Section 4

Indicators of health and wellbeing for Priority Areas

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Introduction

Information is presented in this section to describe key health and wellbeing outcomes for children, young people and adults in Australia, at a geographic level. In particular, the aim is to identify inequalities that exist in these outcomes between different population groups, including Aboriginal and Torres Strait Islander Australians, in capital cities and regional and remote Australia.

In the absence of individual-level data on social background, the approach often taken to describe the association between the health and wellbeing of the population, their socioeconomic status and aspects of social inclusion employs an area-based measure of socioeconomic disadvantage (see Section 6 for further details).

The information, presented as a series of indicators, highlights these inequalities and draws attention to the influence of social, economic and environmental factors on health outcomes, and the influence of these factors on wellbeing. The ensuing picture is one of significant differences across the population, both in health and wellbeing, and in geographic location, and the social inclusion or exclusion of sub-population groups.

In brief, the indicators included in this atlas aim to describe variations across Australia for:

- vulnerable populations represented by the Priority Areas at risk of social exclusion; and
- a set of indicators more specifically related to health and wellbeing.

More detail as to the particular indicators that we were able to represent geographically, and to the selection of the set in this atlas, is provided under the heading 'Selection of Indicators', below.

The value of indicators

One way to gauge the impact of social, economic and environmental factors on the wellbeing of the population is through the use of indicators, both at a point in time, and by tracking their movement over time. Indicators are summary measures of chosen events (for example, the percentage of children under 15 years of age living in families where no parent has a job) derived from data collections that record all cases, or a representative sample, of the events in a population.

Describing the geographic variation in indicators of inequality provides information which can be used to support progress towards reducing inequalities.

Terminology

Information is presented in maps, charts and tables to describe inequalities in health and other outcomes.

In referring to the charts in Section 5, we use the terminology 'highest and lowest socioeconomic status areas', which refers to the way areas have been grouped, using the Australian Bureau of Statistics' Index of Relative Socio-economic Disadvantage (IRSD).[3]

The term 'socioeconomic' refers to the social and economic aspects of the population, where 'social' includes information about the population and their health, education, welfare, housing, transport etc.

It is not used in the context of 'social' as in 'social skills', 'social capital', 'social ability' or 'social behaviour' of community members. Therefore, an area described as having 'a high level of socioeconomic disadvantage' does not imply that the area has low cohesion or lacks strength as a community; rather it identifies a relative lack of resources or opportunities that are available to a greater extent in more advantaged communities.

The indicators included in this atlas are also those for which reliable data are available which can be mapped to show variations, by area, across the capital cities and rural areas of Australia.

Selection of indicators

As noted above, the indicators presented in this section aim to highlight inequalities and draw attention to the influence of social, economic and environmental factors on health outcomes, and the influence of these factors on wellbeing and social inclusion.

There are two sets of indicators. The first set draws on the available data to describe the following vulnerable populations:

- jobless families with children;
- children at greatest risk of long-term disadvantage;
- people affected by homelessness;
- people living with disability or mental illness and their carers;
- Aboriginal and Torres Strait Islander Australians; and
- those living in entrenched and multiple disadvantage in particular neighbourhoods.

The approach is to present the available geographically-referenced data which seem most appropriate to illustrate the indicators, thereby describing facets of the socioeconomic status and health and wellbeing of the population. The

indicators developed from the available data are listed in Table 1.

The second set adds an additional number of indicators specifically describing the health and wellbeing of the population. These are chronic disease (circulatory system disorders and diabetes); risk factors (smoking and obesity, both by sex) and premature mortality (total, and suicides). Information on screening for breast cancer is also included. This set is in a sub-section titled 'Indicators of health status, risk factors, outcomes and use of services'.

In order to keep this atlas to a manageable size, a limited number of the indicators are included in this atlas (these are shown in bold typeface in Table 1); the remainder, together with the specific health-related and many other indicators, are available on the PHIDU website at www.adelaide.edu.au/phidu/.

Caveats, data sources and notes on data

Each indicator presented here is accompanied by a brief definition and any notes considered critical to interpretation. More extensive notes are provided in Appendices A and B. The majority of the indicators will be updated on the PHIDU website as more recent data become available.

As noted in Section 1, the majority of data sourced from the Population Census conducted by the Australian Bureau of Statistics is from the 2011 Census. The exceptions are the data for homeless people, for whom the 2011 Census data were not coded to the level of geography mapped here (the Statistical Local Area – see below for details of this area).

See the note below (under *Areas mapped*, on page 45), about the particular geographical level mapped in this atlas.

Table 1: Selected indicators

Priority Area	Indicators: bolding indicates inclusion in this report – other indicators are online at www.adelaide.edu.au/phidu/					
Jobless families with children	Jobless families with dependent children under 15 years of age	**Children under 15 years of age living in jobless families**	**Long-term unemployment**			
Children at greatest risk of long-term disadvantage	**Children in low income, welfare-dependent families**	**Children in families where the mother has low educational attainment**	**AEDI: children assessed as being developmentally vulnerable on one or more domains**	**Women smoking during pregnancy**	Low birth weight babies	Total Fertility Rate
People who are affected by homelessness	**Homelessness**	**Dwellings rented from the government housing authority**				
People living with disability or mental illness, and their carers	People aged 0 to 64 years and living in the community who have a profound or severe disability	**People aged 15 to 59 years and living in the community who have a profound or severe disability and are not employed**	People who provide assistance to people with a disability	**People with long-term mental health problems who are unemployed**	**Prevalence of psychological distress**	
Aboriginal and Torres Strait Islander Australians	Indigenous population: number	**Indigenous population: % of total population**	**Indigenous participation in secondary education**	**Indigenous women smoking during pregnancy**	**Indigenous median age at death**	**Non-Indigenous median age at death**
Entrenched and multiple disadvantage in particular neighbourhoods	**See Section 6**					

How to use the maps and charts in this section

For each indicator, there is an introductory statement as to its relevance and a brief definition of the indicator. This is followed by:

- a table comparing the capital cities for the indicator (repeated for the non-metropolitan areas);
- a description of the distribution of the indicator within the capital cities (repeated for the non-metropolitan areas); and
- a description of the distribution of the indicator by remoteness.

The introductory statement for each indicator is necessarily brief, because of limited space. However, the notes appended to each indicator in the online mapping software may be more extensive, as is the information presented in the earlier sections of the Atlas.

The following notes provide an overview of how the atlas may be used. Additional details of the indicators, including definitions and data sources, are on the pages describing each indicator, as well as in Appendices A and B.

It is important to use not only the maps and graphs in the atlas, but also to access the online maps and datasheets, which show the number of events, or individuals represented by the rates, as well as the percentages and rates in the maps.

Geographic variation

Two pages of maps are shown for the majority of the variables in the atlas. The first page displays maps of the capital cities, generally at the Statistical Local Area (SLA) level, and the second shows the whole of Australia, with the capital cities depicted as a single area (not mapped by SLA). In brief, SLAs represent whole, or parts of Local Government Areas (LGAs), and also cover areas of Australia not incorporated into LGAs; as such they form one level in the statistical geography hierarchy under the Australian Standard Geographic Classification (ASGC).[1]

As noted, the maps are generally at the SLA level. The exceptions are Brisbane, Gold Coast, Townsville, Canberra and Darwin, where SLAs are based on suburbs rather than LGAs. As such, many of the SLAs are very small, and frequently have too few cases to be mapped with reliability. For these capital cities and major urban centres, SLAs have been grouped together to provide more strength to the data. Details of the groupings are provided in Appendix C.

