



INDIGENOUS POPULATION PROJECTIONS, NSW, 2006 TO 2021

BY NSW ABORIGINAL LAND COUNCIL REGIONS



SEPTEMBER 2008

© NSW Aboriginal Land Council , 2008

ISBN 978-0-646-50156-7

National Library of Australia Cataloguing-in-Publication entry:

Author: Khalidi, Noor Ahmad

Title: Indigenous Population Projections New South Wales 2006 to 2021:
By Aboriginal Land Council Regions

Publisher: NSW Aboriginal Land Council, 2008.

ISBN: 978-0-646-50156-7 (pbk.)

Subjects: Aboriginal Australians--New South Wales--Population--Statistics
Torres Strait Islander--New South Wales--Population--Statistics
Population forecasting--New South Wales--Statistics

Other Authors/Contributors: New South Wales Aboriginal Land Council (NSWALC)

Dewey Number: 304.60899915

This work is copyright under the Copyright Act 1968. However, use of the projected data, reproduction or quotation of any part of this publication is allowed given in all cases NSWALC and Author Dr. Noor A. Khalidi must be acknowledged as the source.

Disclaimer:
The views expressed in this publication are those of the author and do not necessarily represent the views of the NSW Aboriginal Land Council.

INQUIRIES:
For further information and inquiries regarding this publication contact:

NSW Aboriginal Land Council (NSWALC)

Ph: 02 9689 4444
Fax: 02 9687 1234
E-mail: penwurru@alc.org.au

Address:
33 Argyle Street, Parramatta NSW 2150
PO Box 1125 Parramatta NSW 2124

TABLE OF CONTENTS

PREFACE	V
ACKNOWLEDGEMENTS	VI
ABSTRACT	VII
SUMMARY OF PROJECTION RESULTS	1
METHODOLOGY	2
BASE DATA AND ASSUMPTIONS	2
WHO IS AN INDIGENOUS PERSON?	2
BASE POPULATION	2
FERTILITY LEVEL AND PATTERN	4
MORTALITY LEVEL AND PATTERN	4
MIGRATION LEVEL AND PATTERN	6
Indigenous Births to Non-Indigenous Mothers	6
Inter-State Migration	6
Regional Projections	7
PROJECTION RESULTS	8
NSW STATE LEVEL	8
POPULATION SIZE	8
VITAL RATES AND POPULATION CHANGE	8
AGE AND GENDER STRUCTURE	9
REGIONAL PROJECTIONS	14
REGIONAL SUMMARY	14
NSWALC CENTRAL REGION	16
MAP 1: NSWALC CENTRAL REGION	16
NSWALC CENTRAL COAST REGION	22
MAP 2: NSWALC CENTRAL COAST REGION	22
NSWALC NORTH COAST REGION	27
MAP 3: NSWALC NORTH COAST REGION	27
NSWALC NORTHERN REGION	33
MAP 4: NSWALC NORTHERN REGION	33
NSWALC NORTH WEST REGION	39
MAP 5: NSWALC NORTH WEST REGION	39
NSWALC SOUTH COAST REGION	45
MAP 6: NSWALC SOUTH COAST REGION	45
NSWALC SYDNEY-NEWCASTLE REGION	51
MAP 7: NSWALC SYDNEY-NEWCASTLE REGION	51
NSWALC WESTERN REGION	57
MAP 8: NSWALC WESTERN REGION	57
NSWALC WIRADJURI REGION	63
MAP 9: NSWALC WIRADJURI REGION	63
EXPLANATORY NOTES	69
POPULATION PROJECTION METHOD	69
ESTIMATES OF FERTILITY	69
Indirect Estimation of Age-Specific Fertility Rates	72
Basis of method and its rationale	72
ABS EXPERIMENTAL INDIGENOUS LIFE TABLES	72
SOME DEFINITIONS	74
Live Birth	74
Age-specific fertility rates	74
Natural increase	74

Net interstate migration	74
Population growth	74
Total fertility rate	74
Gross Reproduction Rate (GRR)	74
Net Reproduction Rate (NRR)	74
Death.	74
Age-specific death rates	75
The crude death rate	75
Indigenous death	75
Infant death	75
Infant mortality rate	75
Standardised death rate	75
Life Table death rate.	75
Life expectancy	76
Abridged Life Tables.	76
Experimental Indigenous Life Tables	76
The gender ratio	76
Average household size	76
Estimated resident population (ERP)	76
Dependency Ratio	76
Household	76
Household estimate	77
Household population	77
Household size.	77
REFERENCES	78

PREFACE

The 2006 ABS Census of Population and Housing, provides valuable information about the current demographic characteristics and composition of the Indigenous population. However, the ABS experimental estimates and projections of the Indigenous population for NSW do not go beyond 2009. Furthermore, there are no population projections available for the New South Wales Aboriginal Land Council (NSWALC) Regional Areas. Therefore, there is a strong need to provide population projections to year 2021, particularly by NSWALC Regions, to inform service delivery, policy formulation and planning processes.

In the absence of similar work at present by research institutions, and with a view to fulfil the urgent needs for demographic data for future years, NSWALC is pleased to present this work which Local Aboriginal Land Councils, government agencies, and data users may also find useful.

These projections were conducted by an experienced demographer, Dr. Noor A. Khalidi, who has been closely involved in Australian Indigenous affairs for the last 22 years.

Geoff Scott

Chief Executive Officer
NSW Aboriginal Land Council



ACKNOWLEDGEMENTS

We thank Peter Damcevski, Allan Jenner, Kai-Lin Sze and Sarah March from the Australian Bureau of Statistics (ABS), Sydney Office, for providing the bulk of the Census based data and regional maps without which this work could not have been completed.

Also, we thank Patrick Corr, Director, Demography Program, ABS Head Office in Canberra, for providing Experimental Indigenous Resident Population data used in these projections.

Last but not least, we thank Michelle Gourley, Senior Data Analyst, Aboriginal and Torres Strait Islander Health and Welfare Unit at the Australian Institute of Health and Welfare (AIHW) in Canberra for her contribution in providing valuable data used in this work.

ABSTRACT

Very recently, the Australian Bureau of Statistics released revised Experimental Estimates of the Resident Australian Indigenous Population for 30 June 2006¹. As per the revised estimates, the total Indigenous population of NSW on 30 June 2006 was estimated at 152,685, which is 4,507 persons more than the previous estimates by the ABS. The revised estimates are based on a full analysis of the 2006 Census Post Enumeration Survey outcomes. Population projections presented in this report are based on these revised estimates. Therefore, the outcomes are slightly different than the previously published projections for NSW².

The results of projections indicate an accelerated growth for the Indigenous population of NSW during the next 15 years. The total Indigenous population will grow from 152,685 in 2006 to 211,265 in 2021. While more people are living to higher ages, the rate of population growth will continue to increase, from 1.8 percent in 2006 to 2.0 percent in 2011, to 2.1 percent in 2016 and 2021. This accelerated increase suggests an average annual population growth rate of 2.2 percent. As a result of this momentum, the population doubling time will decrease from 40 years in 2006 to 34 years in 2021.

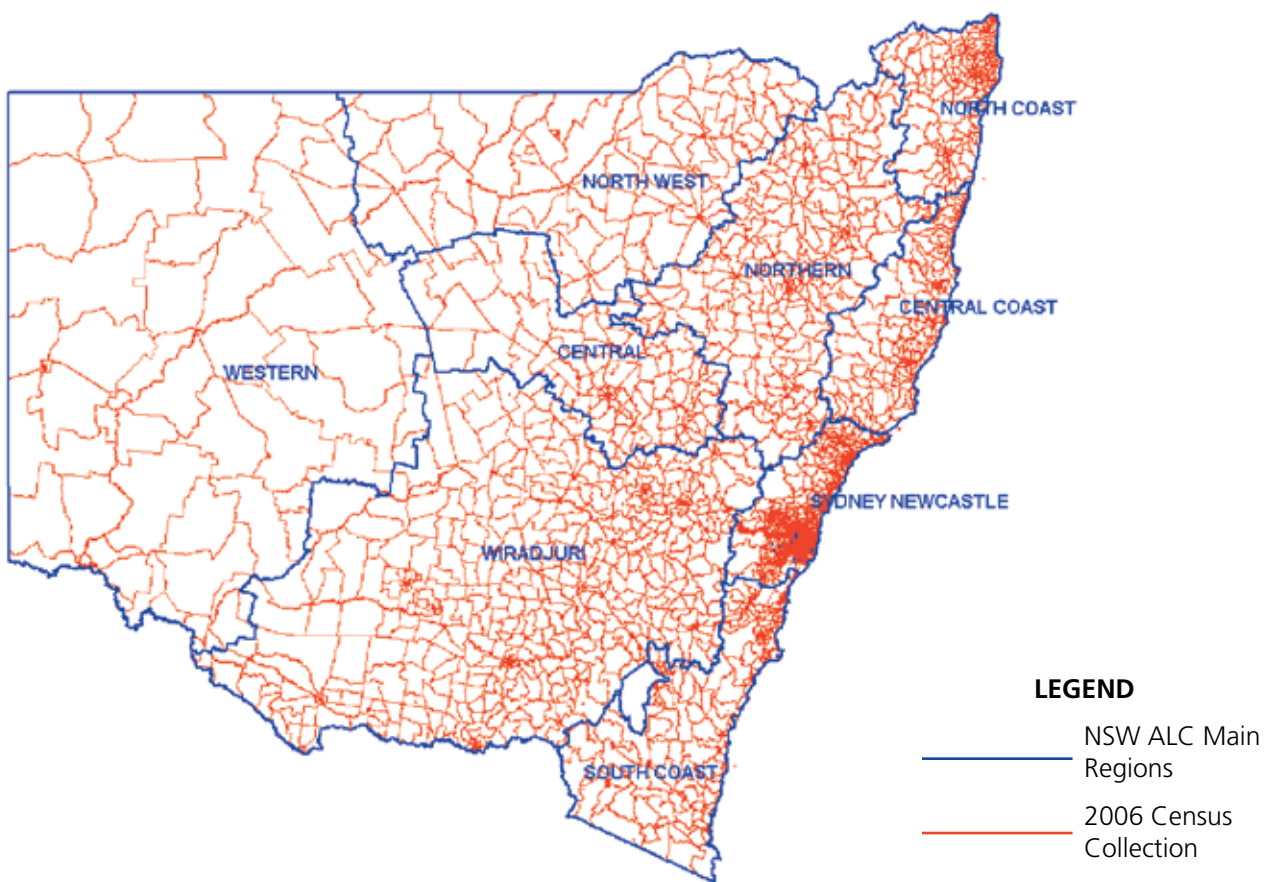
During the next 15 years, the median age of the NSW Indigenous population will increase by two years, from 21 in 2006 to 23 in 2021. The proportion of those in the age category 15 to 64 will grow from 58.5 percent in 2006 to 61.1 percent in 2021. While there will be more people in the working age group, this growth is likely to have considerable implications on new demands for a variety of services including health, housing and social welfare.

¹ Australian Bureau of Statistics, 19 August 2008, "Experimental Estimates of Resident Australian Indigenous Population", Cat. ABS Cat 32380.55.001, 30 June 2006.

² AHO 2008, Indicative NSW Indigenous Population Projections 2006 to 2021.

In 2006 over 40 percent of Indigenous people in NSW lived in the Sydney-Newcastle metropolitan region followed by 12.5 percent in the Wiradjuri region. The sizes of the Indigenous populations in other regions vary, from the smallest being 2.2 percent in the Western region to 8.8 percent in the South-Coast region. The assumption of constant levels of fertility, mortality and migration ensure these proportions remain mostly the same during the next 15 years.

NSW Aboriginal Land Councils Main Regions



SUMMARY OF PROJECTION RESULTS

Mortality Levels and Pattern

- Declines in mortality rates are not significant enough to have any noticeable impact on improving Indigenous male (60.0 years) and Indigenous female (65.1 years) life expectancies during the next 15 years.
- If the observed decline in mortality rates continues to have no significant impact over the next 15 years, the life expectancy gap with non-Indigenous Australians will not close.

Fertility Level and Pattern

- An observed marginal increase in fertility rates is not significant enough to warrant a further increase or decline in the NSW Indigenous fertility rates over the next 15 years.

Population Size

- The Indigenous population growth rate in NSW is gathering momentum and will continue to increase with an average annual growth rate of almost 2.2 percent per year over the next 15 years.
- Total Indigenous population of NSW will grow from 152,685 in 2006, to 211,265 in 2021.

Vital Rates and Population Change

- As a result of the changes to the age structure over time, the birth rate of the NSW Indigenous population will grow from an estimated 20 per 1000 population (2.0 percent) in 2006, to 22 per 1000 population (2.2 percent) in 2021.
- As more Indigenous people move into the age categories with higher mortality rates, the death rate of the NSW Indigenous population will increase from 8 per 1000 population (0.8 percent) in 2006, to 9 per 1000 population (0.9 percent) in 2021.

Age Structure

- The median age of the NSW Indigenous population will increase from 21 in 2006 to 23 in 2021.
- A very high proportion of the 38 percent of the NSW Indigenous population in the age category of "under 15 years", will move into the ages of family formation over the next 15 years.
- An increase in the aged population of "60 years and over", from 5 percent in 2006 to 8 percent in 2021, will likely have considerable implications on new demands for health services.
- An increase in the working age group of "15 to 64 years", from 58.5 percent in 2006 to 61.1 percent in 2021, is likely to have considerable implications on new demands for a variety of services, including health, housing and social welfare.

Gender Structure

- The overall gender ratio will improve from 99.7 males per 100 females in 2006 to 100.1 males to 100 females in 2021.
- The Child Women ratio will be slightly lower in 2021 with 47 children per 100 women, compared to 2006 with 50 children per 100 women.

METHODOLOGY

Population projections are carried out through a standard cohort-component method. The procedure carries out a single-year projection of population by age and gender, based on initial male and female populations in five-year age groups and assumed changes in fertility, mortality and migration (see explanatory notes for a description of the technique).

Projections are carried out at the total New South Wales (NSW) State level as well as by the nine (9) NSW Aboriginal Land Council Regional areas.

BASE DATA AND ASSUMPTIONS

Who is an Indigenous person?

When 'Indigenous' is used in this publication, it refers to Aboriginal and Torres Strait Islander peoples. The 2006 Census outcomes were used as the basis for these projections. The population Census question asks 'Is the person of Aboriginal or Torres Strait Islander Origin?'. A definition of an Aboriginal or Torres Strait Islander person was given in a High Court judgement in the case of *Commonwealth v Tasmania (1983) 46 ALR 625*. This definition states that an Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.

The Census question measures the descent concept although some respondents will interpret the question to mean both descent and identification. It does not take account of the third part of the definition, community acceptance.

Base Population

The most recent Census of Population and Housing was conducted by the Australian Bureau of Statistics (ABS) on 8 August 2006. Australia's first national Census was held in 1911 and since 1961 a Census has been taken every five years, the frequency specified in the *Census and Statistics Act 1905*. The objective of the Census is to count the number of people in Australia on Census Night, identifying their key characteristics and those of the dwellings in which they live.

Following changes to the Australian Constitution as a result of the 1967 Referendum, Aboriginal and Torres Strait Islander peoples were included in official estimates of the Australian population. As a consequence, from the 1971 Census onwards, the ABS has developed and improved strategies to count the Indigenous population throughout Australia.

Population estimates were produced from the 2006 Population and Housing Census by NSWALC Regions. The NSWALC Regions do not fit with boundaries of the Census Collection Districts (CDs) or Indigenous Geographic Classification used by Census (see NSWALC Regional Map in page viii). In order to estimate the population living in these areas, CDs were needed to be concorded to best fit NSWALC Regions.

The ABS provided estimates for NSWALC Regions by concording the 2006 Census counts of usual residents in CDs. These estimates are the best available approximation of the probable numbers of people in those Regions.

At the same time, the ABS has produced Experimental Estimates of Resident Australian Indigenous Population at 30 June 2006 by age and gender. When producing Estimates of the Resident Population (ERP) the ABS adjusts the Census count to take account of unknown Indigenous status and undercount (together with other factors such as the difference in reference periods).

Revised Experimental Estimates of Resident Australian Indigenous Population at 30 June 2006 was released by the ABS on 19 August 2008.

Based on the above adjustments, the Estimated Resident Indigenous Population of NSW at 30 June 2006 was 152,685

persons compared to the Census counts of 138,508 persons on 8 August 2006, an increase of 10.2 percent. The estimated resident population of NSW on 30 June 2006 constitutes 29.5 percent of the total Indigenous population of Australia and 2.24 percent of the total NSW population.

These estimates at the NSW level by age and gender were used to adjust the concorded NSWALC Regional Estimates and formed the basis of projections presented in this publication.

**TABLE 1: ESTIMATED RESIDENT INDIGENOUS POPULATION
IN FIVE-YEAR AGE GROUPS, AT 30 JUNE 2006, NSW**

Age-Groups	Total	Males	Females	Total	Males	Females
0-4	19,105	9,853	9,252	12.5%	12.9%	12.1%
5-9	19,367	9,965	9,402	12.7%	13.1%	12.3%
10-14	19,885	10,173	9,712	13.0%	13.3%	12.7%
15-19	16,398	8,589	7,809	10.7%	11.3%	10.2%
20-24	12,623	6,500	6,123	8.3%	8.5%	8.0%
25-29	9,875	4,872	5,003	6.5%	6.4%	6.5%
30-34	10,051	4,810	5,241	6.6%	6.3%	6.9%
35-39	9,921	4,674	5,247	6.5%	6.1%	6.9%
40-44	8,993	4,190	4,803	5.9%	5.5%	6.3%
45-49	7,632	3,652	3,980	5.0%	4.8%	5.2%
50-54	6,060	2,969	3,091	4.0%	3.9%	4.0%
55-59	4,600	2,215	2,385	3.0%	2.9%	3.1%
60-64	3,112	1,545	1,567	2.0%	2.0%	2.0%
65-69	2,119	991	1,128	1.4%	1.3%	1.5%
70-74	1,436	659	777	0.9%	0.9%	1.0%
75-79	833	330	503	0.5%	0.4%	0.7%
80+	675	242	433	0.4%	0.3%	0.6%
Total	152,685	76,229	76,456	100.0%	100.0%	100.0%

Source: ABS Experimental Estimated Resident Australian Indigenous Population, Cat 32380.55.001 19 Aug 2008

Similarly, other data from the 2006 Census has been extensively used, particularly data on Children Ever Born by age groups of mothers, place of usual residence, 5 years before the Census.



Fertility Level and Pattern

Two different approaches were examined to determine the level and age pattern of the Indigenous fertility in NSW. First, data on registered births to Indigenous women by age for years 2004, 2005 and 2006 were used to provide estimates of the level and pattern of Indigenous fertility (direct estimation method). This is also called Period Fertility. Secondly, estimates of the level and pattern of Indigenous fertility in NSW were obtained by applying an indirect method of fertility estimation using Census data on the number of women by age groups by number of Children Ever Born. The results of these two estimation methods were then compared to ascertain the fertility regime of the Indigenous women in NSW.

Comparing the results of the two methods of fertility estimation suggests that Indigenous birth registration data in NSW is still not complete enough to provide the basis for reliable fertility estimates. Therefore, the results of the indirect fertility estimates based on Census outcomes seem to be more reliable and are used in these projections.

By applying indirect techniques of fertility estimation using data on the number of mothers by age groups by number of Children Ever Born from Census 2006 and Census 1996, two very consistent sets of Age-Specific Fertility Rates and the corresponding Total Fertility Rates for 1996 and 2006 were obtained which show a marginal increase in the Indigenous women's Total Fertility Rates from 2.57 in 1996 to 2.61 in 2006.

However, in the absence of other evidence, the observed increase in fertility rates is not significant enough to warrant a further increase or decline in NSW Indigenous fertility rates during the projection years.

A description of the methods of fertility estimation used in this publication is included in the explanatory notes.

Mortality Level and Pattern

A key component of the Indigenous population estimation or projection process is the construction of Indigenous life tables. In these projections, levels and age-gender patterns of mortality were taken from the ABS Estimated Indicative Indigenous Life Table for 1996-2001. Probabilities of dying (q_x) values for Indigenous males and Indigenous females by age groups, and the corresponding life expectancy figures at birth were incorporated in the population projection procedures (ABS, Deaths Australia, 3302.0, 2006, p.77).

According to these estimates, expectation of life at birth for Indigenous males is 60.0 years and for Indigenous females is 65.1 years (Table 2).

TABLE 2: OBSERVED INDIGENOUS MORTALITY LEVELS AND PATTERNS PROBABILITIES OF DYING BY AGE, 1996-2001

AGE GROUP	MALES	FEMALES
0-1	0.01069	0.00903
1-5	0.00389	0.00247
5-10	0.00313	0.00202
10-15	0.00207	0.00131
15-20	0.01174	0.00640
20-25	0.01590	0.00789
25-30	0.02802	0.01226
30-35	0.03524	0.01801
35-40	0.04173	0.02106
40-45	0.04941	0.03135
45-50	0.07123	0.04803
50-55	0.10329	0.07362
55-60	0.14925	0.11391
60-65	0.20421	0.17816
65-70	0.27584	0.23585
70-75	0.39800	0.31745
75-80	0.51836	0.44932
80-85	0.64271	0.60023
85+	1.00000	1.00000
Life Expectancy at Birth	60.01	65.111

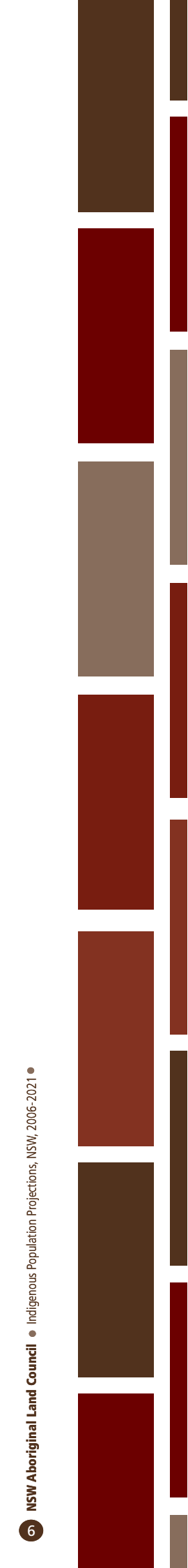
ABS 2006, Deaths Australia 3302.0, Abridged Experimental Indigenous Life Tables, Page 77.

A description of the methodology used by the ABS to derive the above experimental Indigenous Life Tables estimates is included in the Explanatory Notes at the end of this publication.

According to the Australian Institute of Health and Welfare (AIHW), in the 12 year period from 1991 to 2003 there was some decline in recorded mortality rates in Western Australia, South Australia and the Northern Territory combined for both genders of Indigenous Australians (AIHW, 2007, p352). The fitted trend implied an average yearly decline in the rate of around 22 per 100,000. The fitted trend showed steeper declines in recorded deaths for Indigenous females (-30.1) but not for Indigenous males (-9.7).

There is no reason to doubt that similar improvement might have happened on the mortality regime of the Indigenous people in NSW as well. However, after applying the observed decline in age-specific mortality rates to mortality rates of the ABS Experimental Indigenous Life Tables (1996-2001), depicted in Table 2 above, it was found that the observed 1991-2003 declines in mortality rates are not significant enough to have any noticeable impact on improving Indigenous male and female life expectancies during the next 15 years.

Similar conclusions were reached by other researchers in the past, with an article published in the Medical Journal of Australia, Ian T Ring and David Firman conclude that: *“Since the 1970s indigenous infant mortality rates have been declining, but life expectancy has not changed because of continued high adult mortality rates”* (Ring and David Firman, MJA 1998; 169:528-533).



Assuming the observed decline in mortality rates continues to have no significant impact on the size of the projected population during the projection years (2006-2021), much more needs to be done to significantly advance the health of the Indigenous people to improve the expectation of life and close the gap with non-Indigenous Australians.

Migration Level and Pattern

In the absence of international migration, and apart from the effects of births and deaths, the size, age and gender, distribution of the Indigenous population in NSW is affected by two types of population influx: Indigenous births to non-Indigenous mothers and inter-state migration. The 2001 and 2006 Census returns did not register any significant evidence of population influx due to change of identification. As such, change of identification is not considered a factor in these projections.

