# CHAPTER 4 Australia from 1911 to 2006

# Key points

- Substantial change in Australia's settlement patterns has occurred over the past century, particularly in the latter half.
- Regional Australia now has a much smaller proportion of the country's total population than in 1911, yet regional cities have grown.
- The long-term trend for Australia's population distribution is of increasing concentration. For instance, since 1954, people in capital cities have represented a larger proportion of the nation's population than people in regional areas.
- The number of small country towns has declined over the last century.
- Immigration has grown capital cities more quickly than regional cities and towns.

## Introduction

The previous chapter discussed Australia's settlement patterns to 1911. This chapter outlines the spatial development of town settlement, from 1911 to 2006. To track the transition, population change is examined through three snapshot time periods (1911, 1961 and 2006), with data drawn from the Australian Bureau of Statistics (ABS) Censuses.

We acknowledge that the definitions and methodologies used to calculate the populations of Australia's localities have changed over time. While this may distort some of the analysis, the conclusions drawn remain robust. The approach taken to enable the analysis of towns is outlined in Appendix A.

# Population change in States and Territories

The first National Census in 1911 recorded 4.46 million people<sup>10</sup> living in Australia, approximately double the number from the combined colonial Censuses thirty years before. Two thirds were residing in New South Wales or Victoria, while Western Australia, Tasmania and the Northern Territory combined accounted for less than eleven per cent. By 2006, Australia's Census population had grown to 19.86 million persons, an increase of over 15 million persons in 95 years.

<sup>10</sup> The 1911 Census did not include most Indigenous Australians.

Between 1911 and 2006, all states and territories experienced absolute increases in population levels, but growth in Queensland and Western Australia stand out, as their shares of Australia's population increased by 6.1 and 3.6 percentage points respectively (see Table 4.1). In contrast, New South Wales and Victoria increased by more people than other states, but their share of the national population declined by over 4 percentage points each. However, they remained the most populous states.

Table 4.1 also indicates that the biggest shift in population proportions occurred in the later period (1961 to 2006) for all states and territories—except Tasmania, where there was a decline across both periods.

State         1911         1911         1961         1966         1966         2006         2006           New South Wales         1 646 734         37.0         3 918 501         37.1         6 549 177         33.0           Victoria         1 315 551         29.5         2 930 366         27.8         4 932 422         24.8           Queensland         605 813         13.6         1 527 514         14.5         3 904 532         19.7           South Australia         408 558         9.2         971 487         9.2         1514 337         7.6           Western Australia         282 114         6.3         746 750         7.1         1 959 088         9.9           Tasmania         191 211         4.3         350 340         3.3         476 481         2.4           Northern Territory         3 310         0.1         44 481         0.4         192 898         1.0           Australian Capital         1714         0.00         58 828         0.6         324 034         1.0           Australia         4 455 005         100.0         10 54 826         10.0         19 85 288         100.0							
New South Wales164673437.0391850137.1654917733.0Victoria131555129.5293036627.8493242.8Queensland60581313.6152751414.5390453.219.7South Australia4085589.29714879.215143377.6Western Australia2821146.374670.119599.99.9Tasmania1912114.33503.34764812.4Northern Territory33100.1444810.41928981.6Australian Capital Territory17140.0588280.63240.41.6Australia445500.01054267100.019855288100.0	State	1911	9   (per cent)	1961	96  (per cent)	2006	2006 (per cent)
VictoriaI 315 55129.52 930 36627.84 932 42224.8Queensland605 81313.6I 527 51414.53 904 53219.7South Australia408 5589.2971 4879.2I 514 3377.6Western Australia282 1146.3746 7507.1I 959 0889.9Tasmania191 2114.3350 3403.3476 4812.4Northern Territory3 3100.144 4810.4192 8981.0Australian Capital Territory1 7140.058 8280.6324 0341.6Australia4 455 005100.010 548 267100.019 855 288100.0	New South Wales	I 646 734	37.0	3 918 501	37.1	6 549 177	33.0
Queensland605 81313.61 527 51414.53 904 53219.7South Australia408 5589.2971 4879.21 514 3377.6Western Australia282 1146.3746 7507.11 959 0889.9Tasmania191 2114.3350 3403.3476 4812.4Northern Territory3 3100.144 4810.4192 8981.0Australian Capital Territory1 7140.058 8280.6324 0341.6Australia4 455 005100.010 548 267100.019 855 288100.0	Victoria	3 5 55	29.5	2 930 366	27.8	4 932 422	24.8
South Australia         408 558         9.2         971 487         9.2         1 514 337         7.6           Western Australia         282 114         6.3         746 750         7.1         1 959 088         9.9           Tasmania         191 211         4.3         350 340         3.3         476 481         2.4           Northern Territory         3 310         0.1         44 481         0.4         192 898         1.0           Australian Capital Territory         1 714         0.0         58 828         0.6         324 034         1.6           Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	Queensland	605 813	13.6	527 514	14.5	3 904 532	19.7
Western Australia         282 114         6.3         746 750         7.1         1 959 088         9.9           Tasmania         191 211         4.3         350 340         3.3         476 481         2.4           Northern Territory         3 310         0.1         44 481         0.4         192 898         1.0           Australian Capital Territory         1 714         0.0         58 828         0.6         324 034         1.6           Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	South Australia	408 558	9.2	971 487	9.2	5 4 337	7.6
Tasmania         191 211         4.3         350 340         3.3         476 481         2.4           Northern Territory         3 310         0.1         44 481         0.4         192 898         1.0           Australian Capital Territory         1 714         0.0         58 828         0.6         324 034         1.6           Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	Western Australia	282 114	6.3	746 750	7.1	1 959 088	9.9
Northern Territory         3 310         0.1         44 481         0.4         192 898         1.0           Australian Capital Territory         1 714         0.0         58 828         0.6         324 034         1.6           Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	Tasmania	191211	4.3	350 340	3.3	476 481	2.4
Australian Capital Territory         1 714         0.0         58 828         0.6         324 034         1.6           Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	Northern Territory	3 310	0.1	44 481	0.4	192 898	1.0
Australia         4 455 005         100.0         10 548 267         100.0         19 855 288         100.0	Australian Capital Territory	7 4	0.0	58 828	0.6	324 034	1.6
	Australia	4 455 005	100.0	10 548 267	100.0	19 855 288	100.0