The rate or per cent for the other major urban centres of Newcastle, Wollongong, Geelong, Gold Coast and Townsville are also shown on the capital cities' map page. The capital cities and other major urban centres are collectively referred to as 'major urban centres'.

The distribution by remoteness of each indicator is shown in a graph using the Australian Standard Geographic Classification - Remoteness Areas, a geographic classification system developed by the Australian Bureau of Statistics (ABS) as a statistical geography structure, which allows quantitative comparisons between 'city' and 'country' Australia (see box).[1,2]

Remoteness Areas

The purpose of the structure is to classify data into broad geographical categories, called Remoteness Areas (RAs). The RA categories are defined in terms of 'remoteness' - the physical distance of a location from the nearest Urban Centre (access to goods and services) based on population size.

For each variable in the atlas, details were calculated of the average percentage or rate for each of five ASGC Remoteness classes, as follows:

- MC: Major Cities of Australia
- IR: Inner Regional Australia
- OR: Outer Regional Australia
- R: Remote
- VR: Very Remote

For example, for children in low income families, the average percentage of all such people in SLAs in remoteness class one (Major Cities) was calculated and shown in a graph, with the average percentage in each of the other four categories.

The ASGC Remoteness classification thereby provides a summary measure of the characteristics of the population, for each of the variables mapped, categorised by accessibility to the largest populated centres.[1,2]

The second map is of the whole of Australia, again by SLA, but with each capital city mapped as a single area. This enables comparisons to be made of the percentages, rates etc. in these major urban centres overall, with those in the non-metropolitan areas of Australia. Here, the term 'non-metropolitan' is used to refer to the area in each State or Territory outside of the capital city (or capital city and other major urban centres, where the latter exist).

Key maps are located at the back of the report. They are at A3 size and show each major urban centre and non-metropolitan area, enabling the identification of the areas mapped for each indicator. It can also be helpful to refer to the online version of the atlas, where the areas are

able to be ranked in the data table by their rate or per cent, and highlighted in the table and on the map to assist in understanding variations in the data.

Readers should note that the maps reflect the distribution of the population for whom the particular event (e.g., death from a road traffic accident) is recorded, showing the location (at the SLA level) of their usual residence, as coded from the address information in the various statistical data collections. That is, the maps are not of the location of a road traffic accident death, or of a hospital to which a person was admitted.

In many cases, the ranges to which data are mapped in the capital cities and whole-of-Australia maps will vary, as they do between indicators, because of the different prevalence of conditions, or rates of death, etc. This should be taken into account when using the maps.

Areas mapped

The data are mapped to the 2006 version of the ASGC – that is, the boundaries are those in place at 1 July 2006. The reason for using these boundaries is that all of the data, other than the Census data, were coded to geographical areas before the 2011 boundaries were known. In addition, the data, maps and text were finalised before the 2011 Census results were available and the Census data included were from the 2006 Census. As approval for release had not been received when the 2011 Census results became available, these data were updated to reflect the 2011 Census results.

The major variations between the 2006 boundaries and 2011 boundaries are in Queensland and in the Northern Territory. For information on the changes, see *Australian Standard Geographical Classification (ASGC), Appendix 2, Changes to Geographical Areas 2006-2011, July 2011* (ABS Cat. no. 1216.0) at: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1216.0July%202011?OpenDocument.

The latest interactive SLA atlas at www.adelaide.edu.au/phidu/ are, however, based on the 2011 boundaries. Data which had been coded to boundaries from earlier years have been converted to approximate the 2011 boundaries. Of note is that the online version includes data for later years than have been published in this atlas.

In addition, readers should refer to the spreadsheets available on the PHIDU website, as some areas with relatively high percentages or rates may have a relatively small number of cases (e.g., deaths); and others with similar, but lower, rates may have substantially more cases.

Cautions

The comparisons made in the report are between SLAs. Readers should note that there are also variations, and sometimes substantial variations, within SLAs, both in capital cities and in the non-metropolitan areas of Australia. As such, the figures for an SLA represent the average of the different population groups within the SLA.

How best to read the data and maps

How can I best find out about the population in the area where I live or work? Some readers will want to identify a particular area to see how it compares with other areas across the indicators. The key maps at the end of the report fold out to allow a particular geographic area to be identified. Although the maps are small, the areas in the capital city maps are large enough to follow from page to page, noting the location and size of variations. However, many of the urban centres (towns) do not show up on the map as the towns cover very small geographic areas relative to the rural and remote SLAs. The latest spreadsheets and interactive atlas at www.adelaide.edu.au/phidu/ which include these data can be used to show these differences.

What are the predominant patterns across Australia?

Other readers will want an overview of the distribution of the population across all indicators, or across a particular range of indicators. Again, the key map at the end of the report will be useful.

Throughout the atlas, the geographic distribution at the SLA level in the capital cities and whole-of-Australia maps generally highlights, using the darker shades, areas with socioeconomically disadvantaged populations, or poorer outcomes.

Mapping data for some areas of Australia poses a number of challenges, mainly arising from the relatively small populations and, in the non-metropolitan areas, substantial numbers of large but sparsely settled SLAs. For example, areas in country Western Australia are often mapped in a grey shade, and footnoted to show why the data have been withheld.

In addition, the large size of some SLAs in remote areas can distort the message that the map is presenting. This is particularly so where an area is mapped in the darkest shade, thereby dominating the map – even though the number of events might be relatively small. Section 6

includes a discussion about using data at the SLA level to identify disadvantaged populations.

A summary of socioeconomic disadvantage across Australia

In order to provide a reference point for the maps in the following sub-sections, the Index of Relative Socio-economic Disadvantage (IRSD) is presented following this description. The IRSD is one of four Socio-economic Indexes for Areas developed by the Australian Bureau of Statistics following the 2011 Population Census. It is an area-based, summary measure of socioeconomic disadvantage and is calculated from variables characterising individuals and families, including those that relate to education, occupation and labour force participation. Note that although it is referred to as an 'area-based' measure, it is not a measure of the features of the area, but of the population living in the area, and of the dwellings in which they live.

The IRSD is expressed as a number with a base for Australia of 1000: scores above 1000 indicate relative lack of disadvantage and those below indicate relatively greater disadvantage.

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Index of Relative Socio-economic Disadvantage, capital cities

The ABS Index of Relative Socio-economic Disadvantage (IRSD) is a powerful indicator of the socioeconomic disadvantage faced by numerous sub-population groups across Australia. It is based on the social and economic characteristics of the population in each area, and is a useful summary measure, reflecting the patterns of disadvantage seen in many individual indicators of social inequality.[3]

Indicator definition: The IRSD is one of four socioeconomic indexes for areas compiled by the ABS, using data from the 2011 Census about the population and their characteristics. The index has a base of 1000 for Australia: scores above 1000 indicate relative lack of disadvantage and those below indicate relatively greater disadvantage.

