

Embargoed until 10:45am – 18 November 2008

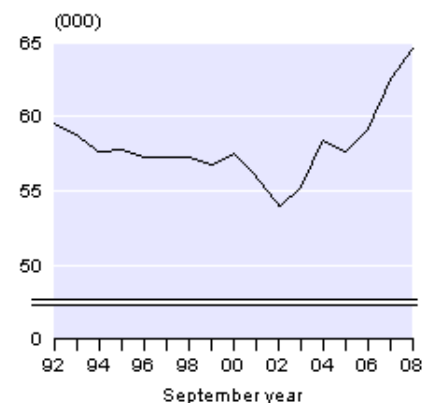
Births and Deaths: September 2008 quarter

Highlights

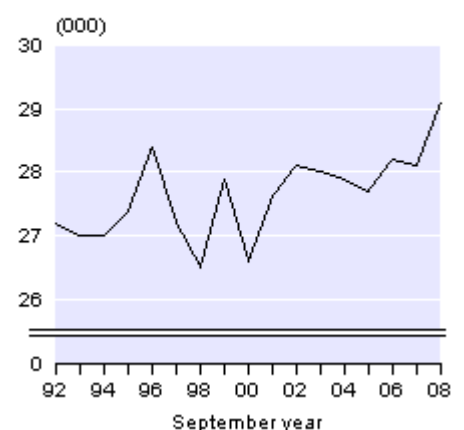
In the September 2008 year:

- There were 64,540 live births registered in New Zealand.
- The birth rate was 2.2 births per woman.
- Women aged 30–34 years had the highest fertility rate (127 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 29,130 deaths registered.
- Births exceeded deaths by 35,410.

Live Births
1992–2008



Deaths
1992–2008



Geoff Bascand
Government Statistician

18 November 2008
ISSN 1178-0436

See also [Births and Deaths: September 2008 quarter – Media release](#).

Commentary

Live births

There were 64,540 live births registered in New Zealand in the September 2008 year, up 2,180 (3.5 percent) from the September 2007 year. The latest figure is 11.1 percent higher than the annual average of 58,080 births per year over the last decade, when the number of births varied from a low of 54,010 in the September 2002 year to this year's high of 64,540.

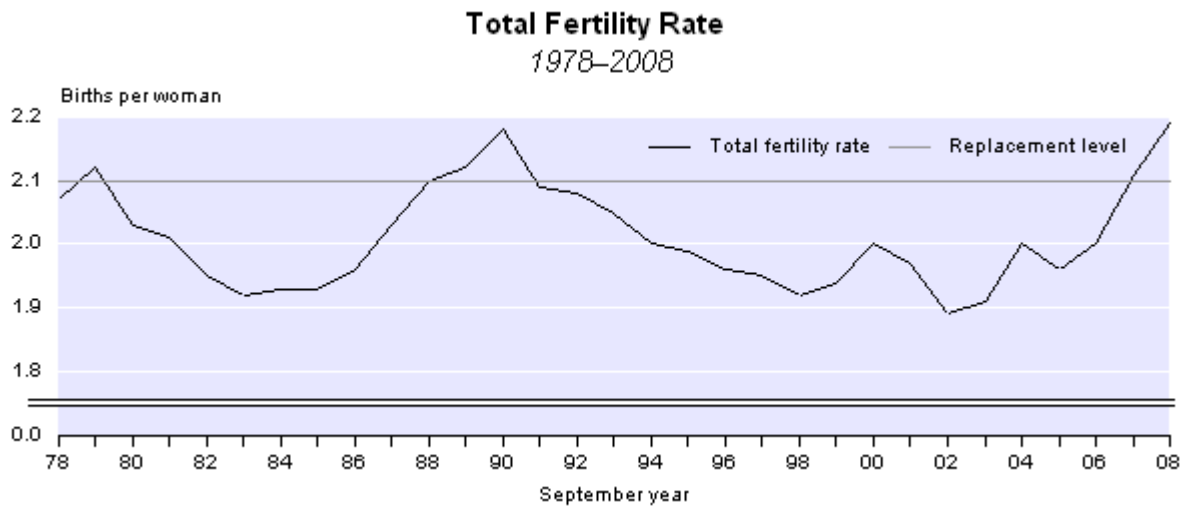
The highest number of births registered in any September year was 65,660 in 1962. At that time New Zealand's population numbered just 2.5 million, compared with 4.3 million in 2008.