Indigenous Births to Non-Indigenous Mothers

The average number of registered births to non-Indigenous mothers (whose fathers are Indigenous) during the years 2004, 2005 and 2006 was 1,238 (ABS, Births Australia 2004, 2005 & 2006 publications). As the observed fertility level and pattern of the non-Indigenous mothers differ to those of the Indigenous mothers, it was decided not to combine the two fertility levels and patterns. Doing so would have resulted in incorrect low estimates of fertility rates for Indigenous mothers. As such, it was decided to treat Indigenous births to non-Indigenous mothers as a special type of population influx, which will affect the size of the population under the age of one year during the projected years. In estimating the size of paternal fertility during the projected years, age-specific fertility rates of non-Indigenous mothers were applied to the estimates of Indigenous male population by age groups 5 years older than mothers as Indigenous fathers were more than 3 years older than the mothers.

Inter-State Migration

Data from the 2006 Census shows that inter-state migration continues to impact on the size of the NSW Indigenous population in a negative way, at a very similar level to the previous Census results. Annually, on average around 1,198 Indigenous people are migrating to other states, about 52% females, and in return only 812 are migrating to NSW from other States and Territories, again 52% females. The net annual migration for NSW Indigenous population is -355 persons (see Table 3).

**TABLE 3: PLACE OF USUAL RESIDENCE 5 YEARS AGO BY GENDER
COUNT OF INDIGENOUS PERSONS AGED 5 YEARS AND OVER
BASED ON PLACE OF USUAL RESIDENCE**

State of Usual Residence on Census Night										
State of Usual Residence 5 years ago	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total	Total
Departures										
Same address	58190	11854	50090	10792	22919	7494	32746	1531	195761	
Same SLA	24024	3967	14312	2741	8739	3074	2568	126	59568	
NSW	23799	<u>968</u>	<u>3516</u>	<u>297</u>	<u>331</u>	<u>186</u>	<u>206</u>	<u>461</u>	29788	5965
Vic	<u>642</u>	5530	518	191	184	160	99	20	7344	
Qld	<u>2113</u>	562	30193	291	393	195	618	151	34519	
SA	<u>199</u>	219	249	5195	170	55	352	22	6461	
WA	<u>237</u>	190	407	249	12128	83	530	27	13851	
Tas	<u>121</u>	187	253	52	91	2668	35	18	3425	
NT	<u>239</u>	165	833	461	441	33	6126	44	8342	
ACT	<u>344</u>	64	187	26	28	18	44	763	1477	
Other	<u>37</u>	0	0	0	6	0	0	0	43	
Overseas	<u>283</u>	161	320	28	93	34	22	22	963	
Not stated	1286	360	1544	292	739	113	334	25	4693	
Not stated	9771	2331	8697	1965	5488	774	3972	215	33223	
Total	121285	26558	111119	22580	51750	14887	47652	3425	399458	
Total Arrivals	4215									-1750
Net Migration per year										-350

(a) Includes persons who stated that they lived at a different address 5 years ago but did not state that address.

(b) Includes persons who did not state whether they were usually resident at a different address 5 years ago.

Cells in this Table have been randomly adjusted to avoid the release of confidential data.

Regional Projections

Projections were carried out not only for the total of NSW, but also at the NSWALC Regional level: Central, Central Coast, Northern, North-West, North Coast, Sydney-Newcastle, South Coast, Western and Wiradjuri (see NSWALC Regional Map on page viii).

In order to carry out projections at the regional level the following data and assumptions were applied:

1. As discussed before, the concorded regional Census Place of Usual Residence data adjusted by NSW Estimates of Resident Population, at 30 June 2006 by age and gender, were used as the basis of the population estimates at the regional levels.
2. Fertility, mortality and migration assumptions at the total NSW level were applied at regional level projections. Migration data at these geographic levels are not obtainable from Census information. Wherever there is a reference to migration in the regional projections, they relate to paternal fertility, which is treated as a special type of population influx. State level paternal fertility data were pro-rata adjusted at regional levels.

PROJECTION RESULTS

NSW State Level

Population Size

The projected population numbers by gender are presented in Table 4 below. These population projections indicate that the total Indigenous population of NSW will grow from **152,685** in 2006 to **211,265** in 2021, implying an average annual growth rate of almost **2.2 percent** per year during the next 15 years. In comparison, the annual growth rate of the total NSW population in 2006 was estimated to have been **0.9 percent** (ABS, March 2007, Cat. 2914.0.55.002)

TABLE 4: INDICATIVE INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021, NSW

Years	Total	Males	Females	Years	Total	Males	Females
2006	152,685	76,229	76,456	2014	180,656	90,562	90,094
2007	155,692	77,771	77,921	2015	184,720	92,641	92,078
2008	158,852	79,391	79,461	2016	188,891	94,776	94,115
2009	162,155	81,085	81,070	2017	193,164	96,962	96,202
2010	165,596	82,849	82,747	2018	197,539	99,201	98,338
2011	169,171	84,681	84,490	2019	202,013	101,491	100,522
2012	172,876	86,579	86,297	2020	206,588	103,833	102,755
2013	176,706	88,540	88,166	2021	211,265	106,228	105,037

Vital Rates and Population Change

The annual Crude Birth Rate or Birth Rate of the NSW Indigenous population in 2006 is estimated at 20 per 1000 population. As a result of these projections, this rate is estimated at 22 per 1000 in 2021. Although we have assumed a constant Fertility Rate of 2.61 and age-specific fertility rates for Indigenous women of childbearing ages during these projections, however, the change in the annual Birth Rate of the population is mainly due to the changes in age structure of the Indigenous population.

The annual Crude Death Rate or Death Rate of the NSW Indigenous population in 2006 is estimated at 8 per 1000 population. As a result of these projections, this rate is estimated at 9 per 1000 in 2021. Similar to the changes in fertility, although we have assumed a constant mortality regime during these projections, however, the change in the annual Death Rate of the population is mainly due to the changes in age structure of the Indigenous population as more people move into the ages with higher mortality rates.

The important trend to note is that the Indigenous growth rate in NSW is gathering momentum. The rate of growth seems to be increasing during a 5 year projected period compared to the previous period (see Table 5).

For that reason, it is anticipated the population doubling time will be reduced by 6 years from **40 years** in 2006 to **34 years** in 2021. In comparison, the annual growth rate of the total NSW population in 2006 was estimated to have been **0.9 percent** (ABS, March 2007, Cat. 2914.0.55.002), which implies a population doubling time of **78 years**.

As a result of the combined effects of annual births and deaths from 2006 to 2021, the population Rate of Natural Increase grows from 1.2 percent to 1.3 percent. Consequently, as mentioned before, the rate of population growth will continue to increase, from **1.8 percent** in 2006 to **2.0 percent** from 2010 to 2011, and **2.11 percent** from 2015 to 2016 as well as during 2020 to 2021. This suggests an average annual population growth rate of **2.2 percent** for the next 15 year period (Table 5).

TABLE 5: CHANGES IN INDIGENOUS VITAL RATES, 2006, 2011, 2016 & 2021

Vital Rates	2006	2011	2016	2021
Crude Birth Rate (CBR) per 1000	19.9	21.1	21.6	21.5
Crude Death Rate (CDR) per 1000	7.9	7.9	8.3	8.7
Rate of Natural Increase (RNI) percent	1.20	1.32	1.33	1.28
Growth Rate (GR) percent	1.8	2.0	2.1	2.1
Population Doubling time (years)	40	35	34	34

Age and Gender Structure

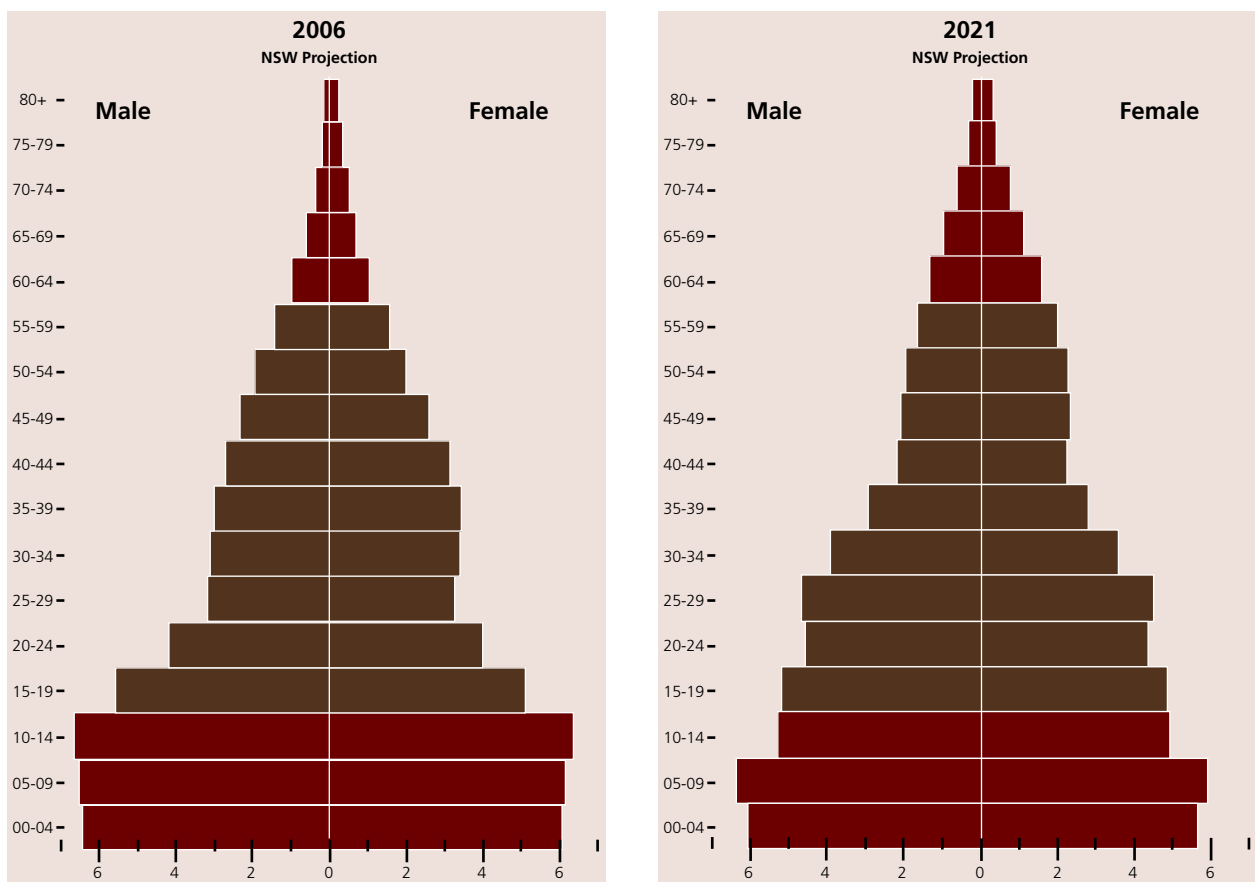
Table 6 shows that over 38 percent of the NSW Indigenous population are currently in the age category of "Under 15 years". Over the next 15 years, a very high proportion of this group will move into the ages of family formation. As a result, the proportion of those in the age category 15 to 29 will grow from 26 percent in 2006 to 28 percent in 2021. The proportion of those in the age bracket 30-59 will not change and will remain at 30 percent. However, the proportion of the aged population of 60 years and over will increase from 5 percent to 8 percent. This growth is likely to have considerable implications on demands for future health services.

TABLE 6: CHANGES IN AGE AND GENDER COMPOSITION, 2006 & 2021

Broad Age Groups	2006			2021		
	Total	Male	Female	Total	Male	Female
0-14	38.2%	39.3%	37.0%	34.2%	35.2%	33.2%
15-29	25.5%	26.2%	24.8%	28.1%	28.7%	27.6%
30-59	31.0%	29.5%	32.4%	30.0%	29.3%	30.8%
60+	5.4%	4.9%	5.8%	7.6%	6.8%	8.4%
All Ages	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The above changes in the NSW Indigenous population age structure are graphically depicted in the Age Pyramids in Chart 2.

**CHART 2: NSW INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
(Percent of Total Population)**



It was assumed that the observed 2006 gender ratio of birth of 108 males per 100 females will continue into the future. However, due to changes in the age structure of the population in future years, the overall population gender ratio will improve from 99.7 males per 100 females to 100.1 males per 100 females. The Child Women Ratio will be slightly lower in 2021 (47 children per 100 women) compared to 2006 (50 children per 100 women).

The proportion of those in the age category 15 to 64 will grow from 58.5 percent in 2006 to 61.1 percent in 2021. The growth of people in the working age group is likely to have considerable implications on new demands for a variety of services, including health, housing and social welfare. As a result, the age dependency ratio will decrease from 71 to 64. Dependency ratio is the ratio of children 0-14 and the aged 65 and over to 100 persons in the working age group.

As a result of the above changes, during the next 15 years, the median age of the NSW Indigenous population will increase by two years, from 21 in 2006 to 23 in 2021. A summary of the changes in the Age-Gender structure of the NSW Indigenous population is reflected in Table 7.

TABLE 7: CHANGES IN AGE AND GENDER COMPOSITION, 2006 & 2021

Age-Gender Indicators	2006	2011	2016	2021
Total population	152,685	169,171	188,891	211,265
Male population	76,229	84,681	94,776	106,228
Female population	76,456	84,490	94,115	105,037
Percent 0-4	12.51	10.98	11.57	11.73
Percent 5-14	25.71	24.09	22.93	22.51
Percent 15-49	49.44	51.16	50.6	50.21
Percent 15-64	58.46	61.29	61.35	61.09
Percent 65 and over	3.32	3.63	4.15	4.68
Percent females 15-49 ¹	49.97	51.41	50.44	49.69
Gender ratio (males per 100 females)	99.7	100.2	100.7	101.1
Dependency Ratio ²	71	63	63	64
Median age (years)	21	22	23	23
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio	50.0	43.0	46.0	47.0

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

TABLE 8: DETAILED INDIGENOUS POPULATION PROJECTIONS BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021

Years	Total	Male	Female	Total	Male	Female
2006						
0-4	19,105	9,853	9,252	12.5%	12.9%	12.1%
5-9	19,367	9,965	9,402	12.7%	13.1%	12.3%
10-14	19,885	10,173	9,712	13.0%	13.3%	12.7%
15-19	16,398	8,589	7,809	10.7%	11.3%	10.2%
20-24	12,623	6,500	6,123	8.3%	8.5%	8.0%
25-29	9,875	4,872	5,003	6.5%	6.4%	6.5%
30-34	10,051	4,810	5,241	6.6%	6.3%	6.9%
35-39	9,921	4,674	5,247	6.5%	6.1%	6.9%
40-44	8,993	4,190	4,803	5.9%	5.5%	6.3%
45-49	7,632	3,652	3,980	5.0%	4.8%	5.2%
50-54	6,060	2,969	3,091	4.0%	3.9%	4.0%
55-59	4,600	2,215	2,385	3.0%	2.9%	3.1%
60-64	3,112	1,545	1,567	2.0%	2.0%	2.0%
65-69	2,119	991	1,128	1.4%	1.3%	1.5%
70-74	1,436	659	777	0.9%	0.9%	1.0%
75-79	833	330	503	0.5%	0.4%	0.7%
80+	675	242	433	0.4%	0.3%	0.6%
Total	152,685	76,229	76,456	100.0%	100.0%	100.0%

**TABLE 8 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021**

Years	Total	Male	Female	Total	Male	Female
2011						
0-4	18,575	9,616	8,959	11.0%	11.4%	10.6%
5-9	21,705	11,214	10,491	12.8%	13.2%	12.4%
10-14	19,054	9,793	9,261	11.3%	11.6%	11.0%
15-19	19,800	10,120	9,680	11.7%	12.0%	11.5%
20-24	16,249	8,497	7,752	9.6%	10.0%	9.2%
25-29	12,477	6,412	6,065	7.4%	7.6%	7.2%
30-34	9,737	4,794	4,944	5.8%	5.7%	5.9%
35-39	9,875	4,713	5,163	5.8%	5.6%	6.1%
40-44	9,696	4,548	5,147	5.7%	5.4%	6.1%
45-49	8,716	4,034	4,682	5.2%	4.8%	5.5%
50-54	7,298	3,457	3,840	4.3%	4.1%	4.5%
55-59	5,673	2,741	2,932	3.4%	3.2%	3.5%
60-64	4,170	1,967	2,203	2.5%	2.3%	2.6%
65-69	2,677	1,293	1,385	1.6%	1.5%	1.6%
70-74	1,683	757	926	1.0%	0.9%	1.1%
75-79	1,015	444	571	0.6%	0.5%	0.7%
80+	771	282	489	0.5%	0.3%	0.6%
Total	169,171	84,681	84,490	100.0%	100.0%	100.0%
2016						
0-4	21,861	11,313	10,548	11.6%	11.9%	11.2%
5-9	21,977	11,393	10,585	11.6%	12.0%	11.2%
10-14	21,333	11,011	10,322	11.3%	11.6%	11.0%
15-19	18,981	9,746	9,235	10.0%	10.3%	9.8%
20-24	19,618	10,009	9,609	10.4%	10.6%	10.2%
25-29	16,060	8,381	7,679	8.5%	8.8%	8.2%
30-34	12,306	6,311	5,995	6.5%	6.7%	6.4%
35-39	9,568	4,698	4,870	5.1%	5.0%	5.2%
40-44	9,648	4,585	5,063	5.1%	4.8%	5.4%
45-49	9,395	4,379	5,016	5.0%	4.6%	5.3%
50-54	8,335	3,819	4,517	4.4%	4.0%	4.8%
55-59	6,834	3,191	3,644	3.6%	3.4%	3.9%
60-64	5,141	2,434	2,707	2.7%	2.6%	2.9%
65-69	3,594	1,646	1,948	1.9%	1.7%	2.1%
70-74	2,132	991	1,141	1.1%	1.0%	1.2%
75-79	1,194	511	682	0.6%	0.5%	0.7%
80+	912	359	554	0.5%	0.4%	0.6%
Total	188,891	94,776	94,115	100.0%	100.0%	100.0%

**TABLE 8 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021**

Years	Total	Male	Female	Total	Male	Female
2021						
0-4	24,771	12,816	2021	11.7%	12.1%	11.4%
5-9	25,993	13,466	12,527	12.3%	12.7%	11.9%
10-14	21,554	11,162	10,392	10.2%	10.5%	9.9%
15-19	21,260	10,963	10,297	10.1%	10.3%	9.8%
20-24	18,803	9,638	9,165	8.9%	9.1%	8.7%
25-29	19,387	9,870	9,517	9.2%	9.3%	9.1%
30-34	15,839	8,249	7,590	7.5%	7.8%	7.2%
35-39	12,097	6,188	5,908	5.7%	5.8%	5.6%
40-44	9,350	4,573	4,778	4.4%	4.3%	4.5%
45-49	9,345	4,412	4,933	4.4%	4.2%	4.7%
50-54	8,981	4,144	4,837	4.3%	3.9%	4.6%
55-59	7,806	3,523	4,283	3.7%	3.3%	4.1%
60-64	6,194	2,830	3,364	2.9%	2.7%	3.2%
65-69	4,425	2,034	2,391	2.1%	1.9%	2.3%
70-74	2,865	1,260	1,605	1.4%	1.2%	1.5%
75-79	1,517	671	845	0.7%	0.6%	0.8%
80+	1,076	429	648	0.5%	0.4%	0.6%
Total	211,265	106,228	105,037	100.0%	100.0%	100.0%



REGIONAL PROJECTIONS

Regional Summary

A summary of the NSWALC Regional levels projections is presented in Table 9 below which shows that in 2006 over 40 percent of Indigenous people in NSW lived in the Sydney-Newcastle Region, followed by 12.5 percent in Wiradjuri Region. The sizes of the Indigenous populations in other Regions vary, from the smallest, 2.2 percent in the Western Region, to 8.8 percent in the South-Coast Region.

The assumption of constant levels of fertility, mortality and migration ensure these proportions remain mostly the same during the next 15 years.

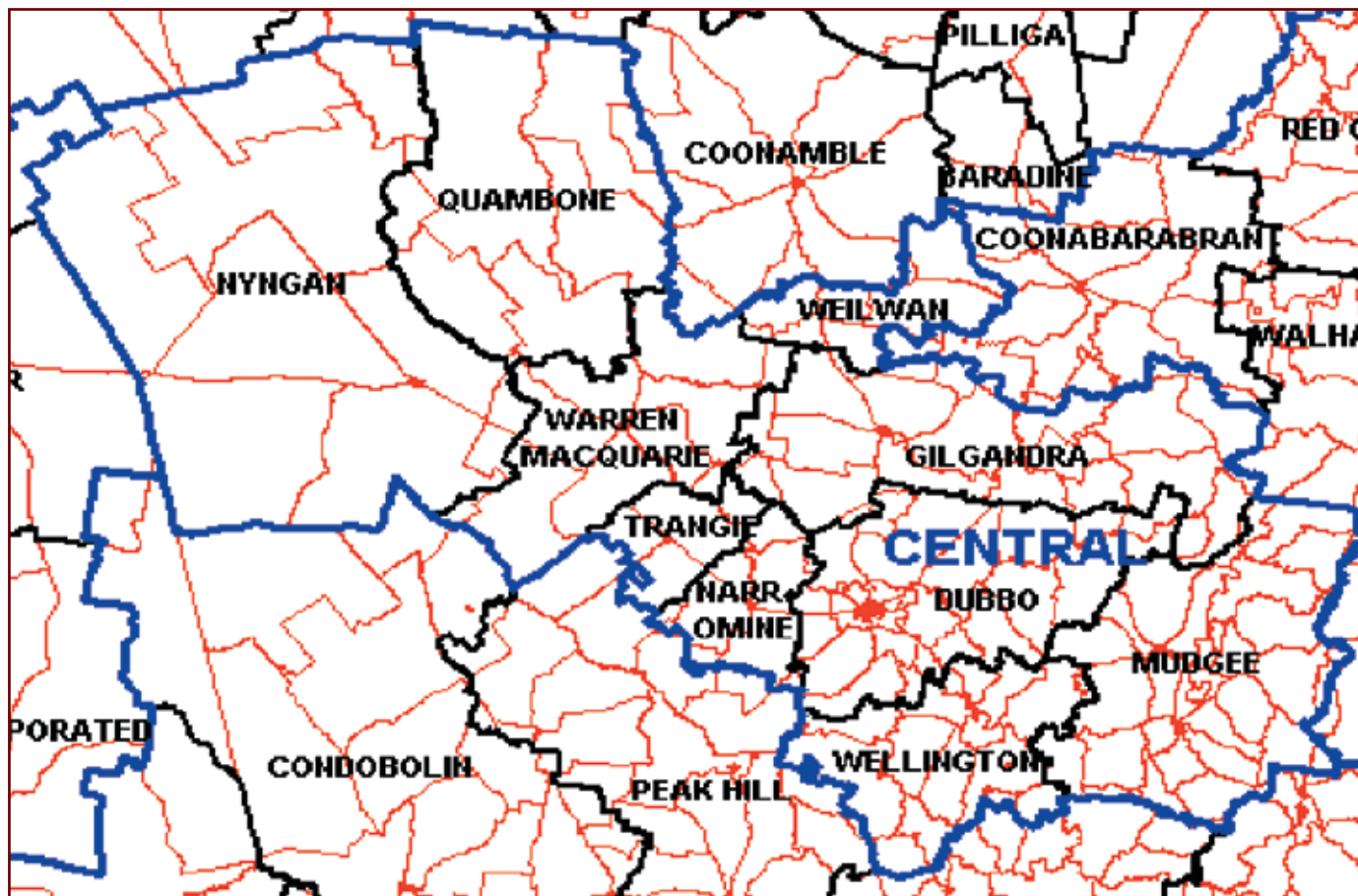
**TABLE 9: INDIGENOUS POPULATION PROJECTIONS 2006-2021,
NSWALC REGIONAL LEVELS SUMMARY**

NSWALC REGIONS	2006	2011	2016	2021	% NSW	% NSW
					2006	2021
CENTRAL REGION						
Total population	9,127	10,143	11,379	12,791	6.0%	6.1%
Male population	4,537	5,051	5,680	6,403	6.0%	6.0%
Female population	4,590	5,092	5,699	6,388	6.0%	6.1%
CENTRAL COAST REGION						
Total population	12,336	13,592	15,177	17,031	8.1%	8.1%
Male population	6,112	6,759	7,575	8,526	8.0%	8.0%
Female population	6,224	6,832	7,602	8,505	8.1%	8.1%
NORTH COAST REGION						
Total population	10,542	11,668	13,011	14,563	6.9%	6.9%
Male population	5,215	5,785	6,469	7,264	6.8%	6.8%
Female population	5,327	5,883	6,542	7,300	7.0%	6.9%
NORTHERN REGION						
Total population	12,874	14,222	15,888	17,824	8.4%	8.4%
Male population	6,461	7,153	8,008	8,999	8.5%	8.5%
Female population	6,413	7,069	7,880	8,825	8.4%	8.4%
NORTH-WEST REGION						
Total population	9,766	10,775	11,981	13,364	6.4%	6.3%
Male population	4,744	5,259	5,871	6,569	6.2%	6.2%
Female population	5,022	5,516	6,111	6,795	6.6%	6.5%
SOUTH-COAST REGION						
Total population	13,460	14,904	16,652	18,638	8.8%	8.8%
Male population	6,786	7,532	8,434	9,459	8.9%	8.9%
Female population	6,674	7,371	8,218	9,179	8.7%	8.7%
SYDNEY-NEWCASTLE REGION						
Total population	61,668	68,550	76,553	85,461	40.4%	40.5%
Male population	30,764	34,287	38,373	42,920	40.4%	40.4%
Female population	30,904	34,263	38,181	42,541	40.4%	40.5%
WESTERN REGION						
Total population	3,423	3,796	4,239	4,731	2.2%	2.2%
Male population	1,731	1,921	2,149	2,402	2.3%	2.3%
Female population	1,692	1,875	2,090	2,329	2.2%	2.2%
WIRADJURI REGION						
Total population	18,995	21,033	23,533	26,397	12.4%	12.5%
Male population	9,581	10,628	11,909	13,377	12.6%	12.6%
Female population	9,414	10,405	11,624	13,020	12.3%	12.4%
NSW ¹						
Total population	152,685	169,171	188,891	211,265	100.0%	100.0%
Male population	76,229	84,681	94,776	106,228	100.0%	100.0%
Female population	76,456	84,490	94,115	105,037	100.0%	100.0%

¹ Total NSW does not add to the sum of the Regions as it also includes data for Not Further Defined (NFD) areas including any unincorporated areas.