Table 2: IRSD, by capital city, 2011

Index score

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
1011	1020	1022	991	1036	983	1030	1076	1018

Capital cities

IRSD scores showed little variation between the capital cities, other than for the lowest scores in Hobart and Adelaide, and the highest score in Canberra. Although the ABS indicates comparison with previous indexes is not recommended, it is of note that there has been a marked increase in the index score for Darwin since the 2006 Census when it was 955, to a score of 1030 in 2011. A major change to the construction of the 2011 index was the exclusion of the variable relating to the proportion of people identifying as Indigenous in an area: this change may explain, at least in part, the movement discussed here.

The geographic distribution of the population in **Sydney** showed a strong socioeconomic pattern, with relatively high scores (least disadvantaged areas) in a number of SLAs on the north shore and in the eastern suburbs, and relatively low scores (most disadvantaged) to the west and south-west of the city, and in some outer northern areas. The lowest score was in Fairfield - East (805) and the highest in Ku-ring-gai (1121).

In **Melbourne**, scores of 1000 or higher were predominant in SLAs spanning a broad area from the city centre to the east, north-east and south-east. The most socioeconomically disadvantaged areas were clustered in locations to the west, north and outer south-east of the city, with the lowest score in Hume - Broadmeadows (860) and the highest in Manningham - East (1115).

A large number of the SLA groups across **Brisbane** had scores above the Australian score of 1000. The majority of SLAs with relatively low scores were located largely in the south and south west of the city (and including Stretton-Karawatha/Kingston, with the city's lowest score (843)), as well as in the outer north.

Adelaide's social geography was also clearly described by the IRSD, with the most disadvantaged areas located in three main clusters – in the outer north, the north-west and the outer south, and including the three lowest of the capital city scores, in Playford - Elizabeth (748) and - West Central (809), and Port Adelaide Enfield - Park (847). SLAs to the east and south-east of the city centre had the highest socioeconomic status populations.

In **Perth**, inner and near-city SLAs comprised the bulk of the most advantaged areas, along with a small number of outer suburban SLAs. No areas had very low scores, with the lowest in Kwinana (968).

The range in **Hobart** was from a low of 867 index points in Brighton and 878 in Derwent Valley - Part A, to high scores of 1046 in the inner city of Hobart, 1042 in Hobart - Remainder and 1043 in Kingborough - Part A.

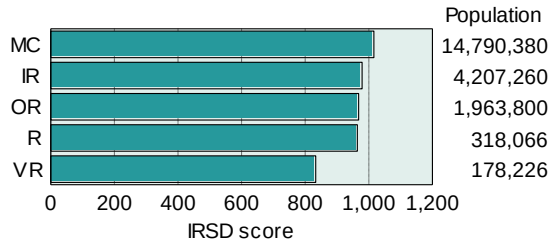
The SLAs in **Darwin** were grouped into six areas for mapping. The IRSD scores were all relatively high, ranging from 999 in Litchfield - Part A to 1063 in Darwin South West.

The small, suburb-based SLAs in **Canberra** were also grouped to larger areas. All but one area (Eastern Fringe, with a very small population and covering a number of SLAs) had scores well above the national average.

Remoteness

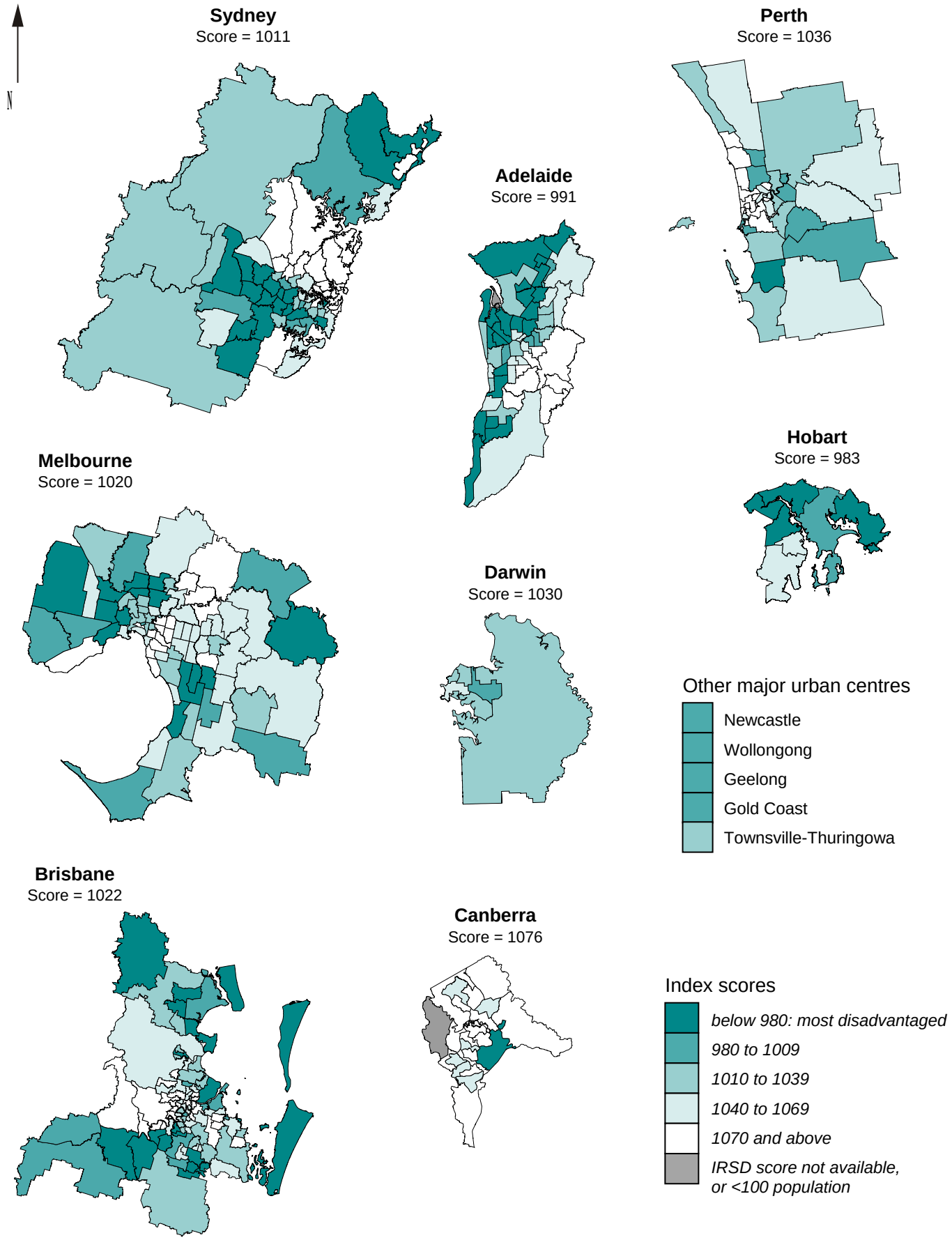
IRSD scores decreased with increasing remoteness, from a score of 1016 in the Major Cities areas to 964 in the Remote Areas, before a more substantial decline to a score of 833 in the Very Remote areas.

