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National Population Projections: 2009 (base)–2061

Highlights

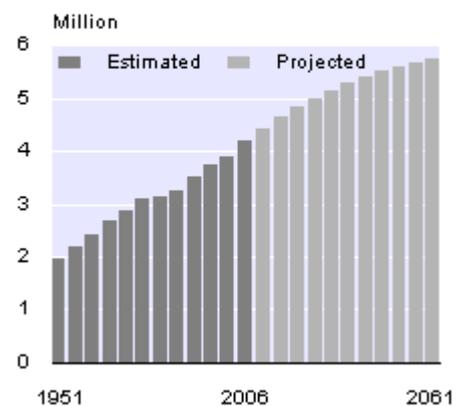
Under all projection series:

- Population growth will slow because of the narrowing gap between births and deaths.
- The population age structure will continue to gradually but significantly change, resulting in more older people and further ageing of the population.

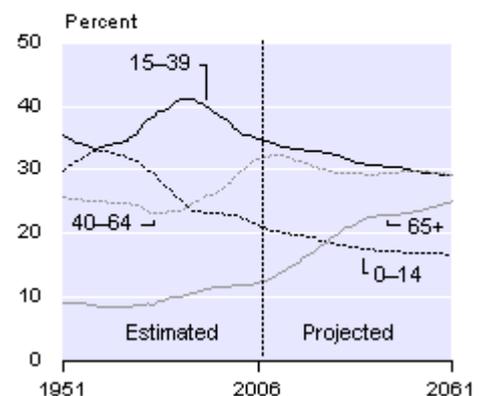
Under mid-range projection series 5:

- New Zealand's population is projected to eclipse 5 million in the mid-2020s and reach 5.75 million by 2061.
- The population aged 65+ will increase from 550,000 in 2009 to 1 million in the late 2020s, and will exceed the number of children aged 0–14 years.
- One in five New Zealanders will be aged 65+ by 2031, compared with one in eight in 2009.

New Zealand Population
1951–2061, series 5



Age Distribution of Population
1951–2061, series 5



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Commentary

Alternative projection series

Nine series of population projections have been produced by Statistics New Zealand using different combinations of fertility, mortality, and migration assumptions (table 1). A further five series are presented in the Additional 'what if?' scenarios section and in table 4. More detailed projection results, including projections for individual years and projections by age and sex, are available from [Table Builder](#) on the Statistics NZ website (www.stats.govt.nz).

Alternative projection assumptions

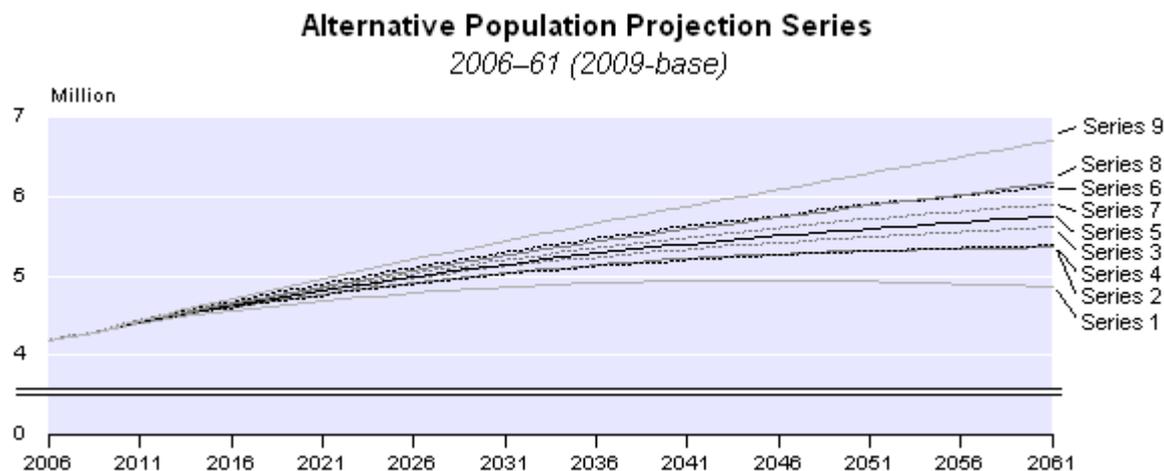
Projection series	Fertility (long-run total fertility rate)	Mortality (male and female life expectancy at birth in 2061)	Migration (long-run annual net migration)
1	Low (1.7)	High (82.6, 86.2)	Low (5,000)
2	Low (1.7)	Medium (85.6, 88.7)	Medium (10,000)
3	Medium (1.9)	High (82.6, 86.2)	Medium (10,000)
4	Medium (1.9)	Medium (85.6, 88.7)	Low (5,000)
5	Medium (1.9)	Medium (85.6, 88.7)	Medium (10,000)
6	Medium (1.9)	Medium (85.6, 88.7)	High (15,000)
7	Medium (1.9)	Low (88.6, 91.2)	Medium (10,000)
8	High (2.1)	Medium (85.6, 88.7)	Medium (10,000)
9	High (2.1)	Low (88.6, 91.2)	High (15,000)
Very high fertility	Very high (2.5)	Medium (85.6, 88.7)	Medium (10,000)
Very low mortality	Medium (1.9)	Very low (95.0, 95.0)	Medium (10,000)
No migration	Medium (1.9)	Medium (85.6, 88.7)	None (zero)
Cyclic migration	Medium (1.9)	Medium (85.6, 88.7)	Cyclic (10,000 average)
Very high migration	Medium (1.9)	Medium (85.6, 88.7)	Very high (25,000)

The projections are neither predictions nor forecasts. They provide an indication of possible future changes in the size, growth rate, and age-sex structure of the population. While the assumptions are formulated from an assessment of short-term and long-term demographic trends both in New Zealand and overseas, there is no certainty that any of the assumptions will be realised.

The population projections have as a base the estimated resident population (provisional) of New Zealand at 30 June 2009. These are the second set of national population projections to use population estimates based on the 2006 Census of Population and Dwellings, and cover the period to 2061 at one-year intervals.

Among the projections, series 9 uses high population growth assumptions and yields the highest population throughout the projection period. Series 9 projects the population to reach 6.71 million in 2061, an increase of 2.39 million or 55 percent from 2009. Series 9 assumes high fertility (a long-run average of 2.1 births per woman), low mortality (life expectancy at birth increasing to 88.6 years for males and 91.2 years for females by 2061), and high migration (long-run annual net migration of 15,000 people).

In contrast, series 1 uses low population growth assumptions and projects the lowest population throughout the projection period. Series 1 projects the population to peak at 4.94 million in 2045, before deaths outnumber the combined effect of births and net migration and the population decreases to 4.86 million in 2061. Series 1 assumes low fertility (a long-run average of 1.7 births per woman), high mortality (life expectancy at birth increasing to 82.6 years for males and 86.2 years for females by 2061), and low migration (long-run annual net migration of 5,000 people).



Which projection series should I use?