NSWALC CENTRAL REGION

MAP 1: NSWALC CENTRAL REGION



LEGEND

- NSW ALC Main Regions
- NSW LALC
- 2006 Census Collection

**TABLE 10: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC CENTRAL REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	9,127	4,537	4,590	2014	10,860	5,416	5,445
2007	9,311	4,630	4,682	2015	11,116	5,546	5,570
2008	9,506	4,728	4,778	2016	11,379	5,680	5,699
2009	9,709	4,831	4,878	2017	11,648	5,817	5,831
2010	9,922	4,939	4,983	2018	11,924	5,959	5,966
2011	10,143	5,051	5,092	2019	12,207	6,103	6,104
2012	10,374	5,168	5,205	2020	12,496	6,252	6,244
2013	10,613	5,290	5,323	2021	12,791	6,403	6,388

**TABLE 11: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC CENTRAL REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	53	43	46	48
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.6	62.6	62.6	62.6
Migration				
Male migration	27	35	43	51
Female migration	25	32	39	46
Total migration	52	67	82	97
Vital Rates				
Crude Birth Rate (CBR) per 1000	19.8	21.5	22.5	22.3
Crude Death Rate (CDR) per 1000	7.4	7.6	8.1	8.4
Rate of Natural Increase (RNI) percent	1.24	1.39	1.44	1.39
Growth Rate (GR) percent	1.81	2.05	2.16	2.15
Population Doubling Time (Years)	38.6	34.2	32.4	32.5
Annual births and deaths				
Births	181	218	256	286
Deaths	68	77	92	107
Population				
Total population	9,127	10,143	11,379	12,791
Male population	4,537	5,051	5,680	6,403
Female population	4,590	5,092	5,699	6,388
Percent 0-4	13.17	11.05	11.84	12.06
Percent 5-14	28.26	26.3	23.36	22.6
Percent 15-49	46.85	49.63	51.03	50.98
Percent 15-64	55.57	59.22	60.69	60.91
Percent 65 and over	3	3.43	4.12	4.43
Percent females 15-49 ¹	49.6	50.8	51.1	50.1
Gender Ratio	98.85	99.2	99.66	100.24
Dependency Ratio ²	80	69	65	64
Median age	19	20	22	22

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

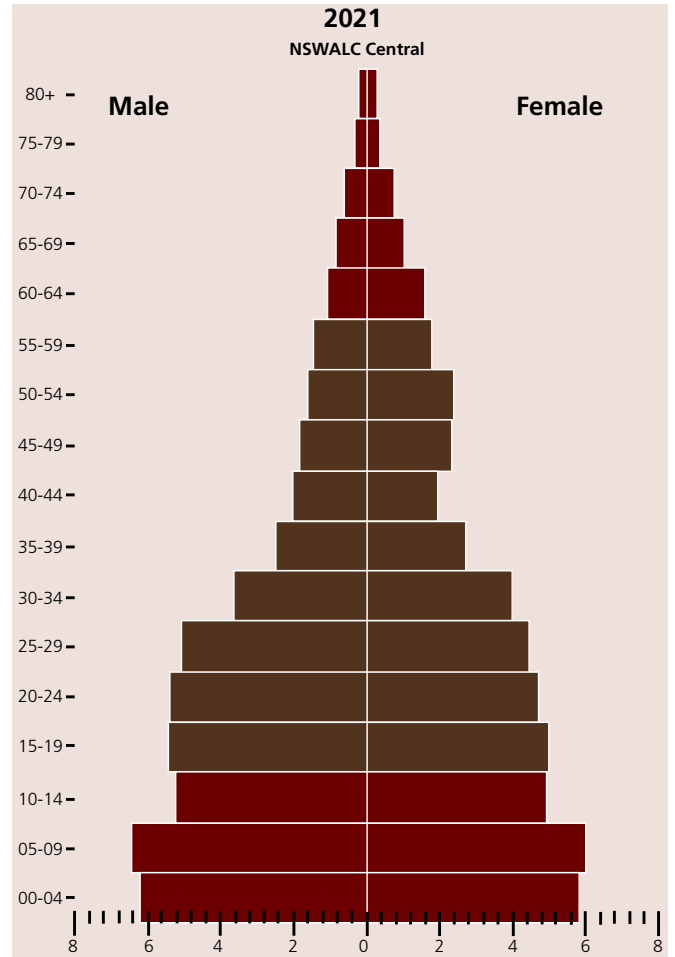
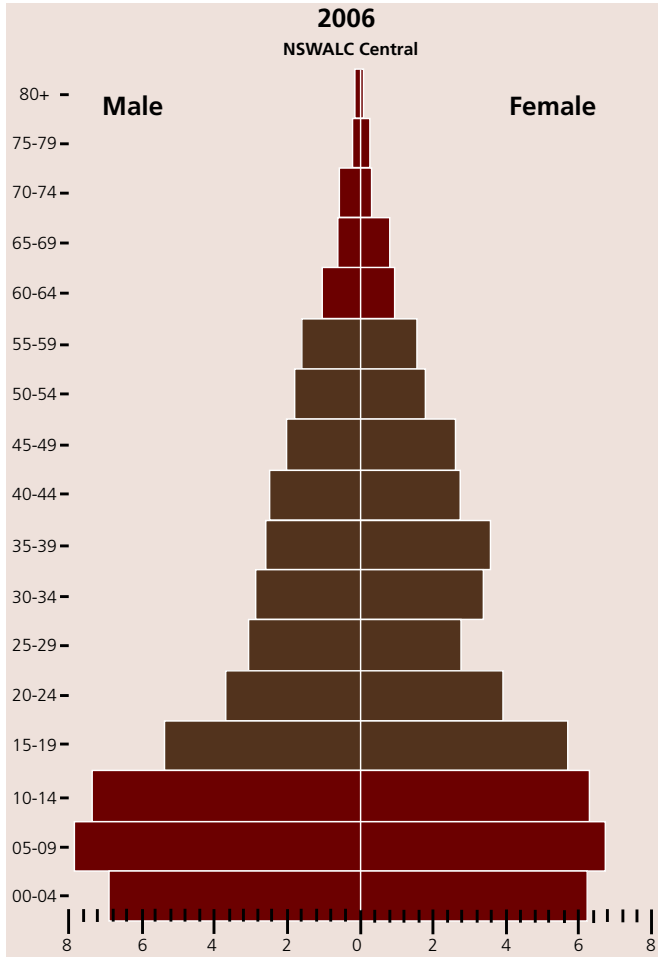
**TABLE 12: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC CENTRAL REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,202	629	573	13.2%	13.9%	12.5%
5-9	1,331	714	617	14.6%	15.7%	13.4%
10-14	1,248	668	580	13.7%	14.7%	12.6%
15-19	1,013	489	524	11.1%	10.8%	11.4%
20-24	698	337	361	7.6%	7.4%	7.9%
25-29	533	276	257	5.8%	6.1%	5.6%
30-34	569	258	311	6.2%	5.7%	6.8%
35-39	563	235	328	6.2%	5.2%	7.1%
40-44	477	223	254	5.2%	4.9%	5.5%
45-49	423	182	241	4.6%	4.0%	5.3%
50-54	327	161	166	3.6%	3.5%	3.6%
55-59	289	145	144	3.2%	3.2%	3.1%
60-64	180	91	89	2.0%	2.0%	1.9%
65-69	127	53	74	1.4%	1.2%	1.6%
70-74	83	49	34	0.9%	1.1%	0.7%
75-79	43	17	26	0.5%	0.4%	0.6%
80+	21	10	11	0.2%	0.2%	0.2%
Total	9,127	4,537	4,590	100.0%	100.0%	100.0%
2011						
0-4	1,121	578	542	11.1%	11.4%	10.6%
5-9	1,357	708	648	13.4%	14.0%	12.7%
10-14	1,311	703	608	12.9%	13.9%	11.9%
15-19	1,243	664	578	12.3%	13.1%	11.4%
20-24	1,004	484	520	9.9%	9.6%	10.2%
25-29	690	332	358	6.8%	6.6%	7.0%
30-34	525	272	254	5.2%	5.4%	5.0%
35-39	559	253	306	5.5%	5.0%	6.0%
40-44	551	229	322	5.4%	4.5%	6.3%
45-49	462	215	248	4.6%	4.3%	4.9%
50-54	405	172	233	4.0%	3.4%	4.6%
55-59	306	148	157	3.0%	2.9%	3.1%
60-64	262	129	133	2.6%	2.6%	2.6%
65-69	155	76	79	1.5%	1.5%	1.6%
70-74	101	40	61	1.0%	0.8%	1.2%
75-79	58	33	25	0.6%	0.7%	0.5%
80+	34	14	20	0.3%	0.3%	0.4%
Total	10,143	5,051	5,092	100.0%	100.0%	100.0%

**TABLE 12 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC CENTRAL REGION**

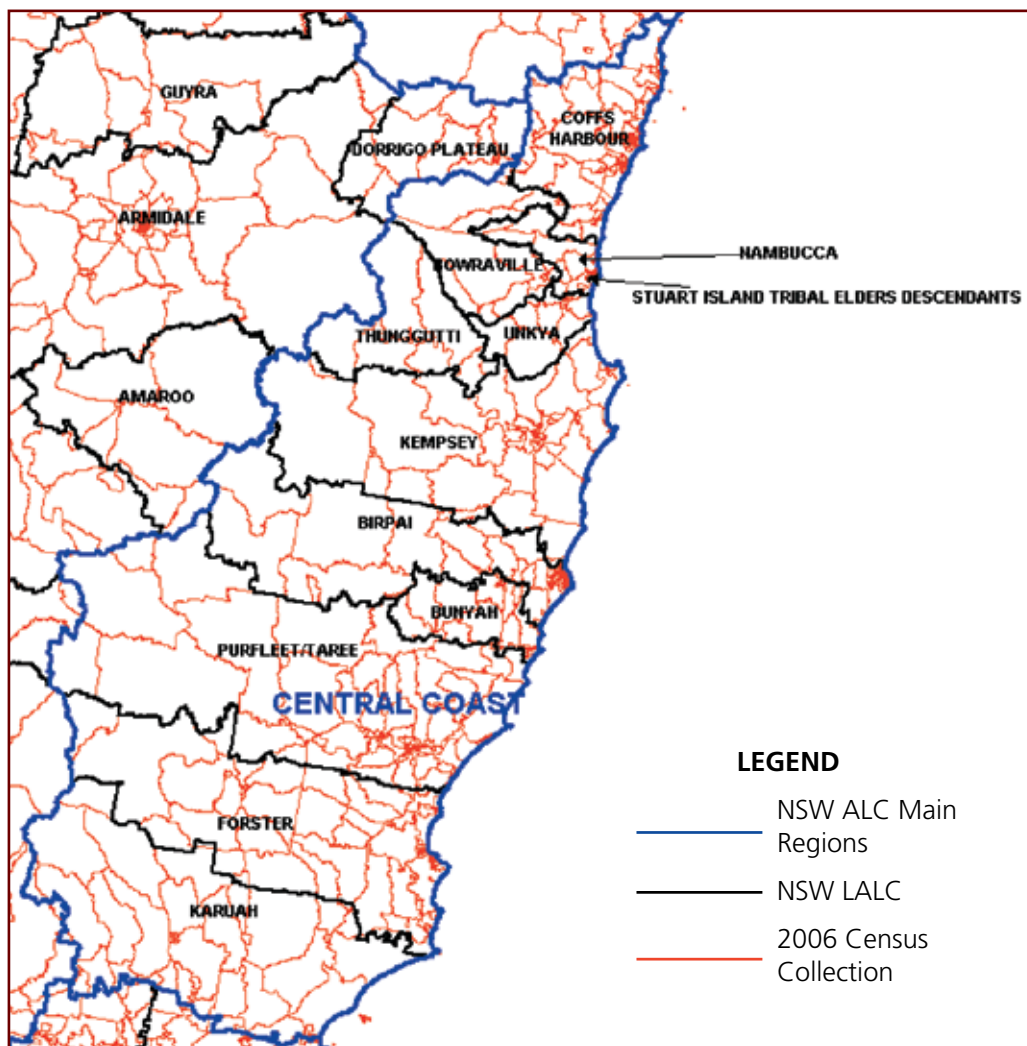
	Total	Male	Female	Total	Male	Female
2016						
0-4	1,347	696	651	11.8%	12.3%	11.4%
5-9	1,324	684	640	11.6%	12.0%	11.2%
10-14	1,334	696	638	11.7%	12.3%	11.2%
15-19	1,306	699	606	11.5%	12.3%	10.6%
20-24	1,231	657	574	10.8%	11.6%	10.1%
25-29	993	477	515	8.7%	8.4%	9.0%
30-34	681	327	354	6.0%	5.8%	6.2%
35-39	516	266	250	4.5%	4.7%	4.4%
40-44	546	246	300	4.8%	4.3%	5.3%
45-49	534	220	314	4.7%	3.9%	5.5%
50-54	442	203	239	3.9%	3.6%	4.2%
55-59	380	159	221	3.3%	2.8%	3.9%
60-64	277	131	145	2.4%	2.3%	2.5%
65-69	225	108	118	2.0%	1.9%	2.1%
70-74	124	59	65	1.1%	1.0%	1.1%
75-79	72	27	45	0.6%	0.5%	0.8%
80+	48	24	24	0.4%	0.4%	0.4%
Total	11,379	5,680	5,699	100.0%	100.0%	100.0%
2021						
0-4	1,542	797	745	12.1%	12.4%	11.7%
5-9	1,593	824	769	12.5%	12.9%	12.0%
10-14	1,298	670	629	10.1%	10.5%	9.8%
15-19	1,329	693	637	10.4%	10.8%	10.0%
20-24	1,293	692	602	10.1%	10.8%	9.4%
25-29	1,217	648	568	9.5%	10.1%	8.9%
30-34	979	470	509	7.7%	7.3%	8.0%
35-39	669	321	349	5.2%	5.0%	5.5%
40-44	504	259	245	3.9%	4.0%	3.8%
45-49	529	237	292	4.1%	3.7%	4.6%
50-54	511	208	303	4.0%	3.2%	4.7%
55-59	414	188	226	3.2%	2.9%	3.5%
60-64	345	141	204	2.7%	2.2%	3.2%
65-69	238	109	128	1.9%	1.7%	2.0%
70-74	179	82	97	1.4%	1.3%	1.5%
75-79	88	40	48	0.7%	0.6%	0.8%
80+	62	25	37	0.5%	0.4%	0.6%
Total	12,791	6,403	6,388	100.0%	100.0%	100.0%

**CHART 3: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC CENTRAL REGION
(Percent of Total Population)**



NSWALC CENTRAL COAST REGION

MAP 2: NSWALC CENTRAL COAST REGION



**TABLE 13: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC CENTRAL COAST REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	12,336	6,112	6,224	2014	14,507	7,230	7,277
2007	12,558	6,227	6,331	2015	14,837	7,400	7,437
2008	12,795	6,349	6,446	2016	15,177	7,575	7,602
2009	13,047	6,479	6,568	2017	15,528	7,755	7,773
2010	13,312	6,615	6,697	2018	15,889	7,940	7,949
2011	13,592	6,759	6,832	2019	16,260	8,130	8,129
2012	13,884	6,910	6,974	2020	16,640	8,325	8,315
2013	14,190	7,067	7,123	2021	17,031	8,526	8,505

**TABLE 14: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC CENTRAL COAST REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	54	43	47	49
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.6	62.6	62.6	62.6
Migration				
Male migration	37	48	58	69
Female migration	33	43	53	63
Total migration	70	91	111	132
Vital Rates				
Crude Birth Rate (CBR) per 1000	18.2	20.6	22.1	22.5
Crude Death Rate (CDR) per 1000	8	8.1	8.5	8.9
Rate of Natural Increase (RNI) percent	1.02	1.25	1.36	1.36
Growth Rate (GR) percent	1.58	1.92	2.09	2.13
Population Doubling Time (Years)	44.1	36.4	33.5	32.8
Annual births and deaths				
Births	224	280	335	382
Deaths	99	109	129	151
Population				
Total population	12,336	13,592	15,177	17,031
Male population	6,112	6,759	7,575	8,526
Female population	6,224	6,832	7,602	8,505
Percent 0-4	12.74	10.57	11.64	12.08
Percent 5-14	27.11	25.29	22.82	22.19
Percent 15-49	46.9	49.08	50.04	49.85
Percent 15-64	56.7	60.38	61.18	60.61
Percent 65 and over	3.45	3.77	4.36	5.12
Percent females 15-49 ¹	47.12	49.11	49.27	49.22
Gender ratio	98.2	98.93	99.64	100.24
Dependency ratio ²	76	66	63	65
Median age	19	21	22	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

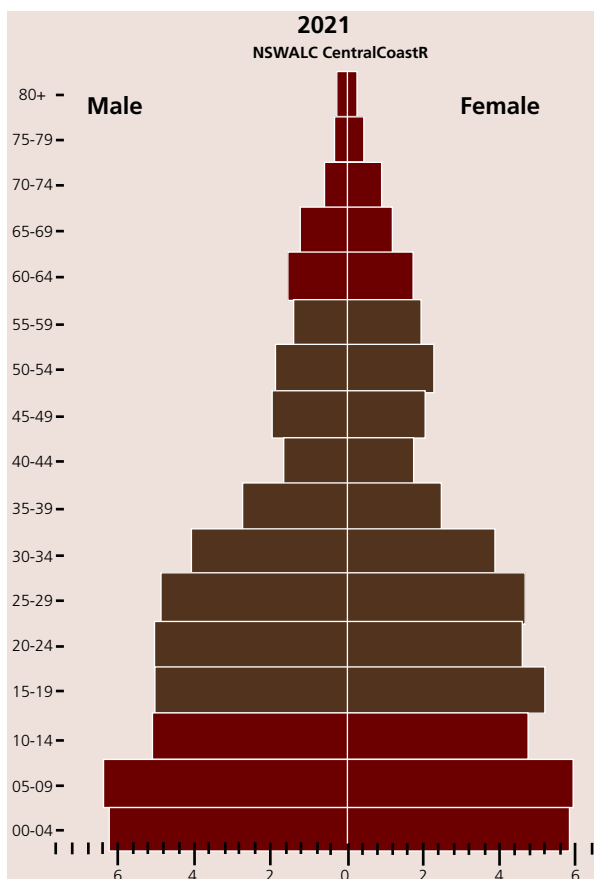
**TABLE 15: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC CENTRAL COAST REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,571	764	807	12.7%	12.5%	13.0%
5-9	1,682	880	802	13.6%	14.4%	12.9%
10-14	1,662	850	812	13.5%	13.9%	13.0%
15-19	1,397	723	674	11.3%	11.8%	10.8%
20-24	917	482	435	7.4%	7.9%	7.0%
25-29	608	302	306	4.9%	4.9%	4.9%
30-34	739	366	373	6.0%	6.0%	6.0%
35-39	786	360	426	6.4%	5.9%	6.8%
40-44	651	283	368	5.3%	4.6%	5.9%
45-49	687	336	351	5.6%	5.5%	5.6%
50-54	560	298	262	4.5%	4.9%	4.2%
55-59	391	169	222	3.2%	2.8%	3.6%
60-64	259	117	142	2.1%	1.9%	2.3%
65-69	175	90	85	1.4%	1.5%	1.4%
70-74	116	40	76	0.9%	0.7%	1.2%
75-79	64	24	40	0.5%	0.4%	0.6%
80+	71	28	43	0.6%	0.5%	0.7%
Total	12,336	6,112	6,224	100.0%	100.0%	100.0%
2011						
0-4	1,436	743	693	10.6%	11.0%	10.1%
5-9	1,781	874	907	13.1%	12.9%	13.3%
10-14	1,656	866	790	12.2%	12.8%	11.6%
15-19	1,655	845	809	12.2%	12.5%	11.8%
20-24	1,384	715	669	10.2%	10.6%	9.8%
25-29	907	476	431	6.7%	7.0%	6.3%
30-34	599	297	302	4.4%	4.4%	4.4%
35-39	726	359	367	5.3%	5.3%	5.4%
40-44	768	350	418	5.7%	5.2%	6.1%
45-49	631	272	359	4.6%	4.0%	5.3%
50-54	656	318	339	4.8%	4.7%	5.0%
55-59	524	275	248	3.9%	4.1%	3.6%
60-64	356	151	205	2.6%	2.2%	3.0%
65-69	223	98	126	1.6%	1.4%	1.8%
70-74	139	69	70	1.0%	1.0%	1.0%
75-79	83	27	56	0.6%	0.4%	0.8%
80+	68	24	43	0.5%	0.4%	0.6%
Total	13,592	6,759	6,832	100.0%	100.0%	100.0%

