> (New Zealand 15.9).<sup>55</sup>
- Fifty-five per cent of the South Island's population lives in Canterbury.
- Canterbury's population is unevenly distributed across the region: 62% in Christchurch City, 82% in greater Christchurch (Waimakariri, Christchurch, Selwyn).

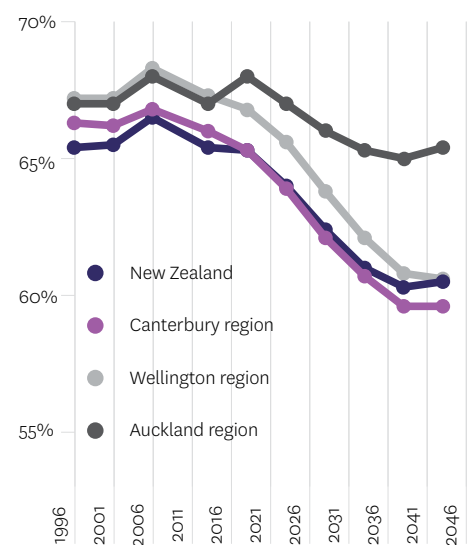
## Key indicators

- On the medium projection, Canterbury's population is expected to grow from 562,900 in 2013 to 767,300 in 2043 – an average annual growth rate of 1%, in line with New Zealand's overall population growth rate.<sup>56</sup>
- Our population is structurally ageing. The median age was 38.8 years in 2018 (NZ 37.0 years), projected to increase to 42.6 years in 2038 (NZ 41.9 years). By 2043, Canterbury is projected to have a smaller proportion of the population aged 15–64 years than the Auckland and Wellington regions and New Zealand as a whole.
- In the year to 30 June 2018, there were 12,229 permanent and long-term migration arrivals to Canterbury and 6,383 departures. This gave net migration of 5,846 people.<sup>57</sup>
- Modelling by the Canterbury Development Corporation (now ChristchurchNZ) in 2015 indicated that Canterbury will face continuing labour and skills shortages (in both high-skilled and low-skilled occupations), assuming modest economic growth and the progressive retiring of baby boomers from the workforce. We need an estimated net migration of around 6,600 people each year to meet these shortages – well above historic levels of around 3,500 annual net migration.

## Estimated resident population



## Projected proportion of the population aged 15–64 years



<sup>54</sup> Statistics New Zealand, Sub-national population estimates, June 2018.

<sup>55</sup> Department of Internal Affairs, <http://www.localcouncils.govt.nz/>

<sup>56</sup> Statistics New Zealand, Subnational population projections, 2013(base)-2043 (Feb 2017 update).

<sup>57</sup> Statistics New Zealand, international travel and migration data.

# Employment and unemployment

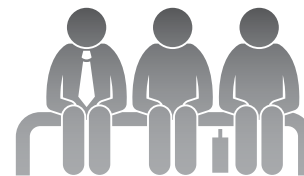
- In 2018, the industries that created the most jobs in Canterbury (the top 10) were, in order: dairy cattle farming; labour supply services; higher education; computer systems design and related services; accommodation; take-away food services; road and bridge construction; employment placement and recruitment services; central government administration; and other health care services.
- In 2018, the industries that lost the most jobs in Canterbury (the top 10) were, in order: house construction; department stores; painting and decorating services; general practice medical services, corporate head office management services, other administrative services; concreting services; wired telecommunications network operation; postal services; and other water transport support services.
- In 2018, the top ten occupations in Canterbury were, in order: specialist managers; education professionals; sales assistants and salespersons; business, HR and marketing professionals; health professionals; hospitality, retail and service managers; design, engineering, science professionals; chief executives, general managers, legislators; carers and aides; and construction trades workers.
- Canterbury has a slightly lower proportion of skilled and highly skilled jobs than NZ as a whole, and a slightly higher proportion of low-skilled and semi-skilled jobs.<sup>58</sup>