Nine projection series have been produced to illustrate a range of possible scenarios. Users can make their own judgement as to which projection series is/are most suitable for their purposes. However, at the time of release, Statistics NZ considers mid-range projection series 5 the most suitable for assessing future population changes. Series 5 assumes:

1. Fertility: the total fertility rate will decrease to 1.9 births per woman by 2026 and then remain constant.
2. Mortality: life expectancy at birth will increase to 85.6 years for males and 88.7 years for females by 2061.
3. Migration: a long-run annual net migration gain of 10,000 people from 2013.

What has changed from the 2006-base projections?

The base population at 30 June 2009 is 4.32 million. This is 6,000 or 0.1 percent higher than the 4.31 million projected at 30 June 2009 from the 2006-base projections (series 5), mainly because observed births were higher than had been projected.

The medium migration variant of the 2009-base projections equates to a net migration gain of 71,000 in the five years to 30 June 2011. By comparison, the corresponding variant of the 2006-base projections assumed a net migration gain of 46,000 in the five years to 30 June 2011. This increase in the short run is largely driven by fewer departures of New Zealand citizens. The low, medium, and high long-run annual net migration levels of 5,000, 10,000, and 15,000, respectively, are the same as used in the 2006-base projections. The distribution of migration by age-sex has also been modified to reflect recent observed patterns (eg arrivals on student and work permits).

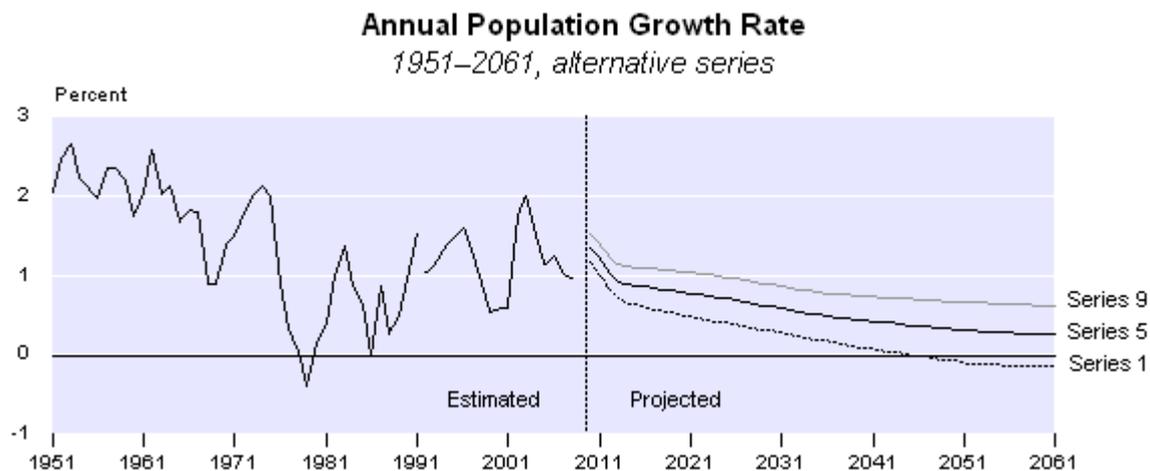
The medium fertility variant of the 2009-base projections equates to an average total fertility rate of 2.12 births per woman in 2007–11 and 2.02 in 2012–16. This is an increase in the short-run compared with the 2006-base medium fertility variant, which assumed an average total fertility rate of 2.09 births per woman in 2007–11 and 2.00 in 2012–16. The new assumptions incorporate the recent fluctuations in the total fertility rate, from about 1.97 in the year ended June 2006, to 2.18 in the year ended June 2008, and to 2.14 in the year ended June 2009.

The 2009-base mortality assumptions have been derived using a new method. The assumptions are essentially driven by observed trends in death rates by birth cohort, age, and sex. Death rates change at different rates at different ages over the projection period. For the medium mortality variant, this results in slightly lower life expectancies for most of the projection period than assumed for the 2006-base projections, although the life expectancies at birth are higher in 2061, and there is a higher range between the low and high variants in 2061: six years for males and five years for females.

The combined effect of these changes is that the New Zealand population is expected to reach 5.15 million in 2031 and 5.75 million in 2061 (series 5, 2009-base projections). The 5 million population mark is projected to be reached in the June 2027 year. By comparison, under series 5 of the 2006-base projections the New Zealand population was expected to reach 5 million in 2028.

Population growth

The New Zealand population grew at an average rate of 1.4 percent a year between 1951 and 2006. Under all projection series, the population growth rate will slow. In series 5, the growth rate drops from 1.3 percent in 2010, to 0.6 percent in 2031, to 0.3 percent in 2061.



Note: In the above and following graphs, a break in data between 1990 and 1991 denotes a change from the de facto population concept to the resident population concept.

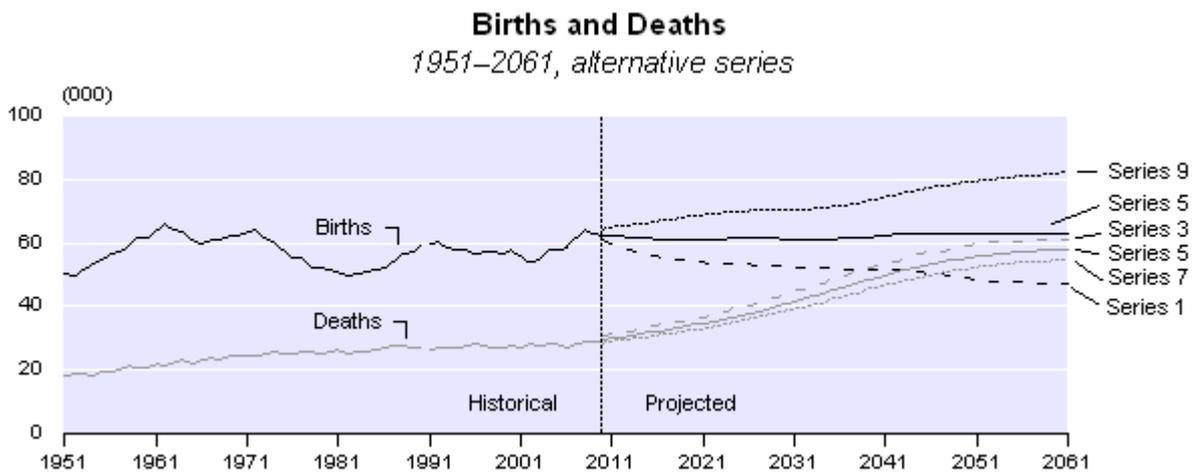
Births and deaths

The slowing of population growth during the projection period is driven by the narrowing gap between births and deaths. Under projection series 5, annual births are expected to decrease from 63,000 in 2010 to an average of 62,000 in 2012–16, and 61,000 in 2017–26. Subsequently, births are projected to increase to an annual average of 63,000 by 2061. These trends reflect the assumed decrease in total fertility rates and fluctuations in the number of women in the childbearing ages.