**TABLE 15 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC CENTRAL COAST REGION**

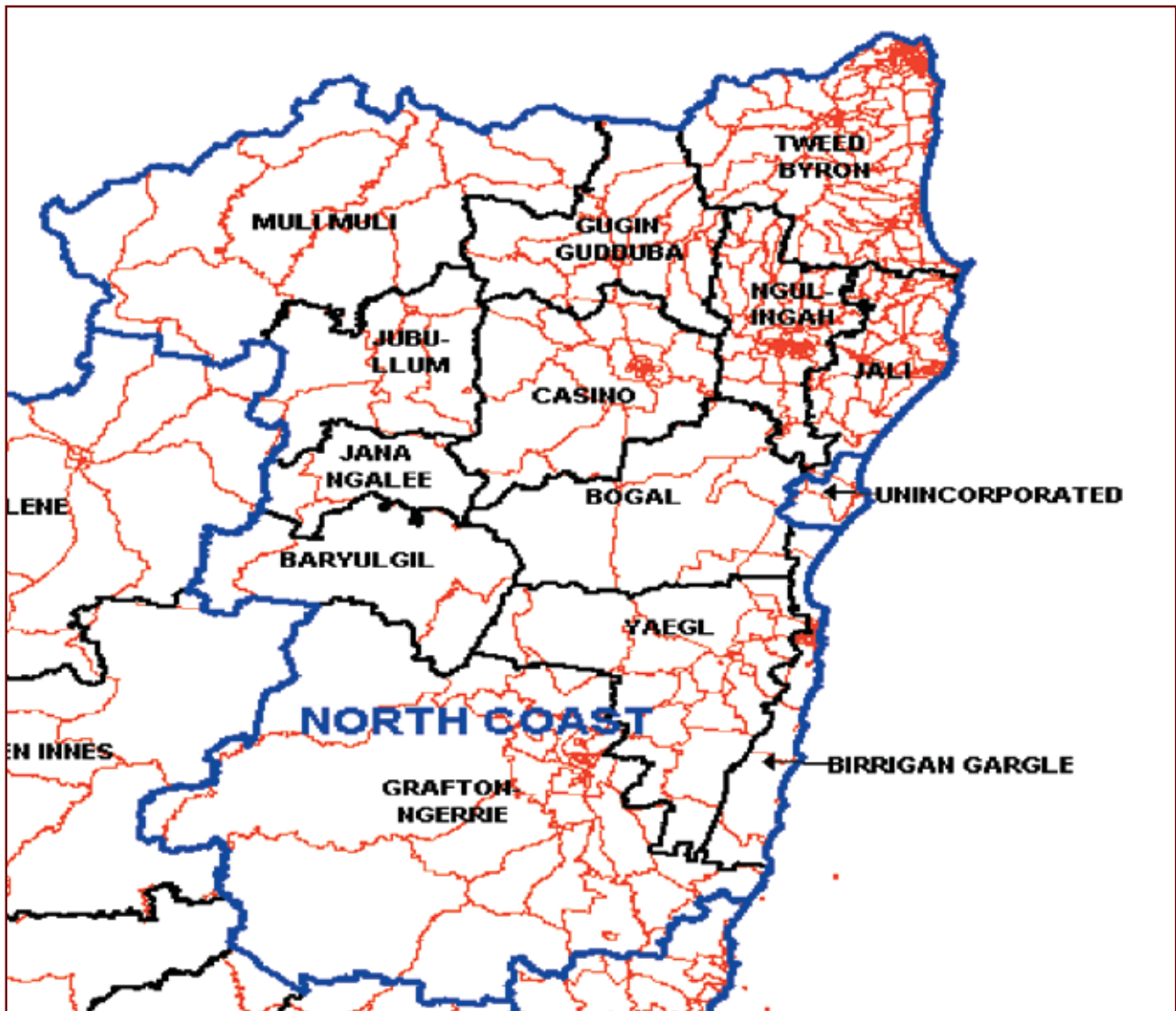
	Total	Male	Female	Total	Male	Female
2016						
0-4	1,766	913	854	11.6%	12.1%	11.2%
5-9	1,713	887	826	11.3%	11.7%	10.9%
10-14	1,751	858	893	11.5%	11.3%	11.7%
15-19	1,649	861	788	10.9%	11.4%	10.4%
20-24	1,640	836	803	10.8%	11.0%	10.6%
25-29	1,368	706	663	9.0%	9.3%	8.7%
30-34	894	468	426	5.9%	6.2%	5.6%
35-39	589	291	298	3.9%	3.8%	3.9%
40-44	709	349	360	4.7%	4.6%	4.7%
45-49	745	338	407	4.9%	4.5%	5.4%
50-54	603	257	346	4.0%	3.4%	4.6%
55-59	614	292	321	4.0%	3.9%	4.2%
60-64	474	245	229	3.1%	3.2%	3.0%
65-69	308	127	181	2.0%	1.7%	2.4%
70-74	178	74	104	1.2%	1.0%	1.4%
75-79	98	47	51	0.6%	0.6%	0.7%
80+	77	25	52	0.5%	0.3%	0.7%
Total	15,177	7,575	7,602	100.0%	100.0%	100.0%
2021						
0-4	2,058	1,063	995	12.1%	12.5%	11.7%
5-9	2,101	1,087	1,015	12.3%	12.7%	11.9%
10-14	1,679	868	810	9.9%	10.2%	9.5%
15-19	1,745	854	890	10.2%	10.0%	10.5%
20-24	1,634	852	782	9.6%	10.0%	9.2%
25-29	1,620	825	796	9.5%	9.7%	9.4%
30-34	1,350	695	655	7.9%	8.2%	7.7%
35-39	880	459	420	5.2%	5.4%	4.9%
40-44	575	283	292	3.4%	3.3%	3.4%
45-49	686	335	351	4.0%	3.9%	4.1%
50-54	713	320	393	4.2%	3.8%	4.6%
55-59	565	237	328	3.3%	2.8%	3.9%
60-64	555	259	296	3.3%	3.0%	3.5%
65-69	408	205	202	2.4%	2.4%	2.4%
70-74	247	98	149	1.5%	1.1%	1.8%
75-79	127	50	78	0.7%	0.6%	0.9%
80+	89	36	53	0.5%	0.4%	0.6%
Total	17,031	8,526	8,505	100.0%	100.0%	100.0%

**CHART 3: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC CENTRAL COAST REGION
(Percent of Total Population)**



NSWALC NORTH COAST REGION

MAP 3: NSWALC NORTH COAST REGION



LEGEND

- NSW ALC Main Regions
- NSW LALC
- 2006 Census Collection

**TABLE 16: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC NORTH COAST REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	10,542	5,215	5,327	2014	12,447	6,181	6,266
2007	10,750	5,320	5,430	2015	12,725	6,323	6,402
2008	10,967	5,430	5,537	2016	13,011	6,469	6,542
2009	11,192	5,543	5,649	2017	13,305	6,619	6,686
2010	11,426	5,662	5,764	2018	13,607	6,774	6,833
2011	11,668	5,785	5,883	2019	13,917	6,933	6,985
2012	11,919	5,912	6,007	2020	14,236	7,096	7,140
2013	12,179	6,044	6,134	2021	14,563	7,264	7,300

**TABLE 17: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC NORTH COAST REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	49	42	45	47
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.6	62.6	62.6	62.6
Migration				
Male migration	31	40	50	59
Female migration	29	37	46	54
Total migration	60	78	95	113
Vital Rates				
Crude Birth Rate (CBR) per 1000	19.7	20.5	21.4	21.7
Crude Death Rate (CDR) per 1000	7.5	7.8	8.3	8.6
Rate of Natural Increase (RNI) percent	1.22	1.27	1.31	1.31
Growth Rate (GR) percent	1.79	1.94	2.05	2.08
Population Doubling Time (Years)	39.1	36.1	34.2	33.6
Annual births and deaths				
Births	208	239	279	316
Deaths	79	91	108	126
Population				
Total population	10,542	11,668	13,011	14,563
Male population	5,215	5,785	6,469	7,264
Female population	5,327	5,883	6,542	7,300
Percent 0-4	12.28	10.77	11.41	11.77
Percent 5-14	26.01	24.59	22.62	22.22
Percent 15-49	50.15	50.8	51.16	49.91
Percent 15-64	58.42	60.89	62.21	61.63
Percent 65 and over	3.28	3.75	3.76	4.38
Percent females 15-49	50.03	50.7	50.82	49.7
Gender ratio ¹	97.9	98.32	98.88	99.51
Dependency ratio ²	71	64	61	62
Median age	21	22	23	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

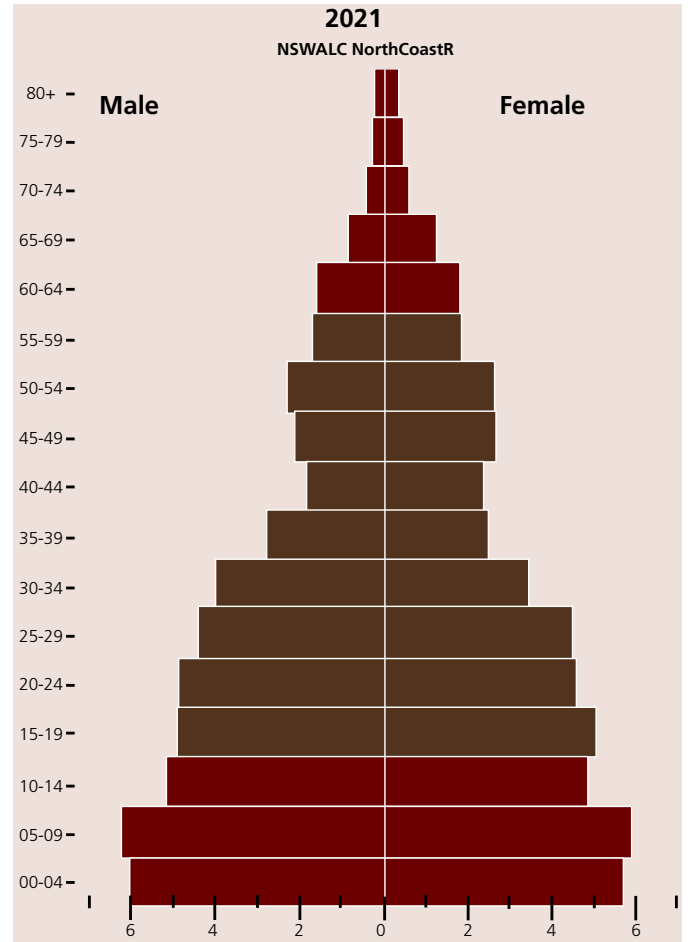
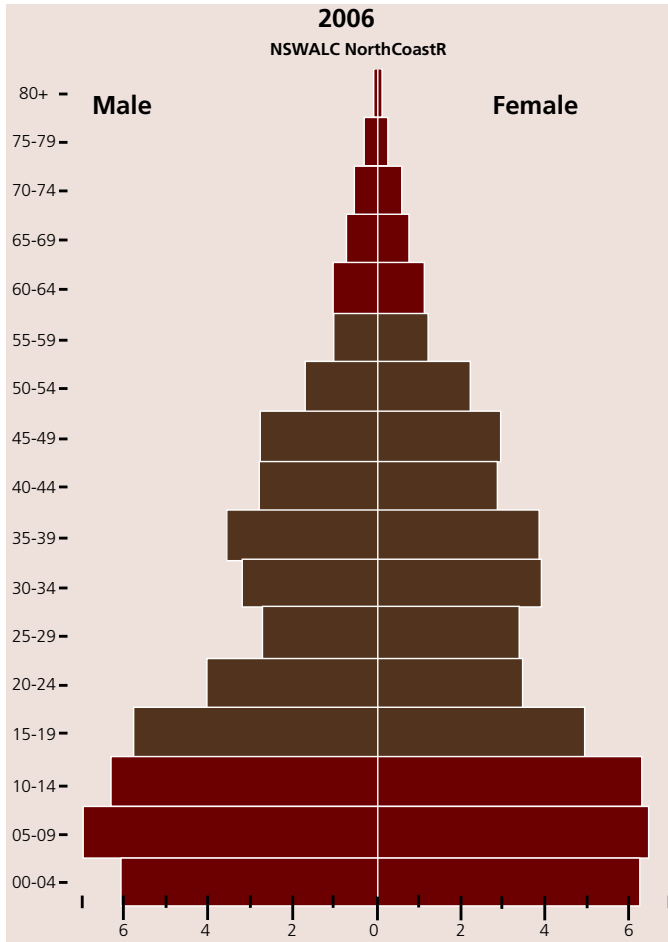
**TABLE 18: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTH COAST REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,295	639	656	12.3%	12.3%	12.3%
5-9	1,416	734	682	13.4%	14.1%	12.8%
10-14	1,326	666	660	12.6%	12.8%	12.4%
15-19	1,125	609	516	10.7%	11.7%	9.7%
20-24	790	423	367	7.5%	8.1%	6.9%
25-29	648	289	359	6.1%	5.5%	6.7%
30-34	750	338	412	7.1%	6.5%	7.7%
35-39	781	376	405	7.4%	7.2%	7.6%
40-44	591	292	299	5.6%	5.6%	5.6%
45-49	602	295	307	5.7%	5.7%	5.8%
50-54	411	180	231	3.9%	3.5%	4.3%
55-59	237	106	131	2.2%	2.0%	2.5%
60-64	224	106	118	2.1%	2.0%	2.2%
65-69	155	73	82	1.5%	1.4%	1.5%
70-74	115	52	63	1.1%	1.0%	1.2%
75-79	60	32	28	0.6%	0.6%	0.5%
80+	16	5	11	0.2%	0.1%	0.2%
Total	10,542	5,215	5,327	100.0%	100.0%	100.0%
2011						
0-4	1,256	648	608	10.8%	11.2%	10.3%
5-9	1,476	732	744	12.6%	12.7%	12.6%
10-14	1,394	722	672	11.9%	12.5%	11.4%
15-19	1,320	663	658	11.3%	11.5%	11.2%
20-24	1,115	602	512	9.6%	10.4%	8.7%
25-29	781	417	364	6.7%	7.2%	6.2%
30-34	639	284	355	5.5%	4.9%	6.0%
35-39	737	331	406	6.3%	5.7%	6.9%
40-44	763	366	397	6.5%	6.3%	6.7%
45-49	572	281	291	4.9%	4.9%	4.9%
50-54	576	279	296	4.9%	4.8%	5.0%
55-59	386	167	219	3.3%	2.9%	3.7%
60-64	215	94	121	1.8%	1.6%	2.1%
65-69	192	88	104	1.6%	1.5%	1.8%
70-74	123	56	67	1.1%	1.0%	1.1%
75-79	81	35	46	0.7%	0.6%	0.8%
80+	41	19	22	0.4%	0.3%	0.4%
Total	11,668	5,785	5,883	100.0%	100.0%	100.0%

**TABLE 18 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTH COAST REGION**

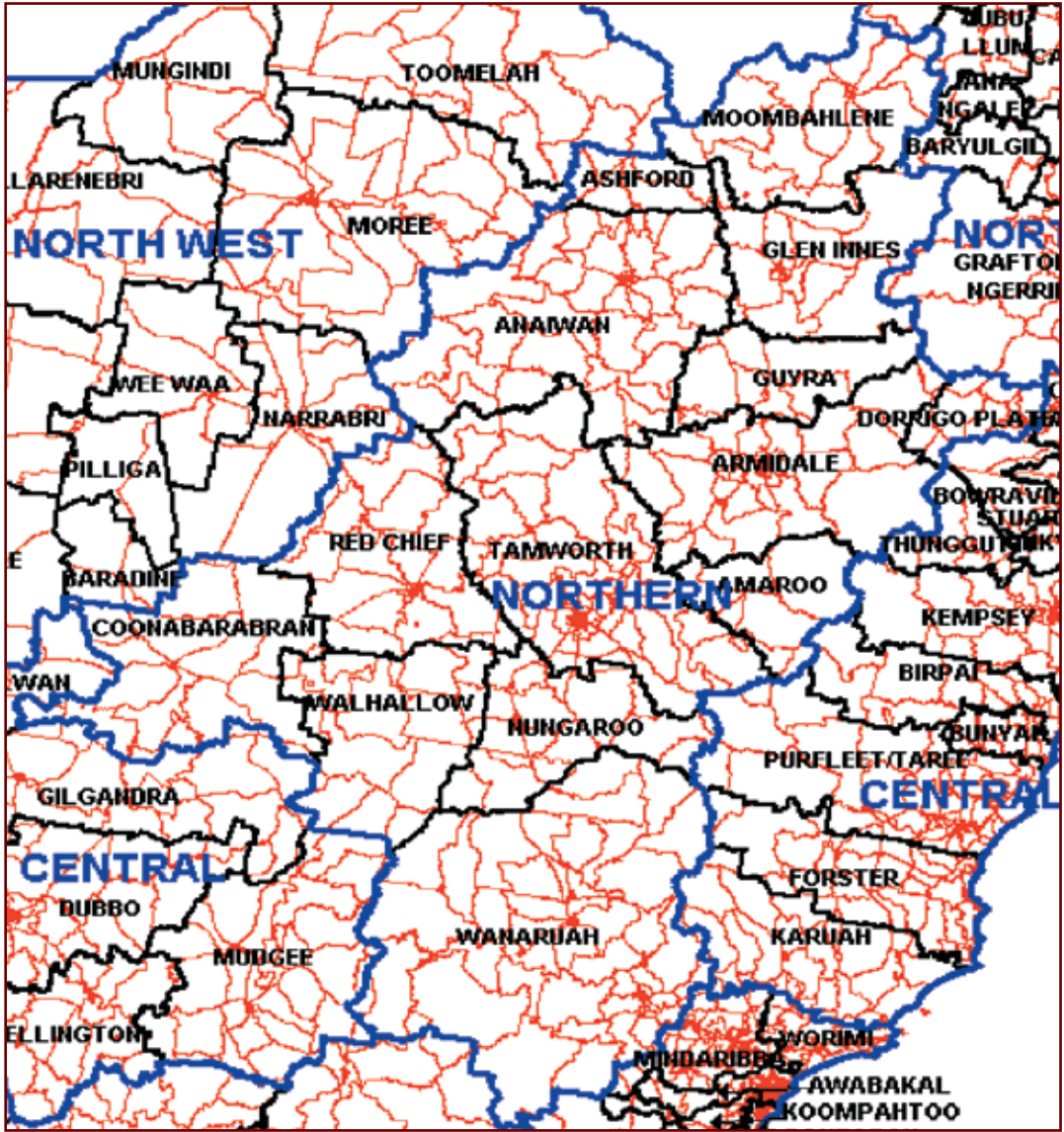
	Total	Male	Female	Total	Male	Female
2016						
0-4	1,485	766	719	11.4%	11.8%	11.0%
5-9	1,493	770	723	11.5%	11.9%	11.1%
10-14	1,450	718	732	11.1%	11.1%	11.2%
15-19	1,388	718	670	10.7%	11.1%	10.2%
20-24	1,308	655	653	10.1%	10.1%	10.0%
25-29	1,102	594	508	8.5%	9.2%	7.8%
30-34	770	411	359	5.9%	6.4%	5.5%
35-39	628	279	349	4.8%	4.3%	5.3%
40-44	720	322	398	5.5%	5.0%	6.1%
45-49	740	352	388	5.7%	5.4%	5.9%
50-54	547	266	281	4.2%	4.1%	4.3%
55-59	539	258	281	4.1%	4.0%	4.3%
60-64	352	149	203	2.7%	2.3%	3.1%
65-69	185	78	107	1.4%	1.2%	1.6%
70-74	152	67	85	1.2%	1.0%	1.3%
75-79	87	38	50	0.7%	0.6%	0.8%
80+	64	27	37	0.5%	0.4%	0.6%
Total	13,011	6,469	6,542	100.0%	100.0%	100.0%
2021						
0-4	1,713	885	829	11.8%	12.2%	11.4%
5-9	1,772	915	857	12.2%	12.6%	11.7%
10-14	1,464	754	710	10.1%	10.4%	9.7%
15-19	1,445	715	730	9.9%	9.8%	10.0%
20-24	1,375	711	665	9.4%	9.8%	9.1%
25-29	1,293	646	647	8.9%	8.9%	8.9%
30-34	1,087	585	502	7.5%	8.1%	6.9%
35-39	757	403	354	5.2%	5.5%	4.8%
40-44	614	271	343	4.2%	3.7%	4.7%
45-49	697	309	388	4.8%	4.3%	5.3%
50-54	708	334	374	4.9%	4.6%	5.1%
55-59	512	245	266	3.5%	3.4%	3.6%
60-64	488	229	259	3.4%	3.2%	3.5%
65-69	306	125	180	2.1%	1.7%	2.5%
70-74	148	60	88	1.0%	0.8%	1.2%
75-79	107	45	63	0.7%	0.6%	0.9%
80+	77	32	46	0.5%	0.4%	0.6%
Total	14,563	7,264	7,300	100.0%	100.0%	100.0%

**CHART 4: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC NORTH COAST REGION
(Percent of Total Population)**



NSWALC NORTHERN REGION

MAP 4: NSWALC NORTHERN REGION



LEGEND

- NSW ALC Main Regions
- NSW LALC
- 2006 Census Collection

**TABLE 19: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC NORTHERN REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	12,874	6,461	6,413	2014	15,187	7,648	7,539
2007	13,116	6,585	6,531	2015	15,532	7,825	7,707
2008	13,372	6,716	6,656	2016	15,888	8,008	7,880
2009	13,642	6,855	6,787	2017	16,254	8,195	8,059
2010	13,926	7,001	6,925	2018	16,631	8,388	8,243
2011	14,222	7,153	7,069	2019	17,019	8,587	8,432
2012	14,532	7,312	7,220	2020	17,416	8,790	8,626
2013	14,854	7,477	7,376	2021	17,824	8,999	8,825

**TABLE 20: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC NORTHERN REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	59	42	46	48
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.6	62.5	62.5	62.5
Migration				
Male migration	39	50	62	73
Female migration	34	44	55	65
Total migration	73	95	116	138
Vital Rates				
Crude Birth Rate (CBR) per 1000	19	20.8	21.8	22.1
Crude Death Rate (CDR) per 1000	7.9	7.9	8.3	8.6
Rate of Natural Increase (RNI) percent	1.11	1.29	1.36	1.35
Growth Rate (GR) percent	1.67	1.95	2.09	2.13
Population Doubling Time (Years)	41.8	35.8	33.5	32.9
Annual births and deaths				
Births	245	295	347	394
Deaths	102	112	131	153
Population				
Total population	12,874	14,222	15,888	17,824
Male population	6,461	7,153	8,008	8,999
Female population	6,413	7,069	7,880	8,825
Percent 0-4	14.11	10.73	11.58	11.94
Percent 5-14	26.2	25.59	24	22.27
Percent 15-49	47.5	50.35	49.75	50.8
Percent 15-64	56.31	59.97	60.34	61.24
Percent 65 and over	3.39	3.71	4.08	4.56
Percent females 15-49 ¹	48.32	51.01	50.26	50.09
Gender ratio	100.75	101.19	101.61	101.97
Dependency ratio ²	78	67	66	63
Median age	20	21	22	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