Canterbury's employment rate in the March 2019 quarter

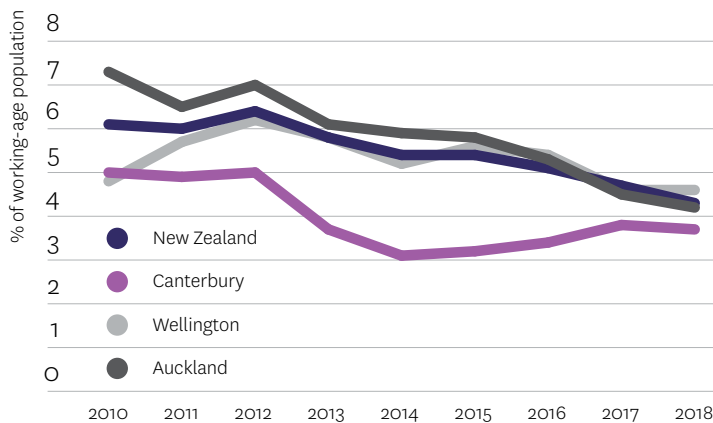
66.1%

down from 69.9% in March 2018.

New Zealand	67.5%
Auckland	68.3%
Wellington	71.9%



## Unemployment 2010-18



<sup>58</sup> Ministry of Business, Innovation and Employment, Provincial Development Unit.

## Key indicators

- As the Christchurch rebuild eases off, employment, unemployment, labour market under-utilisation and youth NEET rates are converging with national rates.
- Canterbury's employment rate in the March 2019 quarter was 66.1% (NZ 67.5%, Auckland 68.3%, Wellington 71.9%), down from 69.9% in March 2018.<sup>59</sup>
- Canterbury's unemployment rate in the March 2019 quarter was 4.0% (NZ 4.2%, Auckland 4.4%, Wellington 3.7%), up from 3.5% in March 2018.
- Because Christchurch City has 62% of the region's population, regional indicators strongly reflect what is happening in Christchurch. In the March 2019 quarter, Christchurch's unemployment rate at 5.0% lifted the regional unemployment rate to 4.0%. In parts of the region, the unemployment rate is much lower than this.<sup>60</sup>
- The labour market under-utilisation rate in Canterbury was 11.6% (NZ 11.3%, Auckland 10.6%, Wellington 11.6%), up from 11.2% in March 2018.
- In Canterbury, 11.2% of 15–24 year-olds were estimated to be not in education, employment or training (NEET) in 2018, up from a low of 8.3% in 2014 – compared to NZ 11.9%, Auckland 11.7%, Wellington 11.5%.<sup>61</sup>
- The number of people receiving a Jobseeker Support (Work Ready) benefit in Canterbury has steadily increased from 3,883 in March 2016 to 4,483 in March 2017 to 4,960 in March 2018 to 6,135 in March 2019.<sup>62</sup>
- Canterbury has a slightly lower proportion of young jobseeker support recipients than the country as a whole. Jobseeker support recipients aged 18–24 years as a proportion of the estimated resident population aged 15–24 years totalled 3.2% in the March quarter of 2019 (NZ 3.8%).<sup>63</sup>

15–24 year-olds in Canterbury estimated to be not in education, employment or training (NEET) in 2018

11.2%

up from a low of 8.3% in 2014

New Zealand	11.9%
Auckland	11.7%
Wellington	11.5%



<sup>59</sup> Statistics New Zealand, Labour market statistics, March quarter 2019.

<sup>60</sup> ChristchurchNZ, Quarterly Economic Report, March 2019, <https://www.christchurchnz.org.nz/christchurchnz-economic-data/>

<sup>61</sup> Ministry of Business, Innovation and Employment, Regional economic activity web tool, <http://webrear.mbie.govt.nz/summary/new-zealand>

<sup>62</sup> Ministry of Social Development, Quarterly benefit fact sheets, March quarter 2019.

<sup>63</sup> Ministry of Social Development, Quarterly benefit fact sheets, March quarter 2019; Statistics New Zealand, Subnational population estimates, June 2018.