### Table 4.1 Population size and proportion by state 1911, 1961 and 2006

Note: Other territories have been omitted, and as such 2006 population estimates do not sum to the Australian total. Source: ABS/CBCS Census of Population and Housing 1911, 1961 and 2006.

Table 4.2 shows that the fastest population growth rates between 1911 and 2006 were in the territories. The Australian Capital Territory's population had an average annual growth rate of 5.7 per cent, compared with 4.4 per cent for the Northern Territory and 1.6 per cent for Australia overall. The high population growth rate in the Australian Capital Territory was driven by the decision to establish the nation's capital there. In addition, the growth rates of both territories came off an extremely low base. Other states with a strong population growth rate in both periods were Queensland and Western Australia, while Tasmania grew at a substantially lower rate, particularly in the latter half of the century.

The table also reveals that the average annual growth rates tended to be higher in the 1911 to 1961 period compared with the 1961 to 2006 period, with the exception of Queensland and Western Australia.

State	1911–61 population increase	Average annual growth	1961–2006 population increase	Average annual growth	1911–2006 population increase	Average annual growth
New South Wales	2 271 767	1.7	2 630 676	1.1	4 902 443	I.5
Victoria	6 4 8 5	1.6	2 002 056	1.2	3 616 871	1.4
Queensland	921 701	1.9	2 377 018	2.1	3 298 719	2.0
South Australia	562 929	1.7	542 850	1.0	1 105 779	1.4
Western Australia	464 636	2.0	2 2 338	2.2	1 676 974	2.1
Tasmania	159 129	1.2	126 141	0.7	285 270	1.0
Northern Territory	4   7	5.3	148 417	3.3	189 588	4.4
Australian Capital Territory	57 114	7.3	265 206	3.9	322 320	5.7
Australia	6 093 262	1.7	9 307 021	1.4	15 400 283	1.6

# Table 4.2Population increase and average annual growth by state 1911, 1961 and<br/>2006

Note: Other territories have been omitted, and as such 2006 population estimates do not sum to the Australian total. Source: ABS (2008a).

In absolute terms, the largest growth in each period was in New South Wales, with an increase of around 5 million people between 1911 and 2006. Both Victoria and Queensland increased their populations by over 3 million, but a substantial portion of the increase for Victoria occurred in the first half of the century in contrast with Queensland's growth in the latter half. Western Australia's growth also occurred principally between 1961 and 2006 reflecting increasing economic activity, especially in mining, and changes in Census counting arrangements for Indigenous residents.

## Regional and urban populations

In contrast to Australia today, the population in 1911 was predominantly located outside the major capitals. As shown in Table 4.3, regional Australia accounted for almost 2.66 million people or 60 per cent of the nation's population. This share fell to 40 per cent in 2006, with a shift towards the major capital cities. A feature of the table is the striking difference between 1911 and 2006 for small localities. This difference may result from both a real decline in small localities but also the changes in the methodology from the ABS counting process. As a result, an appropriate comparison may be to combine small localities and the rural population, which illustrates an absolute increase in population but a declining share of around 10 per cent of the nation's population (from 14.9 per cent to 4.3 per cent).

Regional type	Population 1911	Percentage	Population 2006	Percentage
Major Capital Cities*	796 474	40.3	12 025 829	60.6
Regional Cities and Towns (>200 persons)	1 993 210	44.7	6 965 799	35.1
Small Localities (50 –200 persons)	450 896	10.1	6 522*	na
Rural	214 425	4.8	857   38**	4.3
Total Regional Australia	2 658 531	59.7	7 829 459	39.4
Total Australia	4 455 005	100.0	19 855 288	100.0

### Table 4.3Spatial distribution of the Australian population 1911 and 2006

Note: 'Major Capital Cities' includes approximations of Sydney, Melbourne, Brisbane, Adelaide and Perth populations as they were in 1911. The modern day conurbations of Tweed-Gold Coast, Sunshine Coast and the Central Coast are enumerated as the separate regional entities that they were in 1911—not as the single urban entities commonly reported in the present day.