Figure 5: IRSD, by remoteness, 2011



Map 1: Index of Relative Socio-economic Disadvantage, major urban centres, 2011

Index scores by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data from ABS SEIFA, 2011 Census

Index of Relative Socio-economic Disadvantage, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 3: IRSD, by State/ Territory, Australia, 2011

Index score

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	969	980	983	962	982	945	786	..	973
Total	996	1010	1001	983	1022	961	926	1076	1000

Remainder of State/Territory

The IRSD scores in the non-metropolitan areas are relatively similar, other than for the very low score (relatively disadvantaged) for the Northern Territory. The index score in the Northern Territory is notably higher in 2011 (a score of 786) than in 2006 (753), with the second largest increase in Western Australia (963 in 2006, to 982 in 2011). As noted on the previous text page, a major change to the construction of the 2011 index was the exclusion of the variable relating to the proportion of people identifying as Indigenous in an area: this change may explain, at least in part, the movements discussed here. Scores in the non-metropolitan areas of the other States showed little variation.

Note that many of the low scores at the SLA level in the Northern Territory and Queensland relate to relatively small Aboriginal and Torres Strait Islander communities; for the most part, communities of this size are not separate SLAs in other jurisdictions. There are also often differences in scores between urban centres (towns) and surrounding rural areas; these differences do not show on the map as the towns cover small geographic areas.

Areas of relatively high socioeconomic disadvantage cover much of **New South Wales** (outside of Sydney), with the largest concentration of SLAs in large areas across the north of the State. The lowest index score was in Brewarrina (788), with low scores also in the adjacent SLA of Walgett (856), in Central Darling (824) and in the outer north-east in Richmond Valley - Casino (870). The majority of SLAs of least socioeconomic disadvantage were in the eastern part of the State, in particular inland and to the south of Sydney, through to and along the border with Victoria.

In non-metropolitan **Victoria**, index scores were lowest in Swan Hill - Robinvale (881) and Central Goldfields - Maryborough (882), and in Latrobe - Morwell and Greater Bendigo - Eaglehawk (both 885). The highest scores were recorded in Surf Coast - East, Greater Bendigo - Strathfieldsaye and Macedon Ranges Balance.

A majority of the SLAs in **Queensland** (outside of Brisbane) had scores below 1000; and eleven of the 41 SLAs, with the lowest non-metropolitan scores (below 600) in Australia were in Queensland. These areas were almost exclusively located in the coastal regions and islands in the north of the State, with the exceptions being the SLAs of Cherbourg and Woorabinda. Yarrabah (441, the lowest index score in Australia), Cherbourg (452) and Aurukun (483) had the lowest index scores. SLAs with scores above 1000 were largely located in a group to the west and south of Mackay.

Low scores prevailed across much of **South Australia**, particularly in the north of the State. The lowest score was in Anangu Pitjantjatjara (593), with low scores also recorded for Unincorporated Whyalla (775) and Peterborough (798). Scores above the Australian average were recorded largely in three areas: one adjacent to, one on Eyre Peninsula, and another in the south-east of the State

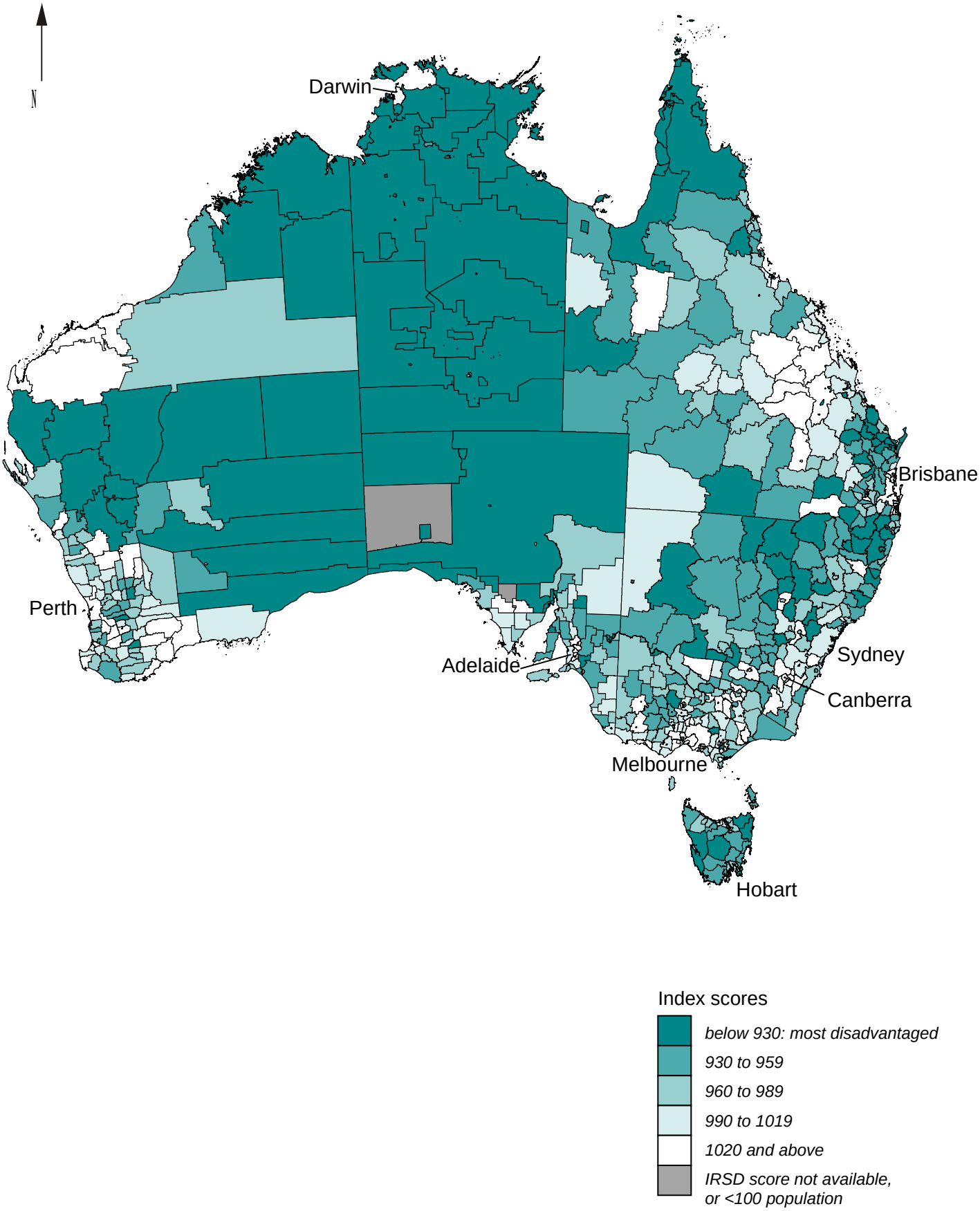
Much of the remote SLAs of **Western Australia**, had low scores, with those above the 1000 located closer to the coast, particularly to the north and south-east of Perth, and further north in Exmouth, Ashburton, Roebourne and Port Hedland. The lowest scores were in Ngaanyatjarraku and Halls Creek (both 607), Menzies (612) and Upper Gascoyne (717).

In **Tasmania**, the three lowest scores were in Georgetown - Part A (852) and Break O'Day (891) in the north, and in the Central Highlands (894). Index scores above the Australian average were in SLAs located around Hobart, and in Launceston and several areas to the west.

The lowest index score in the **Northern Territory** was recorded for Thamarrurr (460), with another 28 SLAs recording scores below 600; over half of this group are also small, remote Indigenous communities. The only areas with index scores above 1000 were in Nhulunbuy, the SLAs in Alice Springs, and in Jabiru.

