

Embargoed until 10:45am – 14 May 2008

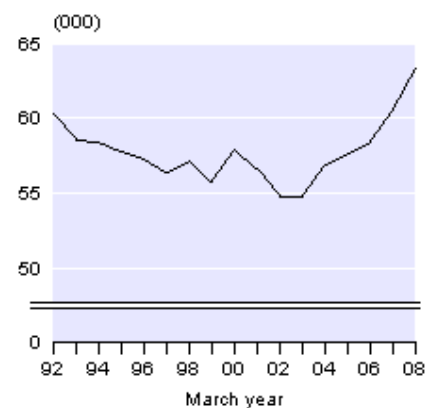
## Births and Deaths: March 2008 quarter

### Highlights

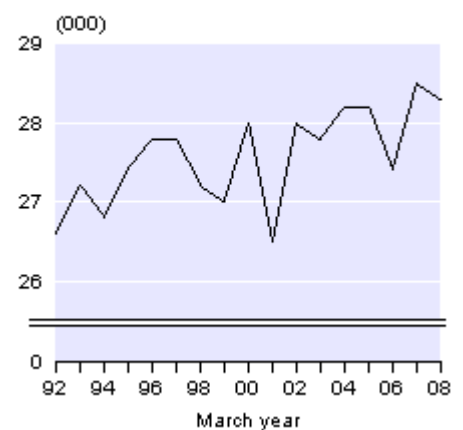
In the March 2008 year:

- There were 63,250 live births registered in New Zealand.
- The birth rate was 2.1 births per woman.
- Women aged 30–34 years had the highest fertility rate (125 births per 1,000 women).
- The median age of women giving birth was 30 years.
- The median age of women giving birth to their first child was 28 years.
- The infant mortality rate was 5.3 deaths per 1,000 live births.
- There were 28,300 deaths registered.
- Births exceeded deaths by 34,960.

Live Births  
1992–2008



Deaths  
1992–2008



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There is a companion Media Release published – [Births and Deaths: March 2008 quarter](#).

# Commentary

## Live births

There were 63,250 live births registered in New Zealand in the March 2008 year, up 2,780 (4.6 percent) from the March 2007 year. The latest figure is 9.8 percent higher than the annual average of 57,620 births per year over the last decade, when the number of births varied from a low of 54,660 in 2003 to this year's high of 63,250. This is the highest number of births since the 1972 March year when 64,000 live births were registered.

The highest number of births registered in any March year was 65,800 in 1962. At that time New Zealand's population numbered just 2.5 million compared with 4.3 million in 2008.

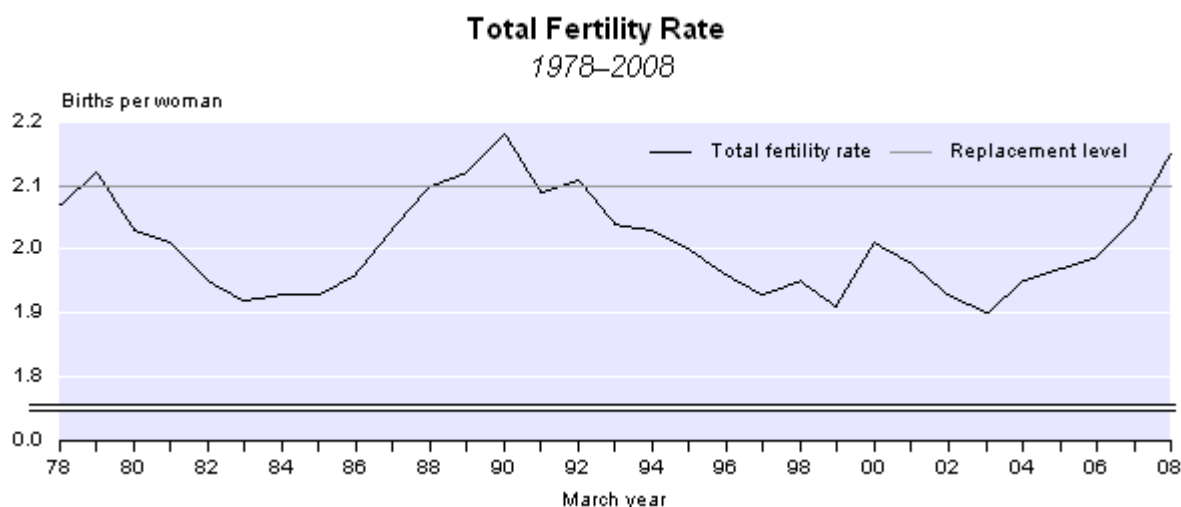
During the March 2008 year, the births of 32,360 boys and 30,890 girls were registered to mothers resident in New Zealand. There are normally more boys born than girls, with an average of 105 boys born for every 100 girls.