During the September 2008 year, the births of 33,060 boys and 31,480 girls were registered to mothers resident in New Zealand. Normally, there are more boys born than girls, with an average of 105 boys born for every 100 girls.

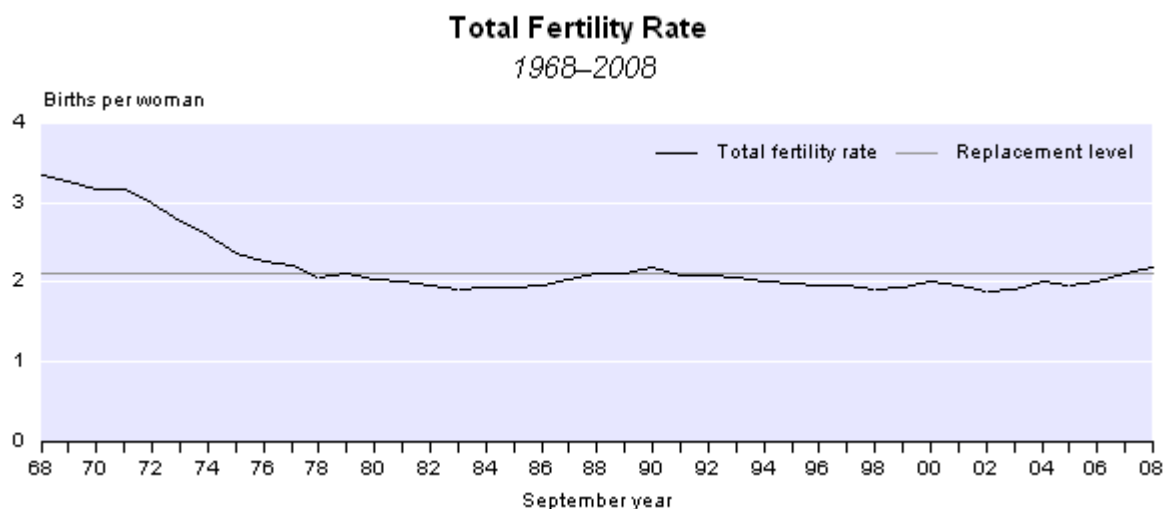
Live births registered in the September 2008 quarter totalled 16,120, an increase of 400 (2.5 percent) compared with the September 2007 quarter (15,720).

Annual fertility rates

Annual fertility rates for the September 2008 year indicate that New Zealand women average 2.19 births per woman, up from 2.11 in the September 2007 year and equal to the most recent peak in the September 1991 year. 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 2.19 births per woman in 1991 and 2008 to 1.89 in 2002. 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.)



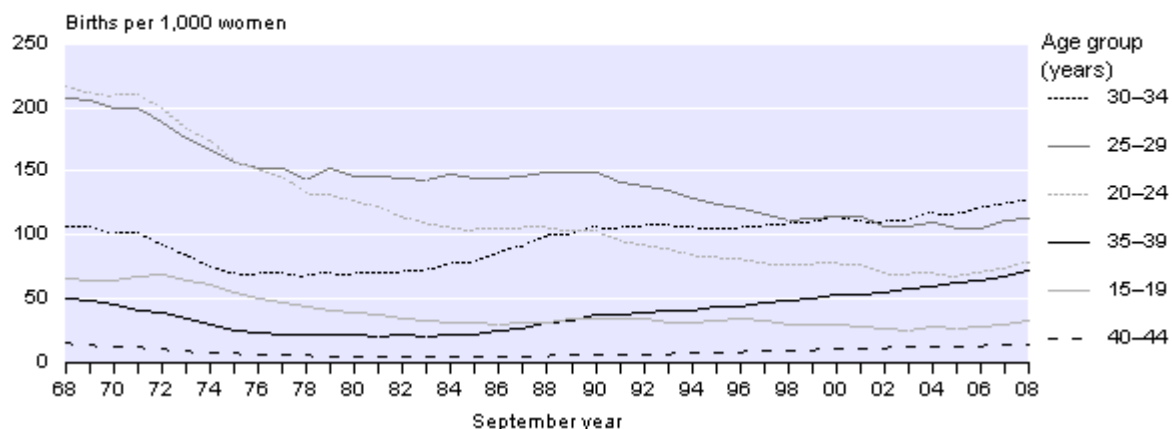
A number of other low-fertility countries have experienced slight recoveries in their fertility rates in recent years, including Australia (up from 1.7 births per woman in 2001 to 1.9 in 2007), England and Wales (up from 1.6 in 2001 to 1.9 in 2006), Denmark (up from 1.7 in 2002 to 1.8 in 2007) and Sweden (up from 1.5 in 1999 to 1.9 in 2007). 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) assume 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