\*The extremely low number is a consequence of the changes in the ABS methodology in calculating small localities, which has primary shifted persons residing in location of less than 200 persons into the rural classification.

\*\* Persons residing in locations of less than 200 persons have been classified as rural.

Source: BITRE analysis of ABS/CBCS 1911 Census.

Maps 4.1 and 4.2 illustrate the distribution of towns in 1911 and 2006. A striking feature of the maps is the number of new towns and cities across the centre of the country (see map 4.2) compared with the 1911 settlement patterns. The distribution of towns is also shifting towards the continent's north and west, and there has been an overall reduction in the number of towns, particularly in the states of Victoria and New South Wales. This expansion is partly due to the inclusion of Indigenous persons in the Census counts<sup>11</sup> and the opening up of mining operations, such as in the Pilbara.

<sup>11</sup> As discussed in Chapter 3, prior to 1967, a question on a person's race was asked and those persons deemed to have 50 per cent Aboriginal 'blood' were excluded from official population figures (ABS 1998). After the 1967 Referendum, the way in which Indigenous persons were counted altered by changing s.51 of the Constitution by removing the exclusion of the 'aboriginal race' (ABS 1998). As a result, 'Censuses immediately following the referendum saw the start of a period of substantial increases in the number of enumerated Indigenous Australians' (ABS 1998).



## Map 4.1 Australian towns of more than 200 persons in 1911

Source: BITRE analysis of ABS/CBCS 1911 Census and Geoscience Australia Gazetteer.



### Map 4.2 Australian towns of more than 200 persons in 2006

Source: ABS Geography 2006 Census of Population and Housing.

To investigate the broad changes in Australia's settlement patterns between 1911 and 2006, hierarchies of town sizes are considered.

## The decline of country towns and villages

As noted in Table 4.3, 55 per cent of Australians were located in regional cities, towns and villages in 1911, outnumbering the forty per cent who lived in metropolitan areas or those who were rural dwellers (five per cent). Figure 4.1 illustrates these numbers, showing the number of regional towns by size (population) and the total number of regional Australians living in each size category of town.



Figure 4.1 Number of towns and total town population by population category in 1911

Source: BITRE analysis of ABS/CBCS 1911 Census.

In 1911, the total number of towns in regional Australia was greater than in the present day, with the 2460 towns servicing less than 2.6 million people compared to 1708 towns servicing almost 8 million people in 2006. This reflects the fact that a large proportion of the 1911 regional population lived in small towns. Population data for 1911 underlying Table 4.3 and Figure 4.1 reveals that more people (44.7 per cent) lived in towns of over 200 persons. Additionally, 40 per cent of these town dwellers (or 18.1 per cent of Australia's population) lived in towns of between 200 and 1000 people. If the range is expanded to towns of 50 to 1000 people, the figure is 28.1 per cent of Australia's population living in these towns at the time.

Another distinctive feature of Figure 4.1 is the large number of smaller towns compared to the relatively small number of what would now be called regional centres. Large regional towns were rare and there were few large urban areas outside of the main capitals. The largest town in 1911 was Ballarat with 38 686 people, a population only exceeded by the five mainland state capitals. Only 16 towns in 1911 had more than 10 000 people and in total, less than 300 000 people lived in these towns. Large modern-day centres notably absent from this list include Canberra (1911 population of 116<sup>12</sup>), Wollongong (4725), Darwin (944), Rockingham (161) and Mandurah (223). Similarly, there were no large towns on the Gold Coast and Sunshine Coasts or the Central Coast, although these regions supported a number of small towns.

<sup>12</sup> The Australian Capital Territory figure in 1911 was 1714 people.

The number of small towns has fallen throughout the twentieth century. Figure 4.2 and Table 4.4 show that between 1911 and 2006, the net number of towns in the 200 to 500 persons range has fallen by around 1000 towns. Three contributing factors are as follows.

- Declining populations have resulted in either towns disappearing or becoming too small for the ABS to consider them localities. For example, Wilmot<sup>13</sup> in Tasmania is no longer classified as a locality by the ABS. Yet this town, 141 kilometres from Launceston, still remains home for a number of people.
- Small towns have been absorbed into larger cities, with the expansion of Australia's capital cities being the clearest example. For example, Melbourne has expanded to include places such as Pakenham and Cranbourne, which once stood apart but are today considered suburbs. Regional cities have also expanded, such as Wollongong growing to include towns such as Austinmer and Mount Kembla.
- Some towns have grown beyond 500 persons. Three of the largest cities in 2006 had populations below 500 persons in 1911: Mandurah (WA), Hervey Bay (QLD) and Ocean Grove-Barwon Heads (Vic.). These towns have also in turn expanded to absorb smaller towns and villages such as the Sunshine Coast incorporating a string of settlements along the coast.



