

Subnational Population Estimates: At 30 June 2012

Embargoed until 10:45am – 23 October 2012

Key facts

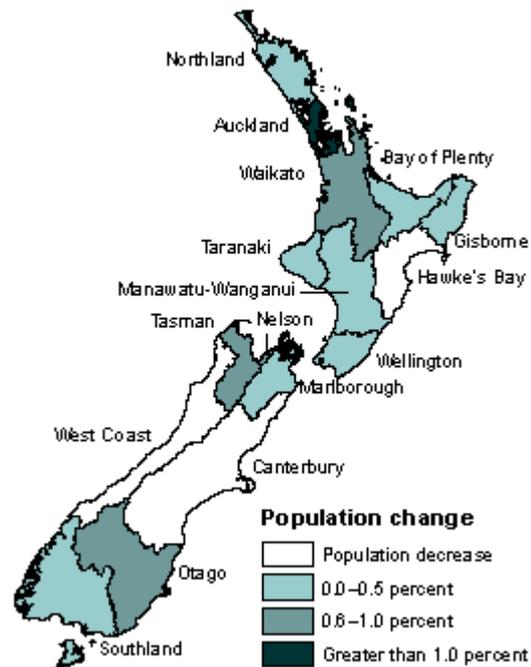
Subnational population estimates give the best available measure of the size and age-sex composition of New Zealand's 16 regional council areas (regions) and 67 territorial authority areas.

In the June 2012 year the estimates indicate:

- Christchurch city's population decreased by 4,600 people (1.2 percent).
- 38 territorial authority areas experienced population growth.
- The fastest-growing territorial authority area was Selwyn district (up 2.9 percent).
- Canterbury region's population decreased by 1,800 people (0.3 percent).
- Auckland accounted for three-quarters of New Zealand's population growth, increasing 21,700 (1.5 percent).
- Waikato and Nelson regions both grew 0.8 percent, slightly above the national average (0.6 percent).

Regional population change

Year ended 30 June 2012



Source: Statistics New Zealand

Geoff Bascand
Government Statistician

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Commentary

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This information release contains provisional estimates of the resident population of New Zealand's 16 regional council areas and 67 territorial authority areas at 30 June 2012. Population estimates give the best available measure of the size and age-sex composition of the population usually living in each area. While the population estimates are based on available data, uncertainty is inherent in the estimation process, and the estimates will be revised after the next Census of Population and Dwellings. Uncertainty increases as population estimates are broken down by age, sex, and geographic area.

International migration and earthquakes affect local population change

The main trends in the June 2012 year were:

- Lower population growth for most areas, reflecting lower growth for New Zealand as a whole.
- Further population decline in Christchurch following the 2010/11 Canterbury earthquakes.
- Significant population growth in neighbouring districts of Christchurch, partly related to the inflow of people from earthquake-affected areas.

New Zealand's population growth slows

New Zealand's population grew by 28,000 (0.6 percent) during the June 2012 year, compared with 37,400 (0.9 percent) in the previous June year. The reduced population growth was due to more international migrant departures (up 9 percent), fewer births (down 3 percent), and more deaths (up 2 percent). The annual growth of 0.6 percent was the lowest since 2001.

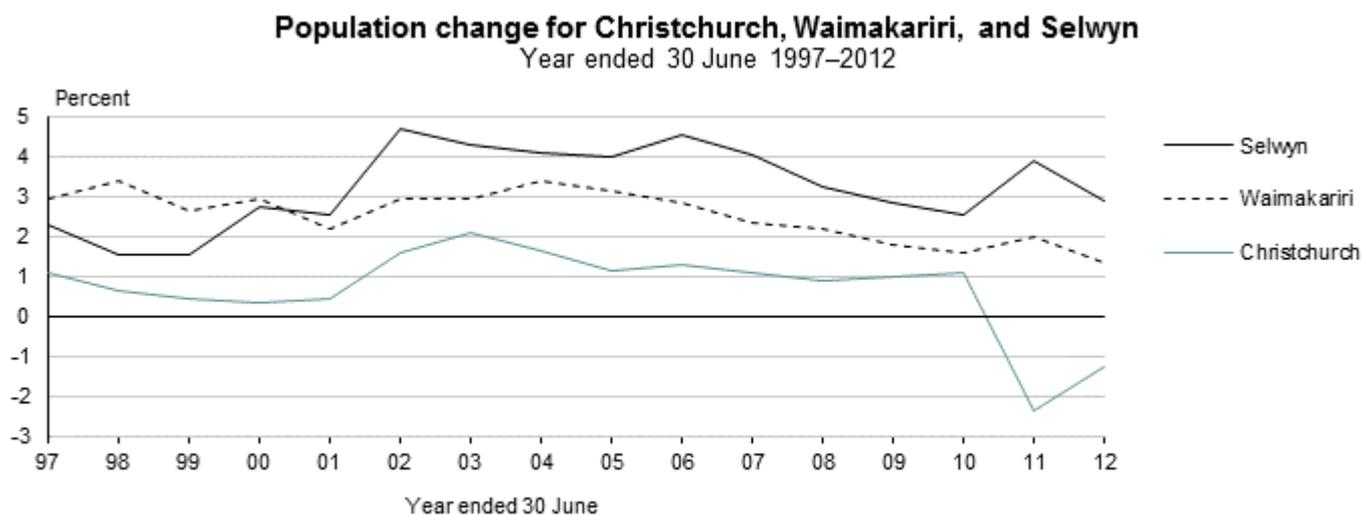
Population growth in the June 2012 year resulted from a natural increase (more births than deaths) of 31,100, partly offset by a net migration loss (more departures than arrivals) of 3,200. Historically, natural increase has contributed most to New Zealand's population growth – about four-fifths over the last 40 years.

