Australian Bureau of Statistics

2001 TO 2026

3238.0

ESTIMATES AND PROJECTIONS, ABORIGINAL AND TORRES STRAIT ISLANDER AUSTRALIANS

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) WED 30 APR 2014

CONTENTS

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Holly Cockburn on Canberra (02) 6252 6400.

NOTES

ABOUT THIS PUBLICATION

This release contains estimates and projections of the Aboriginal and Torres Strait Islander population of Australia, States and Territories and Remoteness Areas for 30 June 2001 to 30 June 2026, based on the 2011 Census of Population and Housing. Estimates for 30 June 1996 to 30 June 2000 are also included in *Appendix 1*, however these estimates should be used with additional caution.

Detailed information is available in data cubes from the ABS web site <http://www.abs.gov.au>.

Projections of the Aboriginal and Torres Strait Islander population by Indigenous Regions (scheduled for release 21 May 2014) for 30 June 2012 to 30 June 2026 will also be available from the ABS web site.

CHANGES TO THIS ISSUE

SuperTABLE data cubes attached to this issue contain 10 projection series for Australia and the states and territories, for 2012 to 2026. Population estimates for 2001 to 2011 are also included as spreadsheets.

These estimates and projections supersede the 2006 Census-based series published in *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2021* (cat. no. 3238.0) released in September 2009.

Population estimates for the Northern Territory at 30 June 2011 are based on age-heaping adjusted data. For further information on this adjustment, see *Estimates of Aboriginal and Torres Strait Islander Australians* (cat. no. 3238.0.55.001).

DATA NOTES

The projections presented are not intended as predictions or forecasts, but are illustrations of growth and change in the population that would occur if assumptions made about future demographic trends were to prevail over the projection period.

While the assumptions are formulated on the basis of an assessment of observed demographic trends, there is no certainty that any of the assumptions will be realised. In addition, no assessment has been made of possible future changes in non-demographic factors.

ROUNDED FIGURES

Population estimates and projections in this release have been rounded to the nearest hundred. Calculations of percentage and numeric change and proportions are based on unrounded data.

Jonathan Palmer
Acting Australian Statistician

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APPENDIX 3 – GUIDELINES FOR USING HISTORICAL ESTIMATES OF THE ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION *continued*

CHAPTER 1 MAIN FEATURES

INTRODUCTION

The estimates and projections of Aboriginal and Torres Strait Islander Australians presented in this release are subject to volatility. Aboriginal and Torres Strait Islander Census counts and the quality of data on births, deaths and migration of Aboriginal and Torres Strait Islander people do not support the use of the standard approach to population estimation.

Population estimates

Estimates for the Aboriginal and Torres Strait Islander population of Australia and the states and territories have been produced for the period 2001 to 2011. Estimates for 30 June 1996 to 30 June 2000 are also included in *Appendix 1*, however these estimates should be used with caution and have not been included in any analysis for this release.

Population projections

Using assumptions about future fertility, paternity, life expectancy at birth and migration, 10 series of projections of the Aboriginal and Torres Strait Islander population have been generated for 2012 to 2026 (see *Chapter 2* for more information). Three series, Series A, B and C, have been chosen for analysis in this release. Detailed information for these and the remaining series are available in data cubes attached to this release on the ABS web site.

It is important to recognise that the projections are not predictions or forecasts, but are illustrations of the growth and change in population which would occur if certain assumptions about future levels of fertility, paternity, mortality and migration were to prevail over the projection period. There can be no certainty that any particular outcome will be realised, or that future outcomes will necessarily fall within the projected ranges.

Population projections continued

1.1 MAIN PROJECTION SERIES, Australia

	Total fertility rate	*Total paternity rate*(a)	*Male life expectancy at birth*	*Females life expectancy at birth*	30 JUNE 2026 *Males*	*Females*	*Persons*
	babies per woman	babies per man	years	years	no.	no.	no.
Series A(b)	2.25	1.25	76.5	80.4	477 124	468 470	945 594
Series B(c)	2.09	1.08	73.5	77.4	466 707	458 246	924 953
Series C(d)	1.95	0.94	72.0	75.9	457 991	449 798	907 789

(a) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status was non-Indigenous or not stated, per Aboriginal and Torres Strait Islander man.

(b) Series A assumes Aboriginal and Torres Strait Islander fertility rates remain constant; paternity rates increase by 2% per year; and life expectancy at birth increases by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026.

(c) Series B assumes Aboriginal and Torres Strait Islander fertility rates decline by 0.5% per year; paternity rates increase by 1% per year; and life expectancy at birth increases by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026.

(d) Series C assumes Aboriginal and Torres Strait Islander fertility rates decline by 1% per year; paternity rates remain constant; and life expectancy at birth increases by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026.

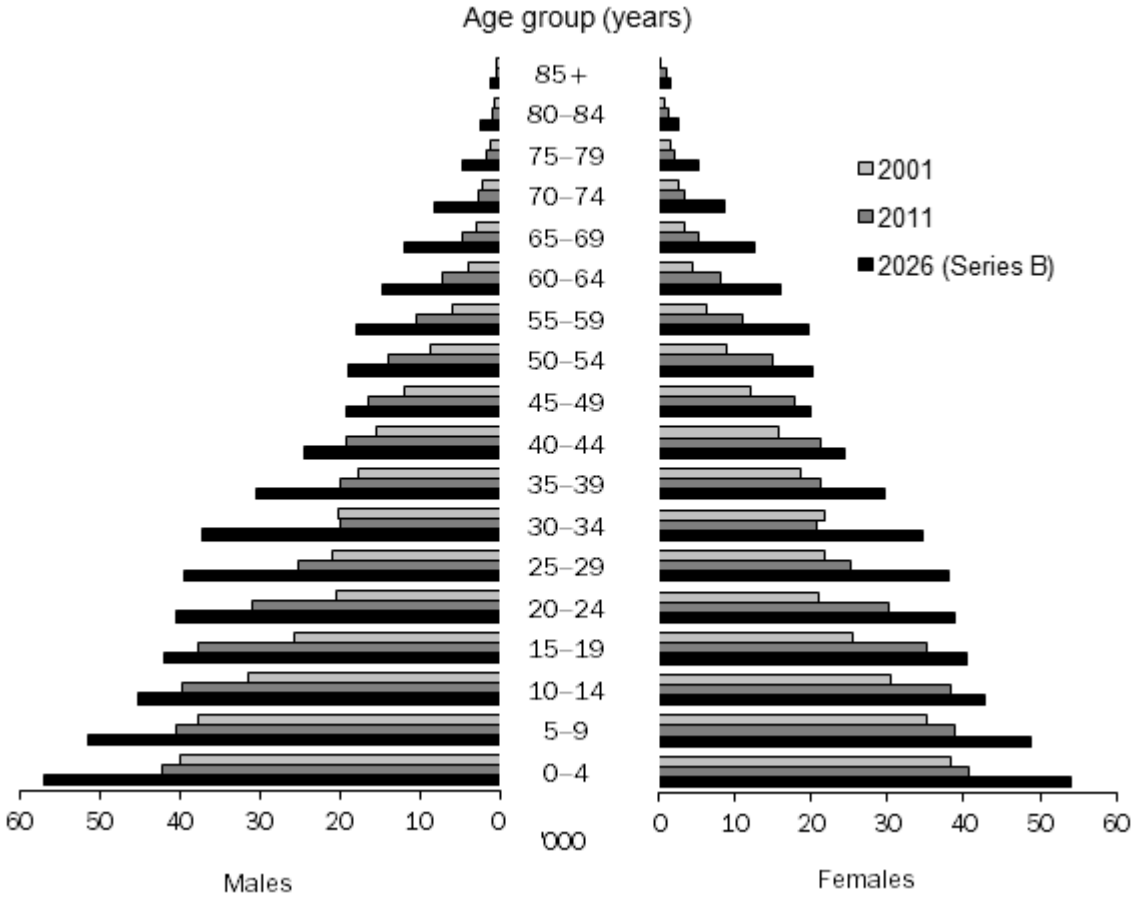
AUSTRALIA

In 2011, the estimated resident Aboriginal and Torres Strait Islander population was 669,900 people, representing 3% of the total Australian population. Between 2001 and 2011 the Aboriginal and Torres Strait Islander population increased by 2.3% (from 534,700 people) per year on average, compared with 1.5% for the total Australian population.

The population of Aboriginal and Torres Strait Islander Australians is projected to increase to between 907,800 and 945,600 people in 2026, at an average growth rate of between 2.0% and 2.3% per year. In comparison, the average growth rate of the total Australian population is projected to be between 1.5% and 1.8% per year over the same period (Population Projections, Australia, 2012 (base) to 2101, cat. no. 3222.0).

The Aboriginal and Torres Strait Islander population is projected to increase across all age groups between 2011 and 2026 albeit at different rates. The number of Aboriginal and Torres Strait Islander children (0–14 years) is projected to increase from 240,600 in 2011 to between 285,200 and 315,200 in 2026, while the number of Aboriginal and Torres Strait Islander people aged 15–64 years is projected to increase from 406,600 in 2011 to between 565,300 and 568,500 in 2026. The number of Aboriginal and Torres Strait Islander people aged 65 years and over is projected to more than double over the period, from 22,700 in 2011 to between 57,400 and 61,900 in 2026.

1.2 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, by age group, Australia—at 30 June



AUSTRALIA *continued*

Consistent with this, the median age of the Aboriginal and Torres Strait Islander population is estimated to have increased from 20.4 years in 2001 to 21.6 years in 2011, and is projected to increase to between 24.7 and 25.4 years in 2026.

The proportion of Aboriginal and Torres Strait Islander children aged 0–14 years is therefore projected to decrease from 36% in 2011 to between 31% and 33% in 2026, while the proportion of Aboriginal and Torres Strait Islander people aged 15–64 years is projected to remain relatively stable, from 61% in 2011 to between 60% and 62% in 2026. The proportion of Aboriginal and Torres Strait Islander people aged 65 years and over is projected to increase from 3.4% in 2011 to between 6.3% and 6.5% in 2026.

STATES AND TERRITORIES

At 30 June 2011, New South Wales had the largest Aboriginal and Torres Strait Islander population of the states and territories (208,500 people), followed by Queensland (189,000), Western Australia (88,300), the Northern Territory (68,900), Victoria (47,300), South Australia (37,400), Tasmania (24,200) and the Australian Capital Territory (6,200) (table 1.3).

The Aboriginal and Torres Strait Islander population of the Australian Capital Territory is projected to be the fastest growing of the states and territories, with an average growth rate over the projection period of between 2.8% and 3.1% per year, followed by Victoria (between 2.5% and 2.8%), Queensland (between 2.3% and 2.6%) and Tasmania (between

STATES AND TERRITORIES *continued*

2.2% and 2.4%). The Aboriginal and Torres Strait Islander population of the Northern Territory is projected to have the lowest growth rate of between 1.4% and 1.6% per year over the projection period.

In Series A, B and C, Queensland is projected to approach New South Wales as the state or territory with the largest Aboriginal and Torres Strait Islander population in 2026. Queensland's share of Australia's Aboriginal and Torres Strait Islander population is projected to increase from 28% in 2011 to 29% in 2026, while New South Wales is projected to remain stable at 31% in 2011 and 2026. The Northern Territory's proportion of the Aboriginal and Torres Strait Islander population is projected to decrease from 10.3% in 2011 to between 9.3% and 9.4% in 2026. The distribution amongst the remaining states and territories is projected to remain largely unchanged.

1.3 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, States and territories—2001–2026

	2001	2011	2026 (SERIES A)		2026 (SERIES B)		2026 (SERIES C)	
	no.	*no.*	*no.*	*Growth rate (%)* (a)	*no.*	*Growth rate (%)* (a)	*no.*	*Growth rate (%)* (a)
NSW	170 827	208 476	289 808	2.2	282 962	2.1	277 233	1.9
Vic.	35 816	47 333	71 379	2.8	69 637	2.6	68 198	2.5
Qld	143 545	188 954	278 019	2.6	271 860	2.5	266 755	2.3
SA	29 068	37 408	52 321	2.3	51 233	2.1	50 312	2.0
WA	71 994	88 270	121 836	2.2	119 431	2.0	117 440	1.9
Tas.	19 292	24 165	34 724	2.4	33 965	2.3	33 305	2.2
NT	59 702	68 850	87 486	1.6	86 060	1.5	84 922	1.4
ACT	4 256	6 160	9 674	3.1	9 463	2.9	9 286	2.8
Aust. (b)	**534 718**	**669 881**	**945 594**	**2.3**	**924 953**	**2.2**	**907 789**	**2.0**

(a) Average annual growth rate for the period 2011 to 2026.
(b) Includes Other Territories.

CHAPTER 2 ASSUMPTIONS

INTRODUCTION

The Australian Bureau of Statistics (ABS) uses a cohort-component method for producing population projections. Using this method, assumptions made about future levels of fertility, mortality, and migration are applied to a base population (split by sex and single year of age) to obtain a projected population for the following year. The assumptions are then applied to this new (projected) population to obtain a projected population for the next year. This process is repeated until the end of the projection period is reached.

A similar method can also be used to produce population estimates for previous years (in this release, years prior to the 2011 Census of Population and Housing). This technique requires assumptions to be made about past levels of mortality taking into account the most recent Census data to utilise the best quality estimates available. These are applied to the base population to obtain a 'reverse-survived' population for the previous year. The assumptions are then applied to this new (reverse-survived) population to obtain a population for the preceding year. This process is repeated until the first year of the estimation period is reached.

Estimates and projections presented in this release supersede estimates and projections based on earlier censuses. The assumptions used differ from those in previous publications. As a result, and in addition to the use of a different base population, which is significantly larger than the previous base population, the size, structure and components of the estimated and projected Aboriginal and Torres Strait Islander population are different to those previously published for the same period.

Span of estimates and projections

Backcast estimates of the Aboriginal and Torres Strait Islander population in this release span the period 30 June 2001 to 30 June 2011 and are available for Australia and the states and territories. Estimates for the period 30 June 1996 to 30 June 2000 have also been produced and are available as an illustrative series in Appendix 1. Given the 15-year interval for which the assumption of improving life expectancy at birth is applied, backcast data should be interpreted with caution.

Projections of the Aboriginal and Torres Strait Islander population in this release span the period 30 June 2012 to 30 June 2026 and are available for Australia, states and territories, Indigenous Regions and Remoteness Areas. Again, given the 15-year interval for which the assumptions are applied, projections data should be interpreted with caution.

Base population

The base population is the Aboriginal and Torres Strait Islander estimated resident population of Australia at 30 June 2011, derived from 2011 Census of Population and Housing counts of Aboriginal and Torres Strait Islander Australians, adjusted for net undercount as measured by the Post Enumeration Survey (PES). The base population estimates for the Northern Territory at 30 June 2011 are based on age-heaping adjusted

Base population continued

data. For further information on this adjustment and the base population, see *Estimates of Aboriginal and Torres Strait Islander Australians* (cat. no. 3238.0.55.001).

ESTIMATES

Summary of assumptions

A single time series of Aboriginal and Torres Strait Islander estimates for the period 1996 to 2010 has been produced. The assumptions used are summarised below:

- Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.3 years per year for males and 0.15 years per year for females between 2006 and 2011 and increases by 0.2 years per year for males and 0.15 years per year females between 1996 and 2006. This assumes Aboriginal and Torres Strait Islander life expectancy at birth of 65.5 years for males and 71.4 years for females for Australia in 1996;
- net interstate migration for each of the three intercensal periods will be based on levels observed in each respective intercensal period; and,
- zero net overseas migration occurred across the entire series with no arrivals and departures.

PROJECTIONS

Summary of assumptions

Assumptions have been formulated on the basis of past demographic trends, in conjunction with consultation with various experts and government department representatives at the national and state/territory level. They do not attempt to allow for non-demographic factors (such as major government policy decisions, economic factors, natural disasters, epidemics or significant health treatment improvements) which may affect future demographic behaviour or outcomes.

Three assumptions are made about fertility rates of Aboriginal and Torres Strait Islander women:

- constant fertility rates;
- an annual decline of 0.5% in fertility rates; and
- an annual decline of 1.0% in fertility rates.

Three paternity assumptions, that is the proportion of births born to an Aboriginal and Torres Strait Islander father and mother whose Indigenous status is non-Indigenous or not stated, were also made:

- constant paternity rates;
- an annual increase of 1.0% in paternity rates; and
- an annual increase of 2.0% in paternity rates.

Three assumptions were made about future Aboriginal and Torres Strait Islander life expectancy at birth for Australia:

- Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026. This equates to an increase in life expectancy at birth of 3 years over the 15 year projection period for males and 2.25 years for females;
- Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026. This equates to an increase in life expectancy at birth of 4.5 years over the 15 year projection period for males and 3.75 years for females; and
- Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026. This equates to an increase in life expectancy at birth of 7.5 years over the 15 year projection period for males and 6.75 years for females.

Summary of assumptions continued

As data are required on a financial year basis, life expectancy at birth estimates were adjusted to account for the six-month period between the midpoint of 2010–2012 (calendar year life expectancy) and 2010–11 (financial year life expectancy). This results in life expectancy at birth of 69.0 years and 73.6 years for Aboriginal and Torres Strait Islander males and females respectively for Australia for the year ending 30 June 2011, which forms the starting point of the life expectancy at birth assumptions.

Additional assumptions regarding the remaining demographic factors for the projections will be:

- constant interstate migration at levels observed in the 2011 Census;
- zero net overseas migration with no arrivals and no departures; and
- zero unexplained growth in the Aboriginal and Torres Strait Islander population.

Projection series

By considering likely scenarios of future levels of fertility, paternity, mortality, migration and using a zero assumption for unexplained growth, 10 projection series were produced.