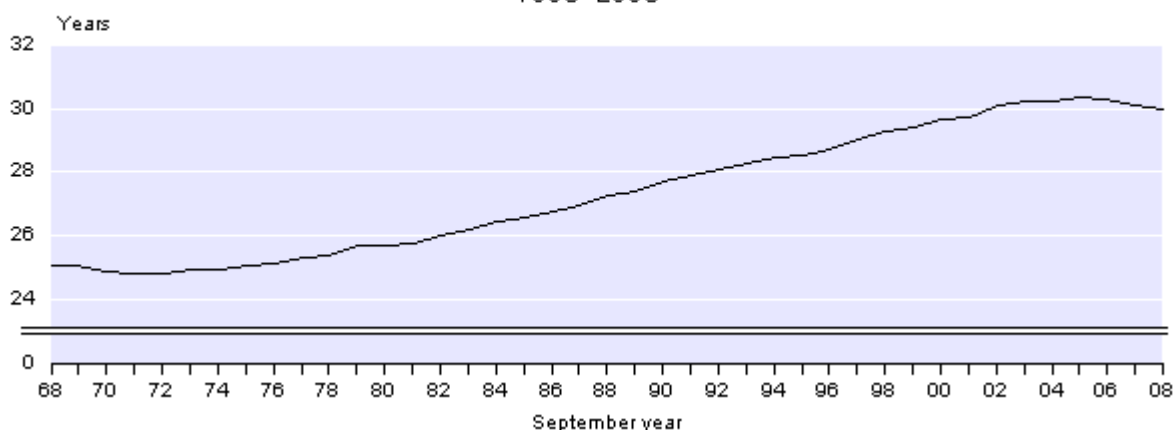
In the September 2008 year, 88 percent of babies were born to mothers aged 20–39 years. In 2008, there were more births to women in all age groups, except those aged under 15 years and 30–34 years, compared with the September 2007 year. The 3 percent decrease in births for the 30–34 year age group resulted from a drop in the number of women in this age group (down 4,090 or 3 percent from 2007), not from a drop in the number of births per women. Thus, women aged 30–34 years still had the highest fertility rate (127 births per 1,000 women aged 30–34 years) in 2008, followed by those aged 25–29 years (113 per 1,000) and 20–24 years (78 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 September years, fertility rates for women aged 15 years and over increased, with fertility rates for those aged 30–34 and 35–39 years increasing by 18 percent and 49 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. Among women aged 40–44 years who registered a baby in the September 2008 year, roughly two-thirds were aged 40 or 41 years. Fertility rates for women aged under 30 years decreased between 1998 and 2006, but increased in 2007 and 2008. In the September 2008 year, the fertility rate for women aged 15–19 years was 33 births per 1,000, half the 1968 rate (66 per 1,000). Among women aged 15–19 years who registered a baby in the September 2008 year, roughly two-thirds were aged 18 or 19 years. (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 (around 30 years) since 2002.

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 September 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 13 percent of women who had had a previous birth. One-quarter (25 percent) of first-time mothers were aged 25–29 years and 23 percent were aged 30–34 years, compared with 23 and 33 percent, respectively, for 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 September 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 just under one-third of babies within the European, and Asian ethnic groups.

In the September 2008 year, the European ethnic group gained 44,740 babies, Māori 19,010, Pacific peoples 10,060, Asian 7,290, MELAA (Middle Eastern, Latin American and African) 1,130 and Other (including New Zealanders) 590.

The total fertility rate for Māori women in the September 2008 year was 2.97 births per woman, up from 2.87 in 2007 and 2.64 in 1998, and well above the rate for the total population (2.19 births per woman). In the September 2008 year, there were 14,930 live births registered to Māori women. Māori women giving birth tend to be younger, with a median age of 26 years in the September 2008 year. The median age for Pacific, Asian and European women was 27, 30 and 31 years, respectively.