Live births registered in the March 2008 quarter totalled 15,740, a decrease of 790 (4.8 percent) compared with the March 2007 quarter (16,540). The figure for the March 2007 quarter was the highest number of birth registrations for any March quarter since 1971 (16,700).

Generally, there are more births registered in the March quarter than in the December quarter as parents delay registering babies born in the December quarter until after the busy Christmas period. However, fewer births were registered in the March 2008 quarter (15,740) than in the December 2007 quarter (16,030).

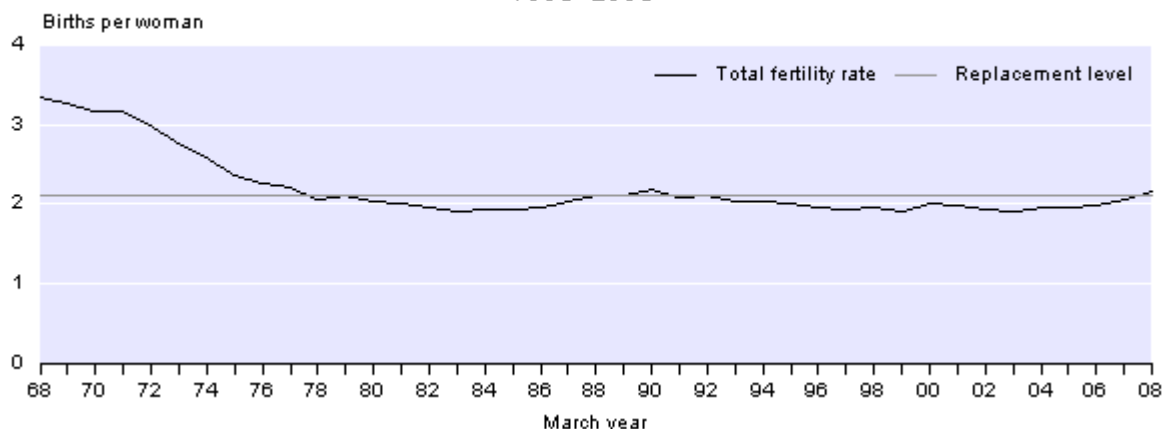
## Annual fertility rates

Annual fertility rates for the March 2008 year indicate that New Zealand women average 2.15 births per woman, up from 2.05 in the March 2007 year and the highest rate since 1991 (2.18 births per woman). The level required by a population to replace itself in the long term without migration is 2.1 births per woman. However, fertility rates of close to or higher than 2.1 births per woman need to be sustained over many years before 'replacement level' fertility can be claimed. Since 1980 fertility in New Zealand has been slightly below the replacement level, with the exception of short periods around 2008 and 1990.



Despite the recent upturn, 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 2.18 births per woman in 1991 to 1.90 in 2003. In contrast, during 1949–1978 women averaged 3.44 births, with the fertility rate peaking at 4.31 births per woman in 1961 and then dropping to 2.07 in 1978. (Total fertility rates for 1949–1978 are based on December years).

**Total Fertility Rate**  
1968–2008



A number of other low-fertility countries have experienced slight recoveries in their fertility rates in recent years, including Australia (up from 1.7 births per woman in 2001 to 1.8 in 2006), England and Wales (up from 1.6 in 2001 to 1.9 in 2006), Denmark (up from 1.7 in 2002 to 1.8 in 2006) and Sweden (up from 1.5 in 1999 to 1.9 in 2006). France's total fertility rate hovered around 1.9 births per woman between 2000 and 2005, but rose to 2.0 in 2006.

