

Embargoed until 10:45am – 17 August 2010

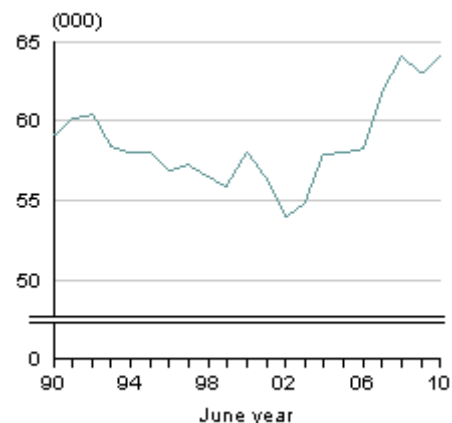
## Births and Deaths: June 2010 quarter

### Highlights

In the June 2010 year:

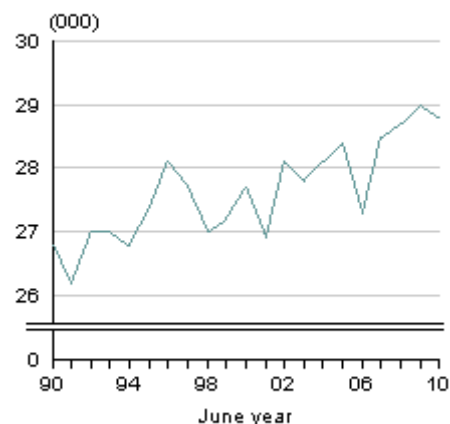
- 64,120 live births were registered in New Zealand, up 1,160 from 62,960 in 2009.
- 79 percent of the increase in births was due to an increase in the number of babies born to women living in the Auckland region.
- The total fertility rate was 2.2 births per woman.
- 28,840 deaths were registered.
- The age-standardised death rate was 3.9 deaths per 1,000 mean estimated population, down from 4.8 in 2000.
- The infant mortality rate was 5.1 deaths per 1,000 live births.
- Births exceeded deaths by 35,280.

Live births  
1990–2010



Source: Statistics New Zealand

Deaths  
1990–2010



Source: Statistics New Zealand

Geoff Bascand  
Government Statistician

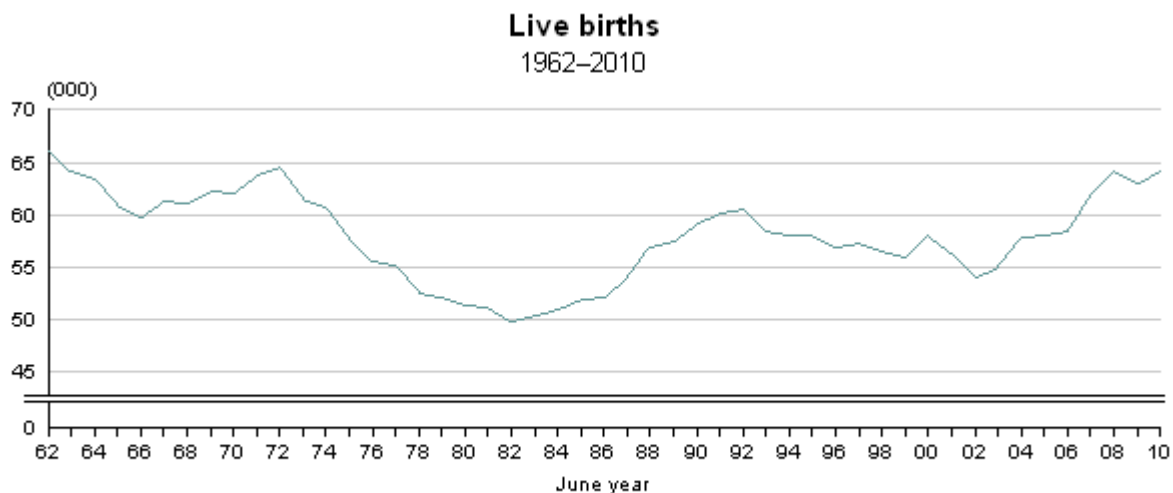
17 August 2010  
ISSN 1178-0436

# Commentary

## Live births

There were 64,120 live births registered in New Zealand in the June 2010 year, up 1,160 (2 percent) from the June 2009 year, but similar to the 64,140 registrations in 2008. With the exception of 2009, births have increased in each June year since dropping to a low of 53,970 in 2002.