Map 2: Index of Relative Socio-economic Disadvantage, Australia, 2011

Index scores by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data from ABS SEIFA, 2011 Census

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Jobless families with children

For jobless families, vocational and non-vocational barriers to employment may include inadequate education and skills; poor literacy and numeracy; poor physical and mental health; disability; substance use; family stress and violence; homelessness and insecure housing; financial management problems; social and/or cultural isolation; language difficulties; lived experiences of torture and trauma; and unresolved grief and loss of land and/or culture.[4-11]

The impact of long-term parental joblessness on the wellbeing of families and children can be substantial.[12] A child's future development may depend significantly on access to economic and other resources during the first fifteen years of life; and long spells of parent joblessness can have consequences for children that extend well beyond childhood, with future income, social position and relative economic success being at risk of adverse effects.[4] There can also be critical periods in a child's development when a lack of resources and the stress of parent joblessness are detrimental. Finally, protracted adult unemployment may lead to poor health, family violence and relationship breakdown, substance use and social exclusion.[12]

Such consequences of family unemployment can have important effects on other aspects of children's wellbeing. For example, parental ill health may be a barrier to social and workforce participation and, consequently, reduce resources for their children. Such difficulties represent stressors that can harm relationships, and inhibit or limit access to resources that are protective to children's wellbeing.[13] Many adversities (e.g., parental unemployment resulting in financial hardship and family breakdown) occur together and can affect children's emotional health, as well as their families' experience of broader social exclusion.[14,15] The effects of co-occurrence are often cumulative, leading to a more entrenched position of disadvantage and social exclusion.[13]

Governments recognise this and provide additional unemployment benefits for families with dependent children. However, jobless families' relative disadvantage across many life domains remains evident; and children in these families are more likely to enter a cycle of intergenerational disadvantage and welfare dependency than children living in working families.[4,18] This underscores the importance of having macro-economic policies that limit or reduce the level of joblessness during economic downturns, and policies and services to minimise the potentially negative effects on children living in jobless families.[16,20]

The indicators listed in bold type are included in this sub-section. The remaining indicators listed below and other indicators which are relevant can be found online at www.adelaide.edu.au/phidu/.

- Jobless families with dependent children under 15 years of age
- **Children under 15 years of age living in jobless families**
- **Long-term unemployment**

Children living in jobless families, capital cities

Families with no employed parent ("jobless families") not only experience substantial economic disadvantage, but also reduced opportunities which may affect the wellbeing of their members.[4,20] Children in jobless families are at risk of experiencing financial hardship and other disadvantages in the short to medium term. They may have no role model of employment to follow, and the joblessness of the parent(s) may mean that such children are more likely to be welfare-dependent in the longer term. The majority of children in these families live in lone-parent households with limited resources.[17,18,20]

Indicator definition: Children aged less than 15 years living in families in which no parent is employed, as a proportion of all children aged less than 15 years.

Table 4: Children under 15 years of age living in jobless families, by capital city, 2011

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
13.4	11.8	12.6	15.2	10.8	16.9	10.5	7.5	12.6

Capital cities

The proportion of children under 15 years of age living in jobless families varied considerably between the capital cities, from 7.5% in Canberra, to 15.2% in Adelaide and 16.9% in Hobart. There is a very strong association at the SLA level with socioeconomic disadvantage (see Section 7).

The majority of SLAs in **Sydney** with the highest proportions of children in jobless families were in a cluster to the west and south-west of the city centre, with the highest proportions in Fairfield - East (35.0%), Parramatta - South (32.6%), Blacktown - South-West (29.7%) and Bankstown - North-East (28.3%). The lowest proportions were in a band of SLAs largely situated on the north shore.

In **Melbourne**, SLAs with a high proportion of children in jobless families were to the north, in Hume - Broadmeadows (with by far the highest proportion, of 35.7%), in the west in Brimbank - Sunshine (26.1%) and south-west of the city, in Dandenong (24.9%). Low proportions were evident in the east, north-east and inner south.

SLAs in the outer south and outer north of **Brisbane** comprised the majority of areas with high rates of children living in jobless families and included Redland Balance (41.3%), Stretton-Karawatha/Kingston (36.2%), and Darra-Sumner/Wacol (31.2%). Rates below the city average were generally in the inner and middle suburbs.

In **Adelaide**, very high proportions of children under 15 in jobless families were in a majority of outer northern SLAs, with Playford - Elizabeth (50.1%) and - West Central (41.4%), the two highest capital city rates; north-west in the SLAs of Port Adelaide Enfield - Inner (28.7%) and - Park (28.0%); and in the outer south. Most other SLAs had below-average proportions, with the lowest being to the east, north-east and south-east of the city centre.

No SLAs in **Perth** had SLAs with proportions of children in jobless families in the highest range mapped, with the largest proportions in Kwinana and Belmont (both 17.3%). A cluster of SLAs surrounding the city centre and extending along the coast to the north had the lowest scores.

There was a substantial difference in the distribution of children in jobless families in **Hobart**, with the highest proportion in Brighton (31.5%) being over three times that of the three SLAs with the lowest proportions (Hobart - Remainder and - Inner, and Kingborough - Part A).

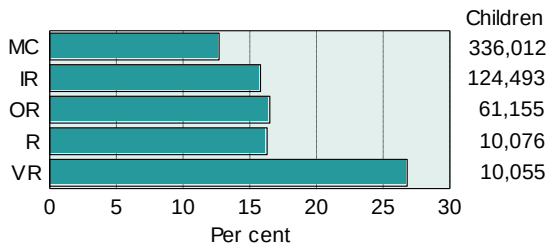
Four of the SLA groups in **Darwin** had proportions above the city average, with low proportions only in the city centre, and in the rural SLA of Litchfield - Part B.

There were relatively low proportions of children living in jobless families across **Canberra**, with all but two SLA groups with proportions in the two lowest ranges mapped.