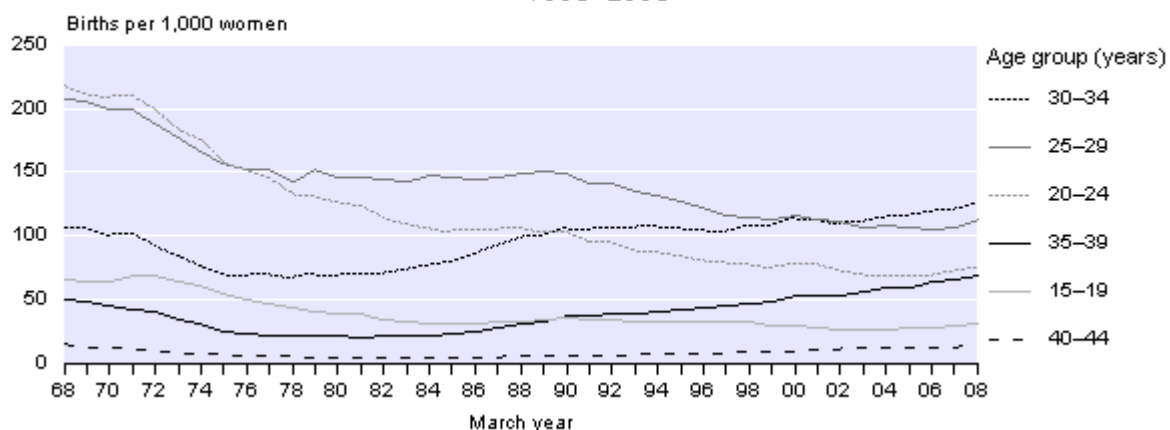
The current upturn in fertility is not expected to continue. Statistics New Zealand's mid-range population projections (series 5) assumes that the total fertility rate will average 2.09 births per woman in the five-year period 2007–2011, dropping to 2.00 in 2012–2016, then to 1.94 in 2017–2021, 1.91 in 2022–2026 and 1.90 thereafter.

## Fertility rates and mother's age

In the March 2008 year, there were more births to women in all age groups under 45 years compared with the March 2007 year. One-third (930) of the increase occurred in the 25–29 year age group, while women aged 35–39 years contributed an extra 680 births (one-quarter of the increase).

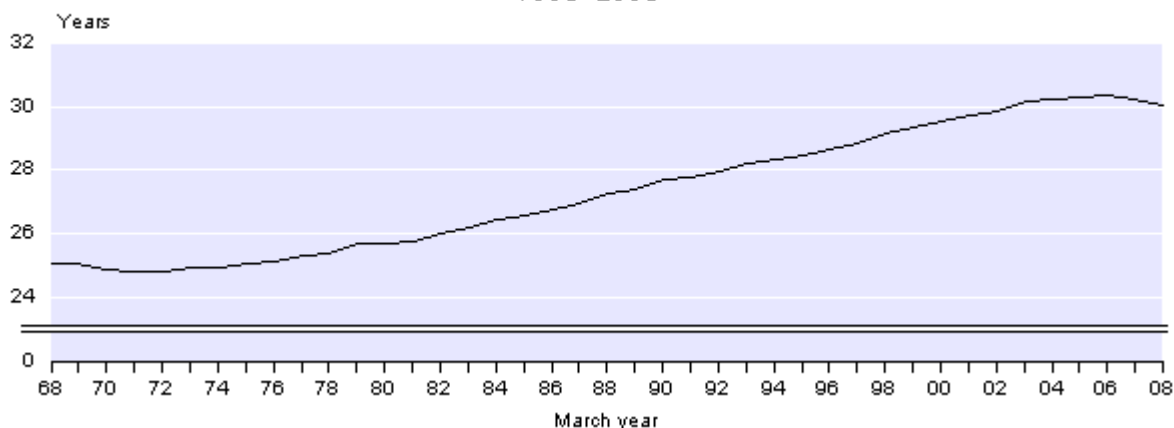
In the March 2008 year, women aged 30–34 years had the highest fertility rate (125 births per 1,000 women aged 30–34 years), followed by those aged 25–29 years (112 per 1,000) and 20–24 years (75 per 1,000). Forty years ago, in 1968, women aged 20–24 years had the highest fertility rate (218 per 1,000), followed by those aged 25–29 years (208 per 1,000) and 30–34 years (107 per 1,000).