Christchurch city's population decrease smaller than last year

Before the 2010/11 Canterbury earthquakes, Christchurch city's population was growing. In the four-year period ended 30 June 2010, the city's population grew at an average annual rate of 1.0 percent, with population gains from both natural increase (2,200 per year on average) and net migration gain (more arrivals than departures) of 1,600 per year on average.

The latest population estimates indicate that Christchurch city's population decreased by 4,600 (1.2 percent) in the June 2012 year. This population decrease was due to a net migration loss of 6,000, partly offset by a natural increase of 1,400.

In the previous June year, Christchurch city's population decreased by 8,900 (2.4 percent) due to a net migration loss of 10,600, partly offset by a natural increase of 1,600. Therefore, in the two-year period ended 30 June 2012, the city's population declined by 13,500 (3.6 percent) due to a net migration loss of 16,600, partly offset by a natural increase of 3,100.



Source: Statistics New Zealand

Statistics NZ continued to use a number of data sources to assess population change in Christchurch city, and New Zealand's other subnational areas, during the June 2012 year (see [Estimating local populations after the 2010/11 Canterbury earthquakes](#)). Some of these data sources – including international migration statistics, primary health organisation enrolments, linked employer-employee data, school rolls, and electoral enrolments – provide information that can be broken down by age. Collectively, they indicate that population change in Christchurch city was unevenly distributed across age groups.

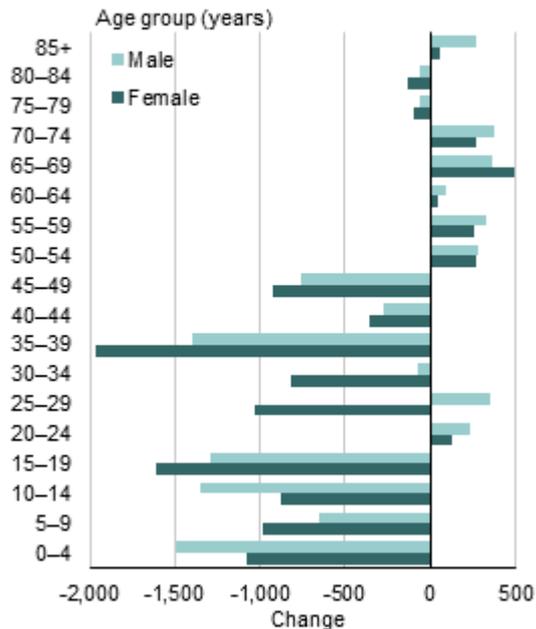
Between 30 June 2010 and 2012, the population aged 0–19 years in Christchurch city decreased by 9,300 (9.6 percent), while the population aged 35–49 years decreased by 5,700 (7.0 percent). This indicates a net outflow of children and their parents over this period. A decrease of 2,900 people aged 15–19 years reflects fewer young adults moving to Christchurch to study.

Within the younger adult population, however, there were some interesting contrasts. The male population aged 20–34 years increased by 500 over the two-year period, while the corresponding female population decreased by 1,700. This reflects a net inflow of young male workers.

Over the two-year period, the population aged 50 years and over (50+) grew slightly, up 2,700 (2.3 percent). This was due to people moving into this age group from younger ages, but it also indicates that people aged 50+ were less likely to leave Christchurch over this period.

Christchurch population change

By age group and sex
Between 30 June 2010 and 2012



Source: Statistics New Zealand

South Island's population growth dampened by Christchurch

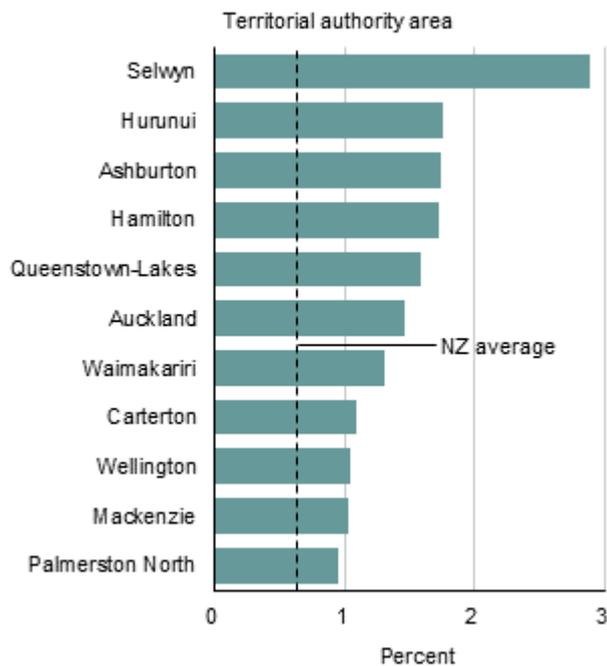
An estimated 1.04 million people lived in the South Island at 30 June 2012. The small increase of 200 in the June 2012 year was due to a natural increase of 4,200, offset by a net migration loss of 4,000. The South Island has grown by just 200 per year in the last two years. By comparison, the South Island grew by an average of 9,900 per year in the four years to 30 June 2010.