The highest number of births registered in any June year was 66,110 in 1962. At that time, New Zealand's mean population was just 2.5 million, compared with 4.3 million in 2010. Since then, births have averaged 57,790 per year, varying between 49,680 in 1982 to 64,510 in 1972.



Source: Statistics New Zealand

Annual fluctuations in births, in part, reflect changes in the size and age of the population, the age at which women have children, and the number of children they have. In turn, the number of births influences the future size and age of the population.

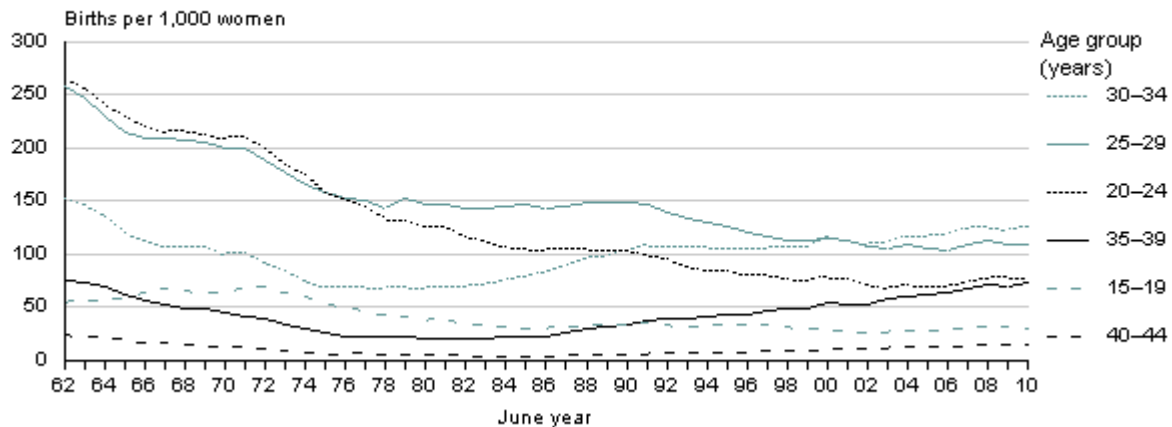
## Fertility rates and mother's age

In the June 2010 year, women aged 30–34 years had the highest fertility rate (127 births per 1,000 women aged 30–34 years), followed by those aged 25–29 years (110 per 1,000) and 20–24 years (77 per 1,000). Compared with the high fertility seen in the early 1960s, women in all age groups now have fewer babies. In 1962, women aged 20–24 years had the highest fertility rate (265 per 1,000), followed by those aged 25–29 years (259 per 1,000) and 30–34 years (152 per 1,000). (Age-specific fertility rates before 1981 are based on December years.)

There were more births to women in all age groups in the June 2010 year compared with the June 2002 year, when birth numbers were relatively low. The biggest increase was in the 35–39 year age group, closely followed by those aged 30–34 years. For every 1,000 women aged 35–39 years there were 19 more births in 2010 than in 2002. In 2010, women aged 30–34 years had, on average, 18 more births per 1,000 women than in 2002.

Compared with the June 2009 year, fertility rates were higher in 2010 for women in the age groups over 25 years, but lower for women aged under 25 years.