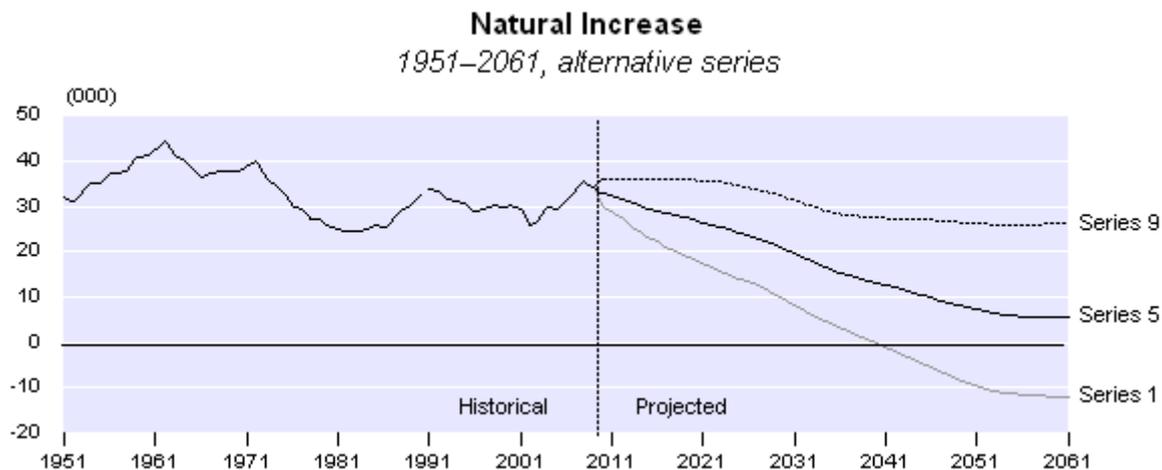
In contrast, deaths are expected to increase steadily from 30,000 in 2010 to 42,000 in 2031, and to 58,000 in 2061, despite assumed lower death rates and increasing life expectancy. This is because of the large number of people born during the 1950s to early 1970s reaching the older ages. About 74 percent of male deaths and 82 percent of female deaths currently occur at ages 65 years and over (65+).

Under the low fertility projection (series 2), which assumes a long-run average of 1.7 births per woman, births are expected to fall to 51,000 a year in 2061. If low fertility is also combined with low migration and high mortality (series 1), births are projected to fall to 47,000 a year. In contrast, under the high fertility projection (series 8), which assumes long-run replacement fertility of 2.1 births per woman, births increase to 77,000 in 2061. Series 9, which assumes high migration and low mortality as well as high fertility, projects that births will increase to 82,000 in 2061.

There is much less variation in the number of deaths between projection series, ranging from 55,000 deaths in 2061 under the low mortality projection (series 7) to 61,000 under the high mortality projection (series 3). For all of the 52-year projection period, series 3 (high mortality) and series 7 (low mortality) give the highest and lowest number of annual deaths, respectively. The wider range of projected births compared with deaths reflects that the trends in age-specific fertility rates are less certain than the trends in age-specific death rates. It also reflects that future births are affected by people born in the projection period who themselves have children during the projection period. In contrast, nearly all those who will die during the projection period are already alive at the beginning of the projection period.



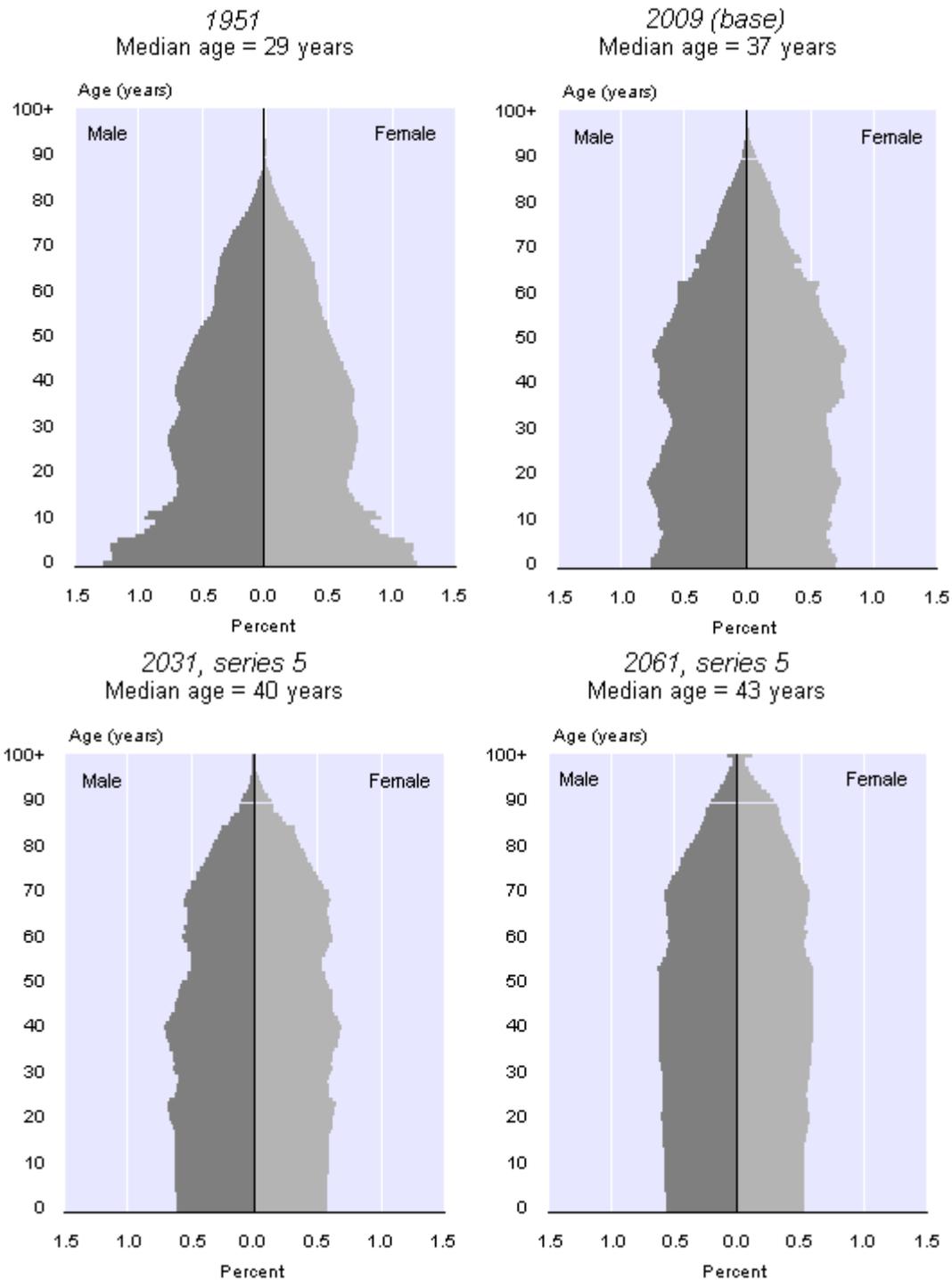
Under series 5, annual natural increase (births minus deaths) is projected to decrease steadily from 33,000 in 2010 to 20,000 in 2031 and 5,000 in 2061. Only in series with the low fertility assumptions (series 1 and 2) do deaths outnumber births by 2061.