Selwyn district maintained the country's highest growth rate (2.9 percent) in the June 2012 year. Eight other South Island territorial authority areas grew at a rate faster than the national average (0.6 percent), including Hurunui, Ashburton, Queenstown-Lakes, Waimakariri, and Mackenzie districts.

Of the 23 territorial authority areas within the South Island, six other areas in addition to Christchurch experienced population decreases, including the districts of Kaikoura (down 1.7 percent) and Clutha (down 1.1 percent).

Fastest-growing territorial authority areas

Year ended 30 June 2012



Source: Statistics New Zealand

Main cities drive population growth in North Island

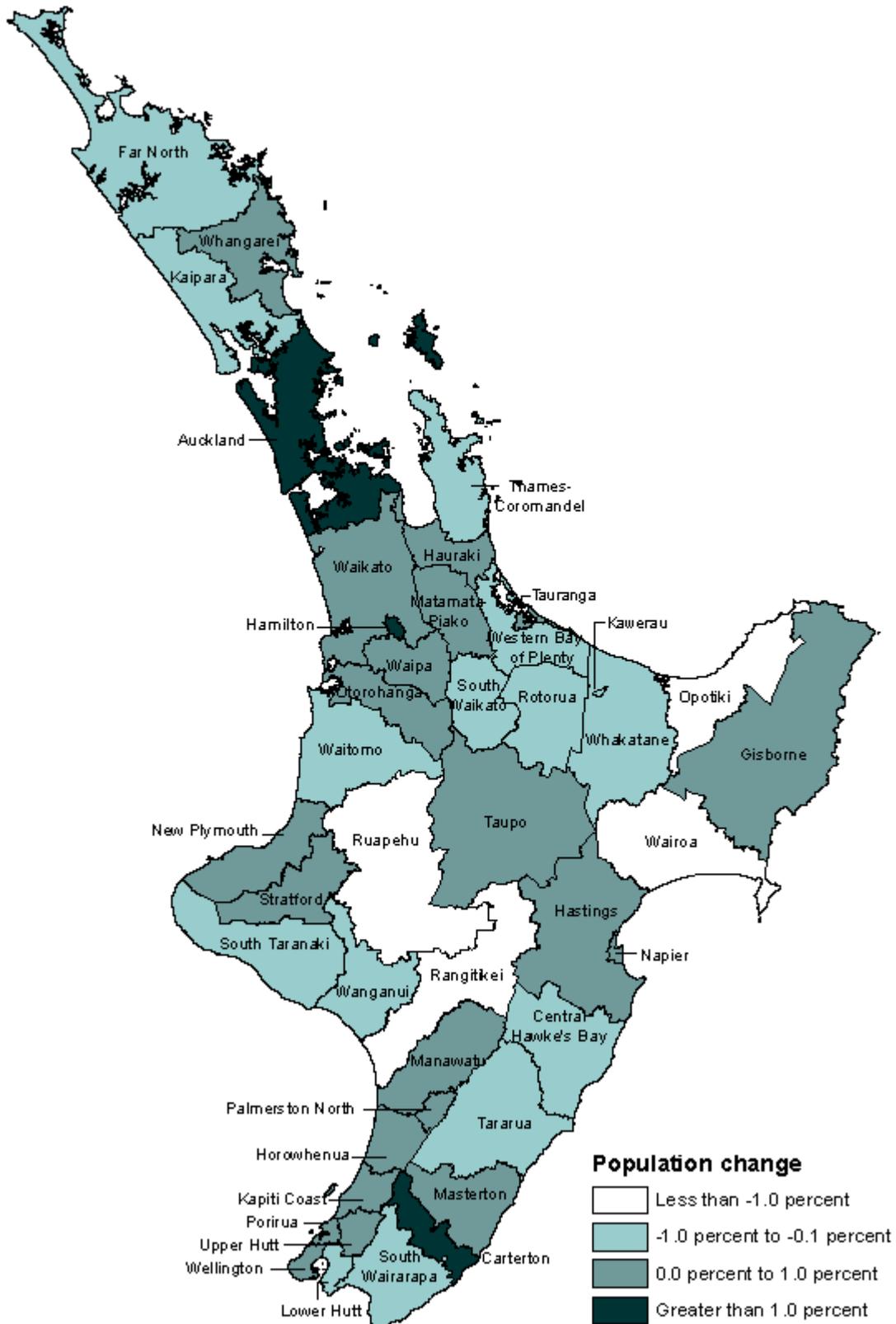
The population of the North Island grew by 27,800 (0.8 percent) in the June 2012 year. The growth was due to natural increase of 26,900 and net migration gain of 900.