## Age-specific fertility rates 1962–2010

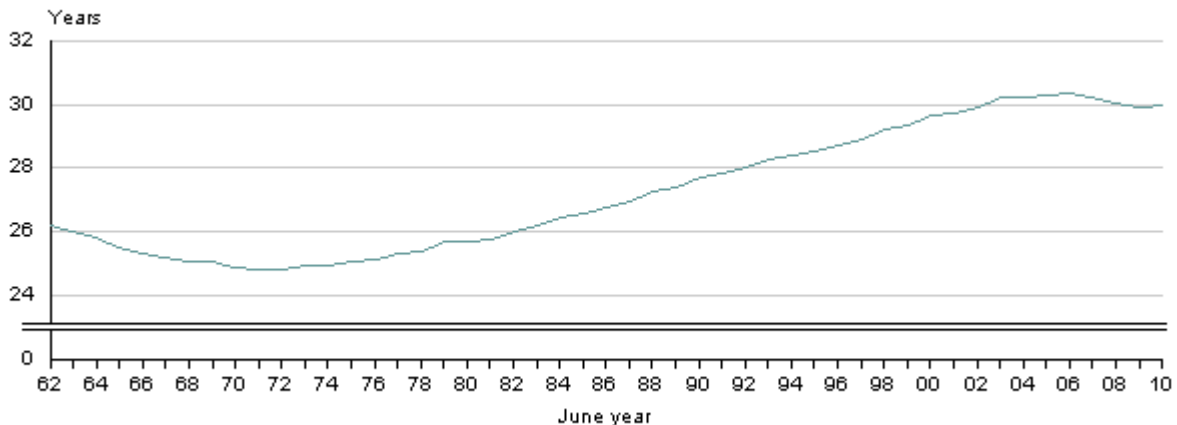


Source: Statistics New Zealand

Fertility rates for women aged 40–44 years dropped from around 20 births per 1,000 in the early 1960s to around 4 per 1,000 in the mid-1980s, before increasing to 15 births per 1,000 in 2010. Among women aged 40–44 years who registered a baby in the June 2010 year, 70 percent were aged 40 or 41 years.

The median age (half are younger and half older than this age) of New Zealand women giving birth is now 30 years, compared with 26 years in the early 1960s. The median age dropped to just under 25 years in the early 1970s. Although there has been a significant increase in the median age since the 1970s, it has been relatively stable at around 30 years in the past decade.

## Median age of mother 1962–2010



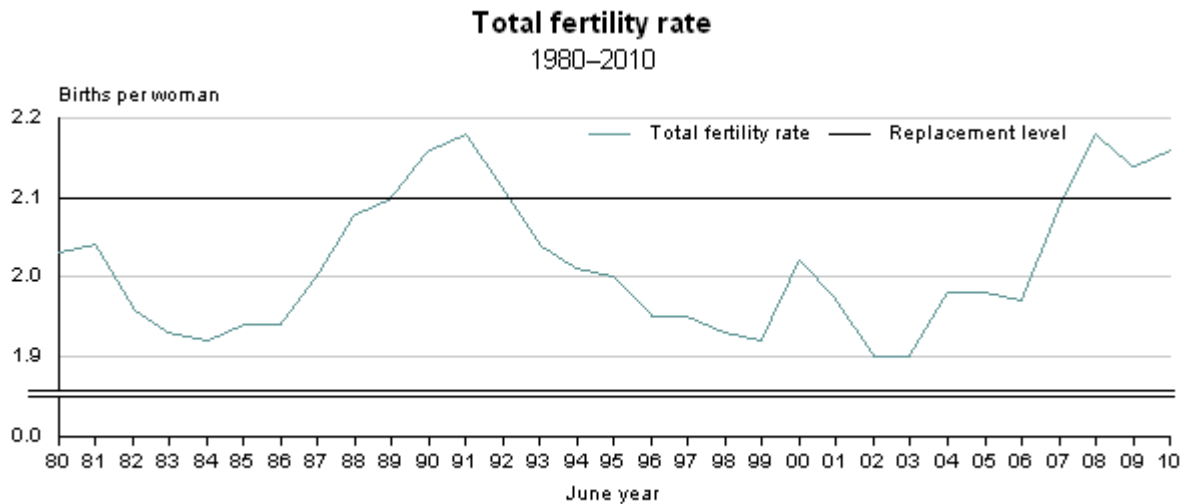
Source: Statistics New Zealand

The median age of women giving birth to their first child (based on children in the current relationship only) was 28 years in the year ended June 2010, and has been relatively stable over the last decade.