Three main series have been selected from these to provide a range, although not the full range, of projections for analysis and discussion in Chapters 1 and 3. These series are referred to as series A, B and C. These series are identified as high, medium and low. Detailed information on these and the remaining projection series are available in the data cubes for this release on the ABS web site.

Projection series continued

2.1 PROJECTION SERIES (A-J), Assumptions used(a)

	LIFE EXPECTANCY AT BIRTH		
	1(b)	*2*(c)	*3*(d)
CONSTANT PATERNITY RATES			
Fertility rates			
Constant	J	. .	. .
Annual decrease of 0.5%	. .	F	. .
Annual decrease of 1%	C	. .	. .
1% ANNUAL INCREASE IN PATERNITY RATES			
Fertility rates			
Constant	. .	D	. .
Annual decrease of 0.5%	I	B	H
Annual decrease of 1%	. .	E	. .
2% ANNUAL INCREASE IN PATERNITY RATES			
Fertility rates			
Constant	. .	. .	A
Annual decrease of 0.5%	. .	G	. .
Annual decrease of 1%	. .	. .	. .

. . not applicable

(a) Levels of interstate migration as observed in the 2011 Census and zero net overseas migration apply to all series.

(b) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026.

(c) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026.

(d) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026.

Which series to use

The three main series respectively imply a high, medium and low overall growth rate of the Aboriginal and Torres Strait islander population. It is expected that Series B will be the most appropriate choice for most users. The Australian Bureau of Statistics will be using Series B in calculating fertility and mortality rates for inclusion in the annual Births and Deaths publications.

The population projections are not intended as forecasts or predictions, but are illustrations of growth and change in the population that would occur if assumptions made about future demographic trends were to prevail over the projection period.

Which series to use continued

Future uncertainty, along with the subjective nature of assessing current trends, means that using a range of possible outcomes rather than a single projection series acknowledges a range of the possible future size, distribution and age structure of Australia's Aboriginal and Torres Strait Islander population.

There is also some level of uncertainty surrounding 2011 Aboriginal and Torres Strait Islander Census counts and population estimates on which the projections are based, as well as data quality issues relating to registered births and deaths of Aboriginal and Torres Strait Islander people. Information on data quality issues related to Aboriginal and Torres Strait Islander estimates and projections are available in the Quality Declaration of this release on the ABS web site.

FERTILITY AND PATERNITY

The ABS Births collection identifies a birth as being an Aboriginal and/or Torres Strait Islander person where at least one parent identifies themselves as being of Aboriginal and Torres Strait Islander origin on the birth registration statement provided to the relevant state or territory registrar. Therefore Aboriginal and Torres Strait Islander births can be attributed to either:

- Aboriginal and Torres Strait Islander mothers, including births where both the mother and father are Aboriginal and Torres Strait Islander; or
- Aboriginal and Torres Strait Islander fathers and non-Indigenous mothers.

For simplicity, birth rates of Aboriginal and Torres Strait Islander mothers are referred to in this release as *fertility rates*, while birth rates where the father is Aboriginal and Torres Strait Islander and the mother's Indigenous status is non-Indigenous or not stated are referred to as *paternity rates*.

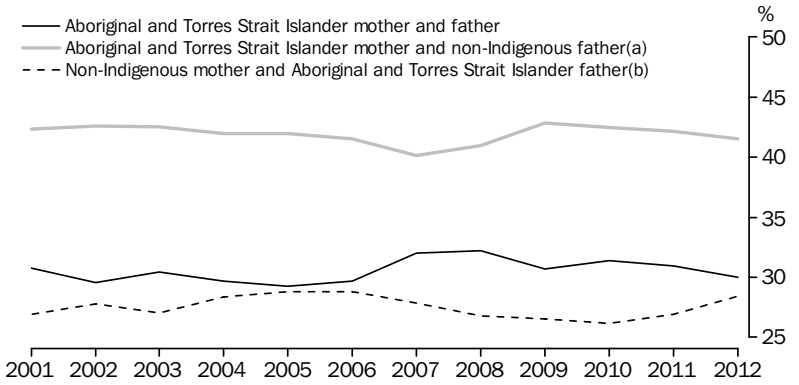
To produce population projections using the cohort-component method, assumptions for each year of the projection period are required for age-specific fertility rates, age-specific paternity rates and the Aboriginal and Torres Strait Islander sex ratio at birth (the ratio of male to female births, multiplied by 100).

Indigenous status of parents

Around one-third (30%) of Aboriginal and Torres Strait Islander births registered in 2012 were births for which both parents identified themselves as being of Aboriginal and Torres Strait Islander origin on the birth registration statement. For 42% of Aboriginal and Torres Strait Islander births, only the mother was of Aboriginal and Torres Strait Islander origin (including births where paternity was not acknowledged and those where the father's Indigenous status was not stated). The remaining 28% of Aboriginal and Torres Strait Islander births were recorded as having an Aboriginal and Torres Strait Islander father and a non-Indigenous mother (including births where the mother's Indigenous status was not stated).

Indigenous status of parents continued

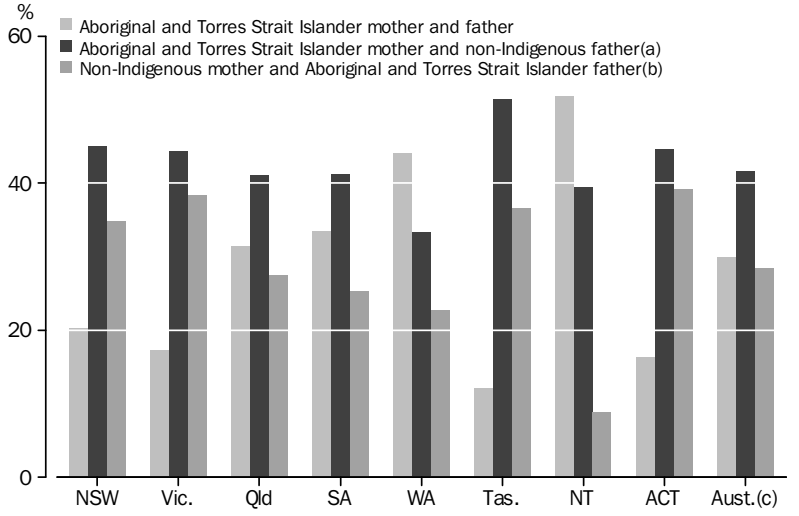
2.2 INDIGENOUS STATUS OF PARENTS, Australia, 2001–2012



(a) Includes fathers whose Indigenous status was not stated.
(b) Includes mothers whose Indigenous status was not stated.

The proportion of Aboriginal and Torres Strait Islander births attributed to Aboriginal and Torres Strait Islander mothers and/or Aboriginal and Torres Strait Islander fathers differs considerably between the states and territories. In 2012, the proportion of Aboriginal and Torres Strait Islander births where both the mother and father were Aboriginal and Torres Strait Islander ranged from 52% in the Northern Territory to 12% in Tasmania, while the proportion of births to non-Indigenous mothers and Aboriginal and Torres Strait Islander fathers ranged from 9% in the Northern Territory to 39% in the Australian Capital Territory (graph 2.3).

2.3 INDIGENOUS STATUS OF PARENTS, States and territories, 2012



(a) Includes fathers whose Indigenous status was not stated.
(b) Includes mothers whose Indigenous status was not stated.
(c) Includes Other Territories.

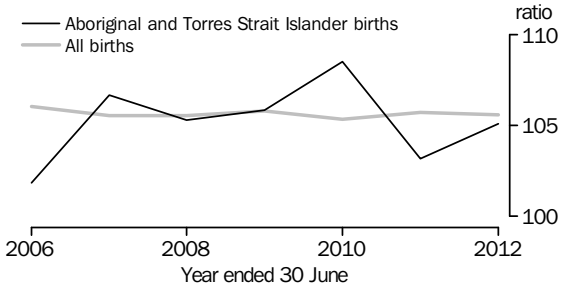
Sex ratio at birth

Population projections require an assumed sex ratio at birth in order to split total projected births into male and female births. The sex ratio for all births registered in Australia fluctuates around 105.6 male births per 100 female births. The sex ratio for all registered births was 106.0 for the year ended 30 June 2006 and 105.6 for the year ended

Sex ratio at birth continued

30 June 2012. While the sex ratio at birth for Aboriginal and Torres Strait Islander births can be more volatile (graph 2.4), a constant ratio of 105.6 male births per 100 female births has been assumed for the duration of the projection period.

2.4 SEX RATIO(a), Australia, 2006–2012



(a) Male births per 100 female births.

FERTILITY ASSUMPTION

Three main assumptions have been made for future fertility rates of Aboriginal and Torres Strait Islander women:

- constant fertility rates;
- an annual decline of 0.5% in fertility rates; and
- an annual decline of 1.0% in fertility rates.

These assumptions were primarily chosen on the basis of the declining trend in fertility as indicated by data from the 'children ever born' question asked in the Census.

The same rate of decline in fertility rates has been assumed for each state and territory, Indigenous Region, and Remoteness Area; that is, each geographic area is assumed to experience a 0.5% annual decline in fertility rates over the projection period for Series B.

The effect of alternative fertility assumptions on the number of projected births and size of the future Aboriginal and Torres Strait Islander population is described in Chapter 4.

Trends in fertility rates

CHILDREN EVER BORN

Cohort fertility rates, based on the 'children ever born' question asked in the Census of Population and Housing, illustrate a decline in Aboriginal and Torres Strait Islander fertility over time.

The number of children ever born provides information on actual fertility outcomes of women of different ages. In particular, the number of children ever born to women aged 40–44 years can be regarded as a measure of completed fertility; that is, on average how many children this group of women each had throughout their entire reproductive lifetimes.

In the 1981 Census, Aboriginal and Torres Strait Islander women aged 40–44 years (born in 1937–1941) had an average of 4.55 babies per woman. In comparison, Aboriginal and Torres Strait Islander women aged 40–44 years at the time of the 1986 Census (born in 1942–1946) had an average of 3.97 babies per woman. Those aged 40–44 years at the time of the 1996 Census (born 1952–1956) had an average of 3.10 babies per woman, and Aboriginal and Torres Strait Islander women in this age group at the time of the 2006 Census (born in 1962–1966) had fewer children (2.84 babies per woman). The 2011

Trends in fertility rates continued

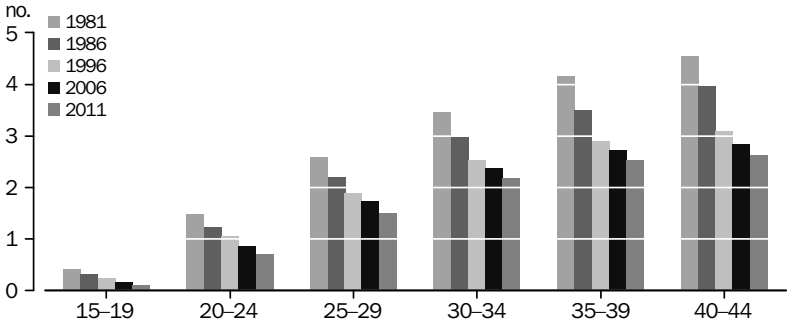
CHILDREN EVER BORN *continued*

Census showed that Aboriginal and Torres Strait Islander women in this age group (born in 1967–1971) had even fewer children (2.63 babies per woman).

As indicated in graph 2.5, the average number of children ever born to Aboriginal and Torres Strait Islander women has been declining for each age group over the past three decades. These declines, particularly in the younger age groups, indicate probable declines in the future overall level of Aboriginal and Torres Strait Islander fertility.

In the 1981 Census, Aboriginal and Torres Strait Islander women aged 25–29 years (born in 1952–1956) had an average of 2.58 children ever born. In comparison, Aboriginal and Torres Strait Islander women aged 25–29 years at the time of the 1986 Census (born in 1957–1961) had an average of 2.20 babies per woman. Those aged 25–29 years at the time of the 1996 Census (born in 1967–1971) had an average of 1.88 babies per woman, and Aboriginal and Torres Strait Islander women in this age group at the time of the 2006 Census (born in 1977–1981) had an average of 1.73 babies per woman. In 2011, women in this age group (born in 1982–1986) had an average of 1.49 babies per woman.

2.5 AVERAGE NUMBER OF CHILDREN EVER BORN(a)(b), Aboriginal and Torres Strait Islander women—1981, 1986, 1996, 2006 and 2011 Censuses



(a) Average number of children ever born calculated on assumption that women with six or more children had an average of 6.9 children.
(b) The children ever born question was not asked in the 1991 Census.

Source: 1981, 1986, 1996, 2006 and 2011 Censuses of Population and Housing.

TOTAL FERTILITY RATE

The total fertility rate (TFR), based on birth registrations, represents the average number of children a woman could expect to bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

In the early 1960s, based on Census data, the TFR for Aboriginal and Torres Strait Islander women was 5.8 babies per woman. Since then, fertility levels for Aboriginal and Torres Strait Islander women have declined substantially, with the largest decreases being recorded during the 1970s. Fertility of Aboriginal and Torres Strait Islander women declined to a low of 2.0 babies per woman in 1996, gradually increased to 2.8 in 2010, before slowly decreasing over the last few years.

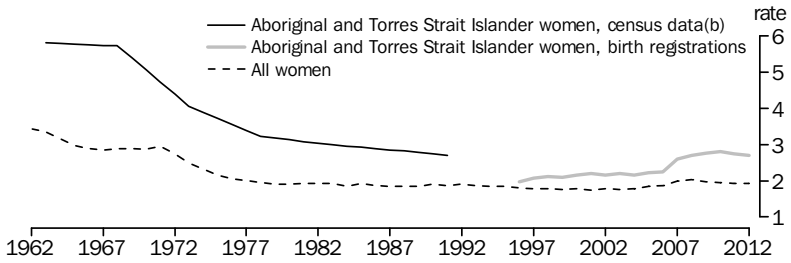
Trends in fertility rates continued

TOTAL FERTILITY RATE *continued*

Graph 2.6 presents TFRs for Aboriginal and Torres Strait Islander and all women for the period 1961–1966 to 2012. Due to the limited availability and variable quality of historical Aboriginal and Torres Strait Islander birth registration data, fertility rates of Aboriginal and Torres Strait Islander women up to 1991 were derived using data collected in the Australian Censuses (Gray, 1997). With improvements in coverage, birth registration data has been used for 1996 onwards.

The TFRs for Aboriginal and Torres Strait Islander women for the period 1996 to 2012 were derived using the number of births registered to Aboriginal and Torres Strait Islander mothers, and estimates of the female Aboriginal and Torres Strait Islander population. As these estimates are derived from different censuses, TFRs for Aboriginal and Torres Strait Islander women for 1996 to 2012 are not strictly comparable.

2.6 TOTAL FERTILITY RATES(a), Australia, 1962–2012



(a) Births per woman.
(b) Five-year TFRs (from 1961–66 to 1981–86) and ten-year TFR 1986–96 plotted against the middle year of the period.

Source: Births, Australia, 2012 (cat. no. 3301.0)
Gray A 1997, The Explosion of Aboriginality: Components of Indigenous Population Growth 1991-1996, Discussion Paper no. 142/1997, Centre for Aboriginal Economic Policy Research, Australian National University, Canberra

Choice of fertility assumption

In summary, while fertility rates based on birth registrations of Aboriginal and Torres Strait Islander children may provide some evidence for assuming constant or increasing Aboriginal and Torres Strait Islander fertility, cohort fertility rates based on the 'children ever born' question asked in the Census indicate long-term declines. Assumptions that take both sets of evidence into account have been made but with more emphasis given to the 'children ever born' data. Given the long-term trend of declining fertility in Census data, three assumptions including a constant fertility rate and decreasing fertility rates were chosen. The magnitude and duration of any future changes in fertility rates are not possible to gauge accurately.

Method used to produce fertility assumptions

Assumed age-specific fertility rates for Aboriginal and Torres Strait Islander women are based on three years of birth registrations (2010 to 2012) in order to minimise the effect of year-to-year fluctuations in registrations. These rates were adjusted to produce plausible numbers of projected births in the first year of the projection period in accordance with Aboriginal and Torres Strait Islander population estimates at younger ages.

Method used to produce fertility assumptions continued

Adjustment factors were calculated for each state and territory by taking the ratio of the number of Aboriginal and Torres Strait Islander children aged 0, 1 and 2 at 30 June 2011 to the number of births registered between 2010 and 2012. Differences in the two sources can be attributed to several factors. These include net undercount, Census records for which Indigenous status was not stated, lags in the registration of births and differences in the method of identification between the Census and the Birth Registrations collection (for example, a child born to an Aboriginal and Torres Strait Islander and non-Indigenous parent is automatically identified as Aboriginal and Torres Strait Islander in birth registrations, however the child may be identified as non-Indigenous on the Census form). For each state and territory, the 2010–2012 age-specific fertility rates were then multiplied by the relevant adjustment factor to produce adjusted age-specific fertility rates.

In addition, as rates are required on a financial year basis, they were adjusted to account for the six-month period between the mid-point of the period 2010–2012 (calendar year fertility rates) and 2011–12 (financial year fertility rates).

Although there is some evidence of greater declines in fertility in the younger age groups relative to older age groups, analysis suggests that incorporating this trend into the fertility assumptions would have a negligible effect on the future size of the Aboriginal and Torres Strait Islander population. Therefore, the assumed 0.5% annual decline in fertility rates for Series B is applied uniformly across relevant age groups.