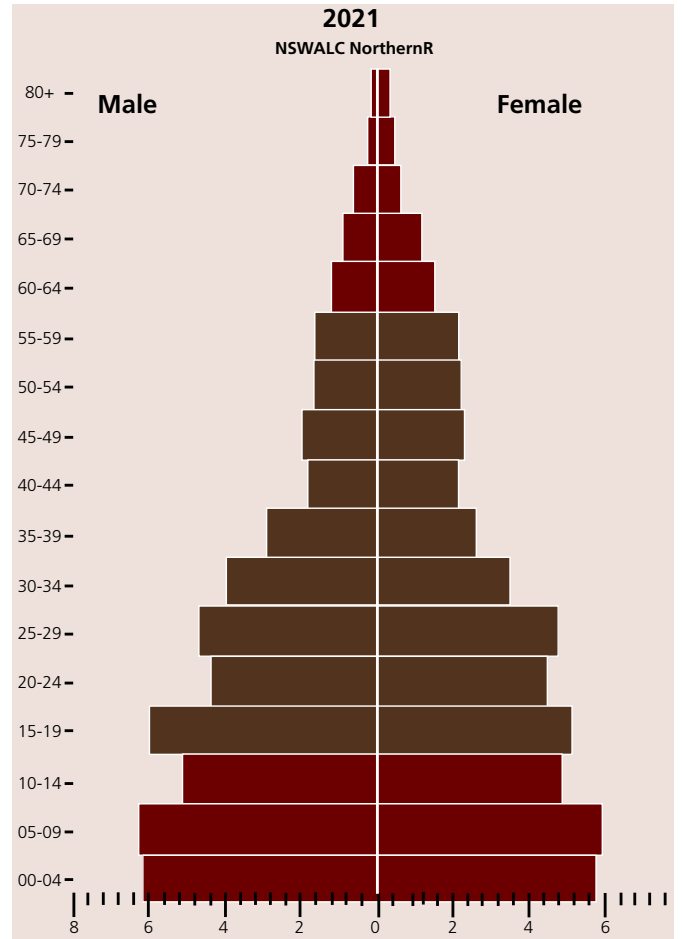
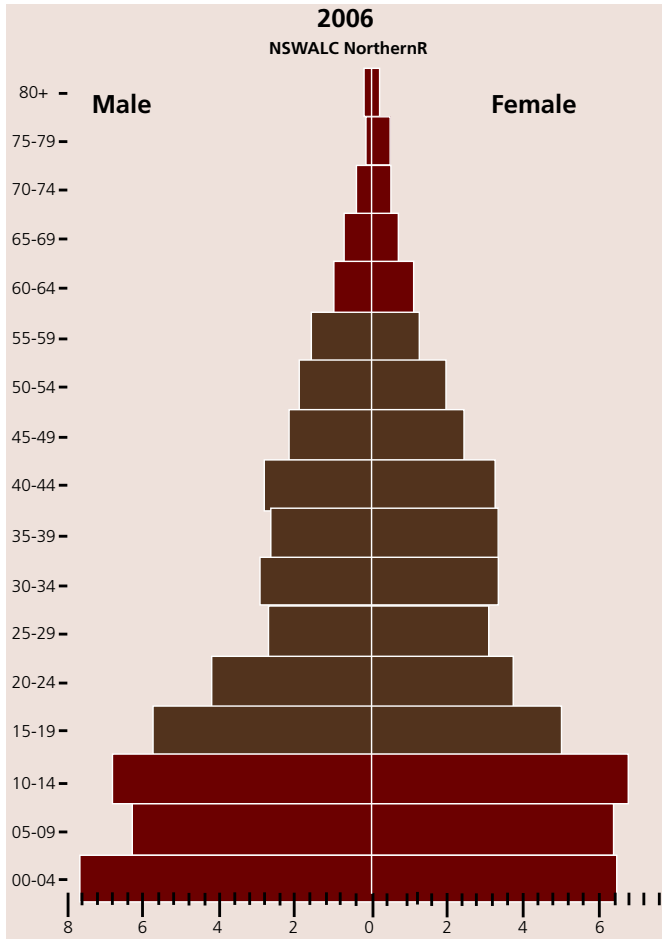
**TABLE 21: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTHERN REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,816	986	830	14.1%	15.3%	12.9%
5-9	1,635	817	818	12.7%	12.6%	12.8%
10-14	1,738	875	863	13.5%	13.5%	13.5%
15-19	1,385	749	636	10.8%	11.6%	9.9%
20-24	1,024	544	480	8.0%	8.4%	7.5%
25-29	747	353	394	5.8%	5.5%	6.1%
30-34	811	382	429	6.3%	5.9%	6.7%
35-39	771	342	429	6.0%	5.3%	6.7%
40-44	783	366	417	6.1%	5.7%	6.5%
45-49	594	280	314	4.6%	4.3%	4.9%
50-54	500	248	252	3.9%	3.8%	3.9%
55-59	367	204	163	2.9%	3.2%	2.5%
60-64	267	124	143	2.1%	1.9%	2.2%
65-69	184	91	93	1.4%	1.4%	1.5%
70-74	115	51	64	0.9%	0.8%	1.0%
75-79	87	23	64	0.7%	0.4%	1.0%
80+	50	26	24	0.4%	0.4%	0.4%
Total	12,874	6,461	6,413	100.0%	100.0%	100.0%
2011						
0-4	1,526	790	736	10.7%	11.0%	10.4%
5-9	2,031	1,099	933	14.3%	15.4%	13.2%
10-14	1,609	803	806	11.3%	11.2%	11.4%
15-19	1,730	870	860	12.2%	12.2%	12.2%
20-24	1,372	741	631	9.6%	10.4%	8.9%
25-29	1,012	537	475	7.1%	7.5%	6.7%
30-34	737	347	389	5.2%	4.9%	5.5%
35-39	797	374	423	5.6%	5.2%	6.0%
40-44	753	333	421	5.3%	4.7%	6.0%
45-49	759	352	407	5.3%	4.9%	5.8%
50-54	568	265	303	4.0%	3.7%	4.3%
55-59	468	229	239	3.3%	3.2%	3.4%
60-64	332	181	150	2.3%	2.5%	2.1%
65-69	230	104	126	1.6%	1.5%	1.8%
70-74	146	69	77	1.0%	1.0%	1.1%
75-79	81	35	47	0.6%	0.5%	0.7%
80+	70	24	46	0.5%	0.3%	0.7%
Total	14,222	7,153	7,069	100.0%	100.0%	100.0%

**TABLE 21 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTHERN REGION**

	Total	Male	Female	Total	Male	Female
2016						
0-4	1,840	953	887	11.6%	11.9%	11.3%
5-9	1,815	942	872	11.4%	11.8%	11.1%
10-14	1,999	1,080	918	12.6%	13.5%	11.6%
15-19	1,603	799	804	10.1%	10.0%	10.2%
20-24	1,715	861	854	10.8%	10.8%	10.8%
25-29	1,356	731	626	8.5%	9.1%	7.9%
30-34	998	528	470	6.3%	6.6%	6.0%
35-39	724	340	384	4.6%	4.2%	4.9%
40-44	779	364	414	4.9%	4.5%	5.3%
45-49	730	320	410	4.6%	4.0%	5.2%
50-54	726	334	392	4.6%	4.2%	5.0%
55-59	532	245	288	3.3%	3.1%	3.7%
60-64	424	203	221	2.7%	2.5%	2.8%
65-69	285	152	133	1.8%	1.9%	1.7%
70-74	183	80	104	1.2%	1.0%	1.3%
75-79	104	47	57	0.7%	0.6%	0.7%
80+	77	29	48	0.5%	0.4%	0.6%
Total	15,888	8,008	7,880	100.0%	100.0%	100.0%
2021						
0-4	2,127	1,101	1,026	11.9%	12.2%	11.6%
5-9	2,190	1,137	1,053	12.3%	12.6%	11.9%
10-14	1,779	923	856	10.0%	10.3%	9.7%
15-19	1,991	1,075	916	11.2%	11.9%	10.4%
20-24	1,588	790	798	8.9%	8.8%	9.0%
25-29	1,694	849	846	9.5%	9.4%	9.6%
30-34	1,338	719	618	7.5%	8.0%	7.0%
35-39	981	518	463	5.5%	5.8%	5.2%
40-44	707	331	376	4.0%	3.7%	4.3%
45-49	754	351	404	4.2%	3.9%	4.6%
50-54	698	303	395	3.9%	3.4%	4.5%
55-59	680	308	372	3.8%	3.4%	4.2%
60-64	483	217	266	2.7%	2.4%	3.0%
65-69	364	169	196	2.0%	1.9%	2.2%
70-74	226	116	109	1.3%	1.3%	1.2%
75-79	130	54	76	0.7%	0.6%	0.9%
80+	92	37	55	0.5%	0.4%	0.6%
Total	17,824	8,999	8,825	100.0%	100.0%	100.0%

**CHART 5: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC NORTHERN REGION
(Percent of Total Population)**



**TABLE 22: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC NORT WEST REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	9,766	4,744	5,022	2014	11,478	5,616	5,863
2007	9,950	4,838	5,112	2015	11,726	5,741	5,985
2008	10,143	4,936	5,206	2016	11,981	5,871	6,111
2009	10,345	5,040	5,305	2017	12,244	6,003	6,241
2010	10,556	5,147	5,409	2018	12,513	6,139	6,374
2011	10,775	5,259	5,516	2019	12,790	6,279	6,510
2012	11,002	5,374	5,628	2020	13,073	6,422	6,651
2013	11,236	5,493	5,743	2021	13,364	6,569	6,795

**TABLE 23: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC NORTH WEST REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio	50	42	46	47
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.6	62.6	62.6	62.6
Migration				
Male migration	29	37	45	53
Female migration	27	35	43	51
Total migration	56	72	88	104
Vital Rates				
Crude Birth Rate (CBR) per 1000	19.8	21	21.4	21.5
Crude Death Rate (CDR) per 1000	8.7	8.7	8.9	9.2
Rate of Natural Increase (RNI) percent	1.11	1.23	1.25	1.24
Growth Rate (GR) percent	1.68	1.9	1.98	2.02
Population Doubling Time (Years)	41.5	36.8	35.4	34.7
Annual births and deaths				
Births	194	226	256	288
Deaths	85	93	107	122
Population				
Total population	9,766	10,775	11,981	13,364
Male population	4,744	5,259	5,871	6,569
Female population	5,022	5,516	6,111	6,795
Percent 0-4	12.73	10.96	11.52	11.73
Percent 5-14	24.42	23.55	23.26	22.58
Percent 15-49	48.83	50.25	48.87	48.94
Percent 15-64	58.83	60.98	60.35	60.55
Percent 65 and over	4.02	4.51	4.87	5.15
Percent females 15-49 ¹	49.98	50.79	48.78	48.84
Gender ratio	94.46	95.33	96.06	96.68
Dependency ratio ²	70	64	66	65
Median age	22	22	23	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

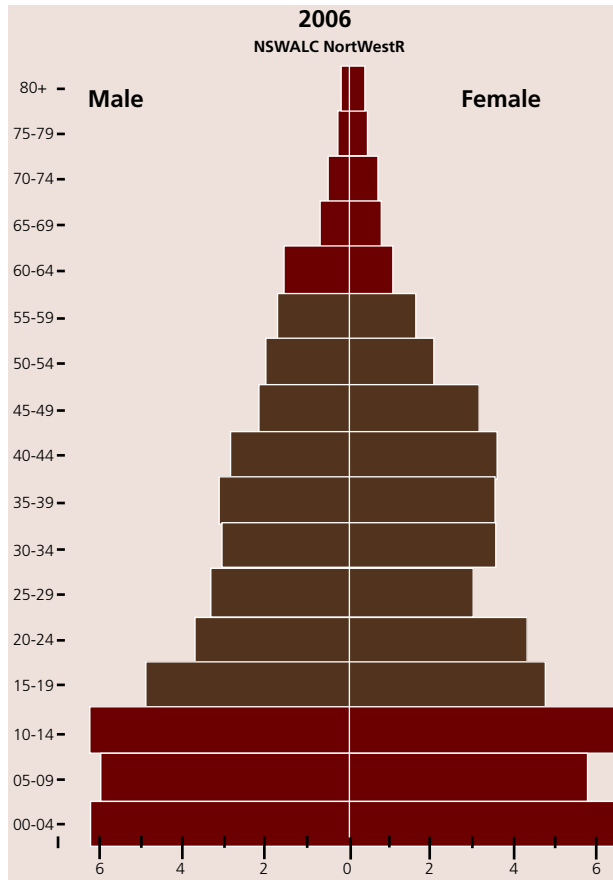
**TABLE 24: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTH WEST REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,243	610	633	12.7%	12.9%	12.6%
5-9	1,146	584	562	11.7%	12.3%	11.2%
10-14	1,239	610	629	12.7%	12.9%	12.5%
15-19	941	481	460	9.6%	10.1%	9.2%
20-24	780	361	419	8.0%	7.6%	8.3%
25-29	611	323	288	6.3%	6.8%	5.7%
30-34	648	301	347	6.6%	6.3%	6.9%
35-39	649	305	344	6.6%	6.4%	6.8%
40-44	623	275	348	6.4%	5.8%	6.9%
45-49	517	213	304	5.3%	4.5%	6.1%
50-54	393	197	196	4.0%	4.2%	3.9%
55-59	325	168	157	3.3%	3.5%	3.1%
60-64	258	156	102	2.6%	3.3%	2.0%
65-69	144	65	79	1.5%	1.4%	1.6%
70-74	118	48	70	1.2%	1.0%	1.4%
75-79	73	28	45	0.7%	0.6%	0.9%
80+	58	19	39	0.6%	0.4%	0.8%
Total	9,766	4,744	5,022	100.0%	100.0%	100.0%
2011						
0-4	1,181	608	573	11.0%	11.6%	10.4%
5-9	1,411	696	715	13.1%	13.2%	13.0%
10-14	1,127	574	553	10.5%	10.9%	10.0%
15-19	1,234	607	627	11.5%	11.5%	11.4%
20-24	932	476	457	8.6%	9.1%	8.3%
25-29	771	356	415	7.2%	6.8%	7.5%
30-34	602	318	285	5.6%	6.0%	5.2%
35-39	637	295	342	5.9%	5.6%	6.2%
40-44	634	297	337	5.9%	5.6%	6.1%
45-49	604	265	339	5.6%	5.0%	6.1%
50-54	495	202	293	4.6%	3.8%	5.3%
55-59	368	182	186	3.4%	3.5%	3.4%
60-64	294	149	145	2.7%	2.8%	2.6%
65-69	221	131	90	2.1%	2.5%	1.6%
70-74	115	50	65	1.1%	1.0%	1.2%
75-79	83	32	51	0.8%	0.6%	0.9%
80+	67	22	44	0.6%	0.4%	0.8%
Total	10,775	5,259	5,516	100.0%	100.0%	100.0%

**TABLE 24 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC NORTH WEST REGION**

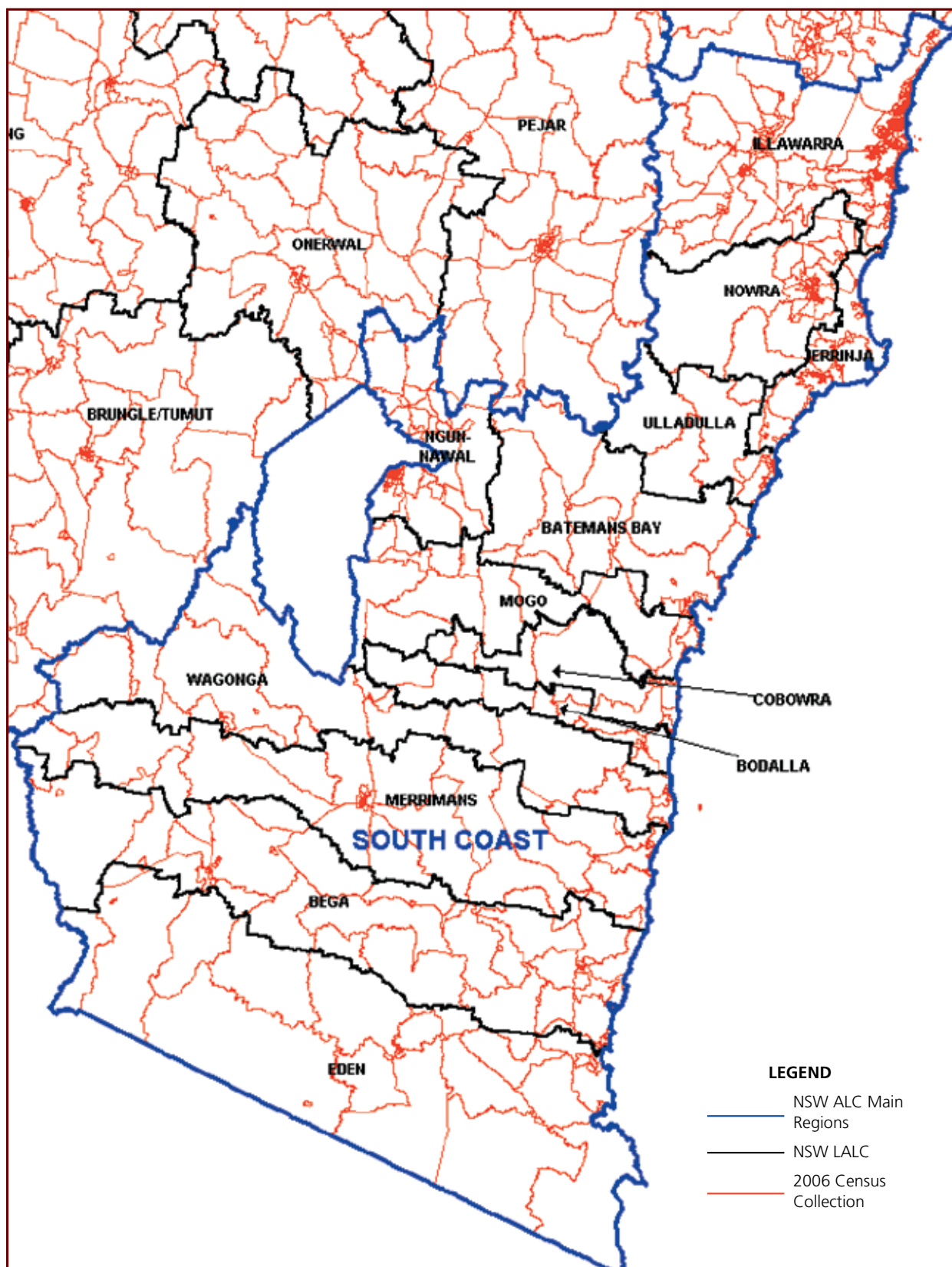
	Total	Male	Female	Total	Male	Female
2016						
0-4	1,380	710	670	11.5%	12.1%	11.0%
5-9	1,400	719	680	11.7%	12.2%	11.1%
10-14	1,387	683	704	11.6%	11.6%	11.5%
15-19	1,122	571	552	9.4%	9.7%	9.0%
20-24	1,223	600	622	10.2%	10.2%	10.2%
25-29	922	469	452	7.7%	8.0%	7.4%
30-34	761	350	410	6.4%	6.0%	6.7%
35-39	592	311	280	4.9%	5.3%	4.6%
40-44	622	287	335	5.2%	4.9%	5.5%
45-49	614	286	329	5.1%	4.9%	5.4%
50-54	578	251	327	4.8%	4.3%	5.4%
55-59	465	186	279	3.9%	3.2%	4.6%
60-64	333	161	172	2.8%	2.7%	2.8%
65-69	252	123	128	2.1%	2.1%	2.1%
70-74	175	100	74	1.5%	1.7%	1.2%
75-79	82	35	47	0.7%	0.6%	0.8%
80+	76	27	49	0.6%	0.5%	0.8%
Total	11,981	5,871	6,111	100.0%	100.0%	100.0%
2021						
0-4	1,567	806	761	11.7%	12.3%	11.2%
5-9	1,644	844	801	12.3%	12.8%	11.8%
10-14	1,373	705	668	10.3%	10.7%	9.8%
15-19	1,382	680	702	10.3%	10.4%	10.3%
20-24	1,112	565	547	8.3%	8.6%	8.1%
25-29	1,208	592	616	9.0%	9.0%	9.1%
30-34	909	462	447	6.8%	7.0%	6.6%
35-39	748	343	404	5.6%	5.2%	5.9%
40-44	578	303	275	4.3%	4.6%	4.0%
45-49	603	276	327	4.5%	4.2%	4.8%
50-54	587	270	317	4.4%	4.1%	4.7%
55-59	542	232	310	4.1%	3.5%	4.6%
60-64	422	165	257	3.2%	2.5%	3.8%
65-69	286	134	152	2.1%	2.0%	2.2%
70-74	199	94	105	1.5%	1.4%	1.5%
75-79	123	68	55	0.9%	1.0%	0.8%
80+	80	31	49	0.6%	0.5%	0.7%
Total	13,364	6,569	6,795	100.0%	100.0%	100.0%

**CHART 6: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC NORTH WEST REGION
(Percent of Total Population)**



NSWALC SOUTH COAST REGION

MAP 6: NSWALC SOUTH COAST REGION



**TABLE 25: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC SOUTH COAST REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	13,460	6,786	6,674	2014	15,921	8,057	7,864
2007	13,721	6,921	6,800	2015	16,282	8,243	8,039
2008	13,996	7,063	6,933	2016	16,652	8,434	8,218
2009	14,285	7,213	7,072	2017	17,032	8,630	8,402
2010	14,588	7,369	7,219	2018	17,420	8,831	8,590
2011	14,904	7,532	7,371	2019	17,817	9,036	8,782
2012	15,232	7,701	7,530	2020	18,223	9,245	8,978
2013	15,571	7,877	7,694	2021	18,638	9,459	9,179

**TABLE 26: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC SOUTH COAST REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	52	43	47	48
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65.1	65.1	65.1	65.1
Total Life Expectancy	62.5	62.5	62.5	62.5
Migration				
Male migration	41	53	64	76
Female migration	35	46	56	67
Total migration	76	98	121	143
Vital Rates				
Crude Birth Rate (CBR) per 1000	19.3	21	21.6	21.5
Crude Death Rate (CDR) per 1000	7.7	7.7	8.1	8.5
Rate of Natural Increase (RNI) percent	1.17	1.33	1.35	1.3
Growth Rate (GR) percent	1.73	1.99	2.07	2.07
Population Doubling Time (Years)	40.3	35.3	33.8	33.9
Annual births and deaths				
Births	260	313	360	401
Deaths	103	115	136	158
Population				
Total population	13,460	14,904	16,652	18,638
Male population	6,786	7,532	8,434	9,459
Female population	6,674	7,371	8,218	9,179
Percent 0-4	12.72	10.84	11.55	11.72
Percent 5-14	26.81	24.44	22.94	22.33
Percent 15-49	48.3	51.31	51.23	50.83
Percent 15-64	57.28	61.27	61.55	61.24
Percent 65 and over	3.19	3.45	3.96	4.7
Percent females 15-49 ¹	49.07	51.4	50.28	49.39
Gender ratio	101.68	102.18	102.63	103.06
Dependency ratio ² (Those in 0-14 and 65+ ages to 100 persons in the working ages of 15-64 years.	75	63	62	63
Median age	20	21	22	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

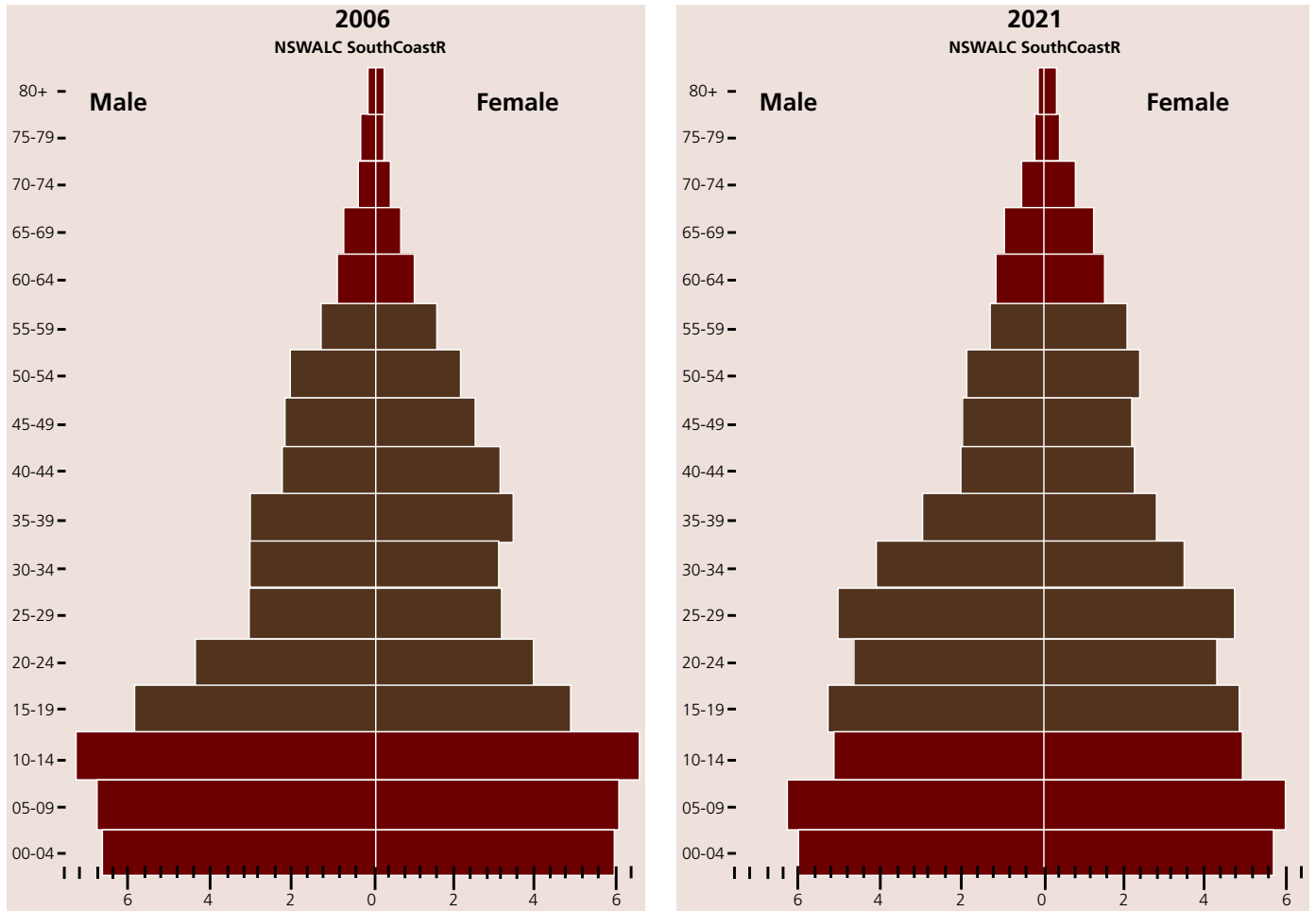
**TABLE 27: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC SOUTH COAST REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	1,712	903	809	12.7%	13.3%	12.1%
5-9	1,731	915	816	12.9%	13.5%	12.2%
10-14	1,877	983	894	13.9%	14.5%	13.4%
15-19	1,457	797	660	10.8%	11.7%	9.9%
20-24	1,133	596	537	8.4%	8.8%	8.0%
25-29	842	417	425	6.3%	6.1%	6.4%
30-34	832	410	422	6.2%	6.0%	6.3%
35-39	883	412	471	6.6%	6.1%	7.1%
40-44	726	302	424	5.4%	4.5%	6.4%
45-49	628	292	336	4.7%	4.3%	5.0%
50-54	569	274	295	4.2%	4.0%	4.4%
55-59	387	175	212	2.9%	2.6%	3.2%
60-64	253	118	135	1.9%	1.7%	2.0%
65-69	195	95	100	1.4%	1.4%	1.5%
70-74	108	49	59	0.8%	0.7%	0.9%
75-79	76	38	38	0.6%	0.6%	0.6%
80+	51	10	41	0.4%	0.1%	0.6%
Total	13,460	6,786	6,674	100.0%	100.0%	100.0%
2011						
0-4	1,615	838	777	10.8%	11.1%	10.5%
5-9	1,939	1,024	915	13.0%	13.6%	12.4%
10-14	1,703	899	804	11.4%	11.9%	10.9%
15-19	1,869	978	891	12.5%	13.0%	12.1%
20-24	1,444	788	655	9.7%	10.5%	8.9%
25-29	1,120	588	532	7.5%	7.8%	7.2%
30-34	830	410	420	5.6%	5.4%	5.7%
35-39	817	402	416	5.5%	5.3%	5.6%
40-44	863	401	462	5.8%	5.3%	6.3%
45-49	704	291	413	4.7%	3.9%	5.6%
50-54	600	276	324	4.0%	3.7%	4.4%
55-59	533	253	280	3.6%	3.4%	3.8%
60-64	352	156	196	2.4%	2.1%	2.7%
65-69	218	98	119	1.5%	1.3%	1.6%
70-74	155	73	82	1.0%	1.0%	1.1%
75-79	77	33	44	0.5%	0.4%	0.6%
80+	65	24	41	0.4%	0.3%	0.6%
Total	14,904	7,532	7,371	100.0%	100.0%	100.0%