## Total fertility rate

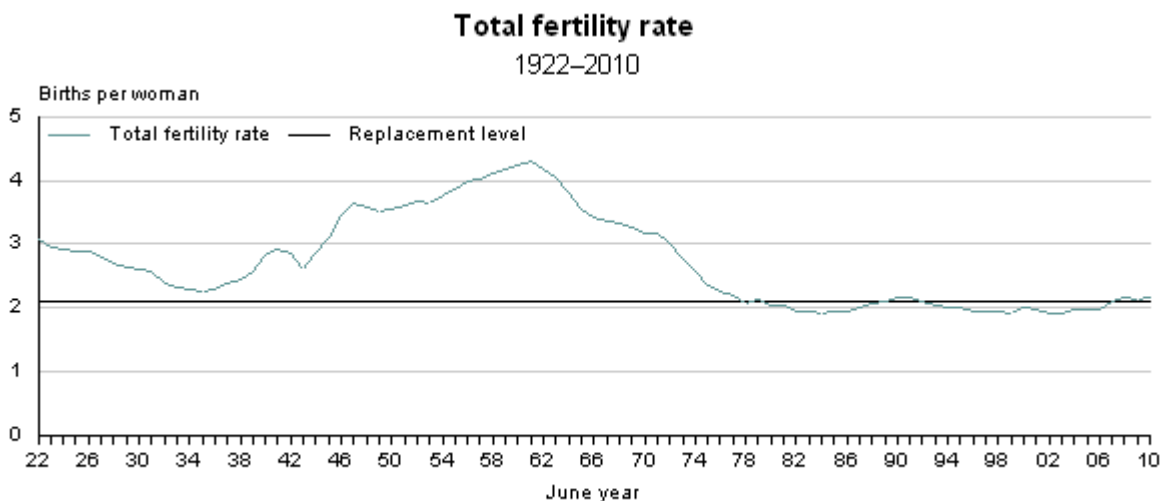
The total fertility rate summarises the age-specific fertility rates into a single number indicator of fertility. It indicates, on average, the number of babies a woman would have in her lifetime if the age-specific fertility rates in a given period stayed the same throughout her life. The total fertility rate for the June 2010 year was 2.16 births per woman, up from 2.14 in 2009, but down from

2.18 in the June 2008 year. The level required by a population to replace itself in the long term, without migration, is 2.1 births per woman. Since 1980, fertility in New Zealand has been slightly below the replacement level, with the exception of short periods around 1990 and 2009. Annual fluctuations in the total fertility rate do not necessarily indicate changes in family size, but rather changes in the timing of births.



Source: Statistics New Zealand

New Zealand's total fertility rate has been relatively stable over the last three decades, averaging 2.01 births per woman. During this period, the total fertility rate varied from 1.90 to 2.18 births per woman. In contrast, fertility rates increased dramatically from the mid-1940s, peaking at 4.31 births per woman in 1961. New Zealand then experienced decreasing fertility, with the total fertility rate dropping to 4.05 in 1963, 3.00 in 1972, and 2.12 in 1979. (Total fertility rates before 1981 are based on December years.)



Source: Statistics New Zealand

## Births by ethnicity

In the June 2010 year, the European ethnic group gained 44,230 babies, Māori 18,430, Pacific peoples 10,390, Asian 7,850, MELAA (Middle Eastern, Latin American, and African) 1,200, and 'other' (including New Zealanders) 510. People can belong to more than one ethnic group. In 2010, one-quarter (25 percent) of babies belonged to two or more ethnic groups, compared with 13 percent of mothers.

Fertility rates for the major ethnic groups (other than Māori) are only produced for the census years 2001 and 2006. You can find these rates on the [Births](#) page of the Statistics NZ website.

## **Māori births**

In the June 2010 year, there were 14,430 live births registered to Māori women. Māori women tend to have higher fertility rates in the younger age groups compared with the total population. The median age of Māori women giving birth was 26 years in the June 2010 year, compared with 30 years for the total population. Māori women aged 20–24 years had the highest fertility rate (157 births per 1,000 women aged 20–24 years), followed by those aged 25–29 years (147 per 1,000) and 30–34 years (112 per 1,000) in 2010. The total fertility rate for Māori women in the June 2010 year was 2.85 births per woman, above the rate for the total population (2.16 births per woman).