2.7 ASSUMED FERTILITY RATES, States and territories

	AGE-SPECIFIC FERTILITY RATES(a)							
	15-19(c)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*(d)	*TFR*(b)
	YEAR ENDED 30 JUNE 2012							
NSW	54.7	126.3	121.2	88.7	38.9	9.2	0.4	2.20
Vic.	47.5	94.3	111.8	85.9	51.4	12.4	1.2	2.02
Qld	74.1	145.3	128.6	94.7	45.8	11.0	0.8	2.50
SA	64.9	127.6	109.2	82.0	38.7	6.1	—	2.14
WA	76.7	122.8	110.0	75.6	35.8	8.3	0.8	2.15
Tas.	46.3	106.4	112.2	83.8	36.5	8.7	—	1.97
NT	86.2	129.5	105.8	79.4	35.7	9.0	0.2	2.23
ACT	49.1	59.3	88.3	61.7	67.1	5.8	3.8	1.68
Aust.(e)	**66.1**	**127.8**	**117.9**	**86.5**	**41.0**	**9.5**	**0.6**	**2.25**
	YEAR ENDED 30 JUNE 2026							
NSW	51.0	117.7	113.0	82.7	36.3	8.6	0.3	2.05
Vic.	44.3	87.9	104.2	80.1	47.9	11.6	1.1	1.89
Qld	69.1	135.5	119.8	88.3	42.7	10.2	0.8	2.33
SA	60.5	118.9	101.8	76.5	36.0	5.7	—	2.00
WA	71.5	114.5	102.6	70.4	33.4	7.8	0.8	2.00
Tas.	43.2	99.2	104.6	78.1	34.0	8.1	—	1.84
NT	80.4	120.7	98.6	74.0	33.2	8.4	0.2	2.08
ACT	45.8	55.3	82.3	57.5	62.5	5.4	3.6	1.56
Aust.(e)	**61.6**	**119.1**	**109.9**	**80.6**	**38.2**	**8.9**	**0.6**	**2.09**

— nil or rounded to zero (including null cells)
(a) Births per 1,000 Aboriginal and Torres Strait Islander women.
(b) Births per Aboriginal and Torres Strait Islander woman.
(c) Includes births to mothers aged less than 15 years.
(d) Includes births to mothers aged 50 years and over.
(e) Includes Other Territories.

Regional variations in fertility

INDIGENOUS REGIONS

In some previously published ABS projections of the Aboriginal and Torres Strait Islander population, fertility assumptions for sub-state geographies used the corresponding state and territory level assumption. The projections presented in this release apply fertility assumptions for sub-state geographies by aggregating Indigenous Regions (IREGs) into two groups for each state and territory (except Tasmania and the Australian Capital Territory):

- capital city IREG (for example, Adelaide IREG); and,
- rest of state/territory IREGs combined (for example, Port Augusta IREG and Port Lincoln - Ceduna IREG combined).

Fertility rates for each of these groups were adjusted in a similar manner to state and territory rates to produce plausible numbers of projected births in the first year of the projection period in accordance with Aboriginal and Torres Strait Islander population estimates at younger ages.

Regional variations in fertility continued

INDIGENOUS REGIONS *continued*

2.8 ASSUMED TOTAL FERTILITY RATES(a), Indigenous Regions

	30 June 2012	*30 June 2026*
Sydney IREG	1.89	1.76
Rest of NSW	2.35	2.19
Melbourne IREG	1.66	1.54
Rest of Vic.	2.34	2.18
Brisbane IREG	2.11	1.96
Rest of Qld	2.71	2.53
Adelaide IREG	2.15	2.00
Rest of SA	2.08	1.94
Perth IREG	1.93	1.80
Rest of WA	2.29	2.14
Tasmania IREG	1.97	1.84
Darwin IREG	2.04	1.90
Rest of NT	2.30	2.14
ACT IREG	1.68	1.56
Australia(b)	**2.25**	**2.09**

(a) Births per Aboriginal and Torres Strait Islander woman.
(b) Includes Other Territories.

REMOTENESS AREAS

Assumed fertility rates for Remoteness Areas were calculated and adjusted using the same technique as for the states and territories.

2.9 ASSUMED TOTAL FERTILITY RATES(a), Remoteness Areas

	30 June 2012	*30 June 2026*
Major Cities	1.92	1.79
Inner and Outer Regional	2.45	2.29
Remote and Very Remote	2.41	2.25
Australia(b)	**2.25**	**2.09**

(a) Births per Aboriginal and Torres Strait Islander woman.
(b) Includes Other Territories.

PATERNITY ASSUMPTION

Three main assumptions have been made for future paternity rates of Aboriginal and Torres Strait Islander men where the mother's Indigenous status was non-Indigenous or not stated:

- constant paternity rates;
- an annual increase of 1.0% in paternity rates; and
- an annual increase of 2.0% in paternity rates.

PATERNITY ASSUMPTION *continued*

The total paternity rate (TPR) is defined in this release as the average number of Aboriginal and Torres Strait Islander babies born per Aboriginal and Torres Strait Islander father where the mother's Indigenous status is non-Indigenous or not stated, and is calculated in the same way as the TFR.

The same rate of increase in paternity rates has been assumed for each state and territory, Indigenous Region, and Remoteness Area; that is, each geographic area is assumed to experience a 1.0% annual increase in paternity rates over the projection period for Series B.

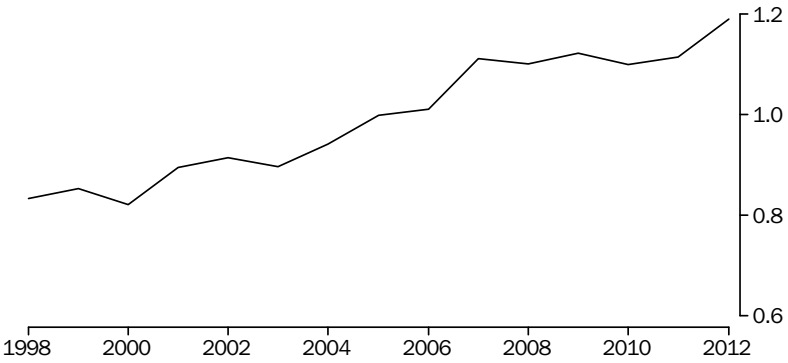
The effect of alternative paternity assumptions on the number of projected births and size of the future Aboriginal and Torres Strait Islander population is described in Chapter 4.

Trends in paternity rates

As with the TFR, the time series of the TPR (graph 2.10) is based on population estimates which are not strictly comparable over time. Based on birth registrations, the TPR has been slowly increasing over the past decade, from 0.83 births per Aboriginal and Torres Strait Islander man in 1998 to 1.19 in 2012.

Paternity rates prior to 1998 are not available as information on births to Aboriginal and Torres Strait Islander fathers was not available for all states and territories, and no 'children ever born' question is asked of males in the Census.

2.10 TOTAL PATERNITY RATES(a), Australia, 1998–2012



(a) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status was non-Indigenous or not stated, per Aboriginal and Torres Strait Islander man. The TPR is calculated in the same way as the TFR.

Method used to produce paternity assumptions

Assumed paternity rates were calculated using the same method as that used for assumed fertility rates. This involved the calculation of age-specific paternity rates based on 2010–2012 registered births to Aboriginal and Torres Strait Islander fathers where the mother's Indigenous status is non-Indigenous or not stated, which were then adjusted to ensure consistency with the Aboriginal and Torres Strait Islander population at younger ages. The assumption of a 1.0% annual increase in paternity rates for Series B was applied consistently across the relevant age groups.

Method used to produce paternity assumptions continued

2.11 ASSUMED PATERNITY RATES, States and territories

	AGE-SPECIFIC PATERNITY RATES(a)							
	15-19(c)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*(d)	*TPR*(b)
	YEAR ENDED 30 JUNE 2012							
NSW	11.6	45.0	64.1	63.0	39.0	16.8	10.3	1.25
Vic.	10.9	46.5	68.3	68.1	43.7	22.0	12.0	1.36
Qld	9.1	40.3	48.4	45.7	25.9	11.7	7.0	0.94
SA	8.8	30.3	42.9	39.8	27.7	12.7	5.5	0.84
WA	7.7	25.7	33.7	33.6	18.1	9.8	5.1	0.67
Tas.	13.9	64.0	73.9	57.4	43.1	15.3	13.3	1.40
NT	1.4	6.7	11.2	11.1	7.5	3.5	3.0	0.22
ACT	8.1	32.7	56.8	55.4	59.0	22.1	17.3	1.26
Aust.(e)	**9.2**	**36.2**	**47.8**	**45.9**	**28.2**	**12.9**	**7.8**	**0.94**
	YEAR ENDED 30 JUNE 2026							
NSW	13.3	51.7	73.7	72.4	44.8	19.3	11.8	1.44
Vic.	12.5	53.4	78.5	78.3	50.3	25.3	13.7	1.56
Qld	10.5	46.3	55.7	52.5	29.7	13.4	8.0	1.08
SA	10.1	34.9	49.3	45.8	31.9	14.6	6.3	0.96
WA	8.8	29.5	38.7	38.6	20.8	11.2	5.9	0.77
Tas.	16.0	73.6	85.0	66.0	49.5	17.6	15.3	1.62
NT	1.7	7.7	12.9	12.8	8.6	4.1	3.4	0.26
ACT	9.3	37.6	65.3	63.6	67.8	25.4	19.9	1.44
Aust.(e)	**10.6**	**41.7**	**54.9**	**52.7**	**32.5**	**14.9**	**9.0**	**1.08**

(a) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status was non-Indigenous or not stated, per 1,000 Aboriginal and Torres Strait Islander men.
(b) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status was non-Indigenous or not stated, per Aboriginal and Torres Strait Islander man.
(c) Includes births to fathers aged less than 15 years.
(d) Includes births to fathers aged 50 years and over.
(e) Includes Other Territories.

Regional variations in paternity

INDIGENOUS REGIONS

Assumed paternity rates for IREGs were calculated and adjusted in the same way as for the states and territories.

Regional variations in paternity continued

INDIGENOUS REGIONS *continued*

2.12 ASSUMED TOTAL PATERNITY RATES(a), Indigenous Regions

	30 June 2012	*30 June 2026*
Sydney IREG	1.17	1.35
Rest of NSW	1.29	1.49
Melbourne IREG	1.22	1.40
Rest of Vic.	1.56	1.80
Brisbane IREG	1.26	1.45
Rest of Qld	0.78	0.90
Adelaide IREG	1.11	1.28
Rest of SA	0.38	0.44
Perth IREG	0.91	1.04
Rest of WA	0.52	0.60
Tasmania IREG	1.40	1.62
Darwin IREG	0.64	0.74
Rest of NT	0.10	0.11
ACT IREG	1.26	1.44
Australia(b)	**0.94**	**1.08**

(a) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status is non-Indigenous or not stated, per Aboriginal and Torres Strait Islander man.
(b) Includes Other Territories.

REMOTENESS AREAS

Assumed paternity rates for Remoteness Areas were calculated and adjusted using the same technique as for the states and territories.

2.13 ASSUMED TOTAL PATERNITY RATES(a), Remoteness Areas

	30 June 2012	*30 June 2026*
Major Cities	1.20	1.38
Inner and Outer Regional	1.12	1.29
Remote and Very Remote	0.25	0.29
Australia(b)	**0.94**	**1.08**

(a) Births to Aboriginal and Torres Strait Islander men, where the mother's Indigenous status was non-Indigenous or not stated, per Aboriginal and Torres Strait Islander man.
(b) Includes Other Territories.

MORTALITY ASSUMPTIONS

To produce population projections using the cohort-component method, life tables are required for each year of the projection period. These are calculated in two steps:

- life expectancy at birth for each projection year is assumed; and

MORTALITY ASSUMPTIONS *continued*

- life tables, based on the 2010–2012 age/sex structure of mortality, are generated to match the assumed life expectancies at birth.

Survivorship ratios from the life tables are then applied to the population by single year of age and sex.

Assumptions for mortality at lower geographical levels are based on 2010–2012 differentials between Australia and each state or territory, groups of Indigenous Regions, and Remoteness Areas.

The effect of alternative life expectancy at birth assumptions on the number of projected deaths and size of the future Aboriginal and Torres Strait Islander population is described in Chapter 4.

Current life expectancy at birth

At the national level, Aboriginal and Torres Strait Islander life expectancy at birth for the period 2010–2012 is estimated to be 69.1 years for males and 73.7 years for females (see *Life Tables for Aboriginal and Torres Strait Islander Australians, 2010–2012*, cat. no. 3302.0.55.003).

As survivorship ratios are required on a financial year basis, life expectancy at birth estimates were adjusted to account for the six-month period between the midpoint of 2010–2012 (calendar year life expectancy) and 2010–11 (financial year life expectancy), resulting in life expectancy at birth of 69.0 years for Aboriginal and Torres Strait Islander males and 73.6 years for Aboriginal and Torres Strait Islander females for Australia for the year ending 30 June 2011, which form the starting point of the life expectancy at birth assumptions.

Trends in life expectancy at birth

The ABS has compiled life tables for Aboriginal and Torres Strait Islander Australians following the 1996, 2001, 2006 and 2011 Censuses of Population and Housing. Due to changes in methods, the 2006 and 2011 estimates of life expectancy at birth are not comparable to estimates for earlier periods. Assumptions about future levels of Aboriginal and Torres Strait Islander life expectancy at birth can therefore only be based on observed trends over the most recent intercensal period.

A recent study (Wilson, Condon and Barnes, 2007) found evidence that life expectancy at birth of Aboriginal and Torres Strait Islander people living in the Northern Territory has improved, increasing from 52 years for males and 54 years for females in the late 1960s to around 60 years for males and 68 years for females in recent years. The study found that improvements in infant mortality contributed considerably to increases in life expectancy at birth, particularly between the late 1960s and mid-1980s. Since then, life expectancy gains have been largely the result of improving mortality of Aboriginal and Torres Strait Islander people aged 45 years and over.

In addition, alternative measures indicate some improvement in mortality of Aboriginal and Torres Strait Islander Australians over time. For example, declines in Aboriginal and Torres Strait Islander mortality, as measured by age-standardised death rates, have been recorded for both males and females in Western Australia, and females in the Northern Territory between 1991 and 2005. Declines in Aboriginal and Torres Strait Islander infant mortality have also been recorded in Western Australia, South Australia and the Northern Territory over the period (see *The Health and Welfare of Australia's Aboriginal and*

Trends in life expectancy at birth continued

Torres Strait Islander Peoples, Oct 2010, cat. no. 4704.0, Wang Z and Li SQ, 2010, *Mortality in the Northern Territory 1967-2006, Health Gains Planning Information Sheet, Dec 2010*, Northern Territory Government, Casuarina NT and SCRGSP (Steering Committee for the Review of Government Service Provision) 2011, *Overcoming Indigenous Disadvantage: Key Indicators 2011*, Productivity Commission, Canberra).

Assumed life expectancy at birth

Three life expectancy at birth assumptions have been used to produce the three main series.

- The first assumption is that Aboriginal and Torres Strait Islander life expectancy at birth will increase at the rate of 0.2 years per year for males and 0.15 years per year for females. This is close to the improvement currently being observed in the total Australia population. Based on this assumption, life expectancy would increase to 72.0 years for males and 75.9 years for females over the projection period.
- The second mortality assumption is that Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.3 years per year for males and 0.25 years per year for females from 2010–11 levels. This level of improvement assumes that Aboriginal and Torres Strait Islander life expectancy at birth will increase at a faster rate than total Australian life expectancy (as assumed in the medium mortality assumption, *Population Projections, Australia, 2006 to 2101*, cat. no. 3222.0), resulting in a narrowing of the difference between Aboriginal and Torres Strait Islander and total Australian life expectancy at birth throughout the projection period. Based on this assumption, male life expectancy at birth would increase by 4.5 years and female life expectancy would increase by 3.75 years over the 15-year projection period, reaching 73.5 and 77.4 years respectively in 2026.
- The third mortality assumption is that Aboriginal and Torres Strait Islander life expectancy at birth will increase at the rate of 0.5 years per year for males and 0.45 years per year for females from 2010–11 levels. Based on this assumption, male life expectancy at birth would increase by 7.5 years and female life expectancy would increase by 6.75 years over the 15 year projection period, reaching 76.5 and 80.4 years respectively in 2026.

State/territory variations in mortality

Aboriginal and Torres Strait Islander life expectancy at the national level has been calculated using an age-specific adjustment to allow for different patterns in mortality amongst different age groups. This adjustment could not be applied at the state and territory level. For this reason the Australia-level estimates are not strictly comparable with the state/territory level estimates. However, for the purpose of compiling estimates and projections, mortality differentials are calculated based on the relationship of 2010-2012 life expectancies at birth for each state/territory (without age adjustment) compared with Australia (with age adjustment).

Aboriginal and Torres Strait Islander life expectancy at birth differs between the states and territories. For the purposes of these projections, mortality differentials between each state/territory and Australia are calculated and applied to the assumed Australian life expectancies at birth (table 2.14) to obtain assumed life expectancy at birth for the states and territories. This method assumes that the mortality differentials, based on those observed during 2010–2012, will remain constant throughout the projection period.

State/territory variations in mortality continued

Aboriginal and Torres Strait Islander life expectancy at birth for 2010–2012 is available for New South Wales, Queensland, Western Australia and the Northern Territory. Due to small numbers of deaths registered as Aboriginal and Torres Strait Islander it was not possible to produce Aboriginal and Torres Strait Islander life tables for the remaining jurisdictions. For the purposes of the projections, life expectancy at birth for Victoria and Tasmania is assumed to be the same as that for New South Wales, while life expectancy at birth for South Australia is assumed to be the same as that for Western Australia. Life expectancy at birth for the Australian Capital Territory is assumed to be the same as that derived for Sydney Indigenous Region.