Regional births

The Auckland region had the highest number of births in the September 2008 year (23,280), accounting for 36 percent of all live births registered in New Zealand. This region was followed by Canterbury (7,390), Wellington (6,890) and Waikato (6,350). Together, these four regions accounted for just over two-thirds of all live births registered in the September 2008 year. This is consistent with their share of New Zealand's population.

Births increased in 14 regions during the September 2008 year. Nine regions had higher percentage increases in birth numbers than the average for New Zealand (3.5 percent). These regions were West Coast (up 22.9 percent), Marlborough (up 21.2 percent), Gisborne (up 9.6 percent), Nelson (up 5.9 percent), Otago (up 5.1 percent), Hawke's Bay (up 5.0 percent), Waikato (up 4.9 percent), Manawatu-Wanganui (up 4.7 percent) and Auckland (up 3.8 percent). Auckland had the highest numerical increase (up 850).

Deaths and longevity

Deaths registered during the September 2008 year totalled 29,130, up from 28,150 in the September 1998 year. There were 14,590 male deaths and 14,540 female deaths.

Deaths continue to be increasingly concentrated in the older age groups. The median age at death in the September 2008 year was 77 years for males and 83 years for females, compared with 72 for males and 78 for females in 1988. Only 5.5 percent of the deceased were aged under 40 years in the September 2008 year, compared with 9.0 percent in 1988.

The crude death rate (deaths per 1,000 mean estimated resident population) was 6.8 in the September 2008 year, down from 7.0 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. For example, the crude death rate for the Māori population was 4.4 in the September 2008 year, much lower than the total population. This lower rate is due to the much younger age structure of the Māori population. Only 4.4 percent of the Māori population is aged 65 and over, compared with 12.6 percent for the total population.

Age-standardised death rates provide an alternative summary of the mortality experience of populations with very different age structures. They are calculated by applying the age-specific death rates of the subject populations to a standard population. They give the overall death rate that would have prevailed in a standard population if it had experienced the age-specific death rates of the subject populations. Using the mean estimated population for the December 1961 year as the standard population results in a standard death rate for the total population of 4.1 deaths per 1,000 mean estimated population for the September 2008 year. In comparison, the standardised death rate for the Māori population is 7.0 per 1,000. This means that once the younger age structure of the Māori population is taken into account, the Māori death rate is significantly higher than that of the total population. Standardised death rates for both the Māori and total populations have dropped over the last decade, down from 9.0 and 5.0 per 1,000, respectively, in the December 1998 year. (Standardised death rates for September years are not available before 2002.)

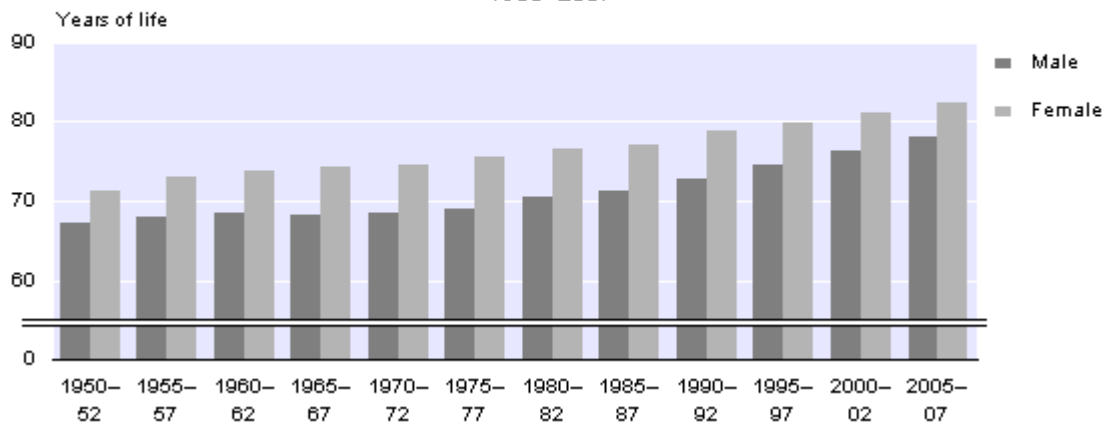
It is important to note that standardised death rates can only be used to compare mortality trends for populations that have been standardised against the same standard population. Life tables give a more accurate and detailed description of the mortality experience across populations and time.