Population growth in the North Island was largely concentrated in the most populous cities, especially Auckland. Collectively, the four cities of Auckland, Wellington, Hamilton, and Palmerston North accounted for 98 percent of the North Island's population growth in the June 2012 year. These four areas made up 57 percent of the North Island's population at 30 June 2012.

Of the 43 North Island territorial authority areas, about half recorded a population decrease in the June 2012 year. The largest rates of population decrease were in Opotiki (down 2.6 percent) and Wairoa districts (down 2.5 percent).

Population change

North Island territorial authority areas
 Year ended 30 June 2012

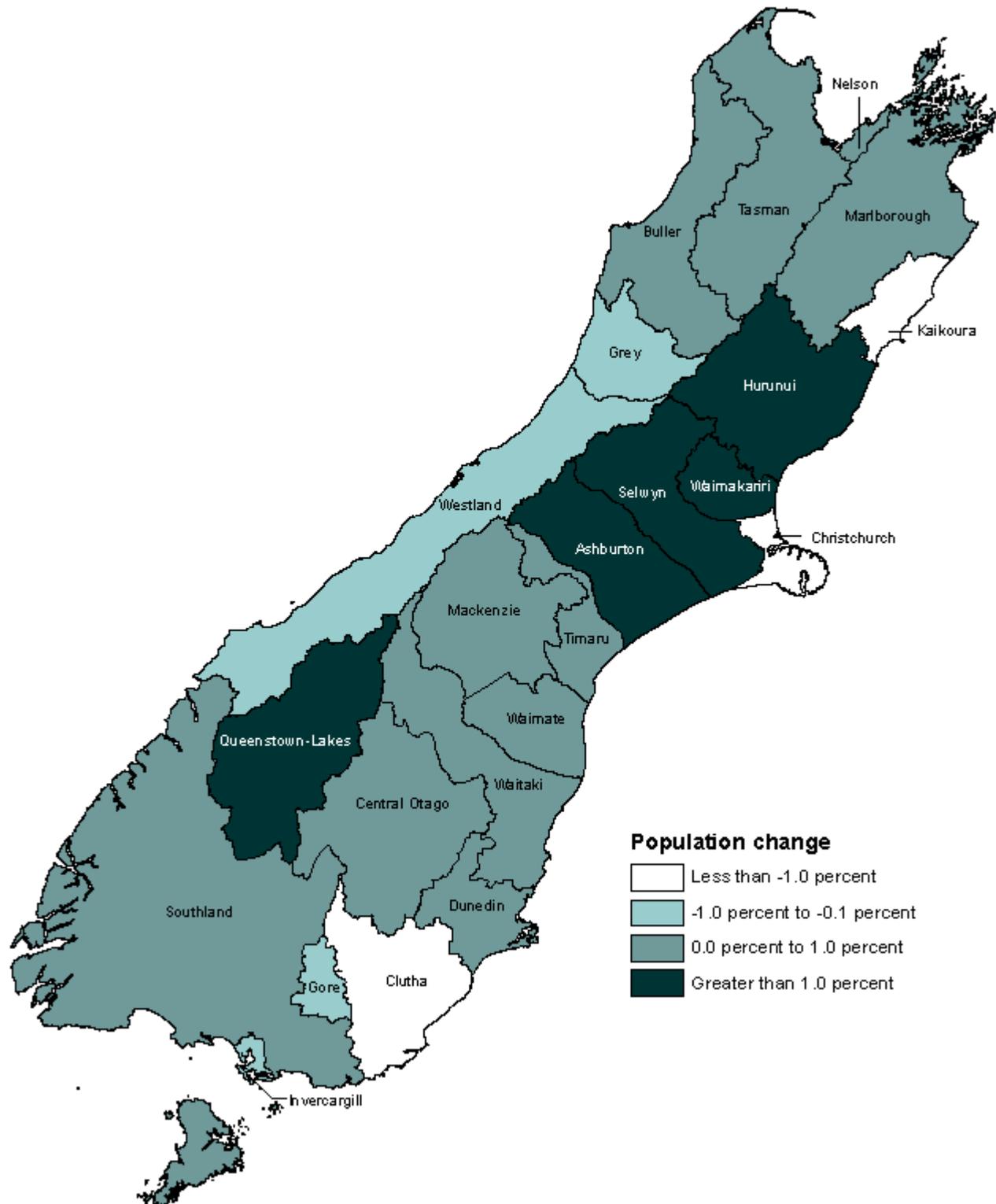


Source: Statistics New Zealand

Population change

South Island territorial authority areas

Year ended 30 June 2012

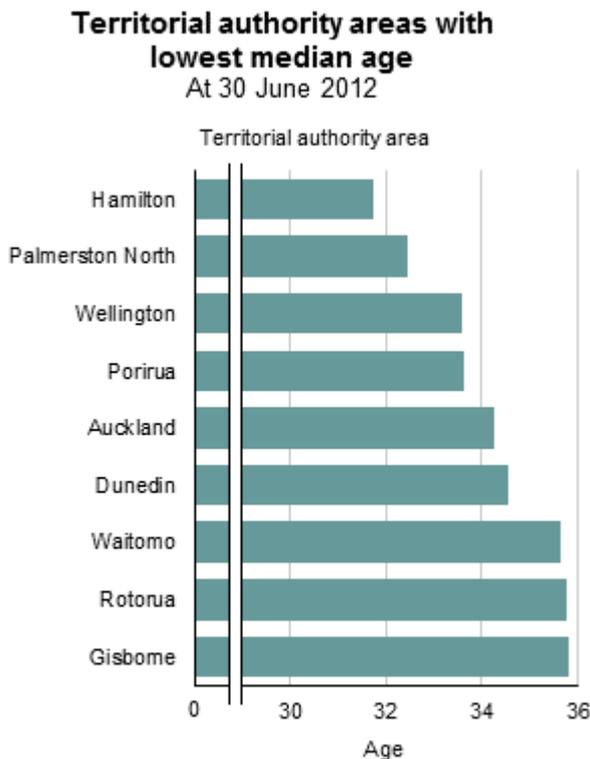


Source: Statistics New Zealand

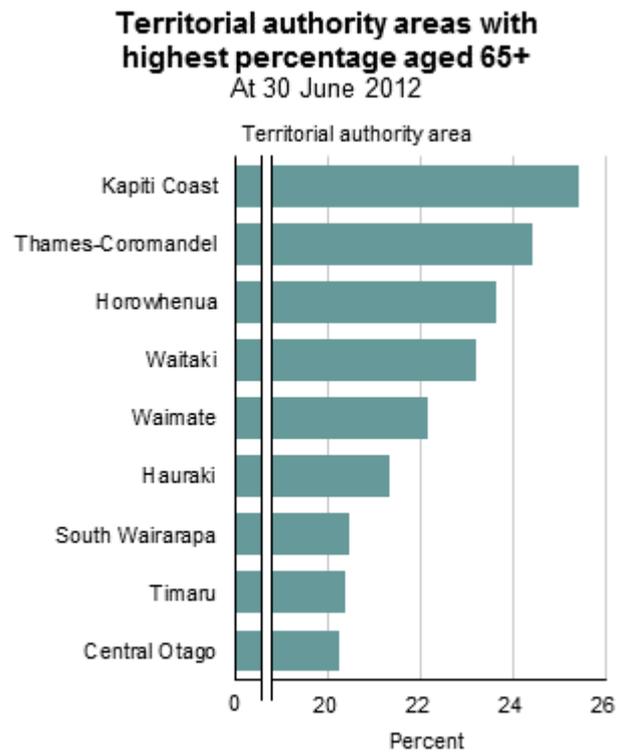
Hamilton city has lowest median age