2.14 ABORIGINAL AND TORRES STRAIT ISLANDER LIFE EXPECTANCY AT BIRTH AND MORTALITY DIFFERENTIALS(a), States and territories—2010–2012

	LIFE EXPECTANCY AT BIRTH		MORTALITY DIFFERENTIALS	
	Males	*Females*	*Males*	*Females*
	years	years	%	%
New South Wales	70.5	74.6	102	101
Queensland	68.7	74.4	99	101
Western Australia	65.0	70.2	94	95
Northern Territory	63.4	68.7	92	93
Australia(b)	**69.1**	**73.7**	**100**	**100**

(a) Mortality differentials are calculated based on the relationship of 2010–2012 life expectancies at birth for each state/territory (without age adjustment), compared with Australia (with age adjustment).
(b) Includes Other Territories.

Regional variations in mortality

INDIGENOUS REGIONS

To apply assumptions on life expectancy at birth for alternative geographies, Indigenous Regions (IREGs) were aggregated into two groups for each state and territory (except Tasmania and the Australian Capital Territory):

- capital city IREG (for example, Adelaide IREG); and,
- rest of state/territory IREGs combined (for example, Port Augusta IREG and Port Lincoln - Ceduna IREG combined).

To account for under-identification of deaths of Aboriginal and Torres Strait Islander people at the smaller geographic level, the number of registered deaths of Aboriginal and Torres Strait Islander people for each IREG group in 2010–2012 was adjusted using state and territory adjustment factors from the *2011 Census Data Enhancement (CDE) Indigenous Mortality Study*. For more information about the derivation and use of adjustment factors in the compilation of Aboriginal and Torres Strait Islander life tables for the states and territories, see *Life Tables for Aboriginal and Torres Strait Islander Australians, 2010–2012* (cat. no. 3302.0.55.003).

A life table methodology was used to obtain life expectancy at birth for 2010–2012 for each IREG group using adjusted deaths in conjunction with 2011 Aboriginal and Torres Strait Islander populations for each IREG group. Differentials were calculated as the ratio of Aboriginal and Torres Strait Islander life expectancy at birth for each IREG group and

Regional variations in mortality continued

INDIGENOUS REGIONS *continued*

Australia with age adjustment (table 2.15). This method assumes that under-identification of Aboriginal and Torres Strait Islander deaths is consistent across all regions within each state and territory as information on under-identification is not available at the IREG level. Mortality differentials are assumed to remain constant throughout the projection period.

2.15 ABORIGINAL AND TORRES STRAIT ISLANDER LIFE EXPECTANCY AT BIRTH AND MORTALITY DIFFERENTIALS(a), Indigenous Regions—2010–2012

	MALE MORTALITY DIFFERENTIALS		FEMALE MORTALITY DIFFERENTIALS	
	Capital city IREG	*Rest of state IREG group*	*Capital city IREG*	*Rest of state IREG group*
	%	%	%	%
New South Wales	106	100	105	99
Queensland	103	98	103	101
Western Australia	97	93	100	94
Northern Territory	94	91	95	92
Australia(b)	**100**	**100**	**100**	**100**

(a) Mortality differentials based on the relationship of 2010–2012 life expectancies at birth for each capital city IREG and rest of state IREG group, compared with Australian life expectancy (with age adjustment) of 69.1 years for males and 73.7 years for females.
(b) Includes Other Territories.

As noted above, Aboriginal and Torres Strait Islander life tables were not produced for Victoria, South Australia, Tasmania and the Australian Capital Territory. The following differentials have been used for IREG groups in these states and territories where sufficient data is not available to calculate a relevant differential:

- for Victoria, Melbourne IREG uses the Sydney IREG differential, and rest of Victoria IREG uses the rest of New South Wales IREG group differential;
- for South Australia, Adelaide IREG uses the Perth IREG differential, and the rest of South Australia IREG group uses the rest of Western Australia IREG group differential;
- for Tasmania, the New South Wales state differential is used; and
- for the Australian Capital Territory, the Sydney IREG differential is used.

REMOTENESS AREAS

Aboriginal and Torres Strait Islander life expectancy at birth differentials for Remoteness Areas were calculated using the same method as that used for IREG groups (table 2.16). To account for the under-identification in deaths of Aboriginal and Torres Strait Islander people, the number of registered deaths of Aboriginal and Torres Strait Islander people in 2010–2012 for each Remoteness Area was adjusted using Australia-level adjustment factors from the CDE Indigenous Mortality Study. As with IREGs this method assumes

Regional variations in mortality continued

REMOTENESS AREAS *continued*

that under-identification of Aboriginal and Torres Strait Islander deaths across Remoteness Areas is consistent across Australia. Mortality differentials are assumed to remain constant throughout the projection period.

Investigation into using adjustment factors for three categories of Remoteness Areas (Major Cities, Inner and Outer Regional combined and Remote and Very Remote combined) was undertaken, but insufficient data was available to accurately calculate reliable factors at this level.

2.16 MORTALITY DIFFERENTIALS(a), Remoteness Areas—2010–2012

	Males	*Females*
	%	%
Major Cities	105	104
Inner and Outer Regional	103	102
Remote and Very Remote	90	92
Australia(b)	**100**	**100**

(a) Mortality differentials based on the relationship of 2010–2012 life expectancies at birth for each Remoteness Area, compared with Australian life expectancy (with age adjustment) of 69.1 years for males and 73.7 years for females.
(b) Includes Other Territories.

INTERSTATE MIGRATION ASSUMPTION

One assumption has been made for future net internal migration of Aboriginal and Torres Strait Islander people:

- constant levels of migration as observed in the 2011 Census of Population and Housing based on address 5 years ago.

Trends in interstate migration

The 2011 Census 'place of usual residence five years ago' question showed that 21,345 Aboriginal and Torres Strait Islander people changed their state or territory of usual residence between 2006 and 2011. Between 2001 and 2006, 18,445 Aboriginal and Torres Strait Islander people changed their state or territory of usual residence. The previous 2001 Census showed that 18,671 Aboriginal and Torres Strait Islander people changed their state or territory of usual residence between 1996 and 2001.

This measure was unable to account for Aboriginal and Torres Strait Islander children under five years of age on Census Night, people whose place of usual residence five years ago was overseas, and people whose state or territory of usual residence five years ago was not recorded. In addition, Aboriginal and Torres Strait Islander people overseas on Census Night, were not counted in the Census.

Trends in interstate migration continued

2.17 INTERSTATE ARRIVALS AND DEPARTURES(a)—2006–2011

STATE/TERRITORY OF DEPARTURE	STATE/TERRITORY OF ARRIVAL								
	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Total departures*(b)
NSW	. .	1 154	3 647	269	478	163	271	581	6 589
Vic.	739	. .	578	204	257	120	123	40	2 061
Qld	2 436	694	. .	296	683	278	660	177	5 224
SA	231	230	272	. .	219	51	268	17	1 288
WA	316	329	505	225	. .	95	427	40	1 940
Tas.	144	175	283	47	124	. .	37	19	829
NT	275	261	956	550	456	64	. .	58	2 620
ACT	443	50	194	22	14	8	44	. .	782
Total arrivals(b)	4 592	2 893	6 435	1 613	2 235	779	1 830	932	21 345
Net movements	**–1 997**	**832**	**1 211**	**325**	**295**	**–50**	**–790**	**150**	. .

. . not applicable

(a) Aboriginal and Torres Strait Islander children under five years of age on Census Nights were excluded, as were people whose place of usual residence five years ago was overseas, and people whose state or territory of usual residence five years ago was not recorded.

(b) Includes Other Territories.

Note: Totals and components may not be consistent within and between tables due to introduced random error to protect confidentiality of Census respondents - see Census Dictionary, 2011 (cat. no. 2901.0).

Method used to produce interstate migration assumption

State or territory of usual residence on Census Night was cross-tabulated with state or territory of usual residence five years ago to obtain net interstate migration for each state and territory for 2006–2011 (table 2.17).

These figures are affected by a number of data quality issues, including Census net undercount and records for which Indigenous status was not stated. To account for these, net interstate migration estimates were adjusted by a proportion calculated by dividing Aboriginal and Torres Strait Islander population estimates by Aboriginal and Torres Strait Islander Census counts, for each state and terrritory.

The adjusted net interstate migration estimates were then divided by five to obtain annual movements, which were assumed to remain constant over the projection period (table 2.18). In addition, they were used as constraints on migration assumptions for Indigenous Regions and Remoteness Areas, that is, migration levels were not allowed to exceed the state totals.

Age/sex profile of interstate migration

The age/sex profile of interstate migration was derived from the 'place of usual residence one year ago' question from the 2011 Census. Arrival and departure rates for the states and territories were calculated by single year of age and sex and adjustments were made where appropriate to ensure the age/sex profiles of projected populations were plausible. All age/sex arrival and departure disaggregations were constrained by the net internal migration assumption at the state/territory level.

Age/sex profile of interstate migration continued

2.18 ASSUMED NET INTERSTATE MIGRATION

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*
	persons	persons	persons	persons	persons	persons	persons	persons
Annual net migration	–503	220	297	55	71	–9	–164	33

Note: Totals and components may not be consistent within and between tables due to introduced random error to protect confidentiality of Census respondents - see Census Dictionary, 2011 (cat. no. 2901.0).

Indigenous Regions migration

Annual net migration estimates for each IREG were calculated in the same way as for the states and territories, and were assumed to remain constant over the 15-year projection period (table 2.19).

Arrival and departure rates were calculated for each IREG by single year of age and sex. These were then constrained to the state or territory net migration levels and were assumed to remain constant over the projection period. Further adjustments were made where appropriate to ensure the age/sex profiles of the projected populations of IREGs were plausible.

Indigenous Regions migration continued

2.19 ASSUMED NET INTERNAL MIGRATION, Indigenous Regions

	Annual net migration
	persons
Dubbo	–64
North-Eastern NSW	–90
North-Western NSW	–102
NSW Central and North Coast	131
Riverina - Orange	–51
South-Eastern NSW	21
Sydney - Wollongong	–348
Melbourne	71
Victoria exc. Melbourne	149
Brisbane	256
Cairns - Atherton	305
Cape York	–147
Mount Isa	–115
Rockhampton	143
Toowoomba - Roma	–24
Torres Strait	–179
Townsville - Mackay	58
Adelaide	69
Port Augusta	–17
Port Lincoln - Ceduna	3
Broome	7
Geraldton	–76
Kalgoorlie	26
Kununurra	–67
Perth	36
South Hedland	91
South-Western WA	95
West Kimberley	–41
Tasmania	–9
Alice Springs	62
Apatula	–89
Darwin	–68
Jabiru - Tiwi	72
Katherine	–209
Nhulunbuy	100
Tennant Creek	–32
Australian Capital Territory	33

Remoteness Areas migration

Annual net migration estimates for each Remoteness Area were calculated in the same way as for the states and territories, and were assumed to remain constant over the 15-year projection period (table 2.20).

Arrival and departure rates were calculated for each Remoteness Area by single year of age and sex and were assumed to remain constant over the projection period. Further adjustments were made where appropriate to ensure that the age/sex profiles of the projected populations of Remoteness Areas were plausible.

Remoteness Areas migration continued

2.20 ASSUMED NET INTERNAL MIGRATION, Remoteness Areas

	Annual net migration
	persons
Major Cities	268
Inner and Outer Regional	630
Remote and Very Remote	–898

OVERSEAS MIGRATION ASSUMPTION

One assumption has been made for future net overseas migration of Aboriginal and Torres Strait Islander people:

- zero overseas migration, with zero arrivals and zero departures.

Trends in overseas migration

According to the 2011 Census of Population and Housing, there were 1,375 Aboriginal and Torres Strait Islander people resident in Australia in 2011 who lived overseas in 2006, equivalent to an in-migration rate of 2.1 persons per 1,000 Aboriginal and Torres Strait Islander persons for the period 2006–2011. This level of in-migration has a negligible effect on the size of the future Aboriginal and Torres Strait Islander population of Australia. In addition, there will also be some level of out-migration of the Aboriginal and Torres Strait Islander population leading to an even smaller net migration rate.

Assumed future overseas migration

Net overseas migration of Aboriginal and Torres Strait Islander people is assumed to be zero (with zero arrivals and departures) for the duration of the projection period.

UNEXPLAINED GROWTH

Projections of the Aboriginal and Torres Strait Islander population based on the 2001 Census included an 'unexplained growth' component to account for changes in the Aboriginal and Torres Strait Islander population between censuses which could not be attributed to demographic factors (that is, the difference could not be fully accounted for by natural increase over the intercensal period). For example, a change in the identification rate. The unexplained growth assumption used in the 'High' series of the 2001-based projections was a 1.6% increase per year in the Aboriginal and Torres Strait Islander population of Australia (see *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2009*, cat. no. 3238.0).

Analysis on the change in the Aboriginal and Torres Strait Islander population between 2001 and 2006, as derived from the 2001 and 2006 Censuses respectively, indicated that the growth over this period could be attributed almost entirely to demographic factors and it was agreed that it was very unlikely to see future unexplained growth. Therefore, a zero assumption was made regarding unexplained growth for projections based on the 2006 Census.

Detailed analysis on the change in Aboriginal and Torres Strait Islander population between 2006 and 2011 can be found in *Census of Population and Housing: Understanding the Increase in Aboriginal and Torres Strait Islander Counts, 2006-2011* (cat. no. 2077.0). A panel of experts, brought together to advise and review the ABS methods used in this release, advised that they did not believe that another change in identification of this magnitude would be seen in the next 15 years. The ABS is unable to

UNEXPLAINED GROWTH
continued

determine whether any possible change would result in an increase or decrease to identification and therefore, zero unexplained growth has been assumed for this series of projections.

CHAPTER 3 SUMMARY OF FINDINGS

INTRODUCTION

This release contains population estimates and projections of the Aboriginal and Torres Strait Islander population of Australia, based on results of the 2011 Census of Population and Housing, for the period 30 June 1996 to 30 June 2026.

Estimates for 1996 to 2010 have been produced by reverse-surviving the estimated resident Aboriginal and Torres Strait Islander population at 30 June 2011, using 2010–2012 Aboriginal and Torres Strait Islander life tables as a basis on which to make assumptions about past Aboriginal and Torres Strait Islander life expectancy at birth and 2011 Census information to make assumptions about past levels of interstate migration. Projections for 2012 to 2026 have been produced by applying a range of assumptions regarding future levels of components of population change to the 30 June 2011 population (see *Chapter 2* for more information).

The base population used for the estimates and projections presented in this release was the 30 June 2011 Aboriginal and Torres Strait Islander resident population. The base population estimates for the Northern Territory at 30 June 2011 are based on age-heaping adjusted data. For further information on this adjustment and the base population, see *Estimates of Aboriginal and Torres Strait Islander Australians* (cat. no. 3238.0.55.001).

Population estimates

For the purposes of the estimates, Aboriginal and Torres Strait Islander life expectancy at birth for Australia is assumed to have increased by 0.3 years per year for males and 0.15 years per year for females between 2006 and 2011 and increased by 0.2 years per year for males and 0.15 years per year for females between 1996 and 2006. The assumption for net interstate migration for each of the three intercensal periods is based on levels observed in each respective intercensal period.

Estimates for 1996 to 2000 should be treated with caution given the 15-year interval for which the assumption of improving life expectancy at birth is applied. Please see *Appendix 1* for more details on the quality of these estimates.

Population projections

It is important to recognise that the projections presented in this release are not predictions or forecasts. Rather, they are an assessment of what would happen to the size and structure of the Aboriginal and Torres Strait Islander population of Australia if assumed levels of births, deaths and migration – the components of population change – were to be realised over the projection period. There can be no certainty that any particular outcome will be realised, or that future outcomes will necessarily fall within the projected ranges.

Population projections continued

As described in *Chapter 2*, various assumptions have been made about future levels of Aboriginal and Torres Strait Islander fertility, paternity, life expectancy at birth and migration, resulting in 10 projection series. Three main series (Series A, B and C) have been selected for presentation and analysis in this release.

Three assumptions are made about fertility rates:

- in Series A, fertility rates are assumed to remain constant;
- in Series B, fertility rates are assumed to decline by 0.5% annually; and
- in Series C, fertility rates are assumed to decline by 1.0% annually.

Three paternity assumptions are also made:

- in Series A, paternity rates are assumed to increase by 2.0% annually;
- in Series B, paternity rates are assumed to increase by 1.0% annually; and
- in Series C, paternity rates are assumed to remain constant.

Three assumptions are made about life expectancy at birth:

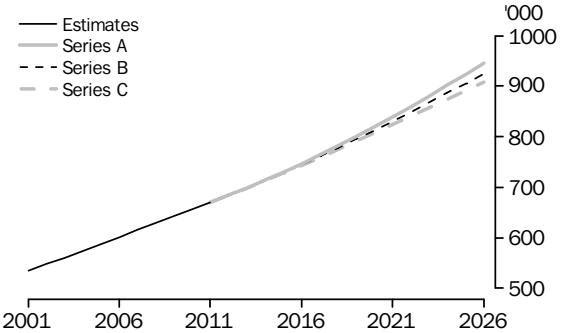
- in Series A, Aboriginal and Torres Strait Islander life expectancy at birth is assumed to increase by 0.5 years per year for males and 0.45 years per year for females;
- in Series B, Aboriginal and Torres Strait Islander life expectancy at birth is assumed to increase by 0.3 years per year for males and 0.25 years per year for females; and
- in Series C, Aboriginal and Torres Strait Islander life expectancy at birth is assumed to increase by 0.2 years per year for males and 0.15 years per year for females.

AUSTRALIA

In 2011, there were 669,900 people, representing 3% of the total Australian population. The estimated resident Aboriginal and Torres Strait Islander population of Australia at 30 June 2001 was 534,700 people. Between 2001 and 2011 the Aboriginal and Torres Strait Islander population increased by 2.3% per year on average, compared with 1.5% for the total Australian population.