#### Figure 4.2 Counts of Australian towns by town size in 1911, 1961 and 2006

Note: Data does not include the five major capitals. Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

<sup>13</sup> Wilmot and its surrounding area are classified as a State Suburb that had a population of 569 in 2006.

	1911		19	1961		2006	
Town Population	Number	Per cent	Number	Per cent	Number	Per cent	
200–500	I 567	63.7	350	58.8	569	33.3	
500-1 000	482	19.6	439	19.1	425	24.9	
I 000–2 000	244	9.9	205	8.9	294	17.2	
2 000–4 000	105	4.3	138	6.0	183	10.7	
4 000–8 000	42	1.7	84	3.7	106	6.2	
8 000-16 000	13	0.5	51	2.2	62	3.6	
16 000-32 000	6	0.2	18	0.8	38	2,2	
32 000–64 000		0.0	9	0.4	13	0.8	
64 000-128 000	0	0.0	0	0.0	9	0.5	
Over 128 000	0	0.0		0.0	9	0.5	
Total	2 460	100	2 295	100	I 708	100	

### Table 4.4 Counts of Australian towns by town size in 1911, 1961 and 2006

Note: Towns with a population under 200 have been removed for all three Censuses; as such the town counts are below those presented in Table B.2. In addition, the five largest capital cities are excluded from the three Census counts (Sydney, Melbourne, Brisbane, Perth and Adelaide).

Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

The large change in numbers of smaller towns (200 to 500 people) occurred in the 1961 to 2006 period. In 1911, 1567 towns had populations of 200 to 500 persons. This fell to 1350 in 1961 but greater change occurred between 1961 and 2006: by 2006, there were only 569 towns with a population of between 200 and 500 persons.

In contrast, the number of towns with a population of more than 1000 grew from 1911 (411 towns) to 1961 (506) and to 2006 (714). While there was a fall in the 1000 to 2000 category in the 1911 to 1961 period (244 to 205), this was less than the rise in larger categories, and was more than made up for by 2006 (when there were 294 towns in this category). Overall, there was a systematic shift in settlement patterns away from smaller towns and towards larger centres.

This shift becomes more pronounced if we consider the populations involved, not just the number of towns. Hence Figure 4.3, which looks at the number of people in each category, shows the complete reversal of the 1911 situation. The emphasis on small towns has apparently been overcome by a strong preference for urban areas. By 2006, the town size category with the largest share of population was regional cities of over 128 000 persons, and the smallest town category now contained the fewest number of people. This shows a long-term trend for the increasing concentration of Australia's population, not just toward capital cities, but also to larger regional centres.



### Figure 4.3 Populations of towns by town size in 1911, 1961 and 2006

Note: Data does not include the five major capitals. Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

This is also consistent with Hugo's (2001) analysis of the period between 1966 and 1996. He found that the number of towns with populations between 1000 and 100 000 persons increased from 450 to 728, and the share of the Australian population in these towns increased from 20.5 per cent in 1966 to 23.7 per cent in 1996. Including large regional centres with populations between 100 000 to 500 000 inhabitants increased the share still further from 25.9 in 1966 to 32.9 per cent in 1996. While these figures are also consistent with the 'drift to the cities' phenomenon, Hugo makes the salient point that 'it may come as a surprise to some that almost one-quarter of Australians live in country towns and regional centres'.

Figure 4.4 shows the same 2006 data as Figure 4.3, but the 1911 pattern has been adjusted to reflect the 2006 population<sup>14</sup>. It emphasises the fundamental change in the pattern of settlement in the regions over the twentieth century. The dominance of small towns and villages has been completely reversed and the larger regional centres now predominate.

<sup>14</sup> That is, to illustrate distributional change, the 1911 distribution has been inflated to reflect the increased population of 2006.



Figure 4.4 Population by town size in 1911 and 2006

Note: Data does not include the five major capitals. Source: BITRE analysis of ABS/CBCS Census 1911 and 2006.

## The dominance of capital cities

Regional Australia had more people than all capital cities combined at the beginning of the twentieth century, with over 2.4 million persons compared with 1.4 million in capital cities<sup>15</sup>. However, capital cities grew at an average rate of 2.2 per cent annually from 1901 to 2006, so that their share of the population overtook regional Australia's share by 1954 (see Figure 4.5). By 2006, capital cities collectively reached a population of over 13 million persons, so that the country now had a metropolitan primacy structure. The major urban centres, Sydney and Melbourne, consistently had the largest numbers of people over the period, although their share was declining slowly, with Brisbane and Perth's populations rising substantially.

<sup>15</sup> The population estimates for capital cities are based on the ABS Historical Population from 2008, to enable analysis as a time series.



## Figure 4.5 Population by capital cities and regional Australia, from 1901 to 2006

Source: ABS (2008a).