Fertility rates for Māori women are available from Statistics New Zealand's Infoshare database ([www.stats.govt.nz/infoshare](http://www.stats.govt.nz/infoshare)), under Population on the Browse page.

## **Regional live births**

Auckland region had the highest number of births in the June 2010 year (23,280), accounting for 36 percent of all live births registered in New Zealand. Next came the Canterbury (7,350), Wellington (6,850), and Waikato (6,250) regions. Together, these four regions accounted for just over two-thirds of all live births registered in the June 2010 year, which is consistent with their share of New Zealand's population.

The Auckland region accounted for 79 percent of the increase in births in the June 2010 year. Six regions (Waikato, Bay of Plenty, Wellington, Otago, West Coast, and Gisborne) experienced a small drop in births between 2009 and 2010.

Fertility rates for regions are only produced for the census years 1996, 2001, and 2006. You can find these rates on the [Births](#) page on the Statistics NZ website.

## **Deaths and death rates**

Deaths registered during the June 2010 year totalled 28,840, down slightly from 28,960 in 2009. The number of deaths has gradually increased over time due to population growth in the older age groups, partly offset by longer life expectancy. Fifty years ago, in the June 1960 year, deaths numbered 20,690. The number of deaths increased over the following 10 years, to 24,460 in 1970, then more slowly to 25,660 in 1980, and 26,780 in 1990. Statistics NZ's mid-range population projections (series 5) indicate deaths will continue to increase, surpassing 40,000 in 2029 and 50,000 in 2042.

Overall, deaths are increasingly concentrated in the older age groups. The median age at death in the June 2010 year was 77 years for males and 83 years for females, compared with 72 years for males and 78 years for females in 1990. Only 5 percent of the deceased were aged under 40 years in the June 2010 year, compared with 9 percent in 1990.

The crude death rate (deaths per 1,000 mean estimated resident population) is influenced by the age structure of the population, and therefore does not provide a true measure of the trends in mortality. For example, the crude death rate for the Māori population (4.4) was much lower than for the total population (6.6) in the June 2010 year. This lower rate is due to the much younger age structure of the Māori population.

Age-standardised death rates provide an alternative summary of the mortality trends of populations with very different age structures. The standardised death rate for the Māori population (6.7 deaths per 1,000 mean estimated population) was much higher than that for the total population (3.9) in the June 2010 year. Standardised death rates for both the Māori and total populations have dropped, down from 8.8 and 4.8 per 1,000, respectively, in the December 2000 year. (Standardised death rates are not available for June years before 2002.)

Please note that standardised death rates can only be used to compare mortality trends for populations that have been standardised against the same standard population. Life tables give a more accurate and detailed description of the mortality trends across populations and time.