The population of Aboriginal and Torres Strait Islander Australians is projected to increase to between 907,800 and 945,600 people in 2026, at an average growth rate of between 2.0% and 2.3% per year. In comparison, the average growth rate of the total Australian population is projected to be between 1.5% and 1.8% per year over the same period (*Population Projections, Australia, 2012 (base) to 2101*, cat. no. 3222.0).

3.1 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, Australia—2001-2026



AUSTRALIA *continued*

The Aboriginal and Torres Strait Islander population is projected to increase across all age groups between 2011 and 2026. The number of Aboriginal and Torres Strait Islander children (0–14 years) is projected to increase from 240,600 in 2011 to between 285,200 and 315,200 in 2026. This equates to an increase of between 19% and 31% over the period. The number of young adults (15–24 years) increases by a smaller proportion (21%), from 133,900 people to between 161,700 and 161,800 people in 2026.

The number of Aboriginal and Torres Strait Islander people aged 25–54 years is projected to increase from 235,900 in 2011 to between 336,100 and 337,800 in 2026. This equates to an increase of between 42% and 43% over the period.

The number of Aboriginal and Torres Strait Islander people aged 55 years and over is projected to more than double over the period, from 59,400 in 2011 to between 124,900 and 130,800 in 2026.

3.2 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, by age group, Australia—At 30 June

Age group (years)	*2001*	*2011*	*2026 (Series A)*	*2026 (Series B)*	*2026 (Series C)*
			NUMBER		
0–14	213 042	240 620	315 171	299 572	285 159
15–24	92 545	133 948	161 806	161 693	161 651
25–34	84 637	91 071	149 677	149 462	149 319
35–44	67 194	81 807	109 473	109 124	108 932
45–54	41 562	63 001	78 655	78 131	77 848
55–64	20 369	36 752	68 898	68 002	67 503
65–74	10 917	15 652	42 184	40 965	40 288
75 and over	4 452	7 030	19 730	18 004	17 089
Total	**534 718**	**669 881**	**945 594**	**924 953**	**907 789**
			PROPORTION (%)		
0–14	39.8	35.9	33.3	32.4	31.4
15–24	17.3	20.0	17.1	17.5	17.8
25–34	15.8	13.6	15.8	16.2	16.4
35–44	12.6	12.2	11.6	11.8	12.0
45–54	7.8	9.4	8.3	8.4	8.6
55–64	3.8	5.5	7.3	7.4	7.4
65–74	2.0	2.3	4.5	4.4	4.4
75 and over	0.8	1.0	2.1	1.9	1.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Population structure

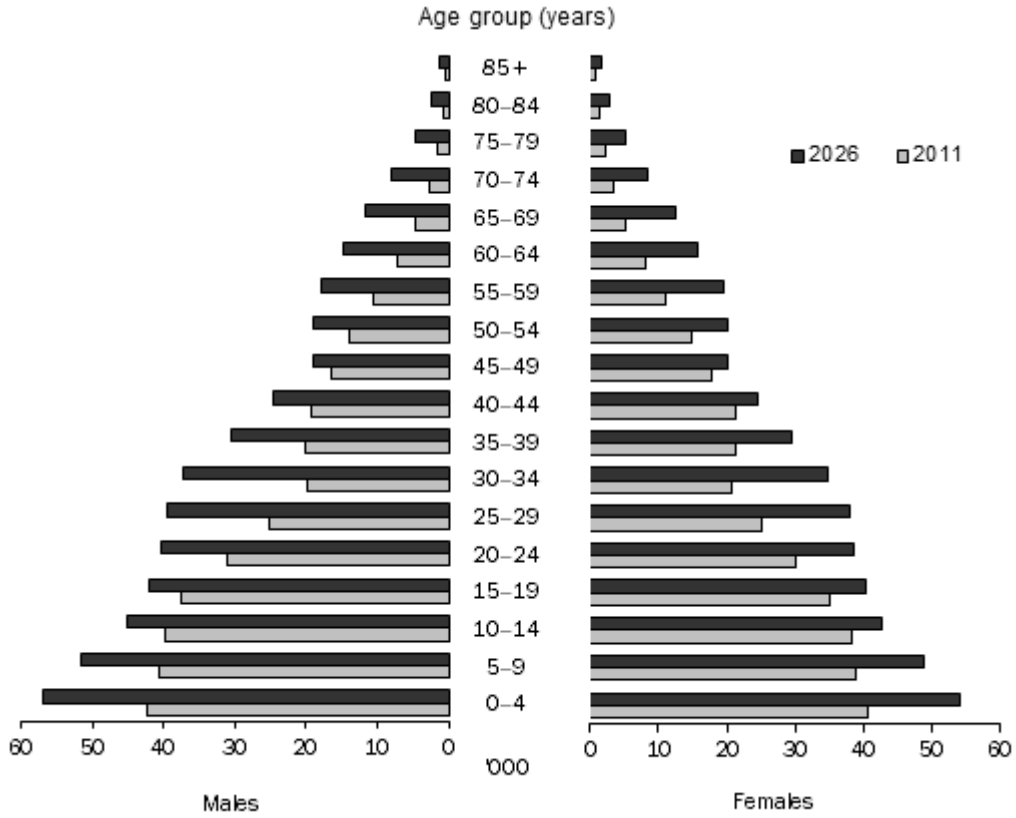
The Aboriginal and Torres Strait Islander population has a relatively young age structure. Between 2001 and 2011 the median age of the Aboriginal and Torres Strait Islander population is estimated to have increased from 20.4 to 21.6 years, and is projected to increase to between 24.7 and 25.4 years in 2026.

The proportion of Aboriginal and Torres Strait Islander children aged 0–14 years decreased from 40% in 2001 to 36% in 2011, and is projected to decrease to between 31% and 33% in 2026. The proportion of Aboriginal and Torres Strait Islander people aged 65 years and over increased slightly from 2.9% in 2001 to 3.4% in 2011 and is

Population structure continued

projected to increase to between 6.3% and 6.5% in 2026. The proportion of Aboriginal and Torres Strait Islander people aged 15–64 years is projected to remain relatively stable, from 61% in 2011 to between 60% and 62% in 2026.

3.3 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, by age group, Australia—Series B—at 30 June



Natural increase

At the national level, any growth in the Aboriginal and Torres Strait Islander population is entirely due to natural increase (that is, the excess of births over deaths), as net overseas migration is assumed to be zero.

Although decreasing fertility rates are assumed, the number of Aboriginal and Torres Strait Islander births is projected to increase over the projection period. This is due to the age structure of the Aboriginal and Torres Strait Islander population, which has large numbers of people moving into peak child-bearing ages over the projection period, as well as due to the assumption of increasing paternity rates. As a result, the number of Aboriginal and Torres Strait Islander births is projected to increase from 16,800 in 2012, to between 21,000 and 25,400 in 2026.

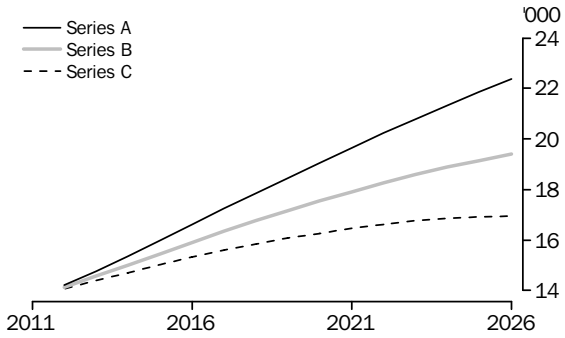
As the population grows and ages, the number of deaths of Aboriginal and Torres Strait Islander people is projected to increase from approximately 2,700 in 2012, to between 3,000 and 4,100 in 2026.

As the number of births is considerably larger than the number of deaths, and is projected to continue to be so, natural increase remains consistently high, reaching between 17,000 and 22,400 people in 2026.

Natural increase

continued

3.4 PROJECTED NATURAL INCREASE OF ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, Australia—2012–2026



STATES AND TERRITORIES

All three series project continuing population growth for all states and territories between 2011 and 2026 (table 3.5).

The Aboriginal and Torres Strait Islander population of the Australian Capital Territory is projected to be the fastest growing of the states and territories, with an average growth rate of between 2.8% and 3.1% per year, followed by Victoria (between 2.5% and 2.8%), Queensland (between 2.3% and 2.6%) and Tasmania (between 2.2% and 2.4%). These high rates of population growth are in part due to the age structure of the Aboriginal and Torres Strait Islander population in these states and territories, with relatively large cohorts of Aboriginal and Torres Strait Islander people moving into peak child-bearing ages throughout the projection period. The assumption of increasing paternity rates also contributes to population growth, as does assumed net interstate migration in some cases, notably for Queensland (a gain of 297 people per year) and Victoria (a gain of 220 people per year).

The Aboriginal and Torres Strait Islander population of New South Wales is projected to grow at a lower rate, of around 1.9% to 2.2% per year on average. While high levels of natural increase are projected due to the age structure of the Aboriginal and Torres Strait Islander population, the net migration assumption of a loss of 503 people per year for New South Wales has the effect of reducing the rate of population growth.

The Northern Territory is projected to have the lowest average growth rate over the projection period, of between 1.4% and 1.6% per year. This is in part due to the age structure of the Northern Territory population which, unlike many of the other states and territories, is relatively stable. The absolute size of the Aboriginal and Torres Strait Islander population in child-bearing age groups (15–49 years) therefore increases relatively consistently throughout the projection period. As a result, projected numbers of births in the Northern Territory do not increase as rapidly as in the other states and territories, and therefore population growth is slower. In addition, the projected Aboriginal and Torres Strait Islander population in the Northern Territory is largely unaffected by an increasing paternity assumption, as less than 9% of births of Aboriginal and Torres Strait Islander children in the Northern Territory are born to Aboriginal and Torres Strait Islander fathers and non-Indigenous mothers compared with, for example, 28% in Queensland in 2012.

STATES AND TERRITORIES *continued*

Similar to the Northern Territory, projected average annual growth rates for Western Australia (between 1.9% and 2.2%) and South Australia (between 2.0% and 2.3%) are lower than those for the Australian Capital Territory, Victoria and Queensland. This is due in part to the relatively stable age structures of their Aboriginal and Torres Strait Islander populations. Assumed net interstate migration for Western Australia (a gain of 71 people per year) and South Australia (a gain of 55 people per year) has a small positive effect on the rate of population growth over the projection period.

Components of population change for Australia and each state and territory are presented in detail in data cubes attached to this release on the ABS web site.

3.5 ESTIMATED AND PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, States and territories—2001–2026

	2001	2011	2026 (SERIES A)		2026 (SERIES B)		2026 (SERIES C)	
	no.	*no.*	*no.*	*Growth rate (%)*(a)	*no.*	*Growth rate (%)*(a)	*no.*	*Growth rate (%)*(a)
NSW	170 827	208 476	289 808	2.2	282 962	2.1	277 233	1.9
Vic.	35 816	47 333	71 379	2.8	69 637	2.6	68 198	2.5
Qld	143 545	188 954	278 019	2.6	271 860	2.5	266 755	2.3
SA	29 068	37 408	52 321	2.3	51 233	2.1	50 312	2.0
WA	71 994	88 270	121 836	2.2	119 431	2.0	117 440	1.9
Tas.	19 292	24 165	34 724	2.4	33 965	2.3	33 305	2.2
NT	59 702	68 850	87 486	1.6	86 060	1.5	84 922	1.4
ACT	4 256	6 160	9 674	3.1	9 463	2.9	9 286	2.8
Aust.(b)	**534 718**	**669 881**	**945 594**	**2.3**	**924 953**	**2.2**	**907 789**	**2.0**

(a) Average annual growth rate for the period 2011 to 2026.
(b) Includes Other Territories.

Changing state/territory share

New South Wales is projected to continue to have the largest Aboriginal and Torres Strait Islander population with its share remaining stable at 31% in both 2011 and 2026. Queensland's share of Australia's Aboriginal and Torres Strait Islander population is projected to increase from 28% in 2011 to 29% in 2026 and Victoria's share is projected to increase from 7.1% in 2011 to 7.5% in 2026.

Northern Territory's share is projected to decline, from 10.3% to between 9.3% and 9.4%. The distribution amongst the remaining states and territories is projected to remain largely unchanged.

Changing state/territory share continued

3.6 PROJECTED DISTRIBUTION OF ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION, States and territories—At 30 June

	2011	*2026 (SERIES A)*	*2026 (SERIES B)*	*2026 (SERIES C)*
	%	%	%	%
NSW	31.1	30.6	30.6	30.5
Vic.	7.1	7.5	7.5	7.5
Qld	28.2	29.4	29.4	29.4
SA	5.6	5.5	5.5	5.5
WA	13.2	12.9	12.9	12.9
Tas.	3.6	3.7	3.7	3.7
NT	10.3	9.3	9.3	9.4
ACT	0.9	1.0	1.0	1.0
Aust.(a)	**100.0**	**100.0**	**100.0**	**100.0**

(a) Includes Other Territories

CHAPTER 4 SENSITIVITY OF PROJECTIONS TO ASSUMPTIONS

INTRODUCTION

The main projection series (Series A, B and C) represent three of a range of possible outcomes for the size and structure of the future Aboriginal and Torres Strait Islander population. Future actual levels of the components of population change may differ from those assumed in this release.

This chapter discusses the effect of differing levels of components of population change on the projected size, structure and numbers of births and deaths of Aboriginal and Torres Strait Islander Australians. Overall, sensitivity analysis shows that varying the assumptions appears to have a minimal effect on the size of the projected Aboriginal and Torres Strait Islander population.

FERTILITY RATES

Series B uses a fertility assumption that incorporates an annual decline of 0.5% in Aboriginal and Torres Strait Islander fertility rates, resulting in a total fertility rate (TFR) of 2.09 by 2026. Sensitivity analysis was undertaken into the effect of alternative fertility assumptions on the size of the future Aboriginal and Torres Strait Islander population and the number of projected births.

Extra projection series were generated using the following assumptions:

- no decline in fertility rates (a TFR of 2.25 by 2026); and
- an annual decline of 1.0% in fertility rates (a TFR of 1.95 by 2026).

Table 4.1 shows the Aboriginal and Torres Strait Islander population at 30 June 2011 and the projected Australian and state/territory populations in 2026 under the three fertility assumptions. Table 4.2 shows the number of Aboriginal and Torres Strait Islander births for 2012 and 2026 under these assumptions. In both tables, assumptions relating to Aboriginal and Torres Strait Islander paternity rates, life expectancy at birth and interstate migration are at levels specified for Series B.

FERTILITY RATES

continued

4.1 PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION(a), Alternative fertility assumptions—At 30 June 2011 and 2026

		2026		
	2011	*Constant (Series D)*	*0.5% annual decrease (Series B)*	*1.0% annual decrease (Series E)*
	'000	'000	'000	'000
NSW	208.5	285.2	283.0	280.8
Vic.	47.3	70.2	69.6	69.2
Qld	189.0	274.4	271.9	269.4
SA	37.4	51.7	51.2	50.8
WA	88.3	120.4	119.4	118.5
Tas.	24.2	34.2	34.0	33.7
NT	68.9	86.8	86.1	85.3
ACT	6.2	9.5	9.5	9.4
Aust.(b)	**669.9**	**932.8**	**925.0**	**917.4**

(a) Assuming Aboriginal and Torres Strait Islander paternity rates increase by 1.0% per year, life expectancy at birth reaches 73.5 years for males and 77.4 years for females by 2026, and migration remains at the levels observed in the 2011 Census.
(b) Includes Other Territories.

4.2 PROJECTED BIRTHS OF ABORIGINAL AND TORRES STRAIT ISLANDER CHILDREN(a), Alternative fertility assumptions—Year ended 30 June 2012 and 2026

		2026		
	2012	*Constant (Series D)*	*0.5% annual decrease (Series B)*	*1.0% annual decrease (Series E)*
	'000	'000	'000	'000
NSW	5.3	7.7	7.4	7.1
Vic.	1.2	1.9	1.9	1.8
Qld	5.1	7.6	7.2	6.9
SA	0.9	1.3	1.2	1.2
WA	2.1	2.8	2.7	2.6
Tas.	0.6	0.9	0.9	0.8
NT	1.5	1.7	1.6	1.5
ACT	0.2	0.3	0.2	0.2
Aust.(b)	**16.8**	**24.2**	**23.1**	**22.0**

(a) Assuming Aboriginal and Torres Strait Islander paternity rates increase by 1.0% per year, life expectancy at birth reaches 73.5 years for males and 77.4 years for females by 2026, and migration remains at the levels observed in the 2011 Census.
(b) Includes Other Territories.

Based on the main fertility assumption (0.5% annual decline in fertility rates), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 925,000 people in 2026 (Series B), and the number of Aboriginal and Torres Strait Islander births increases from 16,800 in 2012 to 23,100 in 2026 (table 4.2).

FERTILITY RATES *continued*

Assuming fertility rates remain constant (Series D), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 932,800 people in 2026, 7,900 (0.8%) people more than in Series B. Under this assumption there would be 24,200 Aboriginal and Torres Strait Islander births in 2026, 1,100 (4.9%) more than in Series B. This equates to 2.6% more Aboriginal and Torres Strait Islander children aged 0–14 years in 2026 compared with Series B.

Assuming a 1.0% annual decline in fertility rates (Series E), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 917,400 people in 2026, 7,500 (0.8%) people fewer than in Series B. Under this assumption there would be 22,000 Aboriginal and Torres Strait Islander births in 2026, 1,000 (4.5%) fewer than in Series B. This equates to 2.5% fewer Aboriginal and Torres Strait Islander children aged 0–14 years in 2026 compared with Series B.