**TABLE 27 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC SOUTH COAST REGION**

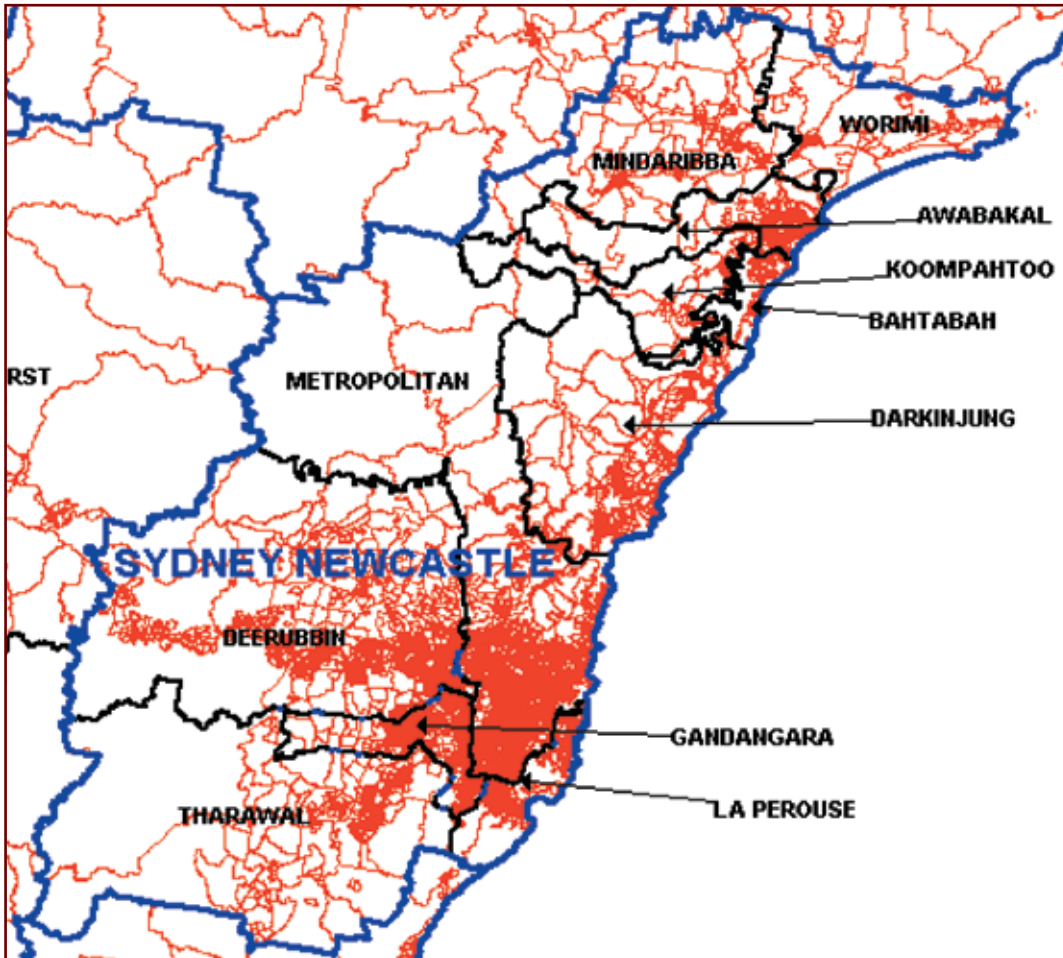
	Total	Male	Female	Total	Male	Female
2016						
0-4	1,923	997	926	11.5%	11.8%	11.3%
5-9	1,914	996	918	11.5%	11.8%	11.2%
10-14	1,907	1,006	901	11.5%	11.9%	11.0%
15-19	1,697	895	801	10.2%	10.6%	9.7%
20-24	1,851	967	884	11.1%	11.5%	10.8%
25-29	1,427	778	649	8.6%	9.2%	7.9%
30-34	1,105	579	526	6.6%	6.9%	6.4%
35-39	816	402	414	4.9%	4.8%	5.0%
40-44	798	391	408	4.8%	4.6%	5.0%
45-49	837	386	450	5.0%	4.6%	5.5%
50-54	674	275	399	4.0%	3.3%	4.9%
55-59	562	254	307	3.4%	3.0%	3.7%
60-64	483	225	258	2.9%	2.7%	3.1%
65-69	304	131	174	1.8%	1.6%	2.1%
70-74	173	75	98	1.0%	0.9%	1.2%
75-79	110	49	61	0.7%	0.6%	0.7%
80+	72	28	44	0.4%	0.3%	0.5%
Total	16,652	8,434	8,218	100.0%	100.0%	100.0%
2021						
0-4	2,184	1,132	1,052	11.7%	12.0%	11.5%
5-9	2,286	1,189	1,097	12.3%	12.6%	12.0%
10-14	1,877	976	901	10.1%	10.3%	9.8%
15-19	1,900	1,001	899	10.2%	10.6%	9.8%
20-24	1,680	885	795	9.0%	9.4%	8.7%
25-29	1,830	954	876	9.8%	10.1%	9.5%
30-34	1,407	766	642	7.5%	8.1%	7.0%
35-39	1,086	568	518	5.8%	6.0%	5.6%
40-44	798	392	406	4.3%	4.1%	4.4%
45-49	773	376	397	4.1%	4.0%	4.3%
50-54	800	366	434	4.3%	3.9%	4.7%
55-59	633	254	378	3.4%	2.7%	4.1%
60-64	509	225	284	2.7%	2.4%	3.1%
65-69	416	188	228	2.2%	2.0%	2.5%
70-74	244	101	143	1.3%	1.1%	1.6%
75-79	123	50	73	0.7%	0.5%	0.8%
80+	94	38	55	0.5%	0.4%	0.6%
Total	18,638	9,459	9,179	100.0%	100.0%	100.0%

**CHART 7: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC SOUTH COAST REGION
(Percent of Total Population)**



NSWALC SYDNEY-NEWCASTLE REGION

MAP 7: NSWALC SYDNEY-NEWCASTLE REGION



LEGEND

- NSW ALC Main Regions
- NSW LALC
- 2006 Census Collection

**TABLE 28: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC SYDNEY-NEWCASTLE REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	61,668	30,764	30,904	2014	73,233	36,679	36,555
2007	62,942	31,416	31,525	2015	74,875	37,516	37,359
2008	64,271	32,097	32,173	2016	76,553	38,373	38,181
2009	65,650	32,804	32,846	2017	78,266	39,246	39,019
2010	67,077	33,534	33,543	2018	80,012	40,138	39,875
2011	68,550	34,287	34,263	2019	81,793	41,047	40,747
2012	70,069	35,063	35,006	2020	83,610	41,974	41,635
2013	71,631	35,861	35,770	2021	85,461	42,920	42,541

**TABLE 29: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC SYDNEY-NEWCASTLE REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.6	2.6	2.6	2.6
Gross Reproduction Rate (GRR)	1.3	1.3	1.3	1.3
Net Reproduction Rate (NRR)	1.1	1.1	1.1	1.1
Mean Age of Childbearing	27	27	27	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	46	43	46	47
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65	65	65	65.1
Total Life Expectancy	63	63	63	62.5
Migration				
Male migration	185	238	292	345
Female migration	165	214	264	313
Total migration	350	453	555	658
Vital Rates				
Crude Birth Rate (CBR) per 1000	21	21.5	21.5	21
Crude Death Rate (CDR) per 1000	7.90	8.00	8.30	8.60
Rate of Natural Increase (RNI) percent	1.31	1.36	1.32	1.24
Growth Rate (GR) percent	1.87	2.02	2.04	2.01
Population Doubling Time (Years)	37	35	34	34.9
Annual births and deaths				
Births	1,294	1,477	1,647	1,795
Deaths	489	547	637	737
Population				
Total population	61,668	68,550	76,553	85,461
Male population	30,764	34,287	38,373	42,920
Female population	30,904	34,263	38,181	42,541
Percent 0-4	12	11.28	12	11.57
Percent 5-14	25	23	22.74	22.79
Percent 15-49	51.11	52.03	50.68	50
Percent 15-64	60.07	62.17	61.52	61.03
Percent 65 and over	3.27	3.55	4.14	4.62
Percent females 15-49 ¹	51.75	52.35	50.68	49.53
Gender ratio	100	100	101	100.89
Dependency ratio ²	66	61	63	64
Median age	21	22	23	24

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

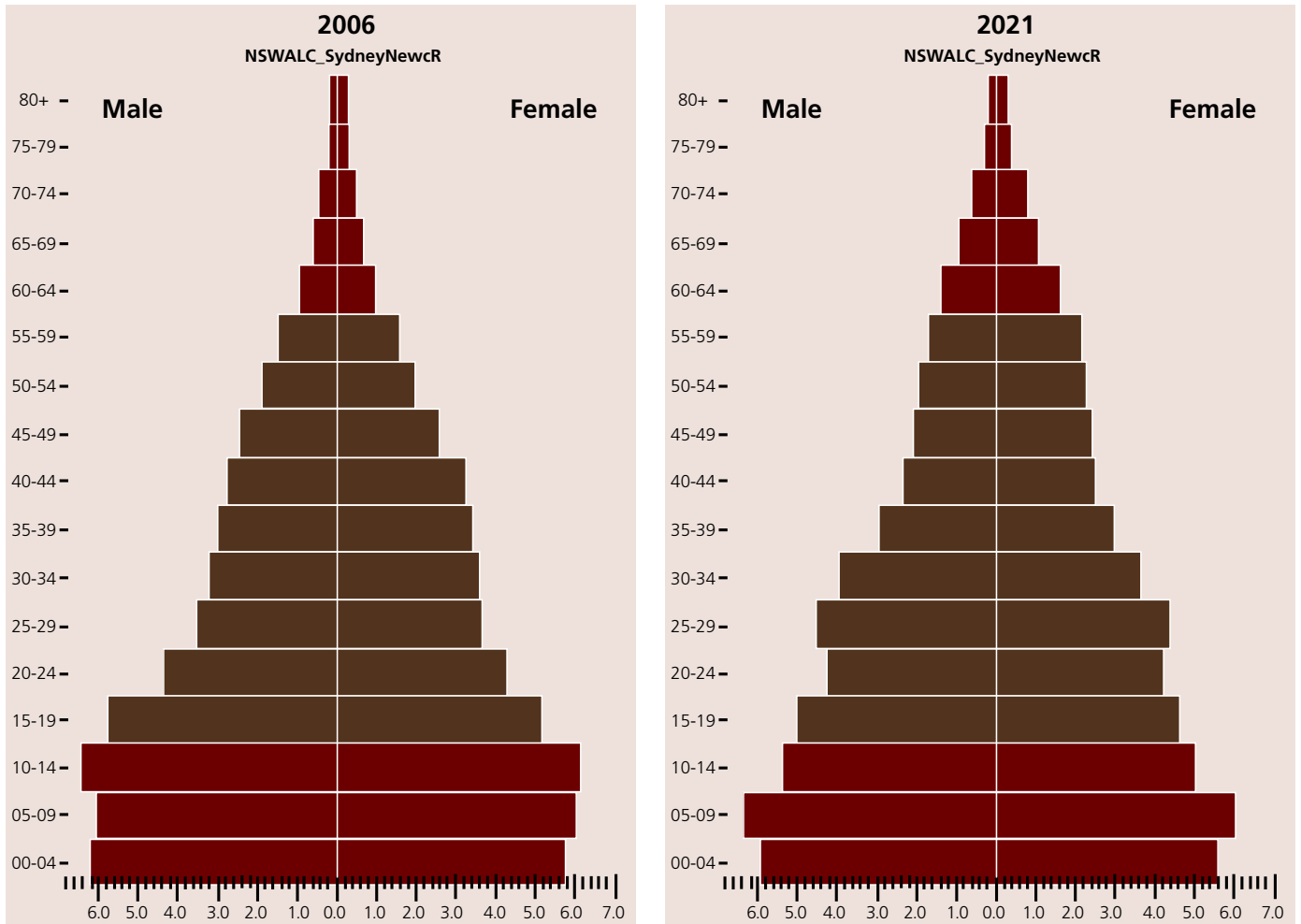
**TABLE 30: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC SYDNEY-NEWCASTLE REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	7,398	3,860	3,538	12.0%	12.5%	11.4%
5-9	7,435	3,764	3,671	12.1%	12.2%	11.9%
10-14	7,773	4,003	3,770	12.6%	13.0%	12.2%
15-19	6,712	3,553	3,159	10.9%	11.5%	10.2%
20-24	5,325	2,700	2,625	8.6%	8.8%	8.5%
25-29	4,398	2,157	2,241	7.1%	7.0%	7.3%
30-34	4,203	1,985	2,218	6.8%	6.5%	7.2%
35-39	3,996	1,891	2,105	6.5%	6.1%	6.8%
40-44	3,753	1,725	2,028	6.1%	5.6%	6.6%
45-49	3,134	1,518	1,616	5.1%	4.9%	5.2%
50-54	2,376	1,179	1,197	3.9%	3.8%	3.9%
55-59	1,912	926	986	3.1%	3.0%	3.2%
60-64	1,234	606	628	2.0%	2.0%	2.0%
65-69	800	378	422	1.3%	1.2%	1.4%
70-74	598	295	303	1.0%	1.0%	1.0%
75-79	321	118	203	0.5%	0.4%	0.7%
80+	300	106	194	0.5%	0.3%	0.6%
Total	61,668	30,764	30,904	100.0%	100.0%	100.0%
2011						
0-4	7,731	3,997	3,734	11.3%	11.7%	10.9%
5-9	8,455	4,411	4,044	12.3%	12.9%	11.8%
10-14	7,311	3,697	3,615	10.7%	10.8%	10.6%
15-19	7,740	3,982	3,758	11.3%	11.6%	11.0%
20-24	6,651	3,515	3,136	9.7%	10.3%	9.2%
25-29	5,263	2,663	2,600	7.7%	7.8%	7.6%
30-34	4,337	2,122	2,214	6.3%	6.2%	6.5%
35-39	4,130	1,945	2,185	6.0%	5.7%	6.4%
40-44	3,905	1,840	2,065	5.7%	5.4%	6.0%
45-49	3,638	1,661	1,977	5.3%	4.8%	5.8%
50-54	2,997	1,437	1,560	4.4%	4.2%	4.6%
55-59	2,224	1,088	1,135	3.2%	3.2%	3.3%
60-64	1,733	823	911	2.5%	2.4%	2.7%
65-69	1,063	508	556	1.6%	1.5%	1.6%
70-74	634	288	347	0.9%	0.8%	1.0%
75-79	421	198	222	0.6%	0.6%	0.6%
80+	318	112	205	0.5%	0.3%	0.6%
Total	68,550	34,287	34,263	100.0%	100.0%	100.0%

**TABLE 30 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC SYDNEY-NEWCASTLE REGION**

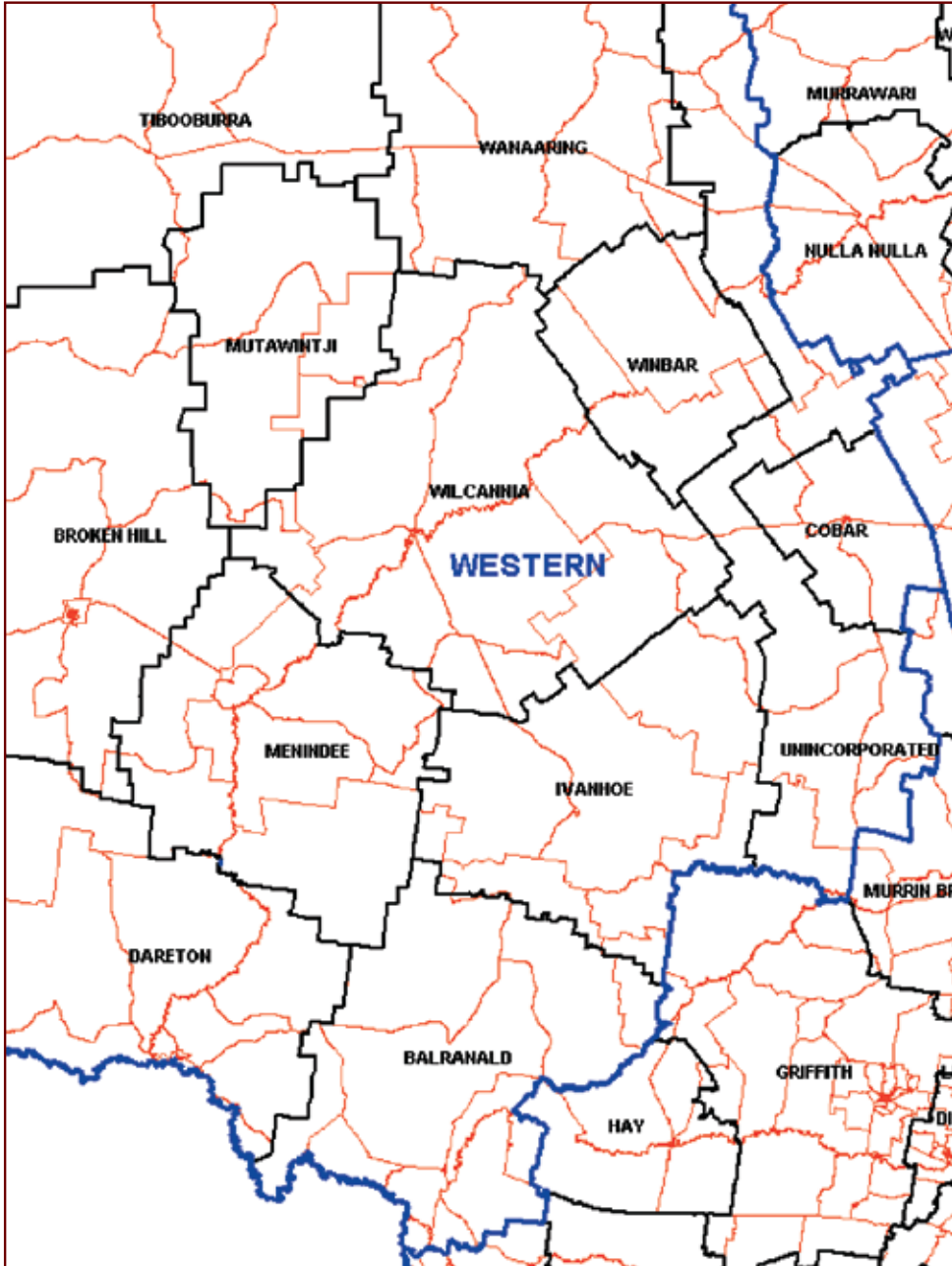
	Total	Male	Female	Total	Male	Female
2016						
0-4	8,879	4,590	4,289	11.6%	12.0%	11.2%
5-9	9,102	4,712	4,390	11.9%	12.3%	11.5%
10-14	8,307	4,330	3,977	10.9%	11.3%	10.4%
15-19	7,284	3,680	3,605	9.5%	9.6%	9.4%
20-24	7,668	3,938	3,730	10.0%	10.3%	9.8%
25-29	6,573	3,467	3,106	8.6%	9.0%	8.1%
30-34	5,191	2,621	2,570	6.8%	6.8%	6.7%
35-39	4,262	2,080	2,182	5.6%	5.4%	5.7%
40-44	4,036	1,893	2,143	5.3%	4.9%	5.6%
45-49	3,784	1,771	2,012	4.9%	4.6%	5.3%
50-54	3,479	1,572	1,907	4.5%	4.1%	5.0%
55-59	2,807	1,327	1,480	3.7%	3.5%	3.9%
60-64	2,014	966	1,048	2.6%	2.5%	2.7%
65-69	1,493	688	805	2.0%	1.8%	2.1%
70-74	849	390	459	1.1%	1.0%	1.2%
75-79	449	193	256	0.6%	0.5%	0.7%
80+	375	154	222	0.5%	0.4%	0.6%
Total	76,553	38,373	38,181	100.0%	100.0%	100.0%
2021						
0-4	9,884	5,109	4,775	11.6%	11.9%	11.2%
5-9	10,547	5,458	5,089	12.3%	12.7%	12.0%
10-14	8,930	4,618	4,312	10.4%	10.8%	10.1%
15-19	8,279	4,312	3,967	9.7%	10.0%	9.3%
20-24	7,216	3,639	3,578	8.4%	8.5%	8.4%
25-29	7,578	3,883	3,694	8.9%	9.0%	8.7%
30-34	6,482	3,412	3,070	7.6%	7.9%	7.2%
35-39	5,102	2,570	2,532	6.0%	6.0%	6.0%
40-44	4,165	2,025	2,140	4.9%	4.7%	5.0%
45-49	3,911	1,822	2,089	4.6%	4.2%	4.9%
50-54	3,616	1,676	1,940	4.2%	3.9%	4.6%
55-59	3,258	1,450	1,808	3.8%	3.4%	4.3%
60-64	2,545	1,178	1,368	3.0%	2.7%	3.2%
65-69	1,733	807	925	2.0%	1.9%	2.2%
70-74	1,189	527	663	1.4%	1.2%	1.6%
75-79	606	266	341	0.7%	0.6%	0.8%
80+	419	169	249	0.5%	0.4%	0.6%
Total	85,461	42,920	42,541	100.0%	100.0%	100.0%

**CHART 8: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC SYDNEY-NEWCASTLE REGION
(Percent of Total Population)**



NSWALC WESTERN REGION

MAP 8: NSWALC WESTERN REGION



LEGEND

- NSWALC Main Regions
- NSW LALC
- 2006 Census Collection



**TABLE 31: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC WESTERN REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	3,423	1,731	1,692	2014	4,055	2,054	2,001
2007	3,491	1,765	1,726	2015	4,146	2,101	2,045
2008	3,562	1,801	1,761	2016	4,239	2,149	2,090
2009	3,637	1,840	1,798	2017	4,333	2,198	2,136
2010	3,715	1,880	1,836	2018	4,430	2,247	2,183
2011	3,796	1,921	1,875	2019	4,529	2,298	2,231
2012	3,880	1,964	1,916	2020	4,629	2,349	2,280
2013	3,966	2,009	1,958	2021	4,731	2,402	2,329