Although conspicuous in Australia, this pattern of urbanisation is a worldwide phenomenon. The proportion of people living in urban areas globally has risen from 29 per cent in 1950 to 52 per cent in 2011, and is projected to grow to 67 per cent by 2050 (UN 2012). The transition to a highly urbanised structure has been a major demographic trend of the past 100 years in Australia. It has become widely recognised as a long-term and inevitable result of the move away from an agricultural-based economy to a service economy.

This phenomenon has seen regional Australia's population share generally decline over the first 70 years of the twentieth century, although it has stabilised since the 1970s. A factor in regional Australia's proportional decline has been that major cities have been attractive to migrants. Hugo (2001) found that between 1947 and 1996 the number of overseas-born persons residing in the country's major urban (populations above 100 000 persons) increased by more than six times to have 80 per cent of Australia's overseas-born persons living in those cities. As a result the impact of immigration has been to grow Australia's major cities much more quickly than regional towns<sup>16</sup>.

## The rise of regional cities

The consistent decline in the share of Australia's regional population compared to the major cities occurred in parallel with increasing urbanisation within regional areas. Separating out regional cities<sup>17</sup> from the rest of regional Australia reveals a more complex picture (see Figure 4.6). While the population share for towns and rural residents as a whole has been declining, albeit at a slower rate over the past several decades, regional cities have grown.

<sup>16</sup> A more detailed description and analysis of recent immigration and internal migration in Australia can be found in BITRE (2011a).

<sup>17</sup> Regional cities in this section are taken from the ABS listing of 'Other major cities' from the Australian historical population statistics 2008, to enable analysis as a time series. These cities have a minimum of 30 000 people in 2006.

Another key element of the change is the nature and timing of the urbanisation—whether towards capital cities or regional cities. As the graph reveals, the share of the Australian population in regional cities stayed virtually the same (around seven per cent) between 1911 and 1954. At the same time, the capital cities experienced the strongest growth in their share of the Australian population, from 37 per cent in 1911 to 54 per cent in 1954.

However, in more recent decades, the capital city share of population has stabilised, growing only two percentage points from 1971 (62 per cent) to 2006 (64 per cent). In contrast, the share of the population in regional cities has grown from 12 to 20 per cent over this same 35 year period.



Figure 4.6 Population share by percentage for capital cities, regional cities and other regional, from 1911 to 2006

This increase in the proportion of persons living in regional cities appears, at least superficially, to come at the expense of rural areas and smaller towns. A closer study of the absolute population numbers (rather than shares) reveals another facet in the changing nature of regional Australia's population (Figure 4.7). The combined regional town and rural populations rose from 1911 until 1961 but this was followed by declining numbers over the next three decades. However, population then began to very slowly increase again in the twenty years to 2006. In contrast, population in regional cities has been growing consistently at an average annual rate of 2.8 per cent (0.7 percentage points higher than capital cities over the same period).



Figure 4.7 Populations of regional cities and other regional, from 1911 to 2006

An important difference between regional cities' population growth rates is evident when separating coastal and inland cities (see Figure 4.8). The number of people living in coastal cities has grown faster than inland cities, with both starting from a similar number of persons in 1911.



Figure 4.8 Population of inland and coastal regional cities, from 1911 to 2006

Note: Not all time periods are available, especially in the earlier half of the century. Source: ABS (2008a).

Source: ABS (2008a).

The shift towards coastal locations is evident when comparing the 10 largest regional cities in 1911, 1961 and 2006 (see Table 4.5) from the Censuses. Only two of the top ten largest regional cities in 2006 were not coastal locations, in contrast with the top three positions taken by inland mining towns in 1911.

A striking feature of the table is the strong population growth in South East Queensland, reflected in the inclusion of the Gold Coast, Sunshine Coast and Toowoomba in the top 10 by 2006. There are also a high number of larger cities positioned close to their capital. These include the cities identified above for Brisbane but also Newcastle, Central Coast and Wollongong (near Sydney) and Geelong and Ballarat (near Melbourne). An interesting facet to consider is the change in function of these large cities (see Table 4.5 and Figure 4.9).

- In 1911, several of the 10 largest cities started with a strong mining focus such as Ballarat, Broken Hill, Kalgoorlie-Boulder, Bendigo and Charters Towers. By 2006, only Ballarat remained in the top 10 as it was able to transition to become a service centre for a substantial portion of western Victoria.
- The largest growth in the second half of the century has been in the Gold Coast, through the increasing importance of service industries such as tourism and lifestyle locations for retirement. This points to a new base industry operating in regional locations, particularly along the coast.
- The port cities of Townsville and Cairns in the tropical regions of Queensland are illustrations of the changing functions. Both Townsville and Cairns began as seaports for agriculture and mining operations. Over time their economies have been diversified to include defence facilities and tourism.
- Newcastle's spectacular growth in the first half of the century benefitted from mining, as it became the port for Hunter Valley coal. But it was also an industrial economy close to the capital, similar to Geelong and Wollongong.