Ageing population

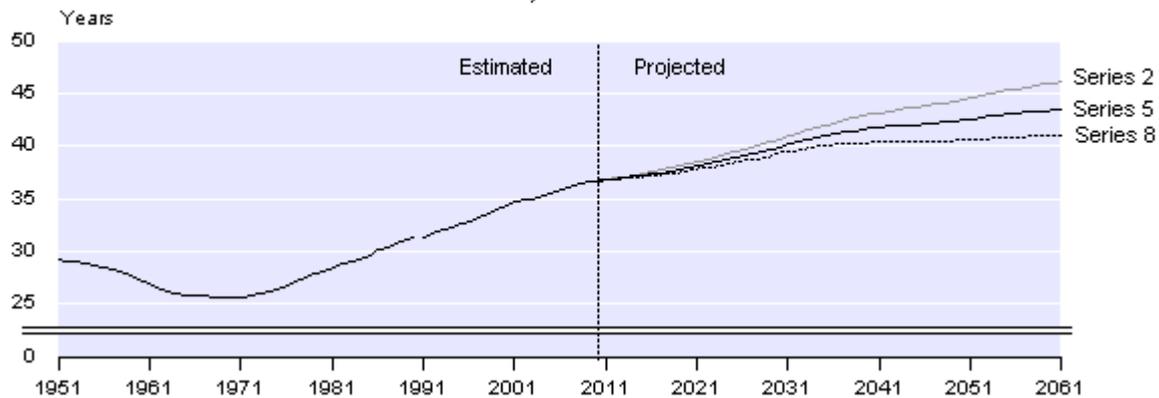
Regardless of which projection series is chosen, there will be significant changes in the age structure of the population. All series project more older people and further ageing of the population. The median age (half the population is older, and half younger, than this age) of New Zealand's population increased from 26 years in 1971 to 37 years in 2009. According to projection series 5, half of the population will be aged 40 years and older by 2031, and by 2061 half the population will be aged 43 years and older. This gradual ageing reflects the combined impact of sub-replacement fertility, increasing longevity, and the movement of the large number of people born during the 1950s to early 1970s into the older ages.

Population Age-sex Pyramids



Higher migration levels are unlikely to significantly slow the ageing of the population. The median age of the population in 2061 is projected to be about 43 years assuming net migration of 15,000 a year (series 6) or 10,000 a year (series 5), and 44 years assuming net migration of 5,000 a year (series 4). Fertility has a much more significant impact on the age structure, with the lowest median age in 2061 (41 years) provided by the high fertility series 8, while the highest median age in 2061 (46 years) is provided by the low fertility series 2.

Median Age
1951–2061, alternative series

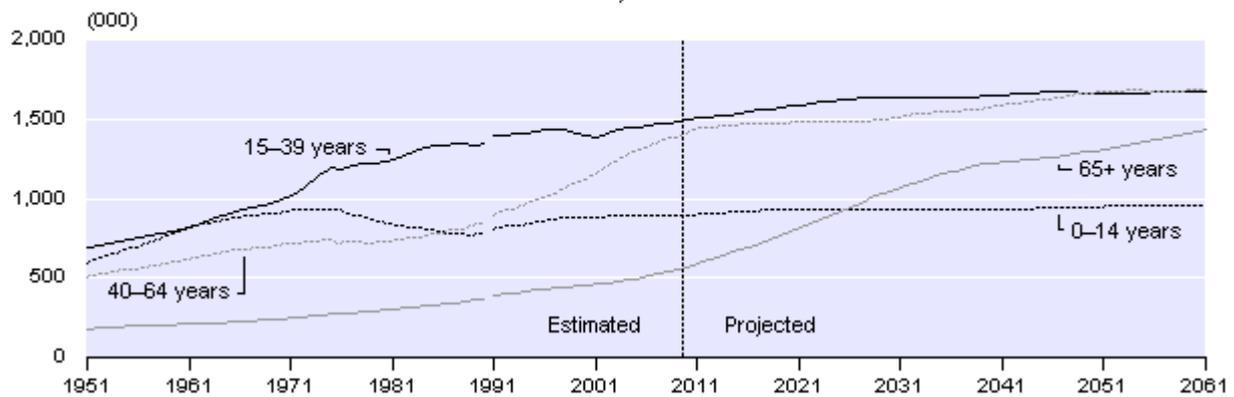


Children

The number of children aged 0–14 years peaked at 940,000 in 1974, then decreased steadily to 770,000 in 1989, before generally increasing to 890,000 in 2009. Under projection series 5, the number of children is expected to increase slightly to 940,000 in 2021 before easing to about 930,000 in 2023–43. In the long term, the number of children increases to 950,000 in 2051 and 960,000 in 2061. The projected fluctuations reflect birth numbers in preceding years. By 2061, children will account for only 17 percent of the population compared with 21 percent in 2009 and about 33 percent during the early 1960s.

Fertility levels have the largest impact on the number of children. Series 1 projects the fewest children throughout the projection period, with a steady decline to 810,000 in 2031 and 730,000 in 2061. In contrast, series 9 projects the most children throughout the projection period, with a steady increase to 1.05 million in 2031 and 1.22 million in 2061. Assuming medium mortality and migration, 790,000 children are projected in 2061 assuming low fertility (series 2), and 1.14 million are projected in 2061 assuming high fertility (series 8). In comparison, the range in the number of children given by the alternative migration assumptions is from 890,000 (series 4) to 1.02 million (series 6). Differences in mortality assumptions have a negligible effect on the number of children.

Population by Broad Age Group 1951–2061, series 5



Working-age population

The working-age population (those aged 15–64 years) more than doubled from 1.20 million in 1951 to 2.87 million in 2009. It is projected to grow gradually to 3.15 million in 2031 and 3.36 million in 2061 (series 5). The working-age population will then make up 58 percent of the total population, compared with 67 percent in 2009.

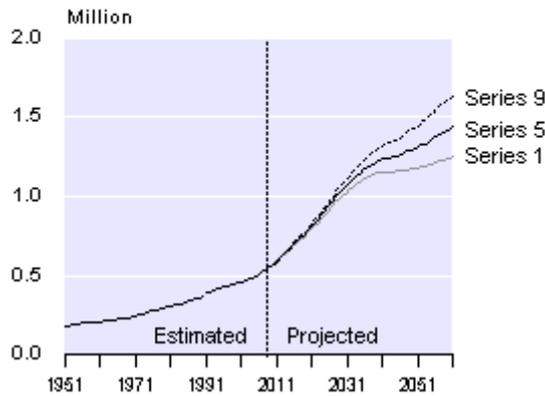
Most of the increase in the working-age population will be in the older half of the age bracket, and thus it will take on an older profile. The population aged 40–64 years has been increasing rapidly since the early 1980s as the baby boomers move into this age group. The increase will slow as the number entering the age group only slightly exceeds those leaving it. The number of people in this age group is expected to increase from 1.39 million in 2009 to 1.51 million in 2031, and 1.68 million in 2061 (series 5). In 2061, 29 percent of the population will be aged 40–64 years, down from a peak of 32 percent expected in 2011.