Half of New Zealand's population was aged over 37.0 years at 30 June 2012. Of New Zealand's 67 territorial authority areas, 13 had a lower median age than the national average, with Hamilton city having the lowest median age of 31.7 years. Other territorial authority areas with a relatively young population included the cities of Palmerston North (32.4 years), Porirua and Wellington (both 33.6 years), Auckland (34.3 years), and Dunedin (34.6 years).

For many areas a low median age indicates a high proportion of children. Dunedin and Wellington, however, have a low proportion of children. Only 15 percent of Dunedin's population is aged under 15 years, and only 17 percent of Wellington's population, compared with 20 percent nationally. Both cities have a high proportion of people aged 15–29 years.



Source: Statistics New Zealand



Source: Statistics New Zealand

More deaths in areas with more older people

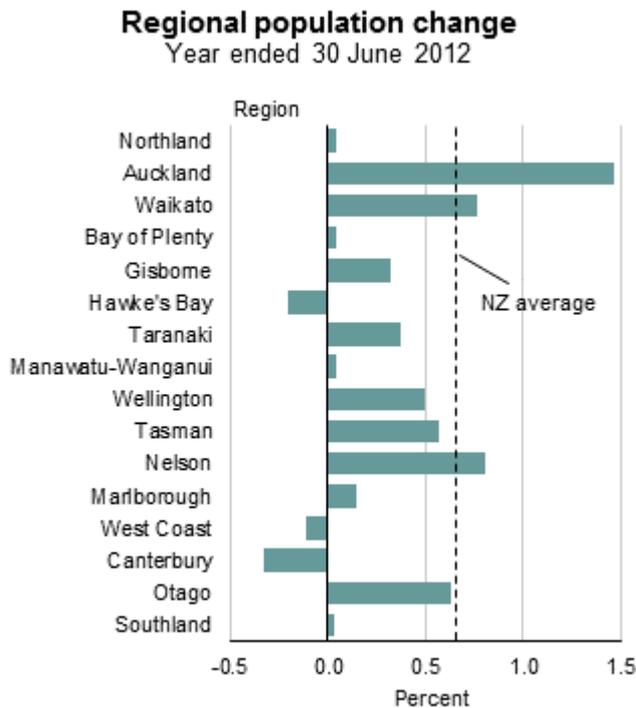
Four territorial authority areas recorded natural decreases (more deaths than births) in the June 2012 year: Thames-Coromandel, Timaru, Kapiti Coast, and Waimate districts. All four areas have a high percentage of their population aged 65 years and over (65+). At 30 June 2012, 25 percent of the Kapiti Coast district's population was aged 65+, compared with the national average of 14 percent.