Town	1911 Population	Town	1961 Population	Town	2006 Population
Ballarat	38 686	Newcastle	142 574	Gold Coast	402 647
Broken Hill	30 953	Townsville	51 143	Newcastle	288 735
Kalgoorlie-Boulder	26 321	Toowoomba	50   34	Central Coast	282 727
Geelong	21 630	Rockhampton	44   28	Wollongong	234 481
Launceston	20 937	Ballarat	41 037	Sunshine Coast	184 663
Bendigo	17 883	Launceston	38   18	Geelong	137 223
Toowoomba	16 160	Geelong	35 700	Townsville- Thuringowa	128 807
Rockhampton	15 451	Wollongong	31 363	Cairns	98 346
Charters Towers	15 037	Broken Hill	31 267	Toowoomba	95 263
Townsville	13 678	Bendigo	30 195	Ballarat	78 223
Total	216 736	Total	495 659	Total	93    5

#### Table 4.5Ten largest regional towns in 1911, 1961 and 2006

Note: Population estimates are based on Localities for 1911 and 1961 while Urban Centres and Localities (UCLs) are used for 2006.

Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

While Table 4.5 presents the population changes in the cities that form the top 10, Figure 4.9 provides a graphical illustration of the dramatic increase in the number of people that live in these regional cities. Although cities in 1961 are larger than those in 1911, only Newcastle had a substantially larger population in 1961 than other regional cities.

In contrast, the largest cities in 2006 had considerably larger populations than the top 10 in 1961. This population growth has resulted in the ten largest regional cities in 2006 containing nearly 10 per cent of Australia's population, doubling their share from 1961. Indeed, only Newcastle's 1961 population would make the top 10 listing in 2006.



### Figure 4.9 Top ten cities by population size in 1911, 1961 and 2006

Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006

## Spatial changes in settlements - tracking individual towns

To consider change over time for individual locations, a customised dataset was developed. The dataset comprises cities, towns and localities from 1911, 1961 and 2006 that were recorded in all three Censuses and had a population of at least 500 persons in at least one of the Censuses. In other words, it excludes towns that were not recorded in one or more of the Censuses, or had a population of fewer than 500 people in all three Censuses. The towns were matched by name, state and local government areas to assemble a listing of 866 cities and towns, with population estimates for all three time periods. A discussion of the methodology is presented in Appendix A.

The rest of the report's analysis includes towns with a population of 200 or more at any of the three Censuses, unless stated otherwise. This section uses the higher (500) threshold because of the difficulty in tracking individual smaller towns over time.

Map 4.3 presents the average annual rate of population growth for matched towns and cities over three different time periods, with consistent scale ranges for easier comparison. In addition, capital cities and major cities with populations above 25 000 in 2006 are identified with a larger circle and labelled separately.

The maps illustrate several changes in the settlement pattern.

- The loss of population in inland Australia, especially in the dryland farming areas of the wheat-sheep belt along western Victoria and extending through New South Wales and Queensland, Eyre Peninsula and Mid North South Australia, and over to the wheat-sheep areas of Western Australia.
- Consistent growth along coastal Australia, especially in New South Wales and Queensland, and towns positioned close to capital cities.
- Population growth in all capital cities and major centres between 1911 and 2006.
- Most of the population change occurring in the second half of the twentieth century, with many more inland country towns experiencing population declines while coastal, larger regional cities and commuting towns had high population growth rates.
- The strong connection between towns surviving from 1911 to 2006 with their position on a rail line.

Towns with the greatest average annual decline in population between 1911 and 2006 were often old mining locations, particularly remote mining towns which had difficulty making the transition from being a one-industry town to a major service centre. The population losses occurred mainly in the first half of the century with towns such as Ravenswood (QLD), Chillagow (QLD), Waratah (Tas), Emmaville (NSW) and Leonora (WA) experiencing the largest average annual decline, even though in 1911 they had populations of over 1000 persons.

The single largest fall in population also occurred in a mining town, with the outback town of Broken Hill declining by over 10 000 persons between 1911 and 2006. Broken Hill was founded and grew around the mining of rich deposits of lead, zinc and silver. While mining continues today, some deposits have been depleted, so resources are not being extracted at the same rate and better technology has reduced the need for mine workers. It is a town that has been exposed to the volatile fortunes of mining, yet more recently has survived because of its size and distance advantages for service provision in the area.

In contrast, towns existing in 1911 that have become major cities in 2006 are dominated by coastal locations, with Mandurah, the Sunshine Coast, the Gold Coast and Hervey Bay having the highest average annual growth rates between 1911 and 2006, particularly in the second half of the century. A feature of some of the growth has been the amalgamation of several towns to become one urban area over time. For example, the Sunshine Coast did not exist in 1911 but towns such as Buderim (251 persons), Caloundra (94 persons), Maroochy River (135 persons), Noosa (87 persons) and Tewantin (219 persons) were towns which became part of the Sunshine Coast.

Two other towns positioned in the top ten for population growth rates were Whyalla (SA) and Mittagong (NSW). These towns illustrate two causes of growth.