# Education

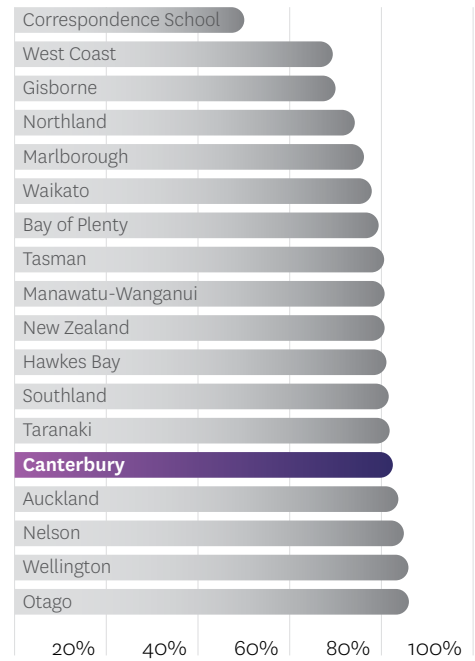


- Canterbury has three universities (the University of Canterbury, Lincoln University and the University of Otago Medical School), a regional polytechnic (Ara Institute of Canterbury) and the largest public library in the South Island (Tūranga).

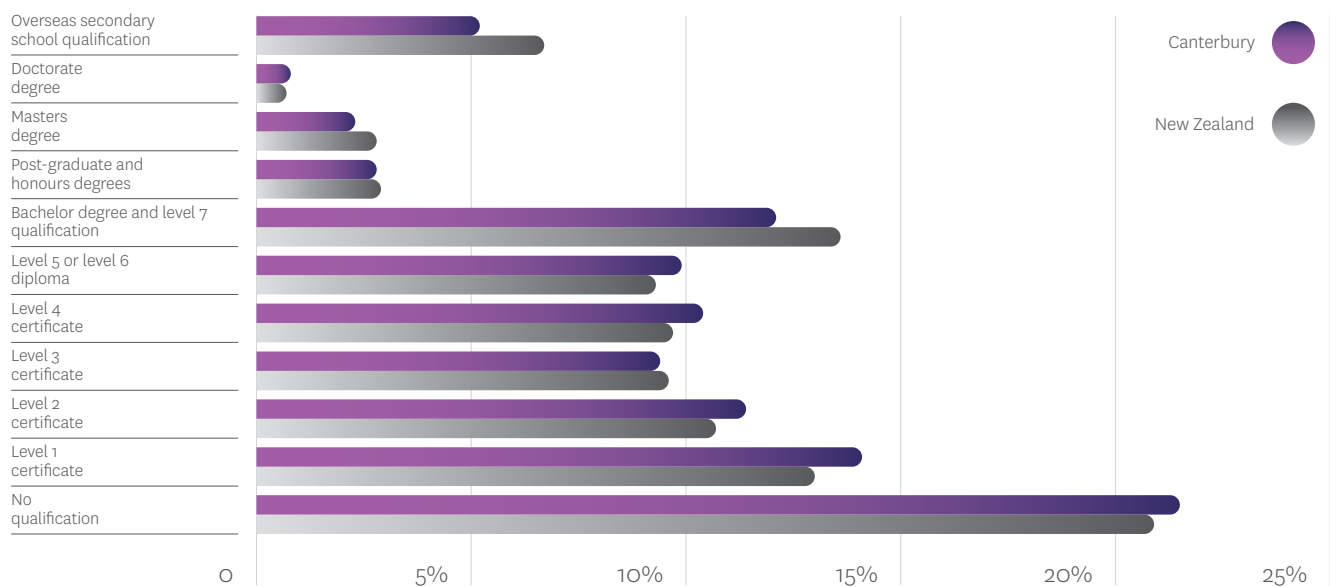
## Key indicators

- In 2017 (latest figures available), 82.5% of school leavers in Canterbury had attained NCEA Level 2 or above (NZ 80.7%).<sup>64</sup>
- Census 2013 showed Canterbury to have slightly lower educational attainment levels than the country as a whole – a slightly higher proportion of people aged 25–64 years with qualifications at level 6 and below, and a slightly lower proportion (18%) of people with a bachelor’s degree or higher qualification (NZ 20%, Auckland 25%, Wellington 28%).<sup>65</sup>

## School leavers with NCEA L2+



## Highest qualification (Census 2013)



64 Ministry of Education, <https://www.educationcounts.govt.nz>

65 Statistics New Zealand, Census 2013.

# Health

- Canterbury has the largest tertiary, research and teaching hospital in the South Island.
- The Canterbury earthquakes of 2010–11 resulted in a significant increase in demand for mental health services for adults, children and adolescents. The Ministry of Health and the Canterbury District Health Board are delivering the largest hospital rebuild in New Zealand’s history.