During the six years ended 30 June 2012, the number of people aged 65+ increased in all territorial authority areas. The latest subnational population projections indicate that this growth will continue over the coming decades.

Population growth slows in most regions

Of New Zealand's 16 regional council areas (regions), 13 experienced population growth in the June 2012 year. Auckland dominated regional growth, up 1.5 percent. Waikato and Nelson (both up 0.8 percent) grew slightly above the national average (0.6 percent).

All regions had a natural increase (more births than deaths) during the June 2012 year. However, all regions except Auckland had net losses from international migration. As a result, most regions had lower population growth than in 2011, while Canterbury, Hawke's Bay, and West Coast experienced small population decreases.



Source: Statistics New Zealand

The population of the earthquake-affected Canterbury region decreased by 1,800 (0.3 percent) in the June 2012 year. This compares with a decrease of 5,000 (0.9 percent) in the June 2011 year.

Excluding Christchurch, the remainder of the Canterbury region grew 2,800 (1.4 percent) in the June 2012 year. This compares with an increase of 4,000 (2.1 percent) in the June 2011 year.

1 in 3 New Zealanders live in Auckland

Auckland has been the fastest-growing region over the last decade. In the June 2012 year:

- Auckland's population grew by 21,700 (1.5 percent), to reach 1.51 million.
- Three-quarters of New Zealand's population growth was in Auckland.
- Two-thirds of Auckland's population growth was contributed by natural increase, and one-third came from net migration gain.

For more detailed data see the Excel tables in the 'Downloads' box.

Definitions

About subnational population estimates

Population estimates give the best available measure of the size and age-sex structure of the population usually living in an area. Estimates are based on the latest census data and on births, deaths, and migration since the census.

Subnational population estimates are published annually and national population estimates are published quarterly.

More definitions

Census usually resident population count: a count of all people who usually live in a given area and are present in New Zealand on a given census night. This count excludes visitors from overseas, visitors from elsewhere in New Zealand, and residents temporarily overseas on census night. The population counts published from the census are not comparable with the estimated resident population.

Estimated resident population: an estimate of all people who usually live in an area for 12 months or more at a given date. Visitors from elsewhere in New Zealand or from overseas are excluded.

Internal migration: migration between areas of New Zealand.

International migration: migration into or out of New Zealand. International migration statistics are based on 'permanent and long-term' migration statistics, which are primarily determined by passengers' responses on arrival or departure cards to the questions on where they live and their length of stay or absence.

International migrant arrivals: people from overseas arriving to live in New Zealand for 12 months or more (including permanently), and New Zealanders returning after an absence of 12 months or more. (Referred to as permanent and long-term arrivals in international migration statistics.)

International migrant departures: New Zealanders departing for an absence of 12 months or more (including permanently), and people from overseas departing after a stay of 12 months or more in New Zealand. (Referred to as permanent and long-term departures in international migration statistics.)

Median age: half the population is younger, and half older, than this age.

Natural increase or decrease: natural increase is an excess of births over deaths. Natural decrease is an excess of deaths over births.

Net migration: the difference between the number of people who have moved to, and departed from, a given area. Subnational net migration includes both international migration and internal migration.

North Island and South Island: the population of the North Island is the sum of the population of North Island regions. The population of the South Island is the sum of the population of South Island regions.

Regional council area (or region): an area governed by a regional council. New Zealand has 16 regional council areas, based on boundaries at 1 January 2013.

Territorial authority area: an area governed by a territorial authority. New Zealand has 67 territorial authority areas (12 cities, 53 districts, Auckland, and the Chatham Islands territory), based on boundaries at 1 January 2013.

Related links

Upcoming releases

Final estimates for regional council and territorial authority areas by five-year age group and sex, at 30 June 2012, will be released on [Table Builder](#) on 19 December 2012. Final estimates for area units by five-year age group and sex, at 30 June 2012, will also be released on [Table Builder](#) at this time.

Final estimates of the total population of urban areas, at 30 June 2012, will be released on [Infoshare](#) by 25 January 2013.

Final estimates of the total population of wards, community boards, subdivisions, constituencies, and district health boards, at 30 June 2012, will be released on the [Subnational population estimates tables](#) webpage by 25 January 2013.

Subnational Population Estimates: At 30 June 2013 is scheduled for release in October 2013.

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[The release calendar](#) lists all our upcoming information releases by date of release.

Past releases

[Subnational Population Estimates](#) has links to past releases. Note, however, that these information releases contain provisional estimates.

[Subnational population estimates tables](#) has final estimates.

Related information

[Subnational population estimates tables](#) has links to provisional estimates for regional council and territorial authority areas, by five-year age groups and sex, at 30 June 2012. Once finalised on 19 December 2012, the estimates will be available on [Table Builder](#), with links from the [Subnational population estimates tables](#) webpage. This webpage also contains Excel files with population estimates for selected local government areas.