- Whyalla's growth stemmed from industrial expansion into resource processing, steel production and ship building. The city grew very quickly in the first half of the century but growth has slowed significantly in the latter half, reflecting the decline in manufacturing.
- Mittagong in New South Wales grew substantially in the latter half of the century, becoming an attractive peri-urban location positioned along the Hume Highway close to Sydney.

# Map 4.3 Average annual percentage growth rate for three different time periods for identified Australian towns



(a) Average annual growth 1911 to 1961

#### (b) Average annual growth 1961 to 2006



(c) Average annual growth 1911 to 2006



Note: Based on a customised dataset to track individual locations over time (see Appendix A). Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines.

Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

Maps 4.4 to 4.6 provide a closer look for sections of the country based on the average annual growth rates from 1911 to 2006. Three features present across all three maps are:

- The loss of population in inland areas.
- The substantial growth of some (now) larger centres, both inland and coastal.
- General population growth along the coast.





- Note: Based on a customised dataset to track individual locations over time (see Appendix A). Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines.
- Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.



# Map 4.5 Average annual percentage growth rate from 1911 to 2006 for identified towns in Queensland

Note: Based on a customised dataset to track individual locations over time (see Appendix A). Rail lines are from MapInfo StreetPro (2007), and include both modern and disused lines.

Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.







Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

## Lost and new towns

As the above maps have only presented towns recorded in all three Censuses, they do not illustrate locations that have been 'lost' by 2006 and 'new' towns appearing over the century. These towns represent points of significant change. For example, Alice Springs did not exist in 1911 (and so is not shown on Maps 4.3) but has since become an iconic and economically and socially significant symbol in the centre of Australia.

Most of Australia's towns were formed in the nineteenth century. The enormous expansion of settlements was illustrated by Freestone (2010) who noted that Victoria had a net increase of 117 towns between 1841 and 1891, while in Western Australia, after a slow start with only 26 town sites declared between 1829 and 1890, the state expanded with the discovery of gold by gazetting 212 towns within 14 years (Freestone 2010). The number of towns that emerged however was unsustainable—basically an oversupply of towns and villages (Freestone 2010). Indeed, this fact was recognised at the time. For instance, the New South Wales Parliament in 1881, passed the Design of Towns and Villages Correcting Act to respond 'to the ''thousands'' of townships sited in unsuitable locations' (Freestone 2010, p.110). However, the trend of generating and abandoning towns continued into the twentieth century.

To give an indication of the spread, towns with populations appearing in both the 1911 and 1961 Census and which had a population of 500 in either Census but were no longer classified as a town by 2006 are presented in Map 4.7. It is important to note that these 'lost' towns are not all ghost towns—many still exist, but with substantially smaller populations.

Mining and agriculture were the basic industries for many of these towns, matching the pattern of population decline as presented in Map 4.4. The wheat-sheep belt regions in Victoria and New South Wales are clearly identifiable, along with mining towns in Queensland and Western Australia. For example, the town of Irvinebank in Queensland, 80 kilometres south-west of Cairns, had a mining and tin smelting operation that grew to around 1300 persons by 1911 (Centre for the Government of Queensland 2013). At its peak the town laid claim to a primary school, a well fitted out hospital, a public hall and a hotel. However, during the twentieth century the town went into decline, symbolised by the closure of the tramline in 1936 (Centre for the Government of Queensland 2013) and a population fall to below 150 persons by 1961.



Source: BITRE derived estimates from ABS/CBCS Censuses 1911, 1961 and 2006.

The loss of towns has been offset by 'new' towns being established. These new towns generally fall into two categories: coastal and remote.

Many Australians regard living by the coast as ideal and coastal towns have benefited from Australians wanting to enjoy a coastal lifestyle. Many factors have led to this long-standing trend, including earlier and longer retirement, rising incomes and wealth, attractive amenities, and tourism (see Chapter 11). Map 4.8 illustrates the coastal growth of 'new towns'<sup>18</sup> in green, which are particularly prevalent on the east coast of New South Wales and Queensland. A

<sup>18</sup> A 'new town' has been classified as being established after 1911 or 1961 based on localities from the 2006 Census.

feature of this growth has been the expansion of existing centres and the positioning of 'new towns' close to these centres to take advantage of existing infrastructure and services.

In addition to coastal locations, there has been the opening up of remote areas with mining operations. Many of these towns have grown on the back of growing demand for iron ore, energy and other commodities. These include Mount Isa (QLD), Roxby Downs (SA), Nhulunbuy (NT) and Leinster (WA). However, several mining towns have come and gone during the century—towns such as Radium Hill (SA), Rossarden (Tas.) and Mary Kathleen (QLD). Wittenoom, in the Pilbara region of Western Australia, is today a well-known virtual ghost town that grew on the back of mining the hazardous local blue asbestos in the 1950s but which closed by the 1960s.