The number of people aged 15–39 years is projected to increase from 1.48 million in 2009 to 1.64 million in 2029 (series 5). The population will then generally increase at a much slower rate, reaching 1.68 million by 2061. This age group accounted for about 41 percent of the population in the mid-1980s and 34 percent of the population in 2009, but is expected to account for only 32 percent in 2031 and 29 percent in 2061. The ratio of the 40–64 years age group to the 15–39 years age group is projected to generally rise from 0.93 in 2009 to 1.00 in 2061. The ratio was 0.57 in 1984.

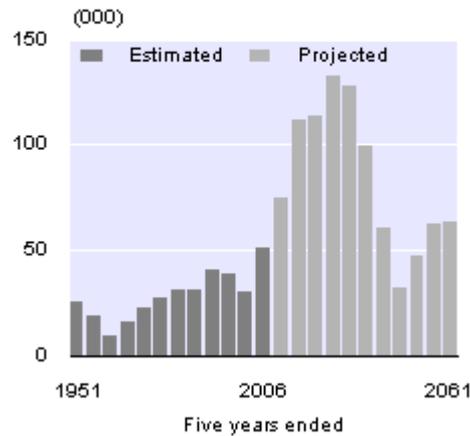
Older people

The number of people aged 65+ has doubled since 1976, to 550,000 in 2009. Projection series 5 indicates that there will be 1.44 million people aged 65+ in 2061, 2.6 times the 2009 total. The largest growth will occur between 2011 and 2037 as the baby boomers move into this age group. From the late 2020s, the 65+ age group will make up over 20 percent of all New Zealanders, compared with 13 percent in 2009. From the late 2050s, this age group will comprise 25 percent of the population.

Population Aged 65+ Years
1951–2061, alternative series

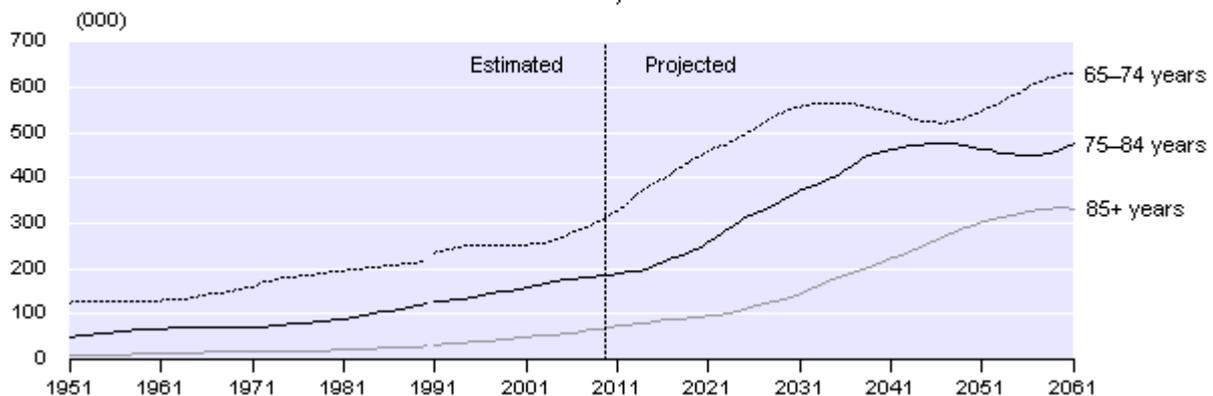


Change in Population Aged 65+ Years
1951–2061, series 5



Within the 65+ age group, the number of people aged 85 and over (85+) is expected to increase from 67,000 in 2009 to about 330,000 in 2061 (series 5). They will make up about one in four of the 65+ population, compared with one in eight in 2009. The number of people aged 85+ is projected to increase substantially even under the high mortality projection (series 3), to 250,000 in 2061. Under the low mortality projection (series 7), there would be 420,000 people aged 85+ in 2061.

Population Aged 65+ Years by Age Group
1951–2061, series 5



Although more males are born than females (at a ratio of about 105.5 to 100), the higher mortality of males at all ages means that females outnumber males by a growing margin in the older ages. In 2009, there were 83 males for every 100 females in the 65+ age group. At ages 85+ there were only 50 males for every 100 females. The projections assume some catch-up in male life expectancy relative to that of females. By 2061 there will be 87 males for every 100 females aged 65+. For ages 85+, the sex ratio is expected to increase to 69 per 100 by 2061.

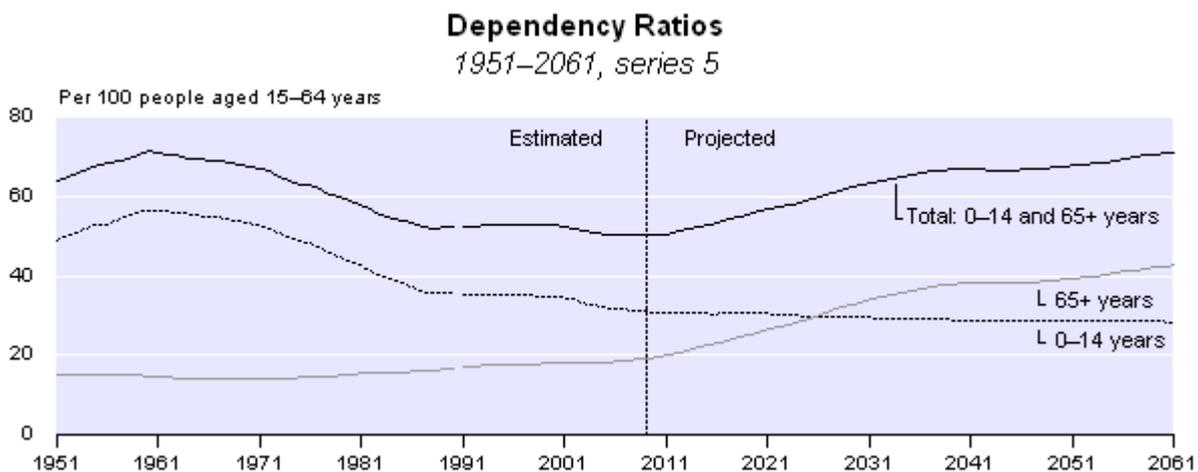
Dependency ratios

Dependency ratios relate the number of people in the 'dependent' age groups (defined here as 0–14 and 65+ years) to the 'working-age' population (15–64 years). They are crude measures because they 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. Furthermore, in the case of those aged 65+, the term 'dependency' need not imply financial or economic dependency. The life expectancy, physical well-being, and labour force status of those aged 65+ continue to change over time.

The 0–14 and 65+ dependency ratios are projected to follow contrasting paths over the projection period. The 0–14 dependency ratio (the number of people aged 0–14 years per 100 people aged 15–64 years) decreased from a peak of 57 per 100 in 1961 to 31 in 2009. This downward trend is expected to continue, with the ratio dropping to 29 in 2031 and 28 in 2061 (series 5).

The 65+ dependency ratio (the number of people aged 65+ per 100 people aged 15–64 years) increased from 15 per 100 in 1951 to 19 in 2009. It is expected to increase substantially after 2011 to reach 37 per 100 in 2036, and then increase at a slower rate to 43 in 2061 (series 5). This means that for every person aged 65+, there will be 2.7 people in the working-age group in 2036 and 2.3 in 2061, compared with 5.2 people in 2009. The 65+ dependency ratio is projected to overtake the 0–14 dependency ratio in the mid-2020s.