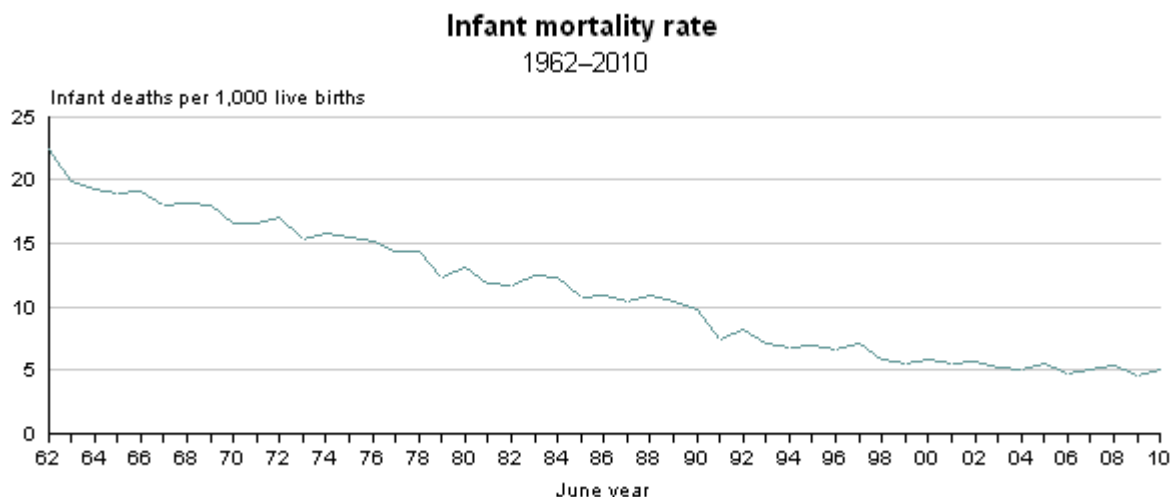
## Life expectancy

According to the [New Zealand abridged period life table for 2007–09](#), a newborn girl can be expected to live, on average, 82.4 years, and a newborn boy 78.4 years. This represents longevity gains since 2006–08 of 0.2 years for both females and males. While female life expectancy is still higher than male life expectancy, the longevity gap has narrowed from 6.4 years in 1975–77 to 4.0 years in 2007–09. Since 1975–77, life expectancy at birth has increased by 6.9 years for females and 9.4 years for males.

Abridged period life tables are produced annually for the total population only. Complete life tables are produced for the Māori, non-Māori, and total populations every five years. Complete life tables present mortality measures for each single year of age, while abridged life tables present mortality measures for age groups. The latest complete life tables, in [New Zealand Life Tables: 2005–07](#), show that Māori life expectancy was 75.1 years for females and 70.4 years for males in 2005–07, compared with 82.2 years and 78.0 years, respectively, for the total population.

## Infant mortality and stillbirths

During the June 2010 year, the number of infant deaths (under one year of age) registered in New Zealand totalled 330. The infant mortality rate (infant deaths per 1,000 live births) has dropped over the last 40 years. In the June 2010 year, the infant mortality rate was 5.1 per 1,000, down from 5.9 in the June 2000 year and 16.6 in 1970. The Māori infant mortality rate was 7.3 per 1,000 in the June 2010 year, down from 24.3 in 1970.



Source: Statistics New Zealand

Neonatal deaths (under four weeks of age) made up 60 percent of infant deaths in the June 2010 year and 30 percent did not survive their first day. The neonatal mortality rate (neonatal deaths per 1,000 live births) was 3.1 in 2010, down from 4.3 in the June 1990 year. The post-neonatal mortality rate (infant deaths over 27 days of age per 1,000 live births) also dropped, from 5.5 in 1990, to 2.1 in 2010.

There were 440 stillbirths in the June 2010 year. This corresponds to 6.8 stillbirths per 1,000 births (live and stillbirths combined). The definition of a stillbirth has changed over time. For this reason, take care when comparing stillbirth rates. Before September 1995, a stillbirth was defined as a child born dead after 28 weeks of gestation. Since September 1995, New Zealand has defined a stillbirth as a child who is born dead and either weighs 400g or more or is born after 20 weeks of gestation. This change gave more parents the right to register their child's birth. As a result, the number of stillbirths increased from 190 in 1995 to 330 in 1996 and stillbirth rates after 1995 cannot be compared with rates up to 1995. Stillbirth rates can be recalculated using the pre-1995 definition of stillbirth to provide a roughly consistent series. This definition produces a stillbirth rate that drops from 10.1 in 1970 to 4.2 in 1990 and 3.0 per 1,000 births in 2010. Despite the long-term drop in the stillbirth rate, the rate has fluctuated around 3.2 per 1,000 over the last decade.

## **Regional deaths and life expectancy**

During the June 2010 year, the Auckland region had the highest number of deaths (7,430). Although the Auckland region is home to approximately one-third of New Zealand's population, it only accounted for about one-quarter of New Zealand's deaths. This is due to the region's relatively young age structure. Only 10 percent of the Auckland region's population is aged 65 years and over, compared with 13 percent for the national population.