Remoteness

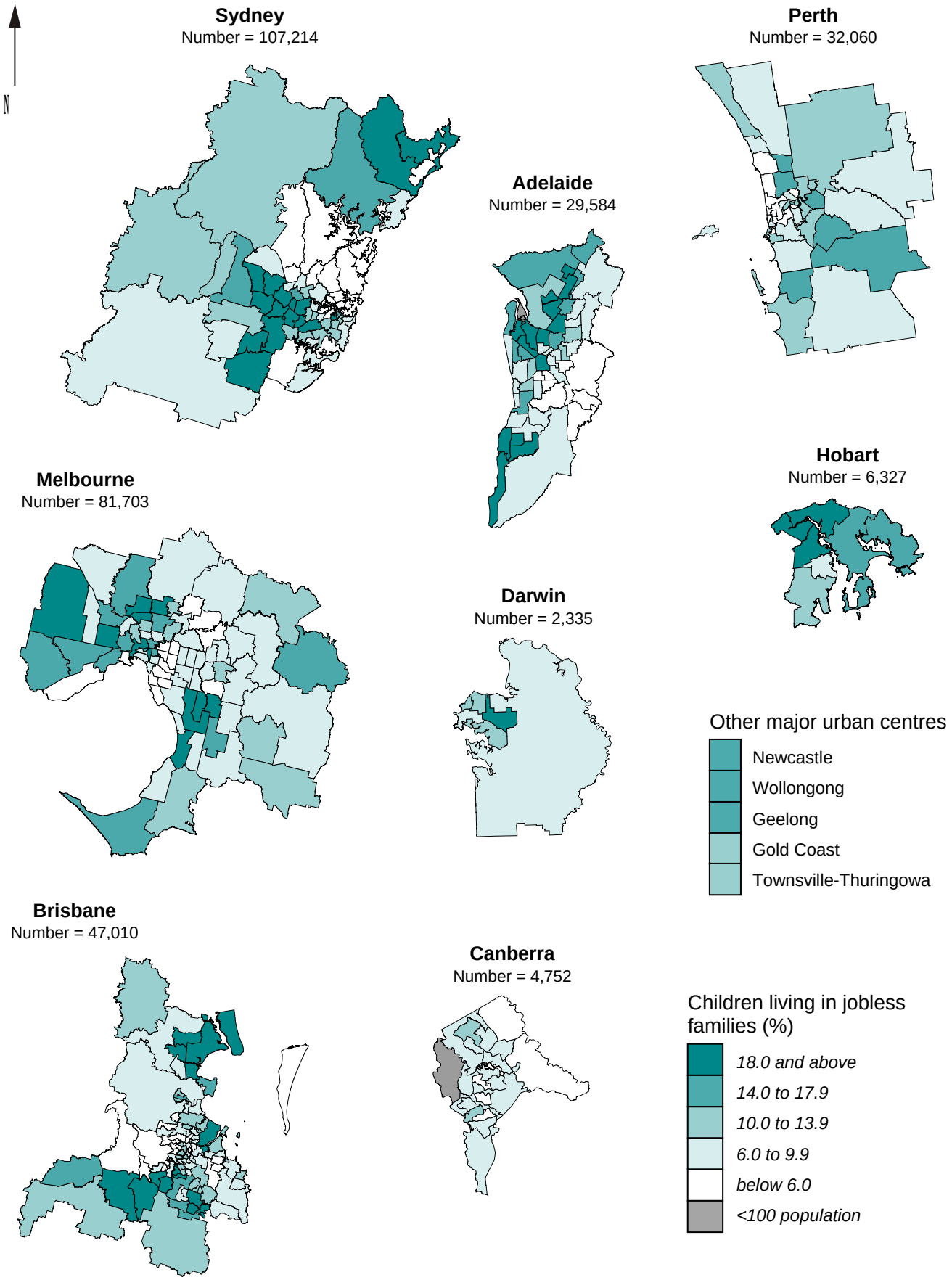
The majority (62.0%) of children living in jobless families were in the Major Cities remoteness class. However, by far the highest proportion of children in these families (26.8%) was in the Very Remote areas.

Figure 6: Children under 15 years of age living in jobless families, by remoteness, 2011



Map 3: Children under 15 years of age living in jobless families, major urban centres, 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on unpublished data from ABS 2011 Census

Children living in jobless families, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 5: Children under 15 years of age living in jobless families, by State/ Territory, Australia, 2011

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	17.0	14.8	15.6	15.2	14.6	19.5	31.2	..	16.2
Total	14.7	12.7	14.3	15.2	11.8	18.4	20.6	7.6	13.9

Non-metropolitan areas

Readers should note that people receiving wages under the Commonwealth Development Employment Program scheme (CDEP, the Indigenous unemployment scheme operating in remote areas of Australia, and commonly called a 'work-for-the-dole' scheme) were categorised by the ABS in the 2011 Census as being employed, and would not therefore be included as jobless. The result of this practice is to understate the number of children in jobless families in remote areas. Since 2009, new CDEP participants have been required to apply for income support payments.

By far the highest proportion of children living in jobless families in areas outside of the capital cities was recorded in the Northern Territory (31.2%). The lowest proportions were in the non-metropolitan areas of Western Australia (14.6%) and Victoria (14.8%).

SLAs with above average proportions of children under 15 years living in jobless families formed a band across much of the north and west of **New South Wales**, including many regional centres and towns. The highest proportion was recorded for Brewarrina (44.9%), with Coonamble, Clarence Valley Balance, Walgett, Kempsey and Central Darling all having approximately one third of their children in this category.

Above-average proportions of children in jobless families were generally found in central and western **Victoria**, in some SLAs along the State's northern border, and in the eastern part of the State; many regional centres and towns were included in this group. SLAs with the highest proportions of children under 15 in jobless families included Latrobe - Morwell (32.1%) and - Moe (27.3%), Greater Bendigo - Eaglehawk (29.1%), Central Goldfields - Maryborough (26.3%) and Benalla - Benalla (25.9%).

In **Queensland** (outside of Brisbane), two groups of SLAs with high proportions of children in jobless families were evident: one covering an area from Brisbane to north of Bundaberg, and including Cherbourg (60.1%), Woorabinda (51.1%) and Mount Morgan (45.8%); and the other in the far north, in coastal areas on Cape York Peninsula. Far northern areas in this category included Yarrabah (71.5%, the second highest proportion in Australia), Aurukun (58.0%), Doomadgee (57.6%), Napranum (54.3%), Lockhart River (45.5%) and Pormpuraaw (45.4%). Further south, Palm Island had a proportion of 47.2%, with a further seven SLAs in the non-metropolitan area having more than one third of their children in this category.

In **South Australia**, regional centres and country towns prevailed among the SLAs with above-average proportions of children living in jobless families. Other SLAs in this category were somewhat scattered, in the far north, mid-north, Riverland area and south-east of the State. Of SLAs with larger numbers of children, the highest proportions were recorded for Anangu Pitjantjatjara (41.6%) and Peterborough (40.5%).