**TABLE 32: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC WESTERN REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.61	2.61	2.61	2.61
Gross Reproduction Rate (GRR)	1.25	1.25	1.25	1.25
Net Reproduction Rate (NRR)	1.12	1.12	1.12	1.12
Mean Age of Childbearing	27	27	27	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	51	42	46	47
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65	65	65	65.1
Total Life Expectancy	63	63	63	62.5
Migration				
Male migration	10	13	16	19
Female migration	9	12	14	17
Total migration	19	25	30	36
Vital Rates				
Crude Birth Rate (CBR) per 1000	20.2	21.4	21.4	20.8
Crude Death Rate (CDR) per 1000	7.90	7.80	8.10	8.40
Rate of Natural Increase (RNI) percent	1.23	1.36	1.33	1.24
Growth Rate (GR) percent	1.79	2.01	2.04	2.00
Population Doubling Time (Years)	39	35	34	35
Annual births and deaths				
Births	69	81	91	98
Deaths	27	30	34	40
Population				
Total population	3,423	3,796	4,239	4,731
Male population	1,731	1,921	2,149	2,402
Female population	1,692	1,875	2,090	2,329
Percent 0-4	13	11.07	12	11.46
Percent 5-14	25	24.09	23.39	22.51
Percent 15-49	50.48	52.1	50.79	50.2
Percent 15-64	58.72	61.62	61.2	61.8
Percent 65 and over	3.1	3.21	3.9	4.23
Percent females 15-49 ¹	52.13	52.82	50.52	49.07
Gender ratio	102	102	103	103.1
Dependency ratio ²	70	62	63	62
Median age	21	22	23	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

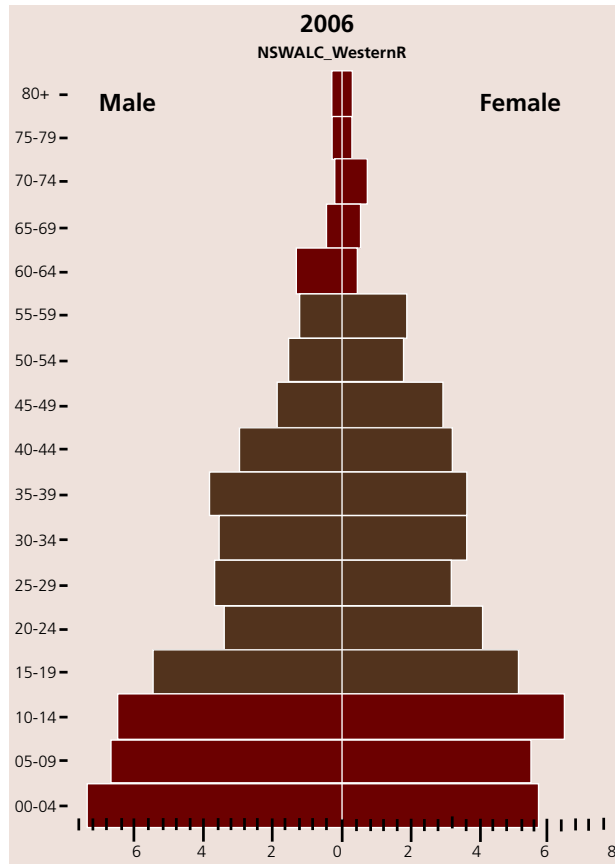
**TABLE 33: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC WESTERN REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	448	253	195	13.1%	14.6%	11.5%
5-9	417	229	188	12.2%	13.2%	11.1%
10-14	442	222	220	12.9%	12.8%	13.0%
15-19	363	187	176	10.6%	10.8%	10.4%
20-24	256	116	140	7.5%	6.7%	8.3%
25-29	235	126	109	6.9%	7.3%	6.4%
30-34	244	121	123	7.1%	7.0%	7.3%
35-39	255	131	124	7.4%	7.6%	7.3%
40-44	211	101	110	6.2%	5.8%	6.5%
45-49	164	64	100	4.8%	3.7%	5.9%
50-54	115	53	62	3.4%	3.1%	3.7%
55-59	106	41	65	3.1%	2.4%	3.8%
60-64	61	45	16	1.8%	2.6%	0.9%
65-69	34	16	18	1.0%	0.9%	1.1%
70-74	32	7	25	0.9%	0.4%	1.5%
75-79	19	9	10	0.6%	0.5%	0.6%
80+	21	10	11	0.6%	0.6%	0.7%
Total	3,423	1,731	1,692	100.0%	100.0%	100.0%
2011						
0-4	420	217	203	11.1%	11.3%	10.8%
5-9	505	282	223	13.3%	14.7%	11.9%
10-14	410	225	185	10.8%	11.7%	9.9%
15-19	440	221	219	11.6%	11.5%	11.7%
20-24	360	185	175	9.5%	9.6%	9.3%
25-29	253	114	139	6.7%	5.9%	7.4%
30-34	232	124	108	6.1%	6.5%	5.8%
35-39	240	119	121	6.3%	6.2%	6.5%
40-44	249	127	122	6.6%	6.6%	6.5%
45-49	205	97	107	5.4%	5.0%	5.7%
50-54	157	61	97	4.1%	3.2%	5.2%
55-59	108	49	59	2.8%	2.6%	3.1%
60-64	96	36	60	2.5%	1.9%	3.2%
65-69	52	38	14	1.4%	2.0%	0.7%
70-74	27	13	14	0.7%	0.7%	0.7%
75-79	23	5	18	0.6%	0.3%	1.0%
80+	20	8	12	0.5%	0.4%	0.6%
Total	3,796	1,921	1,875	100.0%	100.0%	100.0%

**TABLE 33 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC WESTERN REGION**

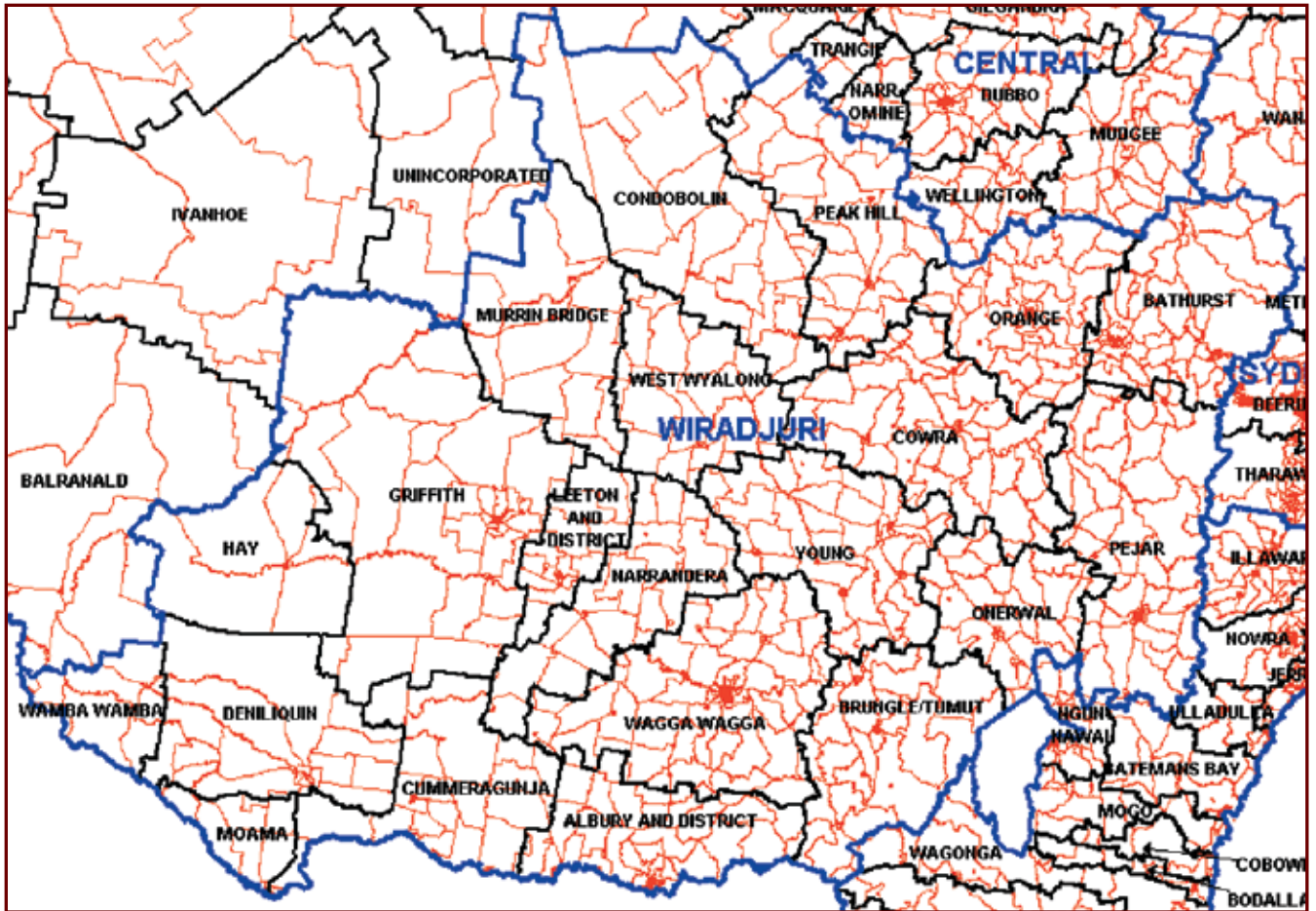
	Total	Male	Female	Total	Male	Female
2016						
0-4	488	253	236	11.5%	11.8%	11.3%
5-9	495	256	239	11.7%	11.9%	11.4%
10-14	496	277	219	11.7%	12.9%	10.5%
15-19	409	224	184	9.6%	10.4%	8.8%
20-24	436	218	218	10.3%	10.1%	10.4%
25-29	356	183	173	8.4%	8.5%	8.3%
30-34	250	113	137	5.9%	5.3%	6.6%
35-39	228	121	106	5.4%	5.6%	5.1%
40-44	234	115	119	5.5%	5.4%	5.7%
45-49	241	123	119	5.7%	5.7%	5.7%
50-54	196	92	103	4.6%	4.3%	4.9%
55-59	148	56	92	3.5%	2.6%	4.4%
60-64	98	43	54	2.3%	2.0%	2.6%
65-69	83	30	53	2.0%	1.4%	2.5%
70-74	41	29	12	1.0%	1.3%	0.6%
75-79	19	9	10	0.4%	0.4%	0.5%
80+	22	6	16	0.5%	0.3%	0.8%
Total	4,239	2,149	2,090	100.0%	100.0%	100.0%
2021						
0-4	542	281	262	11.5%	11.7%	11.2%
5-9	579	300	279	12.2%	12.5%	12.0%
10-14	486	251	235	10.3%	10.4%	10.1%
15-19	494	276	218	10.4%	11.5%	9.4%
20-24	405	222	183	8.6%	9.2%	7.9%
25-29	431	215	216	9.1%	9.0%	9.3%
30-34	351	180	171	7.4%	7.5%	7.3%
35-39	245	110	135	5.2%	4.6%	5.8%
40-44	222	118	104	4.7%	4.9%	4.5%
45-49	227	111	116	4.8%	4.6%	5.0%
50-54	231	116	114	4.9%	4.8%	4.9%
55-59	183	85	98	3.9%	3.5%	4.2%
60-64	135	50	85	2.9%	2.1%	3.6%
65-69	84	36	48	1.8%	1.5%	2.1%
70-74	67	23	44	1.4%	1.0%	1.9%
75-79	29	19	9	0.6%	0.8%	0.4%
80+	20	8	13	0.4%	0.3%	0.6%
Total	4,731	2,402	2,329	100.0%	100.0%	100.0%

**CHART 9: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC WESTERN REGION
(Percent of Total Population)**



NSWALC WIRADJURI REGION

MAP 9: NSWALC WIRADJURI REGION



LEGEND

- NSWALC Main Regions
- NSW LALC
- 2006 Census Collection

**TABLE 34: INDIGENOUS POPULATION PROJECTIONS BY GENDER, 2006 TO 2021
NSWALC WIRADJURI REGION**

Years	Total	Males	Females	Years	Total	Males	Females
2006	18,995	9,581	9,414	2014	22,484	11,372	11,112
2007	19,362	9,770	9,592	2015	23,001	11,637	11,364
2008	19,750	9,969	9,780	2016	23,533	11,909	11,624
2009	20,158	10,179	9,979	2017	24,079	12,189	11,890
2010	20,586	10,399	10,187	2018	24,638	12,476	12,163
2011	21,033	10,628	10,405	2019	25,211	12,769	12,442
2012	21,499	10,867	10,632	2020	25,797	13,070	12,728
2013	21,983	11,115	10,868	2021	26,397	13,377	13,020

**TABLE 35: DEMOGRAPHIC INDICATORS, INDIGENOUS POPULATION PROJECTIONS
2006 TO 2021, NSWALC WIRADJURI REGION**

	2006	2011	2016	2021
Fertility				
Total Fertility Rate (TFR)	2.6	2.6	2.6	2.6
Gross Reproduction Rate (GRR)	1.3	1.3	1.3	1.3
Net Reproduction Rate (NRR)	1.1	1.1	1.1	1.1
Mean Age of Childbearing	26.8	26.8	26.8	26.8
Child-woman ratio (No. of children 0-4 ages to 100 women)	53	43	47	48
Mortality				
Male Life Expectancy	60	60	60	60
Female Life Expectancy	65	65	65	65.1
Total Life Expectancy	63	63	63	62.5
Migration				
Male migration	58	74	91	107
Female migration	50	65	80	95
Total migration	108	139	171	202
Vital Rates				
Crude Birth Rate (CBR) per 1000	19.3	21.1	22.2	22.2
Crude Death Rate (CDR) per 1000	7.7	7.8	8.3	8.7
Rate of Natural Increase (RNI) percent	1.2	1.3	1.4	1.4
Growth Rate (GR) percent	1.7	2.0	2.1	2.1
Population Doubling Time (Years)	40.7	35.1	33.2	33.1
Annual births and deaths				
Births	366	444	521	585
Deaths	147	164	195	229
Population				
Total population	18,995	21,033	23,533	26,397
Male population	9,581	10,628	11,909	13,377
Female population	9,414	10,405	11,624	13,020
Percent 0-4	12	10.88	12	11.98
Percent 5-14	27	24.7	22.76	22.45
Percent 15-49	48.35	50.98	50.86	50.39
Percent 15-64	57.41	60.85	61.4	60.84
Percent 65 and over	3.31	3.58	4.13	4.73
Percent females 15-49 ¹	47.46	50.65	50.66	50.36
Gender ratio	102	102	102	102.74
Dependency ratio ²	74	64	63	64
Median age	20	21	22	23

¹ Females Child bearing Ages

² Ratio of 0-14 and 65+ to 100 Working Age Persons of 15 to 64 years age

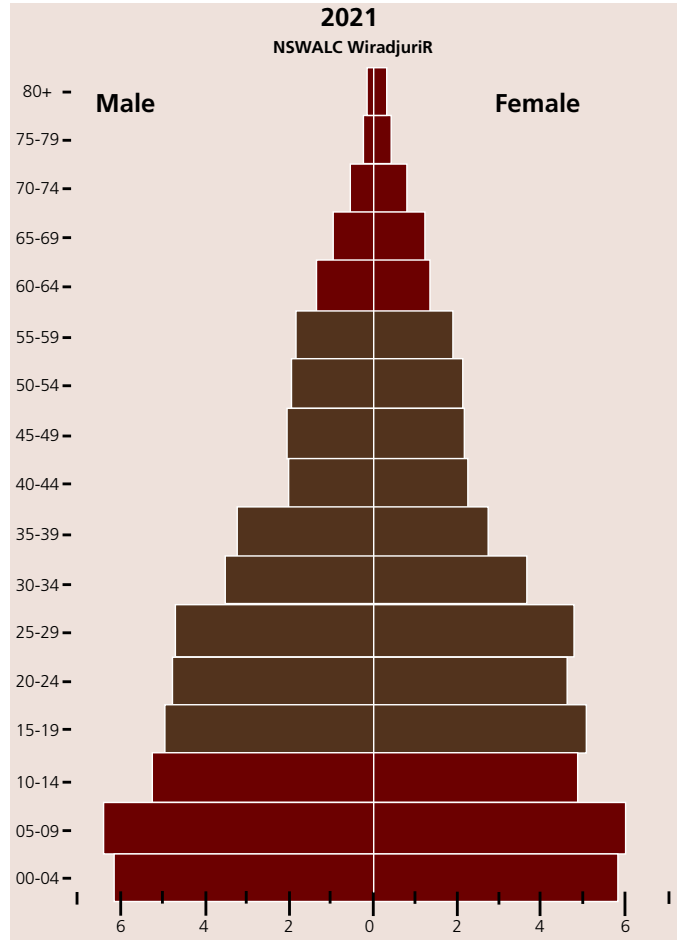
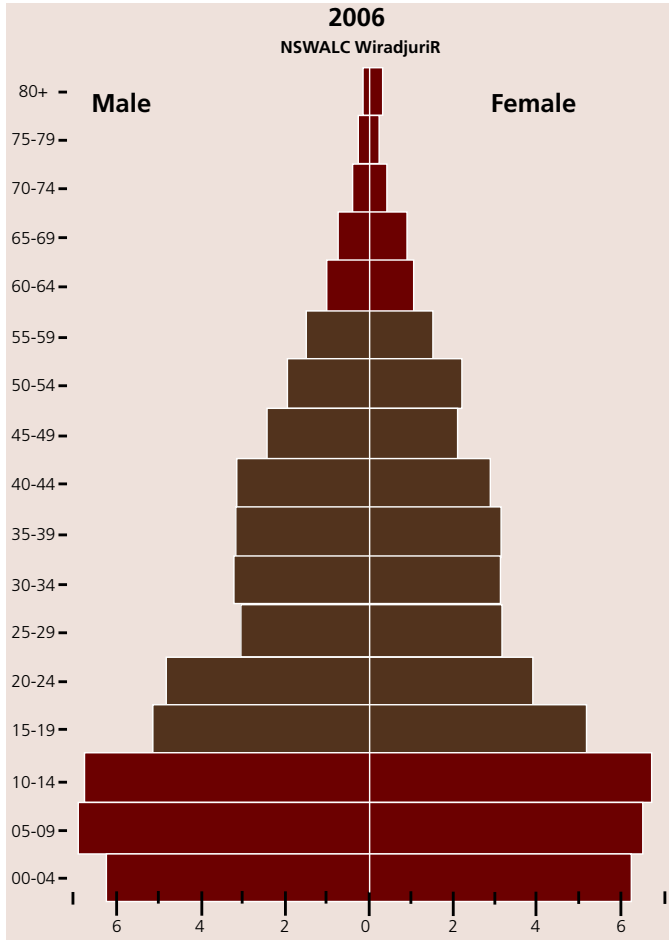
**TABLE 36: DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC WIRADJURI REGION**

	Total	Male	Female	Total	Male	Female
2006						
0-4	2,367	1,182	1,185	12.5%	12.3%	12.6%
5-9	2,544	1,313	1,231	13.4%	13.7%	13.1%
10-14	2,550	1,284	1,266	13.4%	13.4%	13.4%
15-19	1,959	975	984	10.3%	10.2%	10.5%
20-24	1,644	909	735	8.7%	9.5%	7.8%
25-29	1,188	586	602	6.3%	6.1%	6.4%
30-34	1,200	602	598	6.3%	6.3%	6.4%
35-39	1,198	596	602	6.3%	6.2%	6.4%
40-44	1,133	591	542	6.0%	6.2%	5.8%
45-49	862	457	405	4.5%	4.8%	4.3%
50-54	781	365	416	4.1%	3.8%	4.4%
55-59	573	278	295	3.0%	2.9%	3.1%
60-64	367	175	192	1.9%	1.8%	2.0%
65-69	304	130	174	1.6%	1.4%	1.8%
70-74	148	68	80	0.8%	0.7%	0.8%
75-79	90	41	49	0.5%	0.4%	0.5%
80+	87	29	58	0.5%	0.3%	0.6%
Total	18,995	9,581	9,414	100.0%	100.0%	100.0%
2011						
0-4	2,287	1,186	1,102	10.9%	11.2%	10.6%
5-9	2,691	1,355	1,336	12.8%	12.7%	12.8%
10-14	2,504	1,291	1,213	11.9%	12.1%	11.7%
15-19	2,539	1,277	1,262	12.1%	12.0%	12.1%
20-24	1,941	964	977	9.2%	9.1%	9.4%
25-29	1,625	897	728	7.7%	8.4%	7.0%
30-34	1,172	577	595	5.6%	5.4%	5.7%
35-39	1,179	590	589	5.6%	5.6%	5.7%
40-44	1,170	580	591	5.6%	5.5%	5.7%
45-49	1,098	569	529	5.2%	5.4%	5.1%
50-54	823	433	391	3.9%	4.1%	3.8%
55-59	731	337	394	3.5%	3.2%	3.8%
60-64	520	247	273	2.5%	2.3%	2.6%
65-69	315	146	169	1.5%	1.4%	1.6%
70-74	243	99	143	1.2%	0.9%	1.4%
75-79	106	46	60	0.5%	0.4%	0.6%
80+	89	34	55	0.4%	0.3%	0.5%
Total	21,033	10,628	10,405	100.0%	100.0%	100.0%

**TABLE 36 (CONTINUED): DETAILED INDIGENOUS POPULATION PROJECTIONS
BY AGE AND GENDER, NSW 2006, 2011, 2016 & 2021
NSWALC WIRADJURI REGION**

	Total	Male	Female	Total	Male	Female
2016						
0-4	2,755	1,427	1,328	11.7%	12.0%	11.4%
5-9	2,711	1,410	1,301	11.5%	11.8%	11.2%
10-14	2,645	1,330	1,315	11.2%	11.2%	11.3%
15-19	2,494	1,285	1,210	10.6%	10.8%	10.4%
20-24	2,516	1,264	1,252	10.7%	10.6%	10.8%
25-29	1,919	951	968	8.2%	8.0%	8.3%
30-34	1,602	883	720	6.8%	7.4%	6.2%
35-39	1,151	565	586	4.9%	4.7%	5.0%
40-44	1,152	574	578	4.9%	4.8%	5.0%
45-49	1,133	558	576	4.8%	4.7%	5.0%
50-54	1,049	539	510	4.5%	4.5%	4.4%
55-59	770	400	370	3.3%	3.4%	3.2%
60-64	663	299	364	2.8%	2.5%	3.1%
65-69	449	207	242	1.9%	1.7%	2.1%
70-74	251	112	139	1.1%	0.9%	1.2%
75-79	173	67	106	0.7%	0.6%	0.9%
80+	100	40	61	0.4%	0.3%	0.5%
Total	23,533	11,909	11,624	100.0%	100.0%	100.0%
2021						
0-4	3,162	1,637	1,525	12.0%	12.2%	11.7%
5-9	3,267	1,697	1,570	12.4%	12.7%	12.1%
10-14	2,658	1,381	1,277	10.1%	10.3%	9.8%
15-19	2,636	1,324	1,312	10.0%	9.9%	10.1%
20-24	2,471	1,270	1,200	9.4%	9.5%	9.2%
25-29	2,487	1,246	1,241	9.4%	9.3%	9.5%
30-34	1,893	936	957	7.2%	7.0%	7.4%
35-39	1,575	865	709	6.0%	6.5%	5.4%
40-44	1,125	550	575	4.3%	4.1%	4.4%
45-49	1,115	552	563	4.2%	4.1%	4.3%
50-54	1,083	528	555	4.1%	3.9%	4.3%
55-59	981	497	484	3.7%	3.7%	3.7%
60-64	696	355	341	2.6%	2.7%	2.6%
65-69	571	250	321	2.2%	1.9%	2.5%
70-74	358	159	200	1.4%	1.2%	1.5%
75-79	178	76	102	0.7%	0.6%	0.8%
80+	142	53	89	0.5%	0.4%	0.7%
Total	26,397	13,377	13,020	100.0%	100.0%	100.0%

**CHART 10: INDIGENOUS POPULATION PYRAMIDS, 2006 AND 2021
NSWALC WIRADJURI REGION
(Percent of Total Population)**



EXPLANATORY NOTES

Population Projection Method

The population projection is carried out using standard cohort-component methods. The procedure carries out a single-year projection of a population by age and gender, based on initial male and female populations in five-year age groups and assumed changes in fertility, mortality and migration.

The “Spectrum Policy Modelling System” (Version 3.14) (Spectrum) software has been used to conduct projections. Spectrum was developed and is maintained by the Futures Institute, USAID. It is a modular program that is used to examine the consequences of current trends and future program interventions in reproductive health. Some of the components were first developed in the early 1980s (demography and family planning), while others were developed later. They were brought together into the Spectrum program that commenced in 1995.