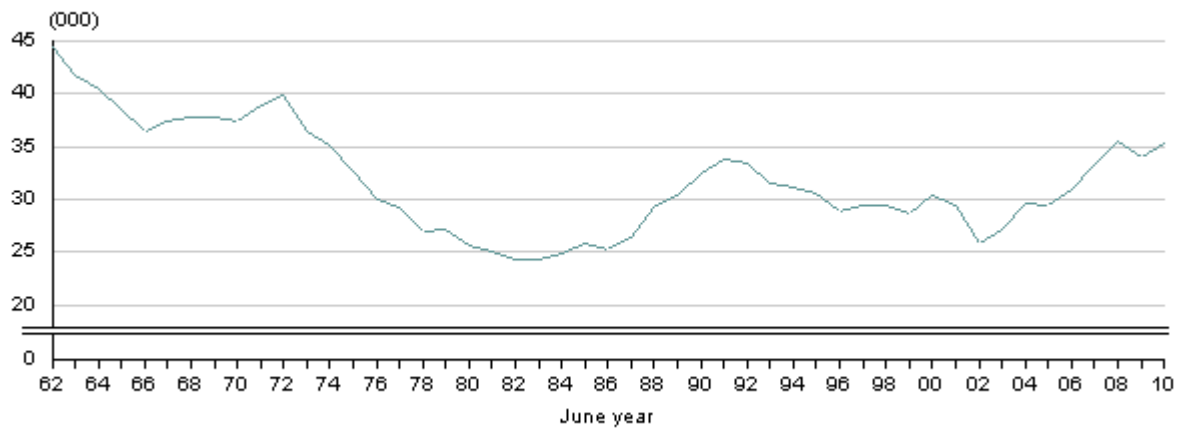
The [New Zealand Life Tables 2005–07](#) report includes the latest information from abridged life tables for regions. The highest life expectancy during 2005–07 was in the Auckland region, for both males (79.4 years) and females (83.2 years). Other regions where life expectancy exceeded the national average were Wellington, Tasman, Nelson (males only), Canterbury, and Otago. The Gisborne region had the lowest life expectancy for both males (73.8 years) and females (78.1 years).

All regions experienced increases in life expectancy between 1995–97 and 2005–07. The regions with the highest life expectancy gains were the West Coast (up 4.6 years for males and 3.3 years for females) and Auckland and Wellington (each up 4.2 years for males and 3.0 years for females).

## **New Zealand's natural increase**

Natural increase represents the excess of births over deaths. Births outnumbered deaths by 35,280 in the June 2010 year, up from 34,000 in the June 2009 year. The rate of natural increase was 8.1 per 1,000 mean estimated resident population in the June 2010 year. The 2009-base mid-range national population projections (series 5) show that natural increase is likely to decline over the next 50 years, dropping to 5,500 in 2061.

## Natural increase 1962–2010



Source: Statistics New Zealand

## Regional natural increase

All regions in New Zealand had more births than deaths in the June 2010 year. Auckland's natural increase (15,840) made up 45 percent of the national natural increase. Auckland's large share of New Zealand's natural increase is due to the small number of deaths relative to the number of births, and the size of its population. The next highest natural increase was in Wellington (3,850), followed by Waikato (3,510), and Canterbury (3,190).

## Final figures and revised demographic rates

The vital statistics and infant mortality rates for the June 2010 year quoted above, and contained in the appended tables, are final. Fertility rates and other death rates for the June 2010 year are provisional. For more details, see the 'Technical notes' section of this release.

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## Next release ...

*Births and Deaths: September 2010 quarter* will be released on 19 November 2010.

## **Technical notes**

### **Births**

Births data from 1991 are based on births registered in New Zealand to mothers resident in New Zealand by date of registration. Before 1991, births data are based on births registered in New Zealand to mothers resident in New Zealand and mothers visiting from overseas by date of registration. Births data exclude late registrations under section 16 of the Births, Deaths, Marriages, and Relationships Registration Act 1995. Section 16 births are those that were not registered in the ordinary way at the time the birth occurred.