The total dependency ratio (sum of the 0–14 and 65+ dependency ratios) is now at its lowest level since the mid-1930s. It is projected to increase from 50 per 100 in 2009 to 66 in 2036 and 71 in 2061 (series 5). All projection series show a similar trend in the total dependency ratio, ranging from 68 (series 3) to 75 (series 7) in 2061. The 65+ dependency ratio will contribute 60 percent of the total dependency ratio compared with 38 percent in 2009. A total dependency ratio of about 70 per 100 was also experienced around 1960, but then the 65+ dependency ratio contributed about 20 percent of the total dependency ratio.



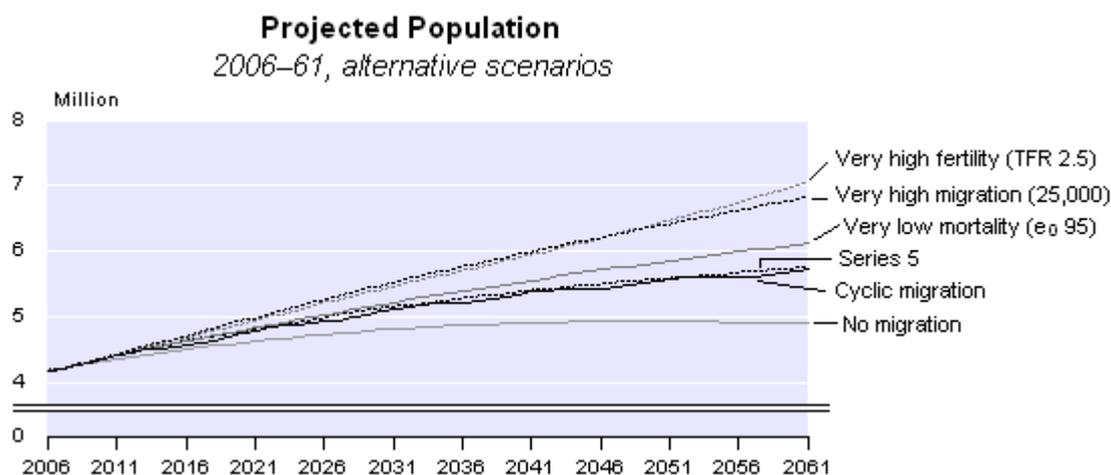
Additional 'what if?' scenarios

Projection series 1–9 cover selected combinations of a plausible, but not exhaustive, range of assumptions for each component (mortality, fertility, migration). Five additional projection series have been derived to explore other scenarios of interest.

Under projection series 5, the population increases by about 1.4 million people between 2009 and 2061 to 5.8 million. Population growth would be higher if either fertility or migration levels were assumed to be higher. For the population to reach 7 million by 2061, a total fertility rate (TFR) of 2.5 births per woman would be required (very high fertility) or annual net migration would have to exceed 25,000 (very high migration series). While these scenarios produce a similar population size, the higher fertility assumption would produce a much younger age structure.

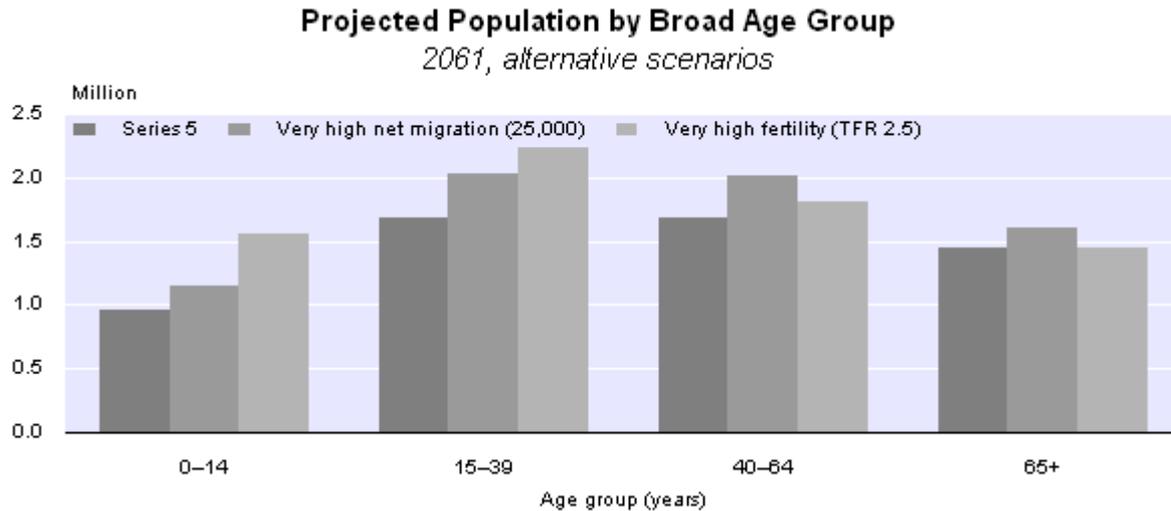
With a total fertility rate of 2.5 births per woman, births would continue to outnumber deaths by 3,000–50,000 throughout the projection period. There would be 108,000 births in 2061 under this scenario, compared with 63,000 under projection series 5. The increased number of births would see the number of children rise by 74 percent over the projection period, compared with 7 percent under series 5. Population ageing would continue but at a much slower rate, with the median age increasing from 37 years in 2009 to peak at 38 years in 2034, before declining to 37 years in 2061. By comparison, series 5 projects the median age to increase steadily to 43 years in 2061.

Net migration of 25,000 a year would also slow the ageing of the population, but much less than the very high fertility level. The median age is projected to increase to 43 years in 2061 with very high net migration – virtually the same as series 5. Because of the higher population, there would be 22 percent more births and 7 percent more deaths in 2061 than projected under series 5. By 2061, births would exceed deaths by 15,000, compared with a natural increase of 5,000 in series 5.



The nine official projection series all assume that the gain in life expectancy will slow slightly over the projection period. If gains seen over the last three decades continue so that life expectancy at birth reaches 95.0 years for males and females in 2061, the population would reach 6.1 million in 2061. This is 380,000 more than under series 5. Almost 350,000 of this difference would be in the 65+ age group, which would more than triple in size to 1.79 million in 2061. The 85 years and over age group would increase to

over 590,000 in 2061 – about 260,000 more than under projection series 5. With more people in the older ages, the population would age even faster than projected by series 5 – the median age of the population reaching 46 years in 2061. The 65+ dependency ratio would also be higher, reaching 53 per 100 in 2061 compared with 43 per 100 under series 5. Deaths would total 48,000 in 2061 compared with 58,000 under series 5.



An interesting projection series for comparative purposes is to assume no migration. This shows the effect on the population solely from births and deaths. With no migration, the population would peak at 4.9 million in the late 2040s then slowly decline as deaths outnumber births. The population of 4.9 million in 2061 would still be 600,000 higher than the 2009 population. Compared with series 5, the population would be lower for all three broad age groups (0–14, 15–64, and 65+ years) and as a result the median age and 65+ dependency ratio would be only slightly higher.