According to the latest complete *New Zealand Period Life Tables: 2005–2007*, a newborn girl can expect to live, on average, 82.2 years, and a newborn boy, 78.0 years. These levels represent longevity gains since 2000–2002 of 1.0 years for females and 1.7 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 2005–2007. Since 1975–1977, life expectancy at birth has increased by 9.0 years for females and 6.7 years for males.

Life Expectancy at Birth

By sex

1950–2007



Māori life expectancy is significantly lower than life expectancy for the total population. Life expectancy at birth for females of Māori ethnicity in 2005–2007 was 75.1 years, while for Māori males it was 70.4 years. The difference of about 7.4 years between Māori and the total population in 2005–2007 is slightly less than the estimated difference of 7.6 years in 2000–2002.

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.

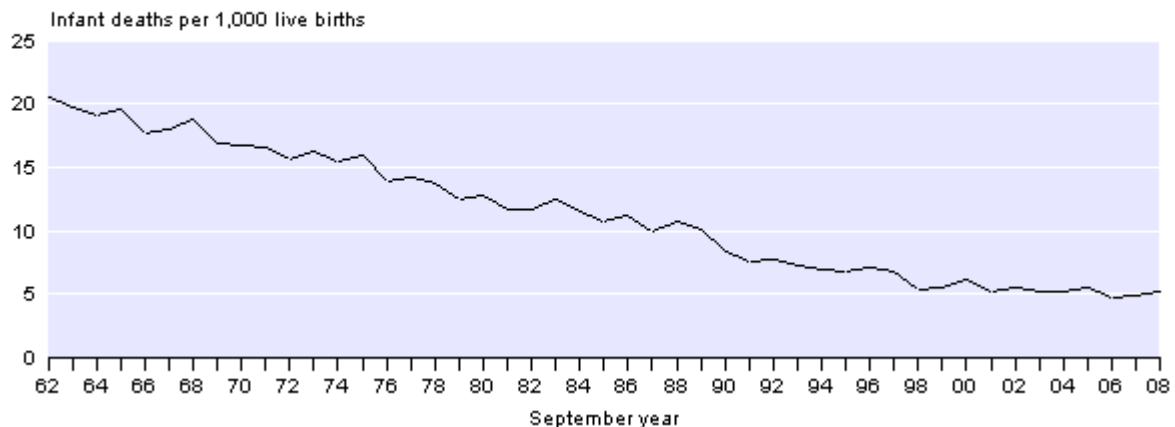
Infant mortality

During the September 2008 year, the number of infant deaths (under one year of age) registered in New Zealand totalled 340, up from the 300 infant deaths registered in the September 2007 year. Some of this increase was due to the late registration of some infant deaths that had occurred in previous years. The infant mortality rate (infant deaths per 1,000 live births) has dropped over the last 40 years. In the September 2008 year, the infant mortality rate was 5.3 per 1,000, up from 4.9 in 2007, but down from 5.4 in the September 1998 year and 18.2 in 1968. The Māori infant mortality rate was 7.2 per 1,000 in the September 2008 year, down from 27.2 in 1968.

Neonatal deaths (under four weeks of age) made up 59 percent of infant deaths in the September 2008 year. The neonatal mortality rate (neonatal deaths per 1,000 live births) was 3.1 in 2008, up from 2.5 in the September 2007 year. The post-neonatal mortality rate (infant deaths over 28 days of age per 1,000 live births) dropped slightly, from 2.4 in 2007 to 2.2 per 1,000 in 2008.

Infant Mortality Rate

1962–2008



Australia has also experienced a drop in infant mortality rates in the last decade. In 1996, New Zealand's infant mortality rate was 6.7 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 4.8 per 1,000 and Australia's rate had dropped to 4.7 per 1,000.

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 countries had lower infant mortality rates: Sweden (2.8), Finland (2.8), Norway (3.2), France (3.6) and Denmark (3.8).

Regional deaths

During the September 2008 year, there were 7,570 deaths of residents in the Auckland region. 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 12 percent for the national population.