### **Stillbirths**

The Births, Deaths, Marriages, and Relationships Registration Act 1995, which took effect from 1 September 1995, redefined a stillbirth as a child who is born dead and weighs 400g or more or is born dead after the 20th week of gestation. Before the new Act, a stillbirth was defined as a child born dead after 28 weeks of gestation. This change in definition means that stillbirths from September 1995 onwards are not directly comparable with earlier years.

### **Deaths**

Deaths data from 1991 onwards are based on deaths registered in New Zealand of New Zealand residents by date of registration. Before 1991, deaths data are based on deaths registered in New Zealand of New Zealand residents and people visiting from overseas by date of registration.

### **Replacement level fertility**

Replacement level fertility is the average number of children a woman needs to have to produce one daughter who survives to childbearing age. Replacement level fertility is also described as the total fertility rate required for the population to replace itself in the long term, without migration.

The internationally accepted replacement level is 2.1 births per woman. Replacement level fertility allows for child mortality (children who die before reaching reproductive age) and the birth of more boys than girls. On average, throughout the world, 105 boys are born for every 100 girls. The actual replacement level will vary slightly from country to country, depending on child mortality rates. In countries with high child mortality, the total fertility rate will need to be higher than 2.1 births per woman to achieve replacement level.

### **Total fertility rate**

The total fertility rate is 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). It excludes the effect of mortality.

### **Children of this relationship**

The birth registration forms ask whether there are any other children of this relationship. However, it is possible that children from previous relationships are included. This question does not produce an accurate measure of all live births to a woman (needed for accurate measures of

birth parity). For privacy reasons it is deemed unacceptable to ask women about children outside their current relationship.

## Standardised death rates

The overall death rate that would have prevailed in a standard population if it had experienced the age-specific (usually age-and-sex-specific) death rates of the population or area being studied. In this Hot Off The Press, the age and sex distribution of the mean estimated population for the year ended 31 December 1961 is used to derive standardised death rates.

## Life tables

A life table provides a detailed description of the mortality experience prevailing in a population during a given period. It comprises an array of measures, including probabilities of death, probabilities of survival and life expectancies at various ages. Complete life tables present mortality measures for each single year of age, while abridged life tables present mortality measures for age groups.

National complete period life tables are produced every five years for Māori, non-Māori, and total New Zealand male and female populations. Subnational abridged period life tables are also produced every five years for the male and female populations. They are available for all 16 regions and most territorial authority areas (where death and population numbers are sufficient to construct reliable life tables). National complete period life tables and subnational abridged period life tables for 2005–2007 are included in the New Zealand Life Tables: 2005–2007 report, released in May 2009. The report also includes details on life tables methodology.

Abridged period life tables are produced annually for the total New Zealand male and female populations and provide an indication of the trends in life expectancy in the years between the construction of complete period life tables. The latest national abridged period life tables were released on 17 May 2010.

## Demographic rates

Demographic rates from 1991 onwards are calculated using the mean estimated resident population. Rates before 1991 are calculated using the mean estimated de facto population.

## Rounding

Birth and death figures contained in the tables attached to this release are unrounded. All other figures have been rounded. This may result in a total differing slightly from the sum of its components. Derived figures (for example percentage annual increase) have been calculated using unrounded data.

## Free online database

A number of births, deaths, and birth and death rates tables are available through Statistics NZ's Infoshare database ([www.stats.govt.nz/infoshare](http://www.stats.govt.nz/infoshare)), a free online tool that provides access to a range of time-series data. The births, birth rates, deaths, and death rates subjects can be found under **Population** on the **Browse** page of the database.

## **More information**

For more information, follow the [link](#) from the 'Technical notes' of this release on the Statistics NZ website.

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## **Timing**

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

## Tables

The following tables are printed with this Hot Off The Press and can also 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. Births, deaths, and selected rates, 1994–2010
2. Live births by regional council, 1997–2010
3. Deaths by regional council, 1997–2010
4. Age-specific fertility rates, 1994–2010
5. Live births by mother's age, 1994–2010
6. Deaths by age and sex, June year 2010