PATERNITY RATES

Series B uses a paternity assumption that incorporates an annual increase of 1.0% in paternity rates for children born to Aboriginal and Torres Strait Islander fathers where the mother's Indigenous status was non-Indigenous or not stated, resulting in a total paternity rate (TPR) of 1.08 for Australia by 2026. Sensitivity analysis was undertaken into the effect of alternative paternity assumptions on the size of the future Aboriginal and Torres Strait Islander population and the number of projected births.

Extra projection series were generated using the following assumptions:

- no increase in paternity rates (a TPR of 0.94 for Australia by 2026); and
- an annual increase of 2.0% in paternity rates (a TPR of 1.25 for Australia by 2026).

Table 4.3 shows the Aboriginal and Torres Strait Islander population at 30 June 2011 and the projected Australian and state/territory populations in 2026 under the three paternity assumptions. Table 4.4 shows the number of Aboriginal and Torres Strait Islander births for 2012 and 2026 under these assumptions. In both tables, assumptions relating to Aboriginal and Torres Strait Islander fertility rates, life expectancy at birth and interstate migration are at levels specified in Series B.

PATERNITY RATES

continued

4.3 PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION(a), Alternative paternity assumptions—At 30 June 2011 and 2026

		2026		
	2011	*Constant (Series F)*	*1.0% annual increase (Series B)*	*2.0% annual increase (Series G)*
	'000	'000	'000	'000
NSW	208.5	280.4	283.0	285.8
Vic.	47.3	68.9	69.6	70.4
Qld	189.0	270.0	271.9	273.9
SA	37.4	50.9	51.2	51.6
WA	88.3	118.8	119.4	120.1
Tas.	24.2	33.6	34.0	34.3
NT	68.9	85.9	86.1	86.2
ACT	6.2	9.4	9.5	9.6
Aust.(b)	**669.9**	**918.3**	**925.0**	**932.2**

(a) Assuming Aboriginal and Torres Strait Islander fertility rates decrease by 0.5% per year, life expectancy at birth reaches 73.5 years for males and 77.4 years for females by 2026, and migration remains at the levels observed in the 2011 Census.

(b) Includes Other Territories.

4.4 PROJECTED BIRTHS OF ABORIGINAL AND TORRES STRAIT ISLANDER CHILDREN(a), Alternative paternity assumptions—Year ended 30 June 2012 and 2026

		2026		
	2012	*Constant (Series F)*	*1.0% annual increase (Series B)*	*2.0% annual decrease (Series G)*
	'000	'000	'000	'000
NSW	5.3	7.0	7.4	7.8
Vic.	1.2	1.8	1.9	2.0
Qld	5.1	6.9	7.2	7.5
SA	0.9	1.2	1.2	1.3
WA	2.1	2.6	2.7	2.8
Tas.	0.6	0.8	0.9	0.9
NT	1.5	1.6	1.6	1.6
ACT	0.2	0.2	0.2	0.3
Aust.(b)	**16.8**	**22.1**	**23.1**	**24.2**

(a) Assuming Aboriginal and Torres Strait Islander fertility rates decrease by 0.5% per year, life expectancy at birth reaches 73.5 years for males and 77.4 years for females by 2026, and migration remains at the levels observed in the 2011 Census.

(b) Includes Other Territories.

PATERNITY RATES *continued*

The main paternity assumption (1.0% annual increase in paternity rates) results in the Aboriginal and Torres Strait Islander population of Australia being projected to reach 925,000 people in 2026 (Series B), and the number of Aboriginal and Torres Strait Islander births increases from 16,800 in 2012 to 23,100 in 2026 (table 4.4).

Assuming paternity rates remain constant (Series F), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 918,300 people in 2026, 6,600 (0.7%) people fewer than in Series B. Under this assumption there would be 22,100 Aboriginal and Torres Strait Islander births in 2026, 1,000 (4.3%) fewer than in Series B. This equates to 2.2% fewer Aboriginal and Torres Strait Islander children aged 0–14 years in 2026 compared with Series B.

Assuming a 2.0% annual increase in paternity rates (Series G), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 932,200 people in 2026, 7,300 (0.8%) people more than in Series B. Under this assumption there would be 24,200 births of Aboriginal and Torres Strait Islander children in 2026, 1,100 (4.9%) more than in Series B. This equates to 2.4% more Aboriginal and Torres Strait Islander children aged 0–14 years in 2026 compared with Series B.

LIFE EXPECTANCY AT BIRTH

Series B assumes that life expectancy at birth for Aboriginal and Torres Strait Islander peoples increases by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026. Sensitivity analysis was undertaken into the effect of alternative life expectancy at birth assumptions on the size of the future Aboriginal and Torres Strait Islander population and the number of projected deaths.

Extra projection series were generated using the following assumptions:

- Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026; and
- Aboriginal and Torres Strait Islander life expectancy at birth will increase by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026.

Table 4.5 shows the Aboriginal and Torres Strait Islander population at 30 June 2011 and the projected Australian and state/territory populations in 2026 under the three life expectancy at birth assumptions. Table 4.6 shows the number of deaths of Aboriginal and Torres Strait Islander people for 2012 and 2026 under these assumptions. For both tables, assumptions relating to Aboriginal and Torres Strait Islander fertility rates, paternity rates and interstate migration are at levels specified in Series B.

LIFE EXPECTANCY AT BIRTH *continued*

4.5 PROJECTED ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION(a), Alternative life expectancy at birth assumptions—At 30 June 2011 and 2026

		2026		
	2011	*Series I*(b)	*Series B*(c)	*Series H*(d)
	'000	'000	'000	'000
NSW	208.5	282.0	283.0	284.7
Vic.	47.3	69.4	69.6	70.1
Qld	189.0	271.0	271.9	273.5
SA	37.4	51.1	51.2	51.5
WA	88.3	119.0	119.4	120.1
Tas.	24.2	33.9	34.0	34.1
NT	68.9	85.8	86.1	86.5
ACT	6.2	9.4	9.5	9.5
Aust.(e)	**669.9**	**921.9**	**925.0**	**930.4**

(a) Assuming Aboriginal and Torres Strait Islander fertility rates decline by 0.5% per year, paternity rates increase by 1.0% per year, and interstate migration remains at the levels observed in the 2011 Census.

(b) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026.

(c) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026.

(d) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026.

(e) Includes Other Territories.

LIFE EXPECTANCY AT BIRTH *continued*

4.6 PROJECTED DEATHS OF ABORIGINAL AND TORRES STRAIT ISLANDER PERSONS(a), Alternative life expectancy at birth assumptions—Year ended 30 June 2012 and 2026

		2026		
	2012(b)	*Series I*(c)	*Series B*(d)	*Series H*(e)
	no.	no.	no.	no.
NSW	787	1 215	1 093	876
Vic.	270	352	322	268
Qld	818	1 239	1 124	924
SA	187	257	235	196
WA	335	525	476	389
Tas.	59	111	98	75
NT	198	345	310	247
ACT	10	24	21	16
Aust.(f)	**2 666**	**4 070**	**3 681**	**2 993**

(a) Assuming Aboriginal and Torres Strait Islander fertility rates decline by 0.5% per year, paternity rates increase by 1.0% per year, and interstate migration remains at the levels observed in the 2011 Census.
(b) Number of deaths projected under Series B.
(c) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.2 years per year for males and 0.15 years per year for females, reaching 72.0 years for males and 75.9 years for females by 2026.
(d) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.3 years per year for males and 0.25 years per year for females, reaching 73.5 years for males and 77.4 years for females by 2026.
(e) Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.5 years per year for males and 0.45 years per year for females, reaching 76.5 years for males and 80.4 years for females by 2026.
(f) Includes Other Territories.

Using Series B life expectancy assumptions, the Aboriginal and Torres Strait Islander population of Australia is projected to reach 925,000 in 2026. The number of deaths of Aboriginal and Torres Strait Islander people would increase from 2,700 in 2012 to 3,700 in 2026.

Assuming Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.2 years per year for males and 0.15 years per year for females (Series I), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 921,900 people in 2026, 3,000 (0.3%) people less than in Series B. Under this assumption there would be 4,100 deaths of Aboriginal and Torres Strait Islander people in 2026, 390 (11%) more than in Series B.

Assuming Aboriginal and Torres Strait Islander life expectancy at birth increases by 0.5 years per year for males and 0.45 years per year for females (Series H), the Aboriginal and Torres Strait Islander population of Australia is projected to reach 930,400 people in 2026, 5,500 (0.6%) people more than in Series B. Under this assumption there would be

LIFE EXPECTANCY AT BIRTH *continued*

3,000 deaths of Aboriginal and Torres Strait Islander people in 2026, 690 (19%) fewer than in Series B.

Interstate migration

In 2011, only one assumption was analysed for interstate migration. The future net interstate migration of Aboriginal and Torres Strait Islander people was set at constant levels as observed in the 2011 Census.

EXPLANATORY NOTES

INTRODUCTION

1 This release contains annual estimates and projections of the Aboriginal and Torres Strait Islander population of Australia from 30 June 1996 to 30 June 2011 and 30 June 2012 to 30 June 2026 respectively, based on results of the 2011 Census of Population and Housing.

2 These estimates and projections supersede the 2006-based series published in *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2021* (cat. no. 3238.0) in September 2009.

DATA QUALITY

3 The significant volatility in the Aboriginal and Torres Strait Islander Census counts and the quality of data on births, deaths and migration of Aboriginal and Torres Strait Islander persons do not support the use of the standard approach to population estimation (observed numbers of births, deaths and migration during a specified period are added to the population at the start of the period to obtain an estimate of the population at the end of the period).

4 Data quality issues relating to Aboriginal and Torres Strait Islander population estimates for 30 June 2011 derived from the 2011 Census of Population and Housing, on which the estimates and projections in this release are based, are discussed in more detail in paragraphs 8 to 18 of the Explanatory Notes of *Estimates of Aboriginal and Torres Strait Islander Australians, Jun 2011* (cat. no. 3238.0.55.001) and the associated Technical Note: Estimated Aboriginal and Torres Strait Islander Australian Resident Population - Method of Calculation.

5 For a discussion of the measurement of deaths of Aboriginal and Torres Strait Islander persons, see Chapter 2 of *Life Tables for Aboriginal and Torres Strait Islander Australians, 2010–2012* (cat. no. 3302.0.55.003).

CLASSIFICATIONS

Indigenous status

6 The Aboriginal and Torres Strait Islander population comprises people who are of Aboriginal origin, Torres Strait Islander origin or both Aboriginal and Torres Strait Islander origin. The Commonwealth definition of an Aboriginal or Torres Strait Islander person is:

- a person of Aboriginal or Torres Strait Islander descent who;
- identifies as being of Aboriginal or Torres Strait Islander origin and who is;
- accepted as such by the community with which the person associates.

7 The 2011 Census of Population and Housing (Household Form) asked the following question of each person:

Australian statistical areas

8 This release contains data presented according to a number of geographic classifications: the Main Structure of the Australian Statistical Geography Standard (ASGS), the Indigenous Structure, and Remoteness Areas (RAs).

9 For further information see *Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011* (cat. no. 1270.0.55.001); *Australian Statistical Geography Standard (ASGS): Volume 2 - Indigenous Structure, July 2011* (cat. no. 1270.0.55.002); and *Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2011* (cat. no. 1270.0.55.005).

Age groups

10 Estimates and projections in this release are presented by five year age groups, with upper age groups as follows:

- Australia, states and territories—85 years and over (65 years and over for Tasmania and the Australian Capital Territory);
- Indigenous Regions—65 years and over; and
- Remoteness Areas—75 years and over.

11 Single year of age data is available on request for Australia and the states and territories, excluding the Australian Capital Territory and Other Territories. Single year of age data for these jurisdictions is not available (see paragraphs 34–35).

12 It is important to recognise the inherent uncertainties in these data. Aboriginal and Torres Strait Islander population estimates for 30 June 2011, on which the estimates and projections in this release are based, may be subject to errors that cannot be adjusted for in the population estimates compilation process. This is due to the inability of the Post Enumeration Survey to adjust for net undercount by Indigenous status by single year of age and sex. For example, features present in single year of age Census counts, such as age heaping, will most likely appear in population estimates for 2011, even after adjustment for net undercount and other factors, and therefore may appear in single year of age estimates for earlier years as well as projections.

13 An age heaping adjustment has been applied to the population of the Northern Territory at 30 June 2011. This information was released in *Estimates of Aboriginal and Torres Strait Islander Australians, June 2011* (cat. no. 3238.0.55.001) and has been used as the base population for the estimates and projections in this release.

14 In addition, the use of assumptions on future levels of fertility, mortality and migration to obtain population projections adds a further level of uncertainty, the extent of which cannot be measured.

METHODS

15 There are many techniques which may be used to produce population projections, such as simple extrapolations, probabilistic methods, broad economic, social and time-series analysis, and detailed component methods.

16 As mentioned above (see paragraphs 3-5), data quality issues relating to Census counts, births, deaths and migration of Aboriginal and Torres Strait Islander persons do not support the standard approach to population estimation. An alternative method is therefore required to enable the construction of a time series of the size and structure of the Aboriginal and Torres Strait Islander population.

17 Estimates of the Aboriginal and Torres Strait Islander population are available for 30 June of the latest Census year (currently, 30 June 2011). Based on these, estimates (for previous years) and projections (for future years) can be derived using assumptions about past and future components of population change.

METHODS *continued*

18 Due to volatility in Aboriginal and Torres Strait Islander Census counts, estimates for previous years derived from the 30 June 2011 data provide a consistent time series compared to Census year estimates derived from previous censuses. The estimates and projections in this release therefore supersede previously published ABS estimates and projections of the Aboriginal and Torres Strait Islander population. See paragraphs 31–33 for a comparison of population estimates based on the 2006, 2001 and 1996 censuses.

Cohort-component method

19 The ABS uses the cohort-component method, which begins with a base population for each sex by single year of age, and advances it year by year by applying assumptions regarding future fertility, mortality and migration. This procedure is repeated for each year in the projection period. Projections for each geographic region (for example, Remoteness Areas) by sex and single years of age are adjusted to sum to state or territory projections which are in turn adjusted to sum to Australia-level projections.

20 A similar technique can also be used to estimate past populations, by 'reverse-surviving' a population using mortality rates derived from life tables.

ESTIMATES

21 A single series of population estimates for the period 1996 to 2010 was calculated by reverse-surviving the 30 June 2011 estimated Aboriginal and Torres Strait Islander resident population using assumed life tables based on those calculated for the period 2010–2012. Zero net overseas migration was assumed for the period 1996 to 2011 and interstate migration levels were based on those measured in the corresponding intercensal period (i.e. 1996–2001, 2001–2006 and 2006–2011).

Method used to derive estimates

22 Using 30 June 2011 Aboriginal and Torres Strait Islander resident population estimates as the base population, estimates were survived back one year at a time to 30 June 1996. For example, the number of 19-year old males in 2010 was obtained by applying survivorship ratios from life tables to the number of 20-year old males in 2011. This calculation is performed for all ages and both sexes to obtain the complete 2010 population, and repeated to obtain estimates for each year back to 1996.

23 Net interstate migration assumptions have been calculated directly from the net migration measured in the corresponding Census periods. As Census data indicates that the level of net overseas migration of Aboriginal and Torres Strait Islander persons is negligible, zero net overseas migration has been assumed.

24 For the estimates presented in this release, it was assumed that Aboriginal and Torres Strait Islander life expectancy at birth at the Australia level increased by 0.2 years per year for males and 0.15 years per year for females for the period 30 June 1996 to 30 June 2006 and then increased by 0.3 years per year for males and 0.15 years per year for females for the 2006–2011 period. Under this assumption, life expectancy at birth in 1996 would be 65.5 years and 71.4 years for Aboriginal and Torres Strait Islander males and females respectively. Whether Aboriginal and Torres Strait Islander life expectancy at birth has changed at a faster or slower rate is unknown.

Comparison to previously published estimates

25 The estimate for 30 June 2006 based on the 2006 Census was 517,000 Aboriginal and Torres Strait Islander persons. The estimate for 2006 presented in this release, based on the 2011 Census, is 601,500 persons (16% more than the previously published 2006 estimate).

26 The total Aboriginal and Torres Strait Islander population of Australia at 30 June 2001, based on the 2001 Census, was 458,500 persons. The estimate for 2001 presented in this release, based on the 2011 Census, is 534,700 persons (17% more than the previously published 2001 estimate).

27 The estimate for 30 June 1996 based on the 1996 Census was 386,000 persons. The estimate for 1996 presented in this release, based on the 2011 Census, is 468,200 persons (21% more than the previously published 1996 estimate).

PROJECTIONS

28 The ABS publishes Aboriginal and Torres Strait Islander population projections once every intercensal period. The projections are not intended as predictions or forecasts, but are illustrations of growth and change in the structure of the Aboriginal and Torres Strait Islander population that would occur if assumptions made about future demographic trends were to prevail over the projection period.

Assumptions

29 Assumptions have been formulated on the basis of past demographic trends, in conjunction with consultation with various experts and government department representatives at the national and state/territory level. Consultation occurred between November 2013 and February 2014, after which the assumptions were finalised.

30 The assumptions do not attempt to allow for non-demographic factors (such as major government policy decisions, economic factors, natural disasters, epidemics or significant health treatment improvements) which may affect future demographic behaviour or outcomes. There is no certainty that any of the assumptions will or will not be realised. For detailed information on the assumptions used, see *Chapter 2* for more information.

31 Projections incorporating alternative levels and combinations of assumptions have been produced in recognition of this uncertainty and to provide a range of possible options to users (see *Chapter 4* for more information).