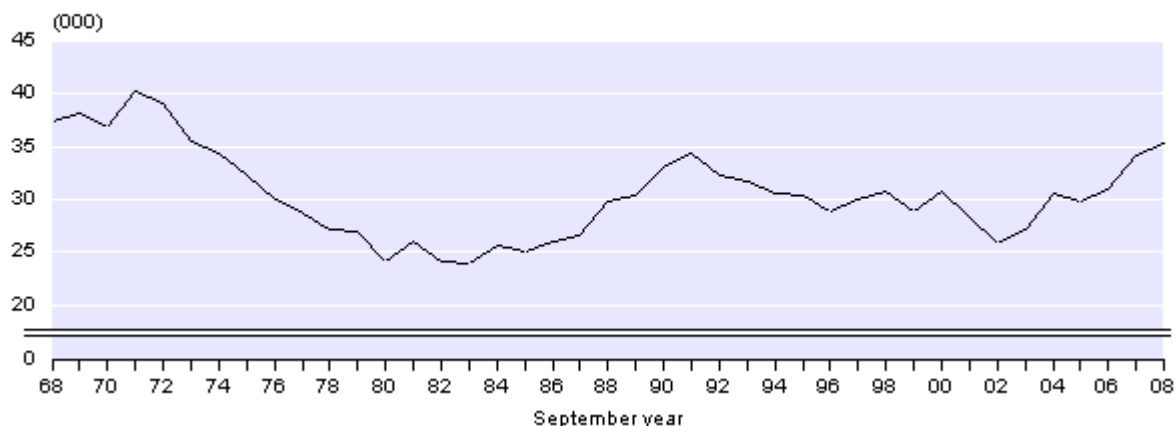
Based on the 2000–2002 abridged life tables for regions, life expectancy at birth across the regions ranged from 72.6 to 77.5 years for males and 78.9 to 82.2 years for females. The reasons for subnational differences in longevity and mortality are difficult to identify precisely and are probably due 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 NZ's report *New Zealand Life Tables (2000–2002)*. Updated regional life tables will be released in the first half of 2009 as part of the report *New Zealand Period Life Tables (2005–2007)*.

Natural increase of population

Natural increase of population represents the excess of births over deaths. Births outnumbered deaths by 35,410 in the September 2008 year. The rate of natural increase was 8.3 per 1,000 mean estimated resident population in the September 2008 year, up from 8.1 per 1,000 in 2007 and the highest rate since 1994 (8.5 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.

Natural Increase 1968–2008



All regions in New Zealand had more births than deaths in the September 2008 year. Auckland's natural increase (15,700) made up 44 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 September 2008 year quoted above, and contained in the appended tables, are final. Fertility rates and crude death rates for the September 2008 quarter and year are provisional. For further details see the Technical notes of this release.

INFOS and Infoshare

The time series that were previously available only to subscribed users in INFOS are now available free of charge in the new online database [Infoshare](#). Vitals (births and deaths) series are listed under the category 'Population'.

Changes to tables

Statistics NZ is making changes to the Hot Off The Press tables from the next release on 18 February 2009. The major change is the discontinuation of quarterly numbers and rates. These include the quarterly birth and death counts, crude birth and death rates, infant mortality rate and total fertility rate. Current annual series (for March, June, September and December years) will continue to be published in the quarterly Hot Off The Press. While quarterly birth and death rates are no longer available, because they do not accurately reflect seasonal changes, quarterly birth and death counts are still available in [Infoshare](#).

For technical information contact:

Anne Howard

Christchurch 03 964 8700

Email: demography@stats.govt.nz

Next release ...

Births and Deaths: December 2008 quarter will be released on 18 February 2009.

Technical notes

Births

Births data from 1991 onwards are based on live births registered in New Zealand by date of registration to mothers resident in New Zealand. 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. 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

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. 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.

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 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 *New Zealand Period Life Tables: 2005–2007* relating to New Zealand Māori, non-Māori and total populations were released by Statistics New Zealand on 10 November 2008. These life tables are available on the Statistics NZ website. More details on life table methodology and results are included in *New Zealand Life Tables (2000–2002)*.

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.

More information

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

Copyright

Information obtained from Statistics NZ may be freely used, reproduced, or quoted unless otherwise specified. In all cases Statistics NZ must be acknowledged as the source.

Liability

While care has been used in processing, analysing and extracting information, Statistics NZ gives no warranty that the information supplied is free from error. Statistics NZ shall not be liable for any loss suffered through the use, directly or indirectly, of any information, product or service.

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, September 2008 year