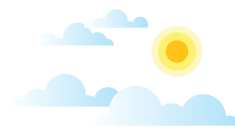
## Key indicators

- Life expectancy at birth is marginally higher in Canterbury than in New Zealand’s total population, but lower than that in Auckland and Wellington.<sup>66</sup>
- In the New Zealand General Social Survey, Canterbury participants self-rated their general health status very similarly to total survey respondents. From 2008 to 2012, 59% of Canterbury respondents rated their health excellent/very good (NZ 60%). This dropped slightly in 2016 for both Canterbury (56%) and total respondents (58%).<sup>67</sup>
- Suicide deaths have climbed in Canterbury region from 70 in the year to 30 June 2008 to 92 in the year to 30 June 2018 – a 31% increase. Total suicide deaths in New Zealand increased from 540 in 2008 to 668 in 2018 – a 24% increase.<sup>68</sup>

Self-rating of health in Canterbury as excellent/very good in 2016

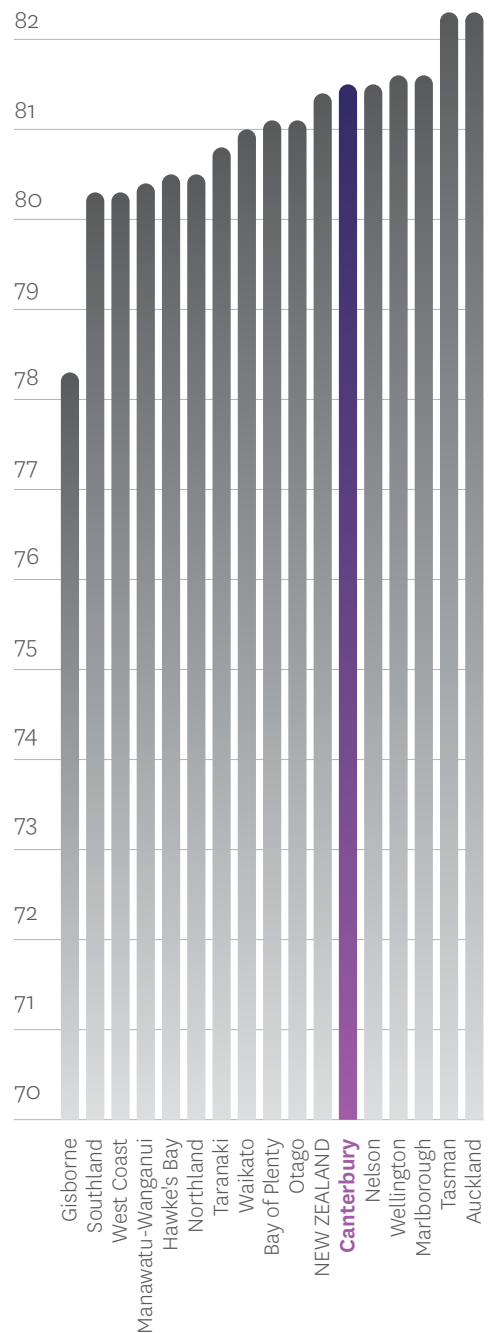
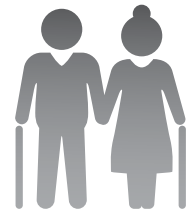
56%