In the long run, the low, medium, and high migration assumptions assume a constant migration level. However, actual net migration tends to fluctuate significantly from year to year. A projection series was constructed assuming cyclic migration levels, fluctuating between -10,000 and +30,000 on a 10-year cycle. This gives exactly the same net migration gain over the projection period as series 5. The resulting population size in 2061 is little different under the cyclic migration series than under projection series 5, being just 16,000 lower. However, during the projection period the population varies between 2,000 and 70,000 below the series 5 population in the same year, because of the annual differences in net migration. Other characteristics of the population (eg age distribution, dependency ratios, births, deaths) are very similar between the two series. A constant level of migration in the long run is therefore a sufficient assumption for most purposes.

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Next release ...

Subnational Population Projections: 2006 (base)–2031 update will be released on 24 February 2010.

Technical notes

Latest projections

This release contains 2009-base projections of the population usually living in New Zealand. The projections supersede the 2006-base series released in October 2007. The new projections cover the period 2010–2061 at one-year intervals. More detailed projection results, including projections for individual years and projections by age and sex, are available from [Table Builder](#) on the Statistics NZ website (www.stats.govt.nz). Special projections can also be produced for clients using their own assumptions. For more information and quotes, email demography@stats.govt.nz or phone toll-free 0508 525 525.

Base population

These projections have as a base the estimated resident population (provisional) of New Zealand at 30 June 2009. This population (4.316 million) was derived from the estimated resident population of New Zealand (4.185 million) at 30 June 2006, updated for births, deaths, and net migration between 30 June 2006 and 30 June 2009 (+131,000). The estimated resident population of New Zealand at 30 June 2009 was derived from the census usually resident population count (4.028 million) at 7 March 2006 with adjustments for:

1. net census undercount (+80,000)
2. residents temporarily overseas on census night (+64,000)
3. births, deaths and net migration between census night and 30 June 2006 (+9,000)
4. reconciliation with demographic estimates at ages 0–4 years (+3,000).

For information about the base population, refer to [Information About the Population Estimates](#) on the Statistics New Zealand website (www.stats.govt.nz).

Alternative series

Nine alternative series have been produced using different combinations of fertility, mortality and migration assumptions. At the time of release, projection series 5 is considered the most suitable for assessing future population changes. The other projection series allow users to assess the impact on population size and structure resulting from changes in the assumptions for each of the components of population change. Series 4, 5, and 6 can be used for assessing the effect of the different migration assumptions; series 3, 5, and 7 allow for a comparative mortality analysis; and series 2, 5, and 8 allow for a comparative fertility analysis.

Series 1 and 9 give the lowest and highest projected population, respectively, based on the adopted assumptions. Series 1 uses low fertility, high mortality, and low net migration. Series 9 uses high fertility, low mortality, and high net migration. Five additional series have also been produced to illustrate how the population will change if certain demographic events were to occur:

1. Very high fertility. The total fertility rate increases from 2.14 births per woman in 2009 to 2.21 in 2011, 2.37 in 2016, 2.46 in 2021, 2.50 in 2026, and then remains constant.
2. Very low mortality. Life expectancy at birth increases at a similar annual rate as between the 1975–77 and 2005–07 complete period life tables (ie by 0.30 and 0.22 years of life for males and females, respectively) to reach 95.0 years of life for both males and females in 2061.
3. No migration. No external migration at any age throughout the projection period (ie a 'closed' population).
4. Cyclic migration. Annual net migration fluctuates between -10,000 and 30,000 over a 10-year cycle, with an average of 10,000.
5. Very high migration. Annual net migration of 25,000 throughout the projection period.

Method

The cohort component method was used to derive the population projections. By this method, the base population is projected forward by calculating the effects of deaths and migration within each age-sex group according to specified mortality and migration assumptions. New birth cohorts are generated by applying specified fertility assumptions to the female population of childbearing age.

Projection assumptions

Projection assumptions are formulated after analysis of short-term and long-term historical trends, recent trends and patterns observed in other countries, government policy, and any other relevant information.

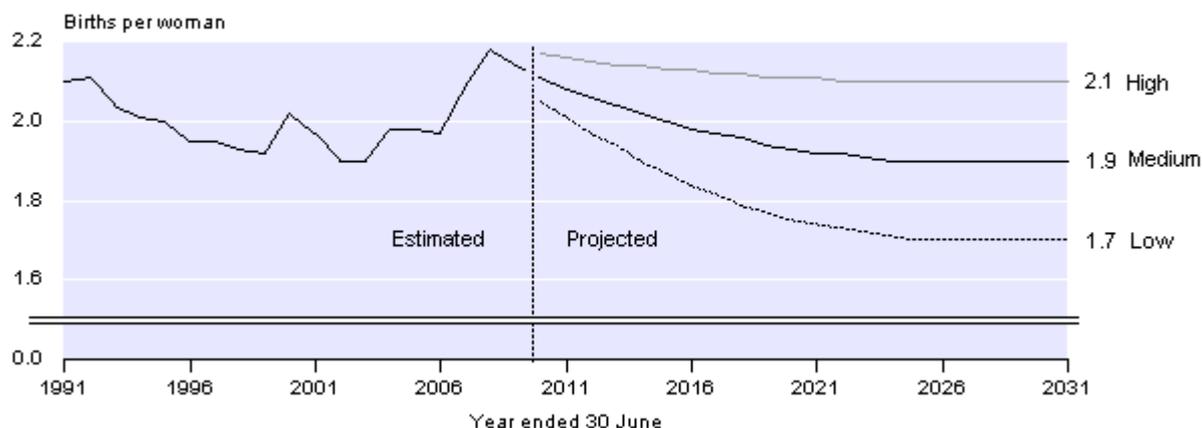
Fertility

There are three alternative fertility variants – designated low, medium, and high – which assume that fertility rates will vary until the year 2026 when the total fertility rate will reach 1.70, 1.90, and 2.10 births per woman, respectively. After 2026, fertility rates are assumed to stay constant. The total fertility rate in the year ended June 2009 was 2.14 births per woman (based on births by date of registration).

The medium fertility variant assumes fertility rates of women aged under 32 years will decline between 2009 and 2026, but increase for women aged 32 years and over. By comparison, the low fertility variant assumes fertility rates will decrease between 2009 and 2026 at most ages. The high fertility variant assumes that fertility rates of women aged under 32 years will drop between 2009 and 2026, but increase for women aged 32 years and over.

A sex ratio at birth of 105.5 males per 100 females is assumed, based on the historical annual average of the New Zealand population.