A range of towns have also grown from several other factors such as the establishment of large infrastructure or industry networks such as the electricity power stations in the La Trobe Valley, the construction of the Snowy Mountain Scheme and irrigation schemes. For example, the Murrumbidgee Irrigation Area (MIA) was the stimulus for the establishment and growth of Griffith, a city of over 16 000 persons, and associated towns such as Coleambally and Leeton (see Chapter 5).



### Map 4.8 'New' towns by 2006

Source: BITRE derived estimates from ABS/CBCS Censuses 1911, 1961 and 2006.

While most of these settlements can be regarded as being genuinely 'new', the apparent appearance of many inland and northern towns owes more to changes in the way Indigenous Australians were counted in the Census than real growth in population. Even today the Australian Bureau of Statistics needs to spend considerable resources to try to ensure a full as possible count in remote areas.

Extensive analysis by Memmott and Moran (2001)<sup>19</sup> of Indigenous settlements describe their development as being in parallel to the colonial settlement pattern. Their analysis identified different types of settlement emerging from variable circumstances such as contact history, regional economic conditions, land tenure, and government policy. Also identified are other culturally distinctive attributes of Indigenous settlements such as lifestyles, extent of preference for remote and rural living and long-standing attachments to place.

## Changing hierarchy of Australia's settlements

The following series of maps (Maps 4.9 to 4.12) captures the pattern of growth, decline, 'lost' towns and 'new' towns described above. The series of maps include Australia, the south east corner of Australia, Queensland and southern Western Australia, over the three Censuses (1911, 1961 and 2006). The size of each circle represents population size (for towns with a minimum of 200 persons). The capital cities of the five mainland states are excluded, as their size overpowers the configuration.

A pattern clearly evident over the three Censuses is the growth of regional centres combined with a reduction in the number of smaller towns. In 1911, only a few regional centres stand out and are usually associated with a specific function, such as Ballarat, Bendigo and Broken Hill with mining, Geelong being an important port and Goulburn's associated with rail. The prevailing pattern in 1911 is the numerous small towns, particularly positioned within the wheat-sheep areas. By 1961, the rise of regional centres had begun with cities such as Canberra, Newcastle and Wollongong increasing in size, but the numerous small towns appear to remain an important part of the structure.

However, by 2006, large regional cities dwarfed the smaller settlements, with many of the smaller towns having 'disappeared' from the map (in other words, their population had fallen below 200 people). Both inland and coastal cities have risen to dominate their surrounding hinterlands.

<sup>19</sup> An extensive analysis into Indigenous settlements is beyond the scope of this paper. However, Chapter 5 presents a case study of the region around Tennant Creek. Further readings on Indigenous settlements are available in Memmott and Moran (2001).

Map 4.9 Towns in Australia by population size over three Censuses; 1911, 1961 and 2006





Note:The capital cities of the five mainland states are excluded.Source:BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

While the changes in the pattern can be seen at the national scale, Maps 4.10 to 4.12 have been included to provide a closer look for specific sections of the country.

Map 4.10 Towns in South East Australia by population size over three Censuses; 1911, 1961 and 2006





Note: The capital cities of the five mainland states are excluded. Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

Map 4.11 Towns in Queensland by population size over three Censuses; 1911, 1961 and 2006





Note: The capital cities of the five mainland states are excluded. Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

Map 4.12 Towns in South West Australia by population size over three Censuses, 1911, 1961 and 2006





Note: The capital cities of the five mainland states are excluded. Source: BITRE analysis of ABS/CBCS Censuses 1911, 1961 and 2006.

# Conclusion

Australia's settlement structure in 2006 is very different to the structure in 1911. Australia has become far more urbanised. The concentration of economic activity and people has driven the development of larger regional cities and has substantially grown the capital cities, creating a metropolitan primacy structure.

Several features are evident when investigating population change in Australian towns over a long timeframe. These include:

- Establishment, loss, growth and decline of towns being part of the urban process and evident in Australia's settlement over the past century.
- All regions transitioning from many small towns with fewer larger ones, to a mix of larger regional centres, substantial towns and small villages.
- Slow or declining population growth for many towns in inland areas, particularly those in dry land farming areas.
- Regional Australia having a much smaller proportion of the country's total population in 2006 than in 1911, yet regional cities have grown.
- All capital cities and regional cities of population greater than 25 000 experiencing positive population growth between 1911 and 2006.
- Stronger population growth in coastal regional cities compared with inland regional cities.

- The dominance of population centres along the east coast of Australia.
- A substantial increase in coastal town populations in the second half of the century.
- Most of the population change occurring in the second half of the twentieth century.
- Spatially identifiable patterns that suggest wider underlying forces impacting on local events.

The identified general patterns may provide a guide to some of the important factors shaping the fortunes of Australia's towns. Yet, as Freestone (2010, p.100) states, '[m]any surveyed towns failed to ignite or their fortunes waxed and waned over time. The physical plan was rarely an issue: siting, accessibility, comparative advantage, and adaptability to new circumstances, such as technological change, were more critical factors'. These factors will be explored further in later chapters.