New Zealand 58%



## Median life expectancy at birth

83 years



66 Statistics New Zealand, Subnational period life tables.

67 Statistics New Zealand, NZ General Social Survey (wellbeing statistics).

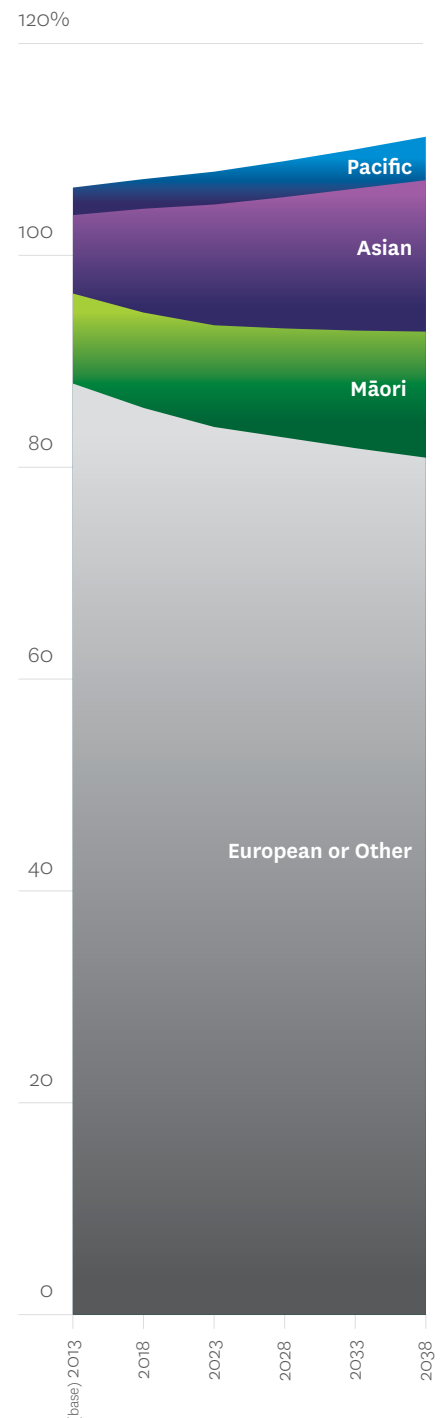
68 Annual provisional suicide statistics for deaths reported to the Coroner between 1 July 2007 and 30 June 2018, <https://coronialservices.justice.govt.nz/assets/Documents/Publications/2017-2018-Annual-Provisional-Suicide-Statistics-Final.pdf>



# Culture and identity

- Canterbury has a higher percentage of people who identify as European than New Zealand as a whole, and smaller percentages of people who identify as Māori, Pacific, Asian, Middle Eastern, or Latin American and African (MELAA).<sup>69</sup>
- The proportion of the population that identifies as European or Other (including ‘New Zealander’) is projected to decline in Canterbury, from 88% in 2013 to 84% in 2023, while the proportions of the population that identify as Māori, Asian and/or Pacific are projected to increase.<sup>70</sup>
- Māori and Pacific populations in Canterbury have a markedly younger age structure than the total population, due to higher birth rates; people who identify as Asian or as Middle Eastern, Latin American or African also have a younger age structure than those who identify as European, but without the high proportions of children aged 5–14 years.
- Just over 50,000 people living in Canterbury stated in Census 2013 that they are of Māori descent, of whom 15,370 (one-third) affiliated with Ngāi Tahu.
- The proportion of people in Canterbury who state ‘no religion’ has increased from 30% in 2001, to 36% in 2006, to 45% in 2013. In Census 2013, 49% of those who stated a religious affiliation identified as Christian. Minority religious affiliations grew significantly between 2006 and 2013, but off a very low base. The fastest growing religions in Canterbury between 2006 and 2013 were Hindu (a 65% increase) and Sikh (a 243% increase), but off a low base: 3,972 Hindu responses in 2013, and 618 Sikh responses.
- Of people usually resident in Canterbury at the time of the 2013 Census, 97.4% indicated that they speak English (NZ 96.1%), 1.7% Māori (NZ 3.7%) and 0.5% indicated that they can communicate in New Zealand Sign Language (NZ 0.5%).
- In Canterbury, 1.7% of total people stated indicated in Census 2013 that they could hold a conversation about a lot of everyday things in te reo Māori down from 1.9% in 2001 – compared to NZ 3.7% (down from 4.5%), Wellington 3.5% (down from 4.0%) and Auckland 2.3% (down from 3.2%).
- Census 2013 indicated that 20% of people in Canterbury were born overseas (NZ 25%). The most common birthplace for people living in Canterbury but born overseas was the UK and Ireland (37%), followed by Australia (19%) and North-East Asia (13%).
- One-third of overseas-born people in Canterbury had been living in New Zealand for 20+ years at the time of the 2013 Census; the majority of these were born in the UK and Ireland.