The core of Spectrum is a demographic projection model called “DemProj” that projects the population by age and gender. Other modules interact with the demographic projection. These can be used as required. Spectrum is a Windows based program that is designed for ease of use. It contains a database of population information that provides instant access to the population estimates and projections of the United Nations Population Division for all countries and regions of the world.

The demographic projection component of Spectrum, DemProj, is a full featured cohort-component projection model. The inputs are the population by age and gender in the base year, the total fertility rate over time, the age distribution of fertility, life expectancy at birth, the age pattern of mortality, and the number and distribution by age and gender of migrants.

Estimates of Fertility

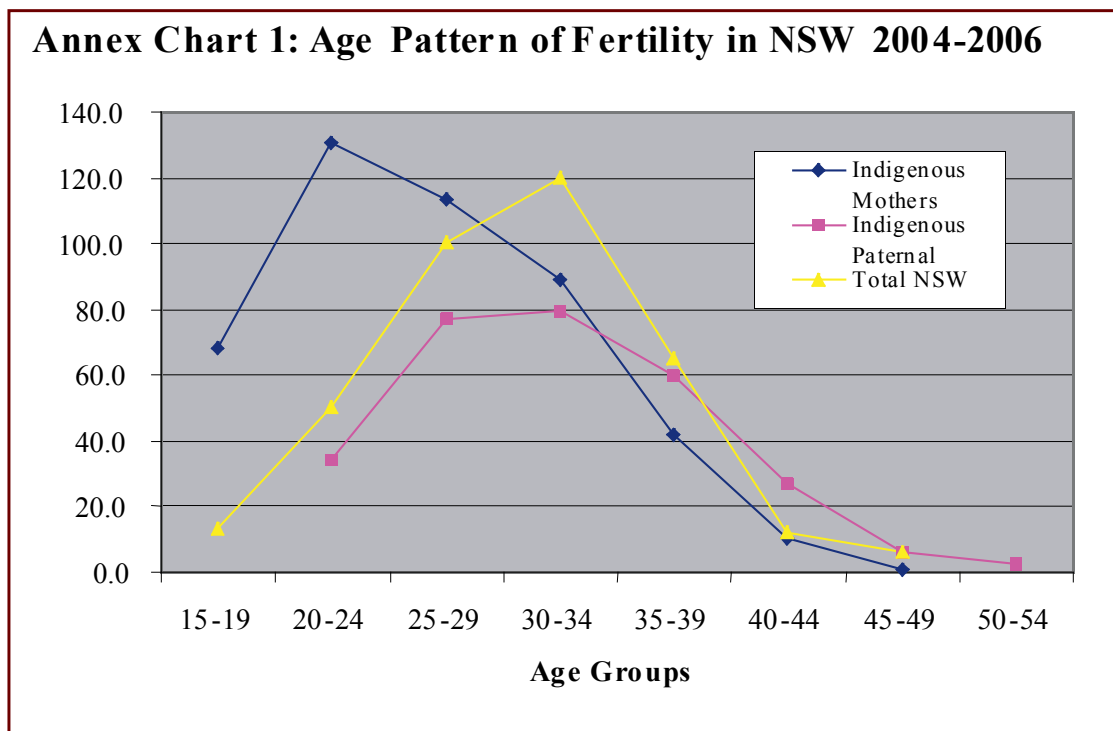
In applying direct method, the registered birth data were aggregated for three years (2004-2006) and averaged to produce a smooth annual estimation of number of births. Given that in 2006 the estimated coverage of the Indigenous births registration in NSW was 89% (ABS, Births Australia, 3301.0, 2006, p.77), the registered births were then inflated by a correction factor (a ratio of 1.236) to compensate for under-coverage. In order to obtain fertility rates, the number of Indigenous females aged 15 to 49 in 5 yearly age groups were used as denominators. Once again, in order to further remove age fluctuations, moving averages were applied.

Application of the above process results in an estimation of the Total Fertility Rate of 2.26 births during the reproductive life of an Indigenous female compared to a Total Fertility Rate of 1.829 (ABS, 3301.0, 2006) for all NSW women. This rate translates to a Net Reproduction Rate of just 1. This means an Indigenous woman in NSW produces only one female child during the entire reproductive life, replacing her under the current fertility regime. In 2006 the NRR for all women in NSW is estimated at 0.859, which is below fertility replacement level.

**ANNEX 1: OBSERVED FERTILITY PATTERN USING
BIRTH REGISTRATION DATA (2004-2006)**

Age Groups	Indigenous Maternal	Indigenous Paternal	Total NSW
15-19	68.1	-	13.2
20-24	130.5	33.9	49.9
25-29	113.0	76.9	100.1
30-34	88.7	79.0	120.0
35-39	41.6	59.7	64.7
40-44	10.2	26.9	11.9
45-49	0.3	5.8	6.0
50-54		2.5	2.5
Total Fertility Rate (TFR)	2.262	1.412	1.829

Annex 1 and Annex Chart 1 show that the observed fertility level and pattern of the Indigenous paternal fertility (Births with father Indigenous and mother non-Indigenous) differ to those of the Indigenous maternal fertility.

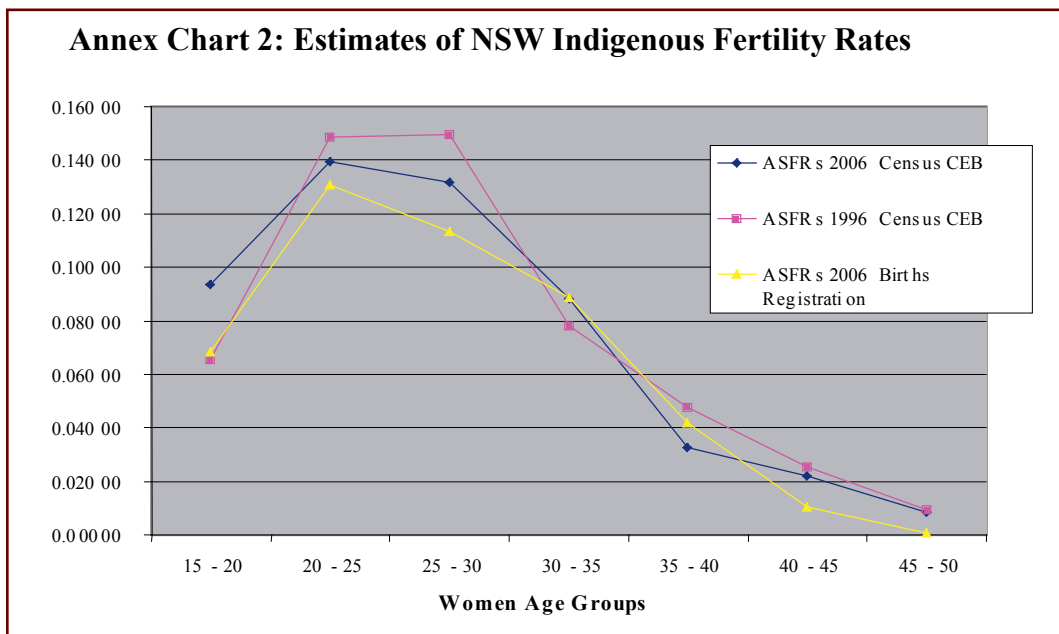


By applying indirect techniques of fertility estimation using data on number of mothers by age groups by number of Children Ever Born from Census 2006 and Census 1996, two very consistent sets of Age-Specific Fertility Rates and the corresponding Total Fertility Rates for 1996 and 2006 were obtained (See Annex 2 and Annex Chart 2).

ANNEX 2: ESTIMATION OF INDIGENOUS FERTILITY RATES USING CENSUS DATA ON CHILDREN EVER BORN, 1996 AND 2006, NSW

Age Groups of Women	ASFRs from Mean No. of Children Ever Born 1996	ASFRs Mean No. of Children Ever Born 2006	ASFRs from Period Fertility (Births)
2004-06			
15 - 19	65.08	93.30	68.10
20 - 24	148.56	139.16	130.50
25 - 29	149.23	131.35	113.00
30 - 34	77.68	88.05	88.70
35 - 39	47.53	32.47	41.60
40 - 44	25.22	21.99	10.20
45 - 49	9.39	8.19	0.30
Total Fertility Rate (TFR)	2.57	2.61	2.26
Mean Age of Childbearing (years)	25.20	26.00	25.00

Annex 2 and Annex Chart 2 also show a marginal increase in the Indigenous women fertility rate from 2.57 in 1996 to 2.61 in 2006. However during the same period, the mean age of child bearing increased by 0.8 years, from 25.2 to 26.0.



Further, Annex 2 and Annex Chart 2 show that the indirectly obtained rates are mostly higher in the younger ages of 15-19, 20-24 and 25-29 than the ASFRs obtained using birth registration data, even after correcting for under-coverage as measured by the ABS. As a result the estimated Total Fertility Rates are also higher.

Indirect Estimation of Age-Specific Fertility Rates

Basis of method and its rationale

Data on Children Ever Born tabulated by standard five-year age group of women for a single Census or survey, convey much information about the past fertility experience of the women.

Conventionally Children Ever Born data, as collected from Census or surveys, excludes stillbirths and children not born by the woman, such as foster children and adopted children. However it is not possible to evaluate to what extent the latter category of children might have been included, though it is commonly accepted that Children Ever Born data from Census or surveys is generally understated with omissions of children more commonly occurring in comparison to the erroneous inclusions of children. Nonetheless, fertility data from the 2006 Census is of reasonable quality and as such the methodology and the results are adequate for this purpose.

For the Indigenous population of Australia, information from vital statistics is incomplete. This requires the use of indirect estimation techniques to estimate fertility rates. There are a number of methods proposed by Mortara, Brass and Arretx to estimate fertility using Census or survey data. Eduardo Arriaga, a demographer with the US Census Bureau, has proposed an alternative technique for estimating fertility when information exists from 2 consecutive surveys about live-born children, classified according to the mother's age. To the contrary of the Brass technique, which assumes constant fertility, the hypothesis implicit in Arriaga's method is that the average number of children born per woman varies linearly in the time interval under consideration. In relation to the Australian Indigenous population, where assumption of constant fertility is doubtful, the application of Arriaga's technique seems more appropriate.

Arriaga (1983) observed that under conditions of declining fertility, the number of Children Ever Born by age of mother also changes almost linearly for mothers aged under 35 years. Based on this empirical observation, Arriaga proposed that linear interpolation of Children Ever Born by age of mother, from two or more Census, can provide an estimate of the Children Ever Born for one year prior to the date of the Census.

When information on Children Ever Born by age of mother and the pattern of fertility are available for one Census or survey, Arriaga's technique can also be used. The results in this case are practically the same as the Brass and Trussell techniques, since fertility is assumed to be constant. Similarly, as in the case of the previous techniques, if an age pattern of fertility is available such a pattern can be adjusted to the fertility level implied by the fertility rates derived from the information on Children Ever Born. The advantage in this case is that no adjustment is required when comparing Children Ever Born with the cumulative pattern of fertility, since in this technique the comparison is made between two sets of cumulative fertility rates. Thus, one set represents the pattern and the other, which is derived from the Children Ever Born data, represents the level of fertility.

By and large, the technique uses the same information as the Brass P/F ratio technique, but can be applied also in cases where the pattern of fertility is not available. However this technique is also sensitive to age misreporting, especially for women in the older ages.

In these projections, Arriaga's method is applied to information on Children Ever Born from 1996 and 2006 Census, to arrive at estimates of Indigenous fertility levels and patterns in NSW.

ABS Experimental Indigenous Life Tables

As mentioned in the text, in these projections, levels and age-gender patterns of mortality were taken from the ABS estimated Indicative Indigenous Life Table for 1996-2001. Probabilities of dying (q_x) values for Indigenous males and Indigenous females by age groups and the corresponding life expectancy figures at birth were incorporated in the population projection procedures (ABS, Deaths Australia, 3302.0, 2006, p.77).

The following descriptions on the methodology for constructing Indigenous Life Tables are taken from the ABS 3106.0.55.003 – Demography Working Paper 2004/3 - Calculating Experimental Life Tables for Use in Population Estimates and Projections of Aboriginal and Torres Strait Islander Australians, 1991 to 2001 (2004). The ABS assesses that these life tables allow the best experimental Indigenous population estimates and projections using currently available data.

The Indigenous life expectancy estimates presented in this paper are experimental because of the nature of the base population estimates, which are affected by both intercensal volatility in the counts of the Indigenous population and the deficiencies in Indigenous identification in birth and death registration data. Consequently, there is uncertainty about the accuracy of death rates, which can be derived from these inputs and used in life table construction.

While the life expectancy estimates are the best that can be compiled with currently available data and are assessed to be suitable for experimental population estimates and projections, over-precise analysis of the life expectancy estimates as measures of Indigenous health outcomes should be avoided. In particular, the differences between the life expectancy estimates in this paper and those previously published by the ABS, which were based on analysis of data for the intercensal period 1991 to 1996, represent improvements in methods and data quality and do not necessarily represent any change over time in the life expectancy of the Indigenous population.

The standard approach to calculating death rates used in life tables is to divide the number of deaths in a given population by the population 'exposed to risk' during that period. Precisely estimating the population at risk between Census years and in the projection period requires accurate information on births. Although it is considered likely that most Indigenous births and deaths are registered, a proportion of Indigenous births and deaths are not identified as 'Indigenous'. There have also been intercensal increases in the Indigenous population that cannot be explained solely by demographic factors, such as by biological natural increase (the excess of births over deaths), or by migration to or from Australia. Without complete and accurate data on Indigenous births and deaths, and accurate data on the size and structure of the Indigenous population, the standard method for calculating death rates cannot be used for the Indigenous population.

This paper describes a new demographic method for determining consistency factors to make registered intercensal deaths data consistent with two-end Census date population estimates. This method was developed by Bhat (2002) and offers improvement over other indirect methods available for estimating mortality from incomplete data. The main advantage of the Bhat method over other methods is that it explicitly allows for an adjustment for 'migration' to be taken into account. The migration component in the Bhat method is being used in this paper to allow for the non-biological, or unexplained change in the measured Indigenous population. Using the Bhat method, this paper calculates the consistency of Indigenous death registrations for the 1991-1996 and 1996-2001 intercensal periods, relative to population estimates at the beginning and end of each five year period. A consistency factor, assumed to be constant at each age group, is applied to the observed age-specific death rates, which are then used for the calculation of the Indigenous Life Tables.

While life table construction based on the Bhat method provides an essential component for preparing experimental population estimates and projections for Aboriginal and Torres Strait Islander Australians, the use of the life tables for other purposes should be undertaken with caution and an understanding of the assumptions used in their construction. This paper assesses the sensitivities of the method to assumptions about the level and age distribution of unexplained growth in the Indigenous population. The sensitivity analysis is restricted to the period of 1996-2001 only. Results obtained from the sensitivity analysis show that life expectancy estimates derived under various assumptions vary widely, suggesting that the life expectancy estimates in the life tables will not be robust for some forms of analysis.

While the Bhat method overcomes one of the deficiencies inherent in previous methods used to construct experimental Indigenous Life Tables published by the ABS, it cannot overcome the underlying issues of quality in the input data.

Some Definitions

Live Birth

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

Age-specific fertility rates

Age-specific fertility rates are the number of live births (occurred or registered) during the calendar year, according to age of mother, per 1,000 of the female estimated resident population of the same age at 30 June. For calculating 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 in respect of births for which age of mother is not given.

Natural increase

Excess of births over deaths.

Net interstate migration

The difference between the number of persons who have changed their place of usual residence by moving into a given state or territory and the number who have changed their place of usual residence by moving out of that state or territory during a specified period. This difference can be either positive or negative.

Population growth

For Australia, population growth is the sum of natural increase and net overseas migration. For states and territories, population growth also includes net interstate migration. After the Census, intercensal population growth also includes an allowance for intercensal discrepancy.

Total fertility rate

The sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Gross Reproduction Rate (GRR)

It represents the number of female children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Net Reproduction Rate (NRR)

It represents the number of female children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life who will survive to child bearing ages of 15-49, replacing the mother.

Death

Death is the permanent disappearance of all evidence of life after birth has taken place. The definition excludes deaths prior to live birth. For the purposes of the Deaths and Causes of Death collections conducted by the Australian Bureau of Statistics (ABS), 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.

Age-specific death rates

Age-specific death rates are the number of deaths (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.

The crude death rate

The crude death rate is the number of deaths registered during the calendar year per 1,000 the estimated resident population at 30 June. For years prior to 1992, the crude death rate was based on the mean estimated resident population for the calendar year.

Indigenous death

The death of a person who is identified as being of Aboriginal or Torres Strait Islander origin on the death registration form.

Infant death

An infant death is the death of a live-born child who dies before reaching his/her first birthday.

Infant mortality rate

The number of deaths of children under one year of age in a financial year per 1,000 live births in the same financial year.

Standardised death rate

Standardised death rates enable the comparison of death rates between populations with different age structures by relating them to a standard population. The ABS standard populations relate to the years ending in 1 (eg 1991). The current standard population is all persons in the 1991 Australian population. They are expressed per 1,000 or 100,000 persons. There are two methods of calculating standardised death rates:

The **direct** method – this is used when the populations under study are large and the age-specific death rates are reliable. It is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study.

The indirect method – this is used when the populations under study are small and the age-specific death rates are unreliable or not known. It is an adjustment to the crude death rate of the standard population to account for the variation between the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population.

Life table death rate

The life table death rate represents the annual number of deaths per 1,000 population that would occur based on the death rates and population structure of the life table. It is calculated as 1,000/expectation of life at birth.

Life expectancy

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

Abridged life tables

Abridged life tables are generally constructed in preference to complete life tables when reliable age-specific death rates are not available by single years of age. Reliable single year age-specific death rates are not available for the Indigenous population. However, abridged life tables are generally sufficient for most purposes of demographic analysis.

Experimental Indigenous life tables

The life tables are experimental because of the nature of the base population estimates used in constructing them. These estimates are affected by intercensal volatility in Census counts of the Indigenous population, as well as deficiencies in birth and death registration data which reduce the quality of Indigenous estimates.

The gender ratio

The gender ratio relates to the number of males per 100 females. The gender ratio is defined for total population, at birth, at death and among age groups by appropriately selecting the numerator and denominator of the ratio.

Average household size

Average household size refers to the number of persons per household in private dwellings.

Estimated resident population (ERP)

The concept of estimated resident population links people to a place of usual residence within Australia. Usual residence is that place where each person has lived or intends to live for six months or more in a reference year. The estimated resident population is an estimate of the Australian population obtained by adding to the estimated population at the beginning of each period the components of natural increase (on a usual residence basis) and net overseas migration. For the states and territories, account is also taken of the estimated interstate movements involving a change of usual residence. Estimates of the resident population are based on Census counts by place of usual residence, to which are added the estimated net Census undercount and Australian residents estimated to have been temporarily overseas at the time of the Census. Overseas visitors in Australia are excluded from this calculation. After each Census, estimates for the preceding intercensal period are revised by incorporating an additional adjustment (intercensal discrepancy) to ensure that the total intercensal increase agrees with the difference between the estimated resident population at the two respective Census dates.

Dependency Ratio

Ratio of children 0-14 and aged persons of 65 and over to 100 persons in the working ages of 15 to 64.

Household

A household is a group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household and who make common provision for food or other essentials for living; or a person living in a dwelling who makes provision for his or her own food and other essentials for living, without combining with any other person. Households include group households of unrelated persons, same-gender couple households, single-parent households as well as one-person households. A household usually resides in a private dwelling (including caravans and other dwellings located in caravan parks). Persons usually resident in non-private dwellings, such as hotels, motels, boarding houses, jails and hospitals are not included in household estimates. This definition of a household is consistent with the definition used in the Census. The number of households can be either based on count or estimated resident population.

Household estimate

Household estimate is a measure of the number of households of the usually resident population. It is based on the Census count of households which is adjusted for missed households, households of overseas visitors, households of Australian residents where all members were temporarily overseas at the time of the Census and households of Australian residents where all members were not home on Census night and spent Census night in a non-private dwelling in Australia.

Household population

The household population is the estimated resident population that usually lives in private dwellings. It is the estimated resident population less the population that usually lives in non-private dwellings.

Household size

Household size refers to the number of persons in a household.



REFERENCES

Australian Bureau of Statistics, 19 August 2008, "Experimental Estimates of Resident Australian Indigenous Population", Cat. ABS Cat 32380.55.001, 30 June 2006.

ABS & AIHW, The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2005.

ABS, August 2007, Population Distribution, Aboriginal and Torres Strait Islander Australians, Cat. 470 5 . 0, 2006.

ABS September 2004, 3106.0.55.003 - Demography Working Paper 2004/3 - Calculating Experimental Life Tables for Use in Population Estimates and Projections of Aboriginal and Torres Strait Islander Australians, 1991 to 2001 Latest ISSUE Released at 11:30 AM (CANBERRA TIME) 24/09/2004.

ABS, 2001, Aboriginal and Torres Strait islander Mortality: Evaluation of Experimental Indigenous Life Tables, March 2001, 3124.0 – Demography Working paper.

ABS, 2000, Draft Experimental Aboriginal and Torres Strait Islander Life Tables, Australia, State and Territories, 1995 to 1997, 3120.0 – Demography Working Paper.

ABS, 2006 Census of Population and Housing, Indigenous Community Profiles.

ABS, 2006 Census of Population and Housing, Special Tables produced for this projection.

ABS, 2007, Australian Demographic Statistics, 3101.0, March 2007.

ABS, 2914.0.55.002 - 2006 Census of Population and Housing: Media Releases and Fact Sheets, 2006, Released 27/06/2007.

ABS, Births Australia 3301.0, 2004

ABS, Births Australia 3301.0, 2005

ABS, Births Australia 3301.0, 2006

ABS, Births Australia, 3301.0, 2001

ABS, Deaths Australia 3301.0, 2006

ABS, Experimental Estimates and Projections, Indigenous Australians, 3238.0, 1991 to 2009.

AHO 2008, Indicative NSW Indigenous Population Projections 2006 to 2021, NSW Aboriginal Housing Office (AHO), 2008.

AIHW and ABS, 2006 Recent Developments in the collection of Aboriginal and Torres Strait Islander Health and Welfare Statistics, 200.

Arriaga, E E (1983) *Estimating Fertility from Data on Children Ever Born by Age of Mother*, International Research Document No. 11 U.S. Bureau of the Census, Washington D C.

Australian Institute of Health and Welfare (AIHW) , June 2007, Aboriginal and Torres Strait islander Health Performance Framework 2006 Report, Canberra.

Australian Institute of Health and Welfare, March 2006, National Summary of the 2003 and 2004 jurisdictional reports against Aboriginal and Torres Strait Islander Health Performance Indicators, Canberra.

Brass, William (1975) 'Fertility Estimates' in: *Methods for Estimating Fertility and Mortality from Limited and Defective*

Data, Chaple Hill, North Carolina pp 11-21.

Brass, William, Coale, Ansley J, Demeny, Paul, Heisel, Don F, Lorimer, Frank, Romaniuk, Anatole and van de Walle, Etienne (1968) *The Demography of Tropical Africa*, Princeton University Press, Princeton, New Jersey.

Khalidi, Noor Ahmad, 1989, *Aboriginal mortality in Central Australia, 1975-77 to 1985-86 : a comparative analysis of levels and trends*

Published [Canberra]: [National Centre for Epidemiology and Population Health], ANU, Canberra.

Kinfu, Y., and Taylor, J., 2002, *Estimating the components of Indigenous Population change, 1996–2001*, CAEPR, Discussion Paper No. 240/2002, ANU, Canberra.

NSW Mothers and Babies 2005, NSW Public Health Bulletin Supplement, Volume 18, Number S-1, February 2007, NSW Health.

Ring and David Firman, *Reducing Indigenous Mortality in Australia: lessons from other countries*, MJA 1998; 169:528-533.

Spectrum Policy Modelling System, Version 3.14., Futures Institute, USAID.

United Nations (1983) *Manual X: Indirect Techniques for Demographic Estimation*, Department of International Economic and Social Affairs, Population Studies, No. 81, New York.

United Nations, MORTPACK for Windows V4, Population Division, New York, USA.
Woolford D, 2001, "Australia: Aboriginal Identity Problems", *Townsville Bulletin*, February 17, p.40.