Total Fertility Rate 1991–2031



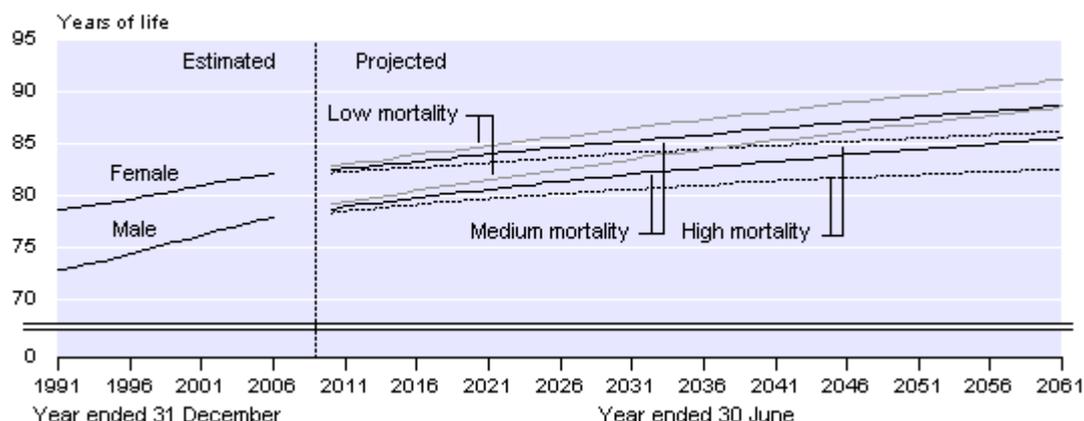
Mortality

There are three alternative mortality variants – designated low, medium, and high – which assume that mortality rates will continue to drop so that the period life expectancy at birth for males will increase to 88.6, 85.6, and 82.6 years, respectively, by 2061. The corresponding life expectancies for females in 2061 will be 91.2, 88.7, and 86.2 years. The life expectancy at birth in 2005–07, from complete period life tables, was 78.0 years for males and 82.2 years for females.

Mortality rates are assumed to decrease at different rates at different ages. Between 2006 and 2061, male mortality rates are assumed to decrease by an average of 2.1, 1.6, and 1.0 percent per year for the low, medium, and high mortality variants, respectively. By comparison, female mortality rates are assumed to decrease by an average of 2.4, 1.8, and 1.3 percent per year for the low, medium, and high mortality variants, respectively.

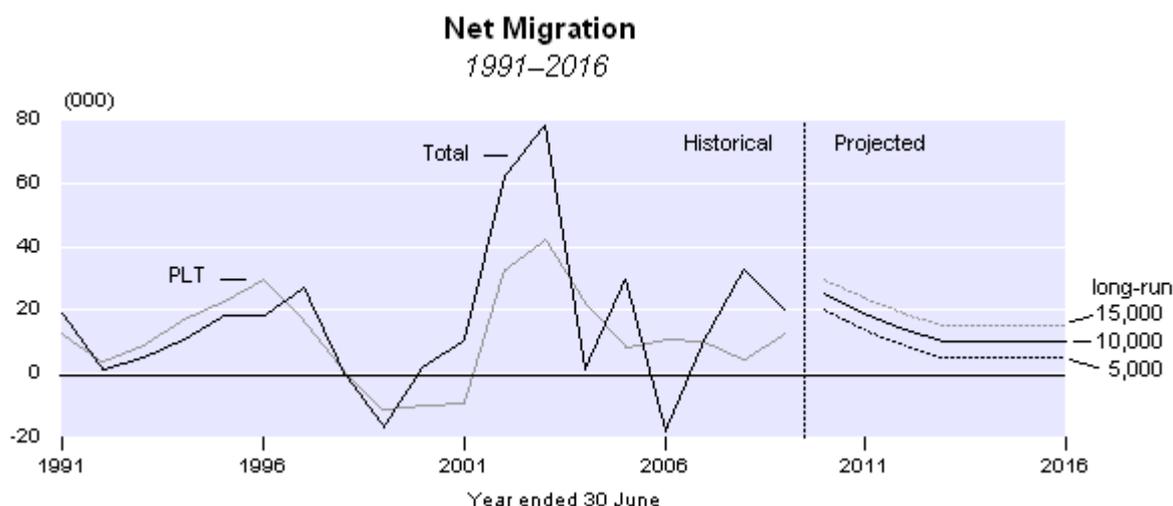
For more information about the method, refer to [Information About the Demographic Projections](#) on the Statistics New Zealand website (www.stats.govt.nz).

Life Expectancy at Birth 1991–2061



Migration

There are three alternative migration variants – designated low, medium, and high – which assume long-run annual net migration of 5,000, 10,000, and 15,000, respectively. The medium migration variant assumes net migration of 25,000 in 2010, 19,000 in 2011, and 14,000 in 2012. The low and high migration variants are 5,000 lower and higher, respectively, than the medium variant for each year. These levels are based on an analysis of immigration permits, residence applications and approvals, overseas student numbers, and arrivals and departures analysed by characteristics such as citizenship, country of last/next permanent residence, and age.



Consistent with historical and recent trends, the age-sex patterns of net migration assume the main net outflow at ages 22–25 years, mainly due to young New Zealanders embarking on overseas travel and the departure of students from overseas after studying in New Zealand. Net inflows are assumed for most other ages with the highest net inflows at 15–20 and 27–37 years.

Nature of projections

Demographic projections are designed to meet both short-term and long-term planning needs, but are not designed to be exact forecasts or to project specific annual variation. These projections are based on assumptions made about future fertility, mortality, and migration patterns of the population. Although the assumptions are carefully formulated to represent future trends, they are subject to uncertainty. Therefore, the projections should be used as guidelines and an indication of the overall trend, rather than as exact forecasts.

The projections do not take into account non-demographic factors (eg war, catastrophes, major government and business decisions) which may invalidate the projections. Demographic trends are monitored regularly and, when it is necessary, the projections are revised to reflect new trends and to maintain their relevance and usefulness.

For more information about the projections, refer to [Information About the Demographic Projections](#) on the Statistics New Zealand website (www.stats.govt.nz).

Definitions

Baby boomer: usually someone born in the years 1946–65, although the definition of the baby boom period varies between sources and between countries.

De facto population concept: a statistical basis for a population in terms of those present in a given area at a given time. The census night population count is a census measure of the de facto population concept, and the estimated de facto population is a demographic measure of the de facto population concept.

Estimated resident population: an estimate of all people who usually live in New Zealand at a given date. It includes all residents present in New Zealand and counted by the census (census usually resident population count), 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.

Life expectancy: the average length of life remaining at a given age. In a period life table, it is the average length of life from a given age, assuming people experience the age-specific mortality rates of a given period from the given age onwards.

Replacement fertility: generally refers to a total fertility rate of 2.1 children per woman, which equates to the average number of children each woman is required to have for a population to replace itself in the long term, without migration. The rate allows for the sex ratio at birth (roughly 105 males born for every 100 females) and for some mortality of females between birth and childbearing.

Resident population concept: a statistical basis for a population in terms of those who usually live in a given area at a given time. The census usually resident population count is a census measure of the resident population concept, and the estimated resident population is a demographic measure of the resident population concept. In terms of vital statistics, the resident population concept refers to events that relate to residents of New Zealand only.

Total fertility rate: the average number of live births that a woman would have during her life if she experienced the age-specific fertility rates of a given period (usually a year).

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Tables

The following tables are printed with this Hot Off the Press and can also can be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the [Excel file viewer](#) to view, print and export the contents of the file.

1. Projected population of New Zealand, 1991–2061 (2009-base)
2. Projected components of population change, 1996–2061 (2009-base)
3. Projected population by age group, 1991–2061 (2009-base)
4. Summary characteristics of alternative scenarios, 2009–61 (2009-base)