### Age-specific Fertility Rates 1968–2008



Between the 1998 and 2008 March years, fertility rates for women aged 30 years and over increased, with fertility rates for those aged 30–34 and 35–39 years increasing by 16 percent and 46 percent, respectively. 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 14 births per 1,000 in 2008. Fertility rates for women aged under 30 years decreased between 1998 and 2006 but increased in 2007 and 2008. In the March 2008 year, the fertility rate for women aged 15–19 years was 32 births per 1,000, less than half the 1968 rate (66 per 1,000). (Age-specific fertility rates before 1991 are based on December years).

### Median Age of Mother 1968–2008



On average, New Zealand women now have children about five years later than their counterparts in the mid-1960s. The median age (half are younger and half older than this age) of New Zealand women giving birth is now 30 years, compared with 25 years in 1968. Although there has been a significant increase in the median age since the 1970s, it has been relatively stable (just above 30 years) since 2003.

## **Mother's age at first birth**

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 March 2008 and has been relatively stable over the last decade. In 2008, women aged 20–24 years made up 22 percent of women having their first birth, compared with 12 percent of women who had had a previous birth. One-quarter (25 percent) of first-time mothers were aged 25–29 years and 24 percent were aged 30–34 years, compared with 23 and 34 percent, respectively, for women who had had a previous birth. Between 1998 and 2008, two-thirds of first time mothers were aged 30 years or younger compared with roughly one-third of women who had had a previous birth.

## **Births by ethnicity**

The 2006 Census showed that 10 percent of the census usually resident population identified with more than one ethnic group. Birth registrations for the March 2008 year show that 13 percent of mothers and 25 percent of babies identified with more than one ethnic group. This suggests that younger generations are becoming increasingly multicultural. Two-thirds of Māori babies and one-half of Pacific babies belonged to multiple ethnic groups, compared with roughly one-third of babies within the European, Asian and Other (including New Zealander) ethnic groups.

In the March 2008 year, the European ethnic group gained 44,030 babies, Māori 18,350, Pacific peoples 9,730, Asian 7,150, MELAA (Middle Eastern, Latin American and African) 1,080 and Other (including New Zealanders) 630.

The total fertility rate for Māori women in the March 2008 year was 2.87 births per woman, up from 2.81 in 2007 and 2.72 in 1998, and well above the rate for the total population (2.15 births per woman). In the March 2008 year, there were 14,380 live births registered to Māori women. Māori women giving birth tend to be younger, with a median age of 26 years in the March 2008 year.

## **Regional births**

The Auckland region had the highest number of births in the March 2008 year (22,960), accounting for 36 percent of all live births registered in New Zealand. This was followed by Canterbury (7,330), Wellington (6,730) and Waikato (6,200). Together, these four regions accounted for just over two-thirds of all live births registered in the March 2008 year. This is consistent with their share of New Zealand's population.

Births increased in all regions during the March 2008 year except Gisborne and Northland. Six regions had higher percentage increases in birth numbers than the average for New Zealand (4.6 percent). These were Nelson (up 15.1 percent), Marlborough (up 9.1 percent), Waikato (up 8.6 percent), Auckland (up 5.8 percent), Taranaki (up 5.3 percent) and Canterbury (up 4.9 percent). Auckland had the highest numerical increase (up 1,250).