Method used to derive projections

32 Using 30 June 2011 Aboriginal and Torres Strait Islander resident population estimates as the base population, the estimates were projected forward one year at a time to 30 June 2026. For example:

- the number of 21 year-old males in 2012 was obtained by applying survivorship ratios from life tables to the number of 20 year-old males in 2011. This calculation is performed for all ages and both sexes to obtain a 'survived' population for 2012;
- net interstate migration (by single year of age and sex) for 2012 was derived by applying migration rates to the 2011 Aboriginal and Torres Strait Islander population and adding these to the population at the relevant geography (that is, state or territory population, Remoteness Area or Indigenous Region); and
- to obtain the number of 0 year-olds in 2012, age-specific fertility and paternity rates were applied to the female and male populations (respectively) aged 15–49 years to derive the number of births (that is, 0 year-olds). These are split into males and females using the assumed sex ratio at birth.

33 The result of these steps is the projected population for 2012. This process is repeated to produce each successive year of the projection, until the year 2026.

CONFIDENTIALITY

34 The *Census and Statistics Act, 1905* provides the authority for the ABS to collect statistical information, and requires that statistical output shall not be published or disseminated in a manner that is likely to enable the identification of a particular person or organisation. This requirement means that the ABS must take care and make assurances that any statistical information about individual respondents cannot be derived from published data.

35 Some techniques used to guard against identification or disclosure of confidential information in statistical tables are suppression of sensitive cells, random adjustments to cells with very small values, and aggregation of data. To protect confidentiality within this release, some cell values may have been suppressed and are not available for release but included in totals where applicable. In these cases data may not sum to totals due to the confidentialisation of individual cells.

ROUNDING

36 In this release population estimates and projections, and their components have sometimes been rounded. Rounded figures and unrounded figures should not be assumed to be accurate to the last digit shown. Where figures have been rounded, discrepancies may occur between sums of component items and totals.

ACKNOWLEDGEMENTS

37 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act, 1905*.

RELATED PUBLICATIONS AND REFERENCES

38 Other ABS publications that may be of interest to users include:

Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-13 (cat.no. 4727.0.55.001)

Australian Demographic Statistics (cat. no. 3101.0)

Births, Australia (cat. no. 3301.0)

Census of Population and Housing: Understanding the Increase in Aboriginal and Torres Strait Islander Counts, 2006-2011 (cat. no. 2077.0)

Deaths, Australia (cat. no. 3302.0)

Demography Working Paper 2001/4 – Issues in Estimating the Aboriginal and Torres Strait Islander Population (cat. no. 3126.0)

Discussion Paper: Assessment of Methods for Developing Life Tables for Aboriginal and Torres Strait Islander Australians, Australia, 2006 (cat. no. 3302.0.55.002)

Estimates of Aboriginal and Torres Strait Islander Australians, June 2011 (cat. no. 3238.0.55.001)

Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2021 (cat. no. 3238.0)

Life Tables for Aboriginal and Torres Strait Islander Australians, 2010–2012 (cat. no. 3302.0.55.003)

Population Characteristics, Aboriginal and Torres Strait Islander Australians, 2006 (cat. no. 4713.0)

Population Distribution, Aboriginal and Torres Strait Islander Australians, 2006 (cat. no. 4705.0)

The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples (cat. no. 4704.0)

ADDITIONAL STATISTICS AVAILABLE

39 As well as the statistics included in this and related publications, the ABS may have other relevant data available on request. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

40 ABS products and publications are available free of charge from the ABS web site <http://www.abs.gov.au>. Click on Statistics to gain access to the full range of ABS statistical and reference information.

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ASDR	age-specific death rate
ASFR	age-specific fertility rate
ASGS	Australian Statistical Geography Standard
Aust.	Australia
ERP	estimated resident population
IREG	Indigenous Region
NSW	New South Wales

NT	Northern Territory
OT	Other Territories
PES	Census of Population and Housing Post Enumeration Survey
Qld	Queensland
RA	Remoteness Area
SA	South Australia
Tas.	Tasmania
TFR	total fertility rate
Vic.	Victoria
WA	Western Australia

APPENDIX 1 BACKCAST ESTIMATES FOR THE PERIOD 1996 TO 2000

QUALITY CONCERNS

Backcast estimates included in this release are compiled using the 30 June 2011 estimates of the Aboriginal and Torres Strait Islander population as the base population and assumptions on mortality and interstate migration (see paragraphs 22–24 of the *Explanatory Notes* for more information). Reliable life expectancy estimates of the Aboriginal and Torres Strait Islander population are not available for the period 1996–2000. Therefore, mortality assumptions for these years were based on the 2010–2012 life expectancy estimates. There will be a greater alignment between this assumption-based mortality and the actual mortality for the years closer to the base year than those for the out years. Moreover, estimates of the Aboriginal and Torres Strait Islander population at 30 June 2011 (based on the 2011 Census) are 30% larger than those at 30 June 2006 (based on the 2006 Census). As a consequence, the use of this particularly large base 2011 ERP introduces uncertainty to the historical estimates by inflating them. The uncertainty increases as the time from the base year increases. Due to this reason, the ABS advises that the 1996–2000 estimates included in the spreadsheet attached to this release should be used with caution.

A1.1 ESTIMATES OF ABORIGINAL AND TORRES STRAIT ISLANDER AUSTRALIANS, States/territories—At 30 June

	1996	*1997*	*1998*	*1999*	*2000*
NSW	153 289	157 044	160 700	164 302	167 572
Vic.	31 917	32 715	33 516	34 372	35 138
Qld	120 460	125 089	129 663	134 030	138 670
SA	24 567	25 447	26 335	27 222	28 182
WA	63 565	65 157	66 746	68 451	70 236
Tas.	16 048	16 709	17 337	17 986	18 620
NT	54 943	55 836	56 747	57 698	58 672
ACT	3 202	3 354	3 582	3 801	4 067
Aust.(a)	**468 183**	**481 552**	**494 830**	**508 071**	**521 369**

(a) Includes Other Territories.

APPENDIX 2

DERIVING NON-INDIGENOUS POPULATION ESTIMATES FOR COMPARATIVE ANALYSIS AND REPORTING PURPOSES

CONTEXT

After each Census, the ABS produces estimates of the Aboriginal and Torres Strait Islander population for the Census year only by using information from the Census (together with some adjustments, the largest being for people missed in the Census). Using 2001 Census data, the ABS for the first time concurrently produced Aboriginal and Torres Strait Islander and non-Indigenous population estimates constrained to total population estimates for 30 June 2001. Accordingly, non-Indigenous population estimates correspond to the difference between the Aboriginal and Torres Strait Islander population estimates and the total population estimates. The ABS uses Census year estimates of the Aboriginal and Torres Strait Islander population and relevant assumptions on fertility, mortality and migration to compile backcast estimates and projections of this population group.

Reliable data on births, deaths and migration of the Aboriginal and Torres Strait Islander population are not available for intercensal years. Due to this reason, it is not possible to produce credible annual estimates of the Aboriginal and Torres Strait Islander population and subsequently the non-Indigenous population for intercensal years using a components based approach. However, the demand for such estimates, particularly as comparisons for measuring and monitoring differences between various Aboriginal and Torres Strait Islander and non-Indigenous rates, has substantially increased in recent years.

This appendix discusses two options for deriving non-Indigenous population estimates for intercensal years, advantages and disadvantages of these options and then provides a recommendation about the optimal approach.

OPTION 1

Option 1 involves deriving non-Indigenous population estimates by subtracting Aboriginal and Torres Strait Islander backcast estimates and projections from the total Australian estimated resident population (ERP) for a given year. This option is currently being used for national reporting purposes. The advantages and disadvantages are covered below.

Advantages:

- This option uses the best available number for each population

Disadvantages:

- A mixture of methods is being used — ERP for the total population and projections and backcast estimates for the Aboriginal and Torres Strait Islander population

OPTION 2

Option 2 involves deriving non-Indigenous population estimates by subtracting Aboriginal and Torres Strait Islander backcast estimates and projections from total population projections. The advantages and disadvantages of this option are detailed below.

Advantages:

- The methods for calculating each population are comparable as both populations are projections
- Both sets of projections are derived from the same base point and at approximately the same point in time

OPTION 2 *continued*

Disadvantages:

- Both sets of projections are based on assumptions of future levels of fertility, mortality and migration (i.e. it is not measured data)
- Non-Indigenous population is more likely to change demographically (through fluctuations in NOM) than the projections can effectively foresee

IMPACT ON NON-INDIGENOUS MORTALITY RATES

Non-Indigenous population estimates derived using Options 1 and 2 are used in calculating child (0–4 years) and age-standardised death rates for NSW, Qld, SA, WA, NT and the total of these five jurisdictions for the periods 2006–2010, 2007–2011 and 2008–2012. Method of calculation is the same as that used for the National Indigenous Reform Agreement (NIRA), National Healthcare Agreement (NHA) and Health Performance Framework (HPF) reporting (that is, the average of five years of deaths is divided by the mid-point population estimates and multiplied by 100,000). Results show that the difference between the rates based on non-Indigenous population derived using Option 1 and Option 2 is minimal (less than 3%). This suggests that the non-Indigenous death rates are not particularly sensitive to the methods used in deriving non-Indigenous population estimates.

RECOMMENDATION

The ABS consulted a number of expert stakeholders who agreed that Option 1 is the preferred method for deriving non-Indigenous population estimates (that is, by subtracting Aboriginal and Torres Strait Islander backcast estimates and projections from total population ERP). This option uses the best available number for each population and hence yields better quality estimates for non-Indigenous population. However, Option 1 cannot be used when total population ERP is not available (for example, when considering future trends). In such situations, Option 2 should be used.

As with all advice the ABS provides, the advice given in this article should be considered in relation to the specific requirements of data users and the appropriateness of the advice for their needs.

APPENDIX 3

USING HISTORICAL ESTIMATES OF THE ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION FOR COMPARATIVE ANALYSIS AND REPORTING PURPOSES

INTRODUCTION

This appendix outlines the issues to consider in choosing an appropriate series of Aboriginal and Torres Strait Islander population estimates, for the purpose of analysing or reporting on this population over time.

WHY THE ABS RECASTS ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION ESTIMATES AFTER EACH CENSUS

The Census of Population and Housing (Census) provides the basis of Australia's official population estimates. For the total Australian population, quarterly estimates can be produced between Censuses by applying components of population growth (births, deaths and migration) to the latest Census-based estimate. Generally speaking, the accuracy of the Census and component data means that only minor adjustments to the population figures occur after each Census.

However, Aboriginal and Torres Strait Islander Census counts and the quality of data on births, deaths and migration of Aboriginal and Torres Strait Islander people do not support the use of the standard approach to population estimation. Instead, the ABS uses assumptions about future fertility, paternity, life expectancy and migration to project figures out from each Census. At the same time, it is also necessary to backcast the Aboriginal and Torres Strait Islander population, because each Census count is sufficiently different from the last.

The uncertainty in the Census and component data occurs because the Aboriginal and Torres Strait Islander population is very small compared with the total Australian population (around 3%), and because the Aboriginal and Torres Strait Islander population requires people not only to be counted in the Census and component datasets, but also to be identified as being of Aboriginal or Torres Strait Islander origin.

The differences between the Aboriginal and Torres Strait Islander population estimates derived from each Census thus tend to be larger than demographic changes can account for. Each Census-based estimate reflects both the desire of people at that time to be identified as being of Aboriginal or Torres Strait Islander origin, and the ability at that time for the information to be effectively collected in the Census.

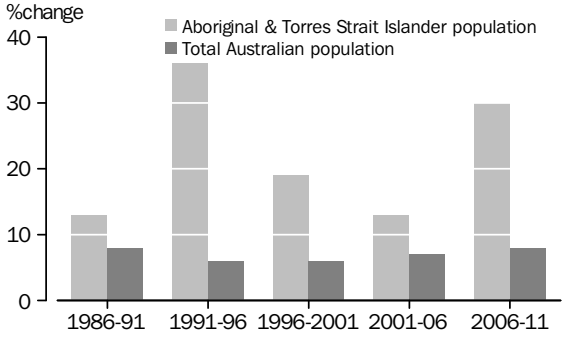
The Australian Census Longitudinal Dataset (ACLD) also suggests that a certain proportion of the population will be counted as Aboriginal or Torres Strait Islander in one Census, but as non-Indigenous in the next, and vice versa (endnote 1).

Graph A3.1, below, shows the percentage increase in estimated resident population (ERP) between Censuses for both the Aboriginal and Torres Strait Islander population and the total Australian population, for the last five intercensal periods. The change in the total population between Censuses remains lower than 10%, and is largely consistent with birth, death and migration rates observed between Censuses. This is not the case for the Aboriginal and Torres Strait Islander population, for which implausible demographic trends would need to have occurred to account for the intercensal difference.

WHY THE ABS RECASTS ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION ESTIMATES AFTER EACH CENSUS *continued*

Of the increase in the Aboriginal and Torres Strait Islander population observed between the 2006 and 2011 Censuses, the ABS estimates that 43% was attributable to demographic change. An estimated 36% of the increase was due to methodological improvements, with propensity to identify a major contributor to the remaining 21% unexplained increase (endnote 2).

A3.1 CHANGE IN ESTIMATED RESIDENT POPULATION, between Censuses



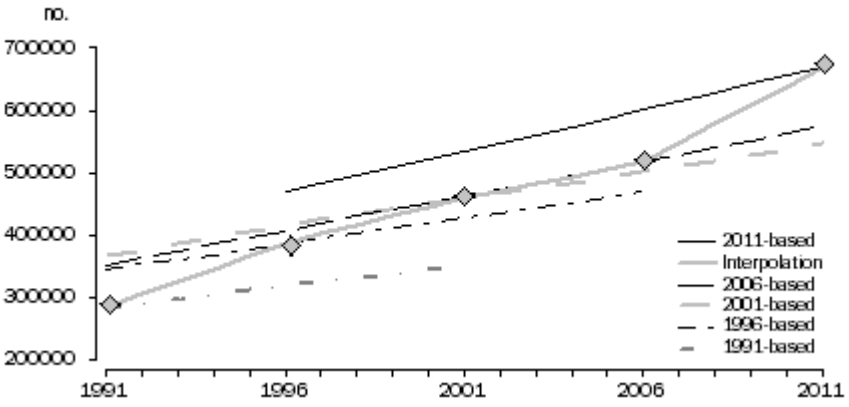
Other collections, such as surveys and administrative datasets also rely on a person's Indigenous status to be accurately reported and recorded, and therefore may likewise be susceptible to differing rates of identification, which may also vary over time (endnote 3). The changing rates of identification of Aboriginal and Torres Strait Islander people in the Census and other datasets create challenges when comparing data about this population over time.

COMPARISON OF HISTORICAL SERIES

After each Census, the ABS creates a time series for the population based on that Census count, by projecting and backcasting around this estimate. The backcast series shows what the Aboriginal and Torres Strait Islander population (based on the latest Census) would have been in previous periods, based purely on demographic change. Similarly, the projected series shows how the currently identified Aboriginal and Torres Strait Islander population may change in future years, if certain demographic assumptions were to hold. Each Census-based series is independent from the others.

Graph A3.2 shows the five different population series that cover the period 1991–2011, as well as how each year's estimated population would change if a simple, straight line interpolation was applied between successive Census-based estimates.

A3.2 BACKCAST AND PROJECTED SERIES, 1991-2011 Census bases



COMPARISON OF HISTORICAL SERIES *continued*

Often, population estimates for Aboriginal and Torres Strait Islander people are used as the denominator for rates, to compare data for the Aboriginal and Torres Strait Islanders population with the non-Indigenous population, or to create time-series indicators about how various aspects of the well-being of Aboriginal and Torres Strait Islander people are changing over time. The use of different series of population estimates shown in graph A3.2 will clearly impact on such indicators.

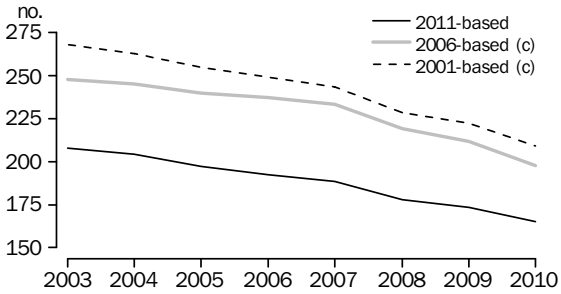
Following are some examples of the impact that the choice of Aboriginal and Torres Strait Islander population estimates can have on a rate. The examples use six different series to demonstrate this:

- the 2011 Census-based series
- the 2006 Census-based series
- the 2001 Census-based series
- a series which uses each Census-based series for the two years before and after that Census (option 1)
- a series which transitions between Census-based series in a way that minimises the 'jump' in the transition year (option 2)
- linear interpolation between Census estimates.

Example 1: Child Mortality Rates

The use of different Census-based Aboriginal and Torres Strait Islander population estimates, while showing a similar pattern of change over time, has a considerable impact on the level of historical child mortality rates, as shown in graph A3.3. When using a combination of series, as shown in graph A3.4, the downward trend in the rate is more obvious.