[Estimating local populations after the 2010/11 Canterbury earthquakes](#) describes the data sources used to derive subnational population estimates at 30 June 2011–12.

[Evaluation of alternative data sources for population estimates](#) assesses a diverse range of existing administrative and commercial data sources that might be useful for producing subnational population estimates.

[National Population Estimates](#) has links to past releases of national population estimates.

Data quality

Period-specific information

This section contains information about data that has changed since the last release.

- [Data sources used to estimate subnational migration](#)
- [Effect of the 2010/11 Canterbury earthquakes](#)
- [Geographic boundaries](#)
- [Provisional and final estimates](#)

General information

This section contains information that does not change between releases.

- [Base population](#)
- [Deriving subnational population estimates](#)
- [2006-base population estimates extended](#)
- [2013-base population estimates](#)
- [Data accuracy](#)
- [Rounding](#)
- [More information](#)

Period-specific information

Data sources used to estimate subnational migration

For subnational areas, net migration includes international migration (flows into and out of New Zealand) and internal migration (flows between areas in New Zealand). Multiple data sources are traditionally used to derive estimates of subnational migration because:

- there is no direct measure of internal migration in New Zealand other than the periodic Census of Population and Dwellings
- while New Zealand does have a direct measure of international migration (via the arrival and departure cards completed by passengers), vague, incomplete, and temporary addresses affect the quality of geographic information.

Since 2006, Statistics NZ has implemented a number of changes to its estimation methods aimed at improving the accuracy of subnational population estimates. This has included the use of new data sources and refined methods for using existing data sources. These initiatives have been given greater impetus due to:

- the estimation challenges raised by the 2010/11 Canterbury earthquakes
- the cancellation of the 2011 Census of Population and Dwellings, which means that population estimates have to be extended further out than usual from the 2006 base (starting point).

While producing subnational population estimates at 30 June 2012, three data sources were primarily used to estimate subnational migration by age and sex:

- international (permanent and long-term) migration statistics
- address change information from primary health organisation enrolment data
- address change information from the Linked Employer-Employee Dataset (LEED).

These three datasets were selected because they have high rates of population coverage, include the key demographic variables of age and sex, and capture information on address changes.

In using these three data sources, efforts were made to identify and make use of their respective strengths. With regards to estimating subnational migration by age:

- international migration data were used to estimate international migration for all ages
- primary health organisation enrolment data were used to estimate internal migration for the population aged 0–14 years and 45 years and over
- taxation data from LEED were used to estimate internal migration for the population aged 25–44 years.

There are particular challenges associated with estimating subnational migration for the 15–24 year age group. Not only is this group highly mobile, it has low coverage in many data sets (including primary health organisation enrolment data and LEED). As a result, subnational migration for this age group was estimated using the information sources mentioned above, as well as historical estimates and age-sex net migration patterns derived from population projections.

Once preliminary estimates of subnational migration had been created, several additional data sources were used to evaluate and refine the estimates. This additional process was considered necessary as no information source perfectly measures movements of the resident population. The information sources used to evaluate and refine the estimates included:

- school enrolment data
- electoral enrolment data
- residential building consents
- information provided by territorial authorities during the annual consultation
- data on specific population sub-groups, namely defence force personnel, prison populations, and tertiary students.

For additional information on the data sources mentioned in this section see [Evaluation of alternative data sources for population estimates](#).

Effect of the 2010/11 Canterbury earthquakes

The 2010/11 Canterbury earthquakes triggered large migration flows as people were displaced from earthquake-affected areas. Consequently, some additional uncertainties apply to subnational population estimates at 30 June 2011 and 30 June 2012. These uncertainties concern whether population movements:

- are short-term (ie temporary) or long-term in nature
- occurred before or after the 30 June reference dates.

With regards to Christchurch city, a number of data sources have been used to assess subnational migration during the 2011 and 2012 June years (see [Data sources used to estimate subnational migration](#) section). These data sources yield different measures of subnational migration for Christchurch city. However, collectively the different data sources provide confidence about the general robustness of population estimates.

Geographic boundaries

The population estimates in this release are based on boundaries at 1 January 2013. They take into account recent boundary changes involving Christchurch city and Selwyn district (which came into effect on 21 March 2012), and Manawatu district and Palmerston North city (which came into effect on 1 July 2012). These boundaries align with those used in the latest [subnational population projections](#) (released 8 October 2012), and the boundaries that will be in place for the 2013 Census of Population and Dwellings.

Provisional and final estimates

The population estimates contained in this release are provisional. They incorporate provisional estimates of births, deaths, and migration that occurred in the June 2012 year. Final estimates will be released on 19 December 2012, along with area unit population estimates. In addition, all population estimates after 30 June 2006 will be revised following results from the 2013 Census of Population and Dwellings.

General information

Base population

The estimated resident population at 30 June 2006 forms the base population for deriving post-censal population estimates.