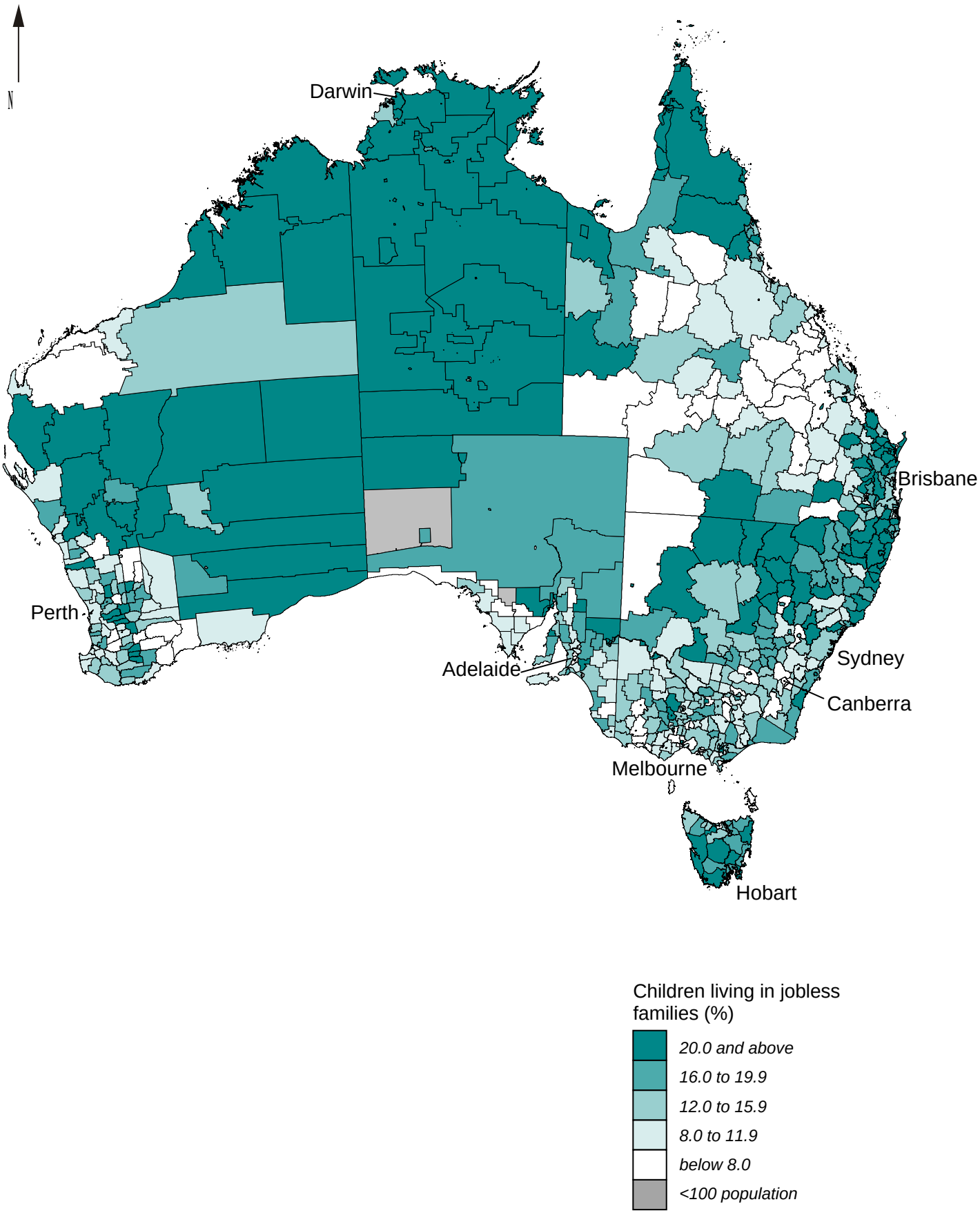
Much of **Western Australia** was covered by SLAs with above-average proportions of children living in jobless families, including many in the populous south-west, such as Quairading (34.0%) and Trayning (33.8%); across central Western Australia, SLAs with larger numbers of children in this category included Wiluna (61.5%), Mount Magnet (53.8%), Upper Gascoyne (49.3%), Ngaanyatjarraku (42.5%) and Menzies (35.4%); and, in the far north, Halls Creek (57.8%). Only a handful of areas outside of the south-west had proportions below the State average.

SLAs in **Tasmania** (outside of Hobart) with proportions of children in jobless families above the State average included several of the regional centres, such as Launceston and Devonport, although a number of the highest proportions were in the smaller, coastal SLAs of George Town - Part A (34.7%) and Break O'Day (28.8%), and in the Central Highlands (26.2%).

A majority of SLAs in the **Northern Territory** had rates above the Territory average. Rates of 50% or higher of children in jobless families were recorded in Thamarrurr (63.9%), Belyuen (59.5%), and in Tennant Creek - Balance, Alpurrurulam, Tableland and Elliott District (all 53.5%).

Map 4: Children under 15 years of age living in jobless families, Australia, 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on unpublished data from ABS 2011 Census

Long-term unemployment, capital cities

People who are unemployed on a long-term basis are much more likely than those who are employed or short-term unemployed to have low education and skill levels, a chronic illness or disability, to live in a region of high unemployment, and to have an unstable employment history.[17,18] Increasing casualisation of the work force and decreasing numbers of full time jobs for low skilled workers over recent years have contributed to the difficulties many face if they have been unemployed for longer than six months.[18]

Indicator definition: Recipients of a *Newstart Allowance* or *Youth Allowance (other)* from Centrelink for six months (182 or more days), as a proportion of the population aged 16 to 64 years – as a proxy for long-term unemployment. Further information is provided in Appendix A.

Table 6: Long-term unemployment, by capital city, June 2011

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
2.6	2.6	2.8	3.6	1.9	3.9	2.0	1.3	2.6

Capital cities

Among the capital cities, the highest rate of long-term unemployment at these ages was recorded in Hobart, and the lowest in Canberra. There is a very strong association at the SLA level with socioeconomic disadvantage (see Section 7).

Long-term unemployment rates within **Sydney** varied from 0.5% in Mosman to 6.9% in Fairfield - East. Other SLAs recording high levels of long-term unemployment were generally located to the west and south of the city centre, and included Blacktown - South-West (5.6%), Parramatta - South (5.4%), Bankstown - North-West and - North-East (both 4.9%); and in the north, the Wyong SLAs of - North-East (5.2%) and - South and West (4.8%). Most areas with low rates were on the north shore, extending up the coast and westwards.

High rates of long-term unemployment were largely concentrated in SLAs situated in the north, north-west, west and south-east of **Melbourne**, with the highest rates in Hume - Broadmeadows (6.6%), Greater Dandenong - Dandenong (5.7%) and Brimbank - Sunshine (5.5%). The lowest levels were to the east and south of the city and in the outer north-east, and included the SLAs of Melbourne - Southbank Docklands, Manningham - East, Bayside - Brighton and Nillumbik - South.

The distribution of the long-term unemployed population was generally concentrated in the outer northern and southern areas of **Brisbane** and in smaller clusters in inner areas south of the river. The highest rates were in Stretton-Karawatha/ Kingston (8.4%), Redland Balance (7.9%), Caboolture - Central (6.1%) and Rocklea (6.0%). Areas with low levels of long-term unemployment were mainly in the inner west, or scattered across the south and east of the city.

The long-term unemployment rate under this measure was well above average throughout the outer northern and southern areas of **Adelaide**, and in the north-west. By far the highest rate was in Playford - Elizabeth, with a proportion of 11.3%. Rates were also high in Salisbury - Inner North (7.4%) and - Central (6.6%), Playford - West Central (7.3%) and - East Central (6.6%); and in Onkaparinga - North Coast (6.7%). A number of SLAs in the east recorded the lowest rates.

Long-term unemployment rates were relatively low across **Perth**, with Fremantle - Inner (4.2%), and Fremantle - Remainder and Armadale (both 3.1%) having the highest rates.

In **Hobart**, more than 5% of the population aged 16 to 64 years in the SLAs of Derwent Valley - Part A (6.9%), and Glenorchy and Brighton (both 5.8%) had been unemployed long-term. The lowest rate was in Kingborough - Part A (2.3%).

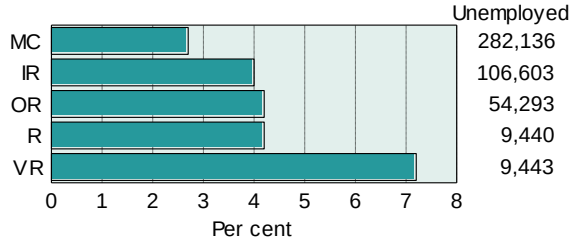
Long-term unemployment rates in **Darwin** were relatively low, and ranged from 1.7% in Darwin North East to 3.6% in Litchfield - Part B. Rates for the three remaining areas were below 2%.

All SLA groups in **Canberra**, apart from the Eastern Fringe (2.7%), had less than 2% of people at these ages who were unemployed long-term.