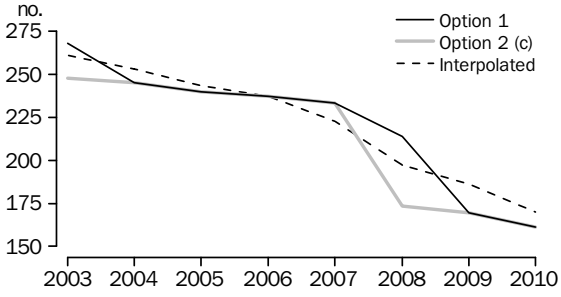
A3.3 CHILD MORTALITY RATES (0-4 YEARS) (a) (b), per 100,000 population – single series



(a) Total of NSW, QLD, WA, SA and NT.
(b) Uses five-year average deaths, and population for the middle year of the five-year period.
(c) Projected data is based on series B (high projection for 2006-based, low projection for 2001-based)

Example 1: Child Mortality Rates continued

A3.4 CHILD MORTALITY RATES (0-4 YEARS) (a) (b), per 100,000 population – combination of series

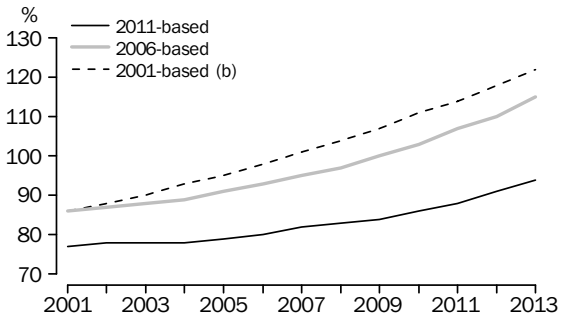


(a) Total of NSW, QLD, WA, SA and NT.
(b) Uses five-year average deaths, and population for the middle year of the five-year period.
(c) Option 2 uses the 2001 Census-based estimate for 2001 & 2002, the 2006 Census-based estimate for 2003–2007, and the 2011 Census-based estimate for 2008 onwards.

Example 2: School Enrolments

In the case of school enrolments data, the use of previous Census-based series generates impossible results, with rates exceeding 100%. In contrast, when using a combination of Census-based population series (graph A3.6), the enrolment rates remain plausible throughout, although there is no longer a clear trend in the time-series. Further analysis would be needed to determine the most appropriate choice of Aboriginal and Torres Strait Islander population estimates. In particular, the choice may depend on an understanding of how identification rates in the enrolment data (numerator) had changed over time.

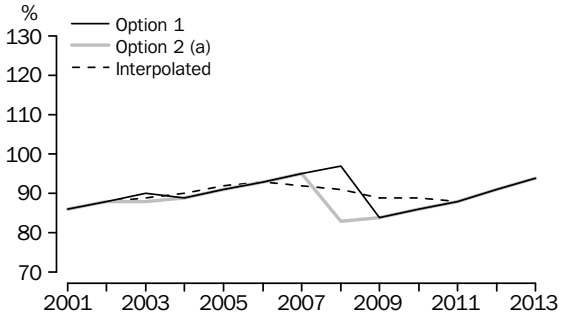
A3.5 FULL-TIME SCHOOL ENROLMENTS (a), Proportion of 6–15 year olds – single series



(a) Projected data is based on series B (medium projection for 2011-based, high projection for 2006-based, low projection for 2001-based).
(b) For the 2001-based series, data for 2010 onwards is pro-rated from five-year age groups.

Example 2: School Enrolments continued

A3.6 FULL-TIME SCHOOL ENROLMENTS, Proportion of 6–15 year olds – combination of series

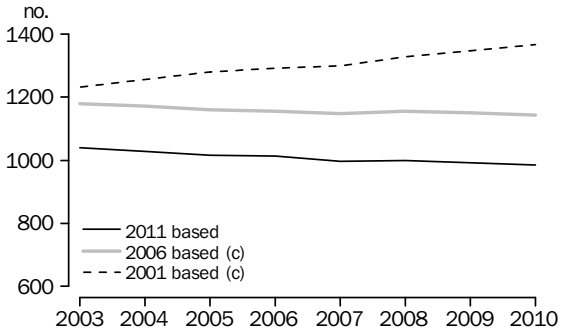


(a) Option 2 uses the 2001 Census-based estimate for 2001 & 2002, the 2006 Census-based estimate for 2003–2007, and the 2011 Census-based estimate for 2008 onwards.

Example 3: Standardised Death Rates

In the case of age-standardised death rates, the use of different Aboriginal and Torres Strait Islander population estimates changes the direction of the trend, as seen in the 2001-based series. This change between the 2001-based and 2006-based data was the result of an improvement to ERP – specifically, using date of birth information from the 2006 Census to derive better estimates of the population at the older age groups in 2006 compared with 2001. For this reason, it is always recommended not to use 2001-based estimates when reporting on older age groups.

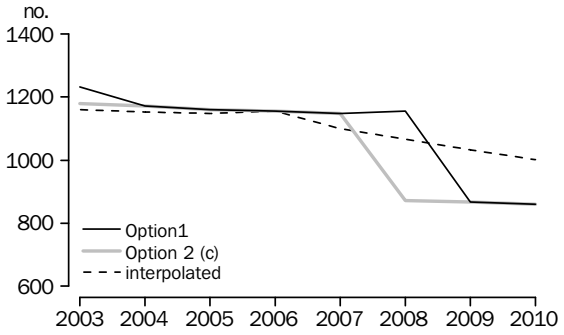
A3.7 STANDARDISED DEATH RATES (a) (b), per 100,000 population – single series



(a) Total of NSW, QLD, WA, SA and NT.
(b) Uses five-year average deaths, and population for the middle year of the five-year period.
(c) Projected data is based on series B (high projection for 2006-based, low projection for 2001-based).

Example 3: Standardised Death Rates continued

A3.8 STANDARDISED DEATH RATES (a) (b), per 100,000 population – combination of series



(a) Total for NSW, QLD, WA, SA, NT.
(b) Uses five-year average deaths, and population for the middle year of the five-year period.
(c) Option 2 uses the 2001 Census-based estimate for 2001 & 2002, the 2006 Census-based estimate for 2003–2007, and the 2011 Census-based estimate for 2008 onwards.

In each of the examples above, of the three methods of transition between population estimate series shown, the rate time-series is smoothest when using a linear interpolation between Census year estimates. Changing from one Census-based series to the next results in a sharp drop in the rate at the changeover point. This can be seen around 2003 and around 2008, with the later transition being far more significant. 2013 would be the equivalent 'decision point' for the current intercensal period. The extent of the 2013 transition will not be known until after the 2016 Census-based ERP series becomes available.

WHICH SERIES TO USE

The question of which historical population series to use depends on the purposes of the analysis. The following provides guidelines to help in making these decisions.

The 2011-based series is the most accurate and up-to-date series currently produced by the ABS, including in terms of the methodology used in the Census collection and in the estimation/projection processes. Wherever possible, the 2011-based series should be used. This includes any of the following scenarios:

- for demographic analysis of the Aboriginal and Torres Strait Islander population
- for forward-looking analysis (i.e. from 2011 onwards), for any purpose
- as the denominator of rates being compared over time, if:
  - the time series is short, generally no further back than the penultimate (2006) Census
  - the numerator data are known to have been fairly consistently high over time
  - analysis is restricted to remote geographies, where the impact of increased identification is much lower than in non-remote areas (8% compared with 24% increase in the 2011 Census)
  - when there is a known quality issue in the data from earlier Censuses (such as the older age groups in the 2001 Census, mentioned above).

Using a range of different Census-based population estimate series could be considered when:

- transitioning from one series to the next will maximise consistency of identification levels and coverage between the numerator and the denominator
- historical rates are thought to be artificially deflated when using the 2011-based population estimates (usually due to lower identification rates in the numerator series in earlier years)

WHICH SERIES TO USE *continued*

- there is a known relationship between identification in the numerator data and the Census data. Data linkage may be used to inform on this relationship (endnote 4). This relationship may be applied to the 2011-based series as a factor, or be used to inform the choice of a transitional series
- data confrontation using supplementary data sources indicates that the 2011-based population estimates do not produce a plausible result.

In some cases, an alternative data source may exist which is more comparable/consistent with the numerator data, and could be used rather than a population estimate series. For example,

- survey data should be compared to the survey population. That is, re-weighting past surveys to the latest population estimate series is not generally recommended.
- analysis of Census data should be based on Census counts rather than population estimates (endnote 5).
- numerator data could be compared to a denominator that is internally consistent, rather than to population estimates – for example retention rates (15 year-old students in 2013 as a percentage of 12 year-old students in 2010) produces a more coherent time-series than enrolment rates (15 year-old students as a percentage of 15 year-old population).

If in any doubt, the ABS recommends that data users conduct their own analysis, for example similar to that illustrated in the examples above. This will highlight the impact of non-demographic changes on their particular area of interest.

Impact of Future Changes

A new series for Aboriginal and Torres Strait Islander population estimates will be produced following the 2016 Census. Depending on how the 2016 Census-based estimate compares with the 2011 Census-based estimate, current indicator trends may change as a result of rebasing any population estimates to the new Census.

Aboriginal and Torres Strait Islander population projections are produced to illustrate potential future demographic changes to the currently identified population. The 2011-based projections therefore do not include any assumption variable on propensity to identify. Anyone considering the future population should consider their requirements for a projection based on a change in propensity to identify, and note that the ABS projections cannot be used for this purpose.

ENDNOTES

(1) The ACLD links a 5% sample of Census records from the 2006 to 2011 Census. The ACLD can be accessed from *http://www.abs.gov.au/websitedbs/censushome.nsf/home/acld?opendocument&navpos=267*

(2) For more information on the increase between the 2006 and 2011 Census counts, see *Census of Population and Housing: Understanding the Increase in Aboriginal and Torres Strait Islander Counts, 2006-2011 (cat. no. 2077.0).* For information on the increase between 1991 and 1996, see *Occasional Paper: Population Issues, Indigenous Australians, 1996 (cat. no. 4708.0)*

(3) For further discussion of how and why identification differs between contexts, see *Information Paper: Perspectives on Aboriginal and Torres Strait Islander Identification in Selected Data Collection Contexts, 2012 (cat. no. 4726.0)*

(4) For an example of data linkage, see *Information paper: Death registrations to Census linkage project - Key Findings for Aboriginal and Torres Strait Islander peoples, 2001-2012 (cat. no. 3302.0.55.005)*

ENDNOTES *continued*

(5) For more information on the difference between Census counts and Census year population estimates, see *Estimates of Aboriginal and Torres Strait Islander Australians, June 2011, Technical Note 1: Estimated Resident Aboriginal and Torres Strait Islander Population - Method of Calculation (cat. no. 3238.0.55.001).*

GLOSSARY

Aboriginal and Torres Strait Islander birth — The birth of a live-born child where either the mother or the father was identified as being of Aboriginal or Torres Strait Islander origin on the birth registration form.

Aboriginal and Torres Strait Islander death — The death of a person who is recorded as being an Aboriginal, Torres Strait Islander or both on the Death Registration Form (DRF). From 2007, Indigenous status for deaths registered in South Australia, Western Australia, Tasmania, the Northern Territory and the Australian Capital Territory is also derived from the Medical Certificate of Cause of Death (MCCD). If the Indigenous status report on the DRF does not agree with that on the MCCD, an identification from either source that the deceased was an Aboriginal and/or Torres Strait Islander persons is given preference over non-Indigenous.

Age heaping — The phenomenon of uneven population age distribution in Census or survey data. When age heaping occurs, data show systematic spikes on particular ages such as those ending in 0 or 5. This happens as a result of 'digit preference' or rounding when respondents are unsure of their age or the age of others they are reporting on behalf of.

Age-sex pyramid — A bar chart graphically representing the age structure of the population, usually in five-year age groups, for males and females separately. The age structure of the population usually approximates the shape of a pyramid because mortality progressively reduces the number in each birth cohort as it ages. The age pyramid is useful to show the existence of unusually large or small cohorts, and in this way, not only conveys information about a country's past demographic history, but also a great deal about its demographic future.

Age-specific death rates — The number of deaths (either occurred or registered) during the calendar year at a specified age per 1,000 of the estimated resident population of the same age at the mid-point of the year (30 June). Pro rata adjustment is made in respect of deaths for which the age of the deceased is not given.

Age-specific fertility rates — The number of live births (either occurred or registered) during the calendar year, according to the age of the mother, per 1,000 of the female estimated resident population of the same age at 30 June. In the calculation of these rates, births to mothers under 15 years are included in the 15–19 years age group, and births to mothers aged 50 years and over are included in the 45–49 years age group. Pro rata adjustment is made for births for which the age of the mother is not given.

Age-specific paternity rates — The number of live births (either occurred or registered) during the calendar year, according to the age of the father, per 1,000 of the male estimated resident population of the same age at 30 June. In the calculation of these rates, births to fathers under 15 years are included in the 15–19 years age group, and births to fathers aged 50 years and over are included in the 45–49 years age group. Pro rata adjustment is made for births for which the age of the father is not given.

Average annual growth rate — The average annual growth rate, r, is calculated as a percentage using the formula:

$$\left[\left(\frac{P_n}{P_0}\right)^{\frac{1}{n}} - 1\right] \times 100$$

where P_0 is the population at the start of the period, P_n is the population at the end of the period and n is the length of the period between P_0 and P_n in years.

Birth — The delivery of a child, irrespective of the duration of pregnancy, who, after being born, breathes or shows any evidence of life such as heartbeat.

Completed fertility Completed fertility represents the average number of births a cohort of females have borne over their reproductive lifetimes.

Death The permanent disappearance of all evidence of life after birth has taken place. The definition excludes all deaths prior to live birth. For the purposes of the ABS Death Registration collection, a death refers to any death which occurs in, or en route to Australia and is registered with a state or territory Registry of Births, Deaths and Marriages.

Estimated resident population (ERP) The official measure of the population of Australia is based on the concept of usual residence. It refers to all people, regardless of nationality, citizenship or legal status, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months over a 16 month period. It excludes overseas visitors who are in Australia for less than 12 months over a 16 month period.

Estimates of the Australian resident population are generated on a quarterly basis by adding natural increase (the excess of births over deaths) and net overseas migration (NOM) occurring during the period to the population at the beginning of each period.

Indigenous Region (IREG) Indigenous Regions (IREGs) are large geographical units loosely based on the former Aboriginal and Torres Strait Islander Commission boundaries. They are created by aggregating one or more Indigenous Areas.

Intercensal period The time period between 30 June in the previous Census year and 30 June of the latest Census year.

Life expectancy The average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of each period continued throughout his/her lifetime.

Life table A tabular, numerical representation of mortality and survivorship of a cohort of births at each age of life. The conventional life table is based on the assumption that as the cohort passes through life it experiences mortality at each age in accordance with a predetermined pattern (usually based upon death rates from a real population during a particular period of time) of mortality rates which do not change from year to year. The life table thus constitutes a hypothetical model of mortality, and it does not describe the actual mortality which characterises a cohort as it ages.

Life tables may be complete or abridged, depending on the age interval used in their compilation. Complete life tables such as those for the Australian population contain data by single years of age, while abridged life tables, such as those for the Aboriginal and Torres Strait Islander population, contain data for five-year age groups. Due to differences in mortality patterns between males and females at different ages, life tables are generally constructed separately for each sex.

Median age For any distribution the median value is that which divides the relevant population into two equal parts, half falling below the value, and half exceeding it. Thus, the median age is the age at which half the population is older and half is younger.

Migration The movement of people across a specified boundary for the purpose of establishing a new or semi-permanent residence. Migration can be international (migration between countries) and internal (migration within a country).

Mortality Differentials The difference in mortality when comparing one population group with another. In this release, it is calculated as the ratio of life expectancy at birth for a particular geographic region (e.g. state/territory) over the life expectancy at birth for Australia.

Natural increase Excess of births over deaths.

Net interstate migration Net interstate migration is the net gain or loss of population though interstate migration being the change of a person's place of usual residence from one state or territory to another state or territory.

Net overseas migration Net overseas migration is the net gain or loss of population through immigration to Australia and emigration from Australia.

Net population growth For Australia, net population growth is the sum of natural increase and net overseas migration. For the states and territories, net population growth also includes net interstate migration.

Net undercount The difference between the actual Census count (including imputations) and an estimate of the number of people who should have been counted in the Census. This estimate is based on the Post Enumeration Survey (PES) conducted after each Census. For a category of person (e.g. based on age, sex and state of usual residence), net undercount is the resultant of Census undercount, overcount, misclassification and imputation error.

Other Territories Following the 1992 amendments to the Acts Interpretation Act to include the Indian Ocean Territories of Christmas Island and the Cocos (Keeling) Islands as part of geographic Australia, another category of the state and territory level has been created, known as Other Territories. Other Territories include Jervis Bay Territory, previously included with the Australian Capital Territory, as well as Christmas Island and the Cocos (Keeling) Islands.

Post Enumeration Survey (PES) A household survey conducted three to four weeks after the Census. The PES allows the ABS to estimate the number of people who should have been counted in the Census compared to the number who were. Results from the PES contribute to a more accurate calculation of the estimated resident population (ERP) for Australia and the states and territories which is then backdated to 30 June of the Census year.

Remoteness Area An aggregation of non-continuous geographical areas which share common characteristics of remoteness. The delimitation criteria for Remoteness Areas (RAs) are based on the Accessibility/Remoteness Index of Australia (ARIA+) which measures the remoteness of a point based on the road distance to the nearest urban centre. The RA categories range from Major Cities to Very Remote. Within the Australian Statistical Geography Standard, each RA is created from a grouping of Statistical Areas Level 1 having a particular degree of remoteness.

Sex ratio The number of males per 100 females.

State/territory of usual residence State or territory of usual residence refers to the state or territory of usual residence of:
- the population;
- the mother (Birth Registrations collection); and
- the deceased (Death Registrations collection).

Total fertility rate (TFR) The sum of age-specific fertility rates expressed as rate per woman. It represents the number of children a female would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Total paternity rate (TPR) The sum of age-specific paternity rates expressed as a rate per man. It represents the number of children a male would father during his lifetime if he experienced current age-specific paternity rates at each age of his reproductive life.

Unexplained growth The intercensal growth in the Aboriginal and Torres Strait Islander population counts that cannot be fully explained by births, deaths and migration.

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