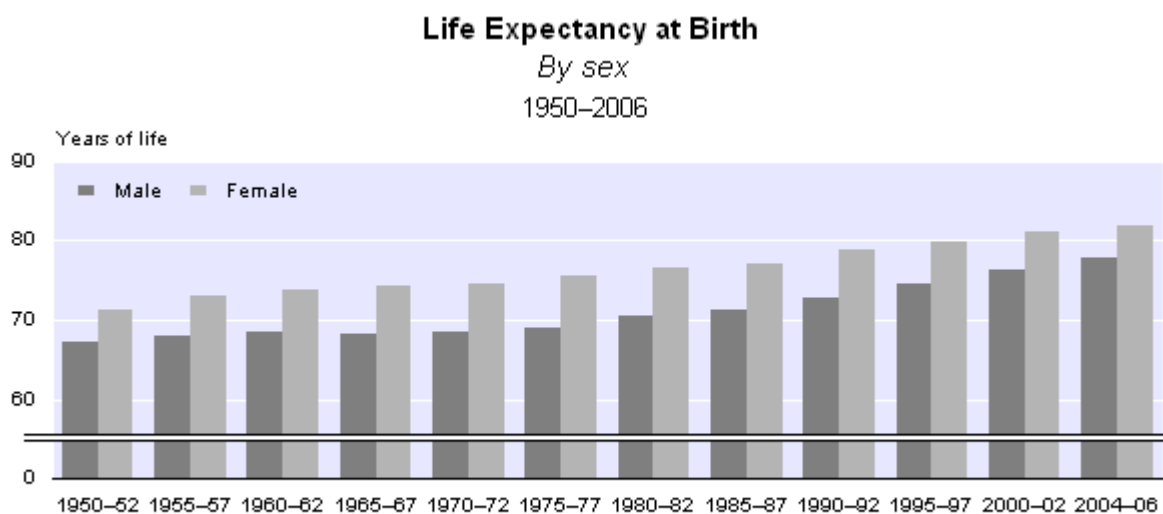
## **Deaths and longevity**

Deaths registered during the March 2008 year totalled 28,300 up from 27,230 in the March 1998 year. There were 14,170 male deaths and 14,130 female deaths.

Deaths are becoming increasingly concentrated in the older age groups. The median age at death in the March 2008 year was 76 years for males and 83 years for females, compared with 72 for males and 77 for females in 1988. Only 5.7 percent of the deceased were aged under 40 years in the March 2008 year, compared with 8.8 percent in 1988.

The crude death rate (deaths per 1,000 mean estimated resident population) was 6.7 in the March 2008 year, down from 7.2 in 1998. Because the crude death rate is influenced by the age structure of the population, it does not provide a true measure of the trends in mortality. Life tables are used to give a more accurate description of the mortality experience.

According to the New Zealand abridged period life table for 2004–2006, a newborn girl can be expected to live, on average, 81.9 years, and a newborn boy, 77.9 years. These levels represent longevity gains since 2003–2005 of 0.2 years for females and 0.4 years for males. While female life expectancy is still higher than male life expectancy, their longevity gap has narrowed from 6.4 years in 1975–1977 to 4.1 years in 2004–2006. Since 1975–1977, life expectancy at birth has increased by 6.5 years for females and 8.9 years for males.



**Note:** Abridged period life table 2004–2006.

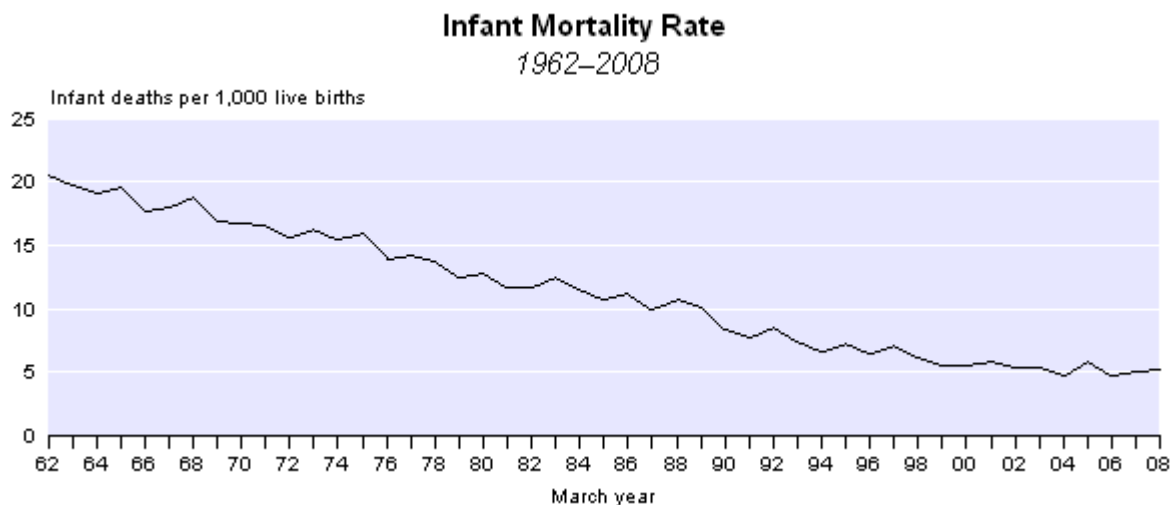
Abridged period life tables are produced annually for the total population only. Complete life tables are produced for Māori, non-Māori and total populations every five years. The latest complete period life tables available cover 2000–2002. Māori life expectancy is significantly lower than life expectancy for the total population. Life expectancy at birth for females of Māori ethnicity in 2000–2002 was 73.2 years, while for Māori males it was 69.0 years. The difference of about 7.6 years between Māori and the total population in 2000–2002 is slightly less than the estimated difference of 8.1 years in 1995–1997.