The estimated resident population of each area at 30 June 2006 is based on the census usually resident population count from the 2006 Census (held 7 March 2006), with adjustments for:

- people missed or counted more than once by the census (net census undercount)
- residents temporarily overseas on census night
- births, deaths, and net migration between census night and 30 June 2006
- reconciliation with demographic estimates at ages 0–4 years.

Deriving subnational population estimates

Subnational population estimates for dates after 30 June 2006 were derived by updating the estimated resident population of each area at 30 June 2006 for births, deaths, and net migration (international and internal migration combined).

Birth and death registrations are used to estimate the number of births and deaths that occurred during each June year. There is often a delay between when a birth or death occurs and when it is registered, and this delay is taken into account when estimating birth and death occurrences.

Multiple data sources are used to derive estimates of subnational migration (see [Data sources used to estimate subnational migration](#)).

Subnational population estimates are consistent with national population estimates for a given reference date.

2006-base population estimates extended

Statistics NZ planned to produce 2006-base post-censal estimates until mid-2012. Following the cancellation of the 2011 Census of Population and Dwellings, 2006-base post-censal estimates will now be produced until mid-2014.

2013-base population estimates

The 2013 Census of Population and Dwellings will be held on Tuesday 5 March 2013. The 2013 Census website (www.census.govt.nz) provides information about the census.

Population estimates based on the 2013 Census are scheduled for release from August 2014.

Nature of estimates

Population estimates give the best available measure of the size and age-sex composition of the population usually living in an area. However, uncertainty is inherent in the estimation process. Statistics NZ produces subnational population estimates using a component methodology, where the components of population change (births, deaths, and net migration) are used to update a base population. There is some uncertainty associated with component data, particularly the estimation of net migration (international and internal migration combined) for subnational areas. Generally speaking, the uncertainty associated with population estimates increases as the estimates move further away from the base (starting point). Uncertainty also increases as population estimates are broken down by age, sex, and geographic area.

In reality, there is no data source that perfectly measures the resident population of New Zealand or of subnational areas. Furthermore, there is no data source that perfectly measures changes in the resident population, or even movements of the resident population within New Zealand. The periodic Census of Population and Dwellings remains the cornerstone of population statistics in New Zealand. Following the 2013 Census it will be possible to derive updated estimates of the population, to assess the accuracy of estimates since 2006, and to revise estimates where necessary.

Data accuracy

An evaluation of subnational population estimates produced during the 2002–06 period identified that, five years out from the 2001 base population, absolute relative errors were less than 5 percent for 60 out of 73 territorial authority areas (based on boundaries at 30 June 2006). For the 10 territorial authority areas with a population greater than 100,000, relative errors ranged from an underestimate of 2.2 percent (Manukau city) to an overestimate of 0.5 percent (Auckland city).

It is not possible to ascertain the accuracy of current population estimates as no independent authoritative measure of the resident population exists. Since 2006, Statistics NZ has implemented a number of changes to its estimation methods aimed at improving the accuracy of population estimates. This has included the use of new data sources and refined methods for using existing data sources (see [Data sources used to estimate subnational migration](#)).

Rounding

All figures in this release were rounded independently. All derived figures in this release were calculated using data of greater precision than published.

The rounding of estimates of the total population, and broad age groups, has been determined by the total population size of the geographic area. Estimates for areas with a population less than 10,000 are rounded to the nearest 10. For areas with a population between 10,000 and 20,000, estimates are rounded to the nearest 50. Estimates for areas with a population of 20,000 or more are rounded to the nearest 100.

The rounding of estimates of natural increase, net migration, and population change has been determined by the absolute value of the estimate. Estimates less than 1,000 have been rounded to the nearest 10. Estimates greater than 1,000 have been rounded to the nearest 100.

More information

[Information about the population estimates](#) contains detailed information about the methods used to derive population estimates.

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Contacts

For media enquiries contact:

Kim Dunstan

Christchurch 03 964 8700

Email: info@stats.govt.nz

For technical information contact:

Helen He

Christchurch 03 964 8700

Email: demography@stats.govt.nz

For general enquiries contact our Information Centre:

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Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

1. Estimated resident population, regional council areas, at 30 June 2006, 2011, and 2012
2. Estimated resident population, territorial authority areas, at 30 June 2006, 2011, and 2012
3. Estimated resident population by broad age group, regional council areas, at 30 June 2006, 2011, and 2012
4. Estimated resident population by broad age group, territorial authority areas, at 30 June 2006, 2011, and 2012
5. Components of population change, regional council areas
6. Components of population change, territorial authority areas

Access more data on Table Builder

[Subnational population estimates tables](#) has links to provisional estimates for regional council and territorial authority areas, by five-year age groups and sex, at 30 June 2012. Once finalised on 19 December 2012, the estimates will be available on Table Builder, with links from the Subnational population estimates tables webpage. This webpage also contains Excel files with population estimates for selected local government areas.

Access more data on Infoshare

Use [Infoshare](#) to access time-series data specific to your needs. For this release, select the following categories from the homepage:

Subject category: **Population**
Group: **Population Estimates**

The time series can be downloaded in Excel or comma delimited format. More information [about Infoshare](#) can be found on our website.