Projected ethnic identities, Canterbury, 2013–38



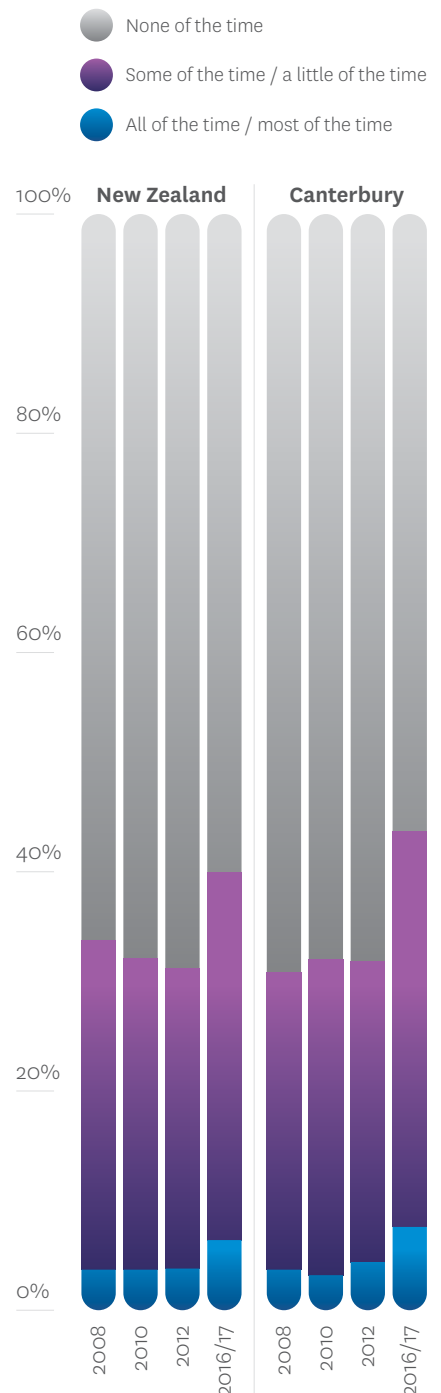
69 Statistics New Zealand, Census 2013.

70 Statistics New Zealand, Subnational ethnic population projections.

## Key indicators

- Between 2008 and 2012, overall life satisfaction in Canterbury was similar to life satisfaction in New Zealand as a whole, with 86% of Canterbury respondents to the NZ General Social Survey self-rating as very satisfied or satisfied. There was a very slight increase (1%) of people feeling dissatisfied or very dissatisfied between 2010 and 2012, i.e. following the Canterbury earthquakes of 2010–11.<sup>71</sup>
- In 2016/17, 87.7% of Canterbury respondents rated their overall life satisfaction between 7–10 on a scale where 0 = completely dissatisfied and 10 = completely satisfied (Wellington 87.9%, NZ 87.3%, Auckland 86.6%).<sup>71</sup>
- Reported social isolation (Feeling lonely none of the time, some of the time, all of the time) is a little higher than the national rate. In 2016/17 (latest available), 36.1% of respondents to the NZ General Social Survey in Canterbury reported that they feel lonely a little or some of the time (NZ 33.5%). Reported social isolation increased in both Canterbury and New Zealand between 2012 and 2016/17.<sup>72</sup>
- In 2010 and 2012, a slightly higher percentage of Canterbury respondents to the NZ General Social Survey indicated that they belong or very strongly belong to New Zealand than in the country as a whole. Predictably, this proportion is higher among NZ-born and overseas-born, long-term migrant respondents than among overseas-born, recent migrants.<sup>73</sup>
- Trust that staff in government departments will treat people fairly is marginally lower in Canterbury than in New Zealand as a whole. In 2012, 41% of Canterbury respondents to the NZ General Social Survey strongly agreed or agreed that staff in government departments can be trusted to treat people fairly (NZ 44%).<sup>74</sup>
- The percentage of adults and/or households that experienced criminal offences in Canterbury (29%) is not significantly different from the national average (29%), or from Auckland (29%) and Wellington (33%).<sup>75</sup>
- Average voter turnout across Canterbury councils in local body elections in 2010, 2013 and 2016 was higher than in New Zealand as a whole. In 2016, voter turnout in Canterbury was 49.6% (NZ 42.0%), but this means only half of eligible voters did in fact vote.<sup>76</sup>

## Social isolation, 2008–16



71 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

72 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

73 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

74 Statistics New Zealand, Wellbeing statistics (NZ General Social Survey).

75 NZ Crime and Victims Survey 2018, <https://www.justice.govt.nz/justice-sector-policy/research-data/nzcvs/resources-and-results/>

76 Department of Internal Affairs, Local election statistics.

Notes section

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**Produced for the Canterbury Mayoral Forum**  
<http://canterburymayors.org.nz/>