Life tables for other ethnicities, such as the broad Pacific and Asian ethnic groups, have not been produced because of the small number of death registrations and the uncertainty associated with ethnic identification and measurement.

## Infant mortality

During the March 2008 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 March 2008 year, the infant mortality rate was 5.3 per 1,000, down from 6.3 in the March 1998 year and 18.2 in 1968. The Māori infant mortality rate was 7.4 per 1,000 in the March 2008 year, down from 10.1 in 1998.

Neonatal deaths (under four weeks of age) made up 55 percent of infant deaths in the March 2008 year. The neonatal mortality rate (neonatal deaths per 1,000 live births) was 2.9 in 2008, down from 3.2 in the March 1998 year. The post-neonatal mortality rate (infant deaths over 28 days of age per 1,000 live births) has also dropped over the last decade, from 3.0 to 2.4 per 1,000.



Australia has also experienced a drop in infant mortality rates in the last decade. In 1996, New Zealand's infant mortality rate was 7.1 per 1,000 live births compared with 5.8 per 1,000 in Australia. By 2006, New Zealand's infant mortality rate had dropped to 5.1 per 1,000 and Australia's rate had dropped to 4.7 per 1,000. (Infant mortality rates for Australia beyond 2006 are not yet available.)

Scotland (4.5 per 1,000 live births), and England and Wales (5.0) had similar infant mortality rates to New Zealand's in 2006. However, a number of other low fertility rate countries had lower infant mortality rates: Sweden (2.8), Finland (2.8), Norway (3.2), France (3.6) and Denmark (3.8).

## Regional deaths

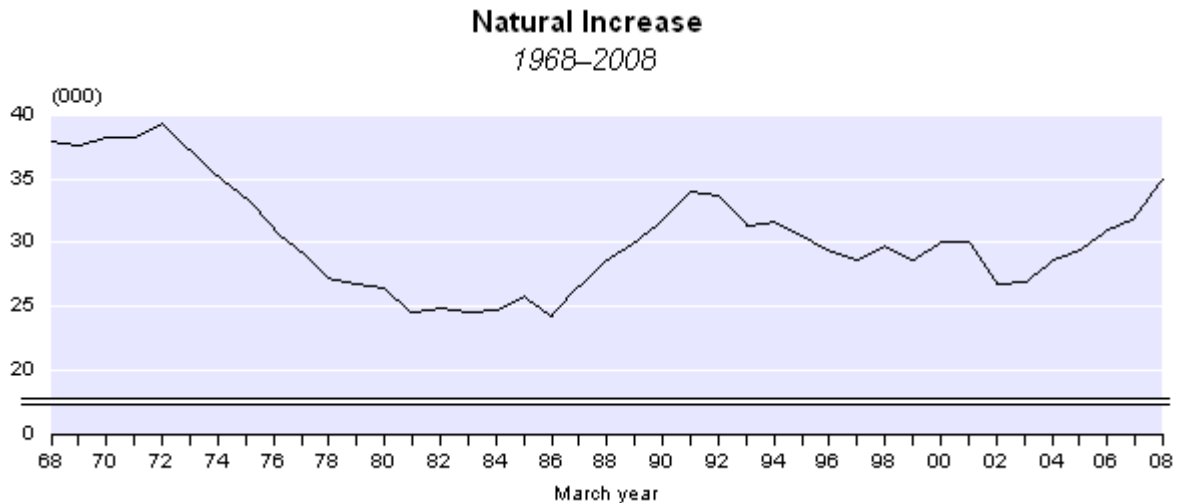
There were 7,210 deaths of residents in the Auckland region during the March 2008 year. Although the Auckland region is home to approximately one-third of New Zealand's population, it only accounted for one-quarter of New Zealand's deaths. This is due to the region's relatively young age structure. Only 10 percent of the Auckland region's population is aged 65 years and over, compared with 12 percent for the national population.

Based on the 2000–2002 abridged life tables for regions, life expectancy at birth across the regions ranged from 72.6 to 77.5 years for males and 78.9 to 82.2 years for females. The reasons for subnational differences in longevity and mortality are difficult to identify precisely and are probably due to a combination of interrelated factors, including the proportion of the population who are Māori, the proportion of the population who smoke (or have smoked), the proximity to health and hospital services, the degree of urbanisation and socio-economic factors.

More information about regional mortality can be found in Statistics New Zealand's report [New Zealand Life Tables \(2000–2002\)](#).

## Natural increase of population

Natural increase of population represents the excess of births over deaths. Births outnumbered deaths by 34,960 in the March 2008 year. The rate of natural increase was 8.2 per 1,000 mean estimated resident population in the March 2008 year up from 7.6 per 1,000 in 2007 and the highest rate since 1995 (8.4 per 1,000). However, the 2006-base national population projections show that natural increase is likely to decline over the next 50 years. Deaths are projected to outnumber births from 2055.



All regions in New Zealand had more births than deaths in the March 2008 year. Auckland's natural increase (15,750) 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.

## Final figures and revised demographic rates

The vital statistics and infant mortality rates for the March 2008 year quoted above, and contained in the appended tables, are final. Fertility rates and crude death rates for 2002–2006 have been revised using new 2006-based population estimates. The revised 2006-based rates are not comparable with the 2001-based rates published in previous *Hot Off The Press* releases. Fertility rates and crude death rates for the March 2008 quarter and year are provisional. For further details see the Technical notes of this release.

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### Next release ...

*Births and Deaths: June 2008 quarter* will be released on 18 August 2008.

## **Technical notes**

### **Births**

Birth data for the March, June, September and December quarters of 1998 are based on the number of notifications received by the Department of Internal Affairs. All other birth data are based on live births registered in New Zealand to mothers resident in New Zealand by date of registration. Birth data exclude late registrations under section 16 of the Births, Deaths, and Marriages Registration Act 1995. Section 16 births are those that were not registered in the ordinary way at the time the birth occurred.

### **Deaths**

Death data are based on deaths registered in New Zealand of New Zealand residents 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. Unfortunately, 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.

## Life tables

A life table is a standard demographic device that 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. The 2000–2002 period life tables relating to New Zealand Māori, non-Māori and total populations were released by Statistics New Zealand on 30 March 2004. These are available on the Statistics NZ website (<http://www.stats.govt.nz/default.htm>). More details on life table methodology and results are included in *New Zealand Life Tables (2000–2002)*.

## Resident population concept

Unless otherwise stated, this release refers to vital events (births and deaths) registered in New Zealand by date of registration. It excludes births to women who normally reside overseas, and deaths of people who normally reside overseas. Demographic rates are calculated using the mean estimated resident population.

## Revised demographic rates

After each Census of Population and Dwellings, Statistics NZ routinely revises its intercensal population estimates based on the latest census usually resident population count. Statistics NZ has revised annual and quarterly population estimates for the 2001–2006 intercensal period. The mean estimated resident population is used as the denominator for calculating various demographic rates, such as total fertility rates, crude birth rates, crude death rates and age-specific birth and death rates.

All quarterly and annual demographic rates for the 2001–2006 period have been revised based on 2006-base population estimates. Revised rates are now available on the Statistics NZ website and on INFOS.

## 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.

## 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, 1992–2008
2. Live births by regional council, 1995–2008
3. Deaths by regional council, 1995–2008
4. Age-specific fertility rates, 1992–2008
5. Live births by mother's age, 1992–2008
6. Deaths by age and sex, 2008



[Births and Deaths: March 2008 quarter – tables 1–7 \(Excel, 51KB\)](#)