Remoteness

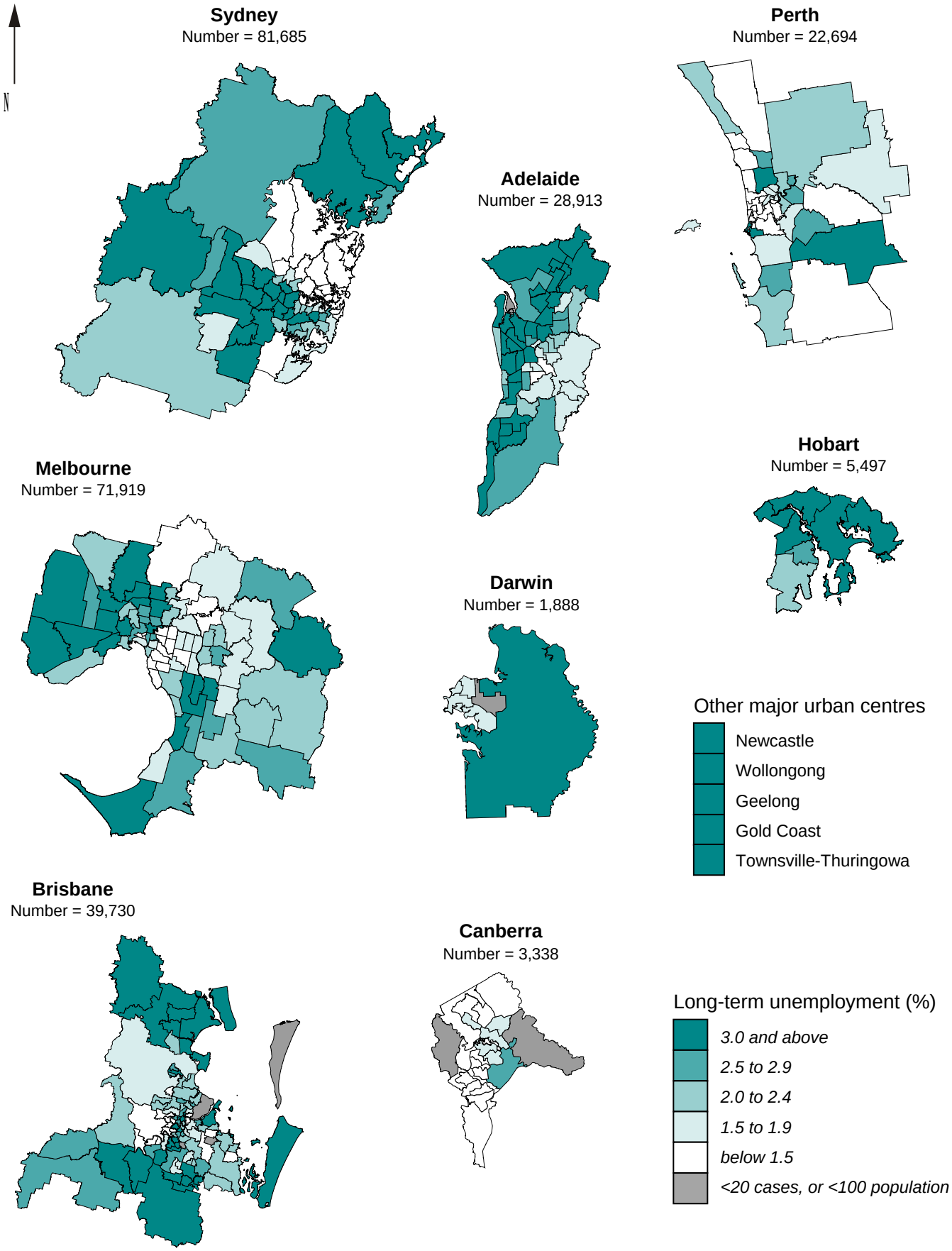
Long-term unemployment increased in a step-wise fashion with increasing remoteness, with rates ranging from 2.7% in the Major Cities areas to 4.0% to 4.2% in the middle remoteness classes, before rising to 7.2% in the Very Remote areas.

Figure 7: Long-term unemployment, by remoteness, 2011



Map 5: Long-term unemployment, major urban centres, June 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by Centrelink

Long-term unemployment, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 7: Long-term unemployment, by State/ Territory, Australia, June 2011

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	4.4	3.8	4.0	4.5	3.1	5.3	9.5	..	4.2
Total	3.2	2.9	3.4	3.9	2.2	4.7	5.3	1.3	3.1

Non-metropolitan areas

People living in remote areas who receive wages under the Commonwealth Development Employment Program scheme (CDEP, the Indigenous unemployment scheme, and more commonly called a 'work-for-the-dole' scheme) are not included in these data, as they are not in receipt of a Newstart or Youth Allowance from Centrelink. As a result, the extent of long-term unemployment, as measured by this indicator, is understated in remote areas.

In June 2011, long-term unemployment rates in the non-metropolitan areas of Australia ranged from 3.1% in Western Australia to 9.5% in the Northern Territory. In all States and the Northern Territory, rates were higher in the non-metropolitan areas than in the capital cities.

Walgett (10.6%), Brewarrina (10.5%), Central Darling (9.2%) and Bourke (8.4%), located in the far western and northern areas of **New South Wales**, recorded the highest long-term unemployment rates, with the northern and inner northern coastal areas of Nambucca (8.7%) and Kyogle (8.5%) recording similarly high rates. Rates below 2% were recorded in the south-eastern SLAs of Palerang - Part A, Yass Valley, Queanbeyan and Snowy River and, just north of Sydney, in Singleton.

The rates in **Victoria** were generally low, with the highest in the La Trobe SLAs of - Morwell (7.0%) and - Moe (6.3%). Other SLAs with long-term unemployment rates of 6% or above were in central Victoria in the Central Goldfields SLAs of Balance (6.6%) and - Maryborough (6.2%), and Loddon South (6.0%). Rates below 2% were recorded in Macedon Ranges Balance, Horsham Balance, Queenscliffe, Surf Coast - East, Towong - Part A and Golden Plains - South-East.

In 2011, 10% or more of the population aged 16 to 64 years were unemployed long-term in the **Queensland** non-metropolitan SLAs of Woorabinda (29.3%), Wujal Wujal (18.4%), Doomadgee (16.6%), Lockhart River (14.8%), Yarrabah (13.6%), Etheridge (13.4%), Mornington (13.3%), Hope Vale (12.4%), Kowanyama (12.3%), Cook (11.9%), Burke and Croydon (both 11.4%), Pormpuraaw (11.3%), Murgon (11.1%), Mount Morgan and Aurukun (both 10.7%), New Mapoon (10.1%) and Cherbourg (10.0%). The next highest rates (of 7% or more) were recorded in Carpentaria, Kolan, Herberton, Injinoo, Cairns - Part B, Perry, Mareeba, Napranum, Hervey Bay - Part B, Townsville - Part B, Maryborough and Palm Island.

In **South Australia**, long-term unemployment rates were highest in the remote SLAs of Anangu Pitjantjatjara (12.7%), Coober Pedy (9.0%) and Ceduna (8.5%); and in Peterborough (8.0%). The lowest rates were in SLAs situated closest to the metropolitan area, and included Barossa - Tanunda, Adelaide Hills - North and Balance, and Mount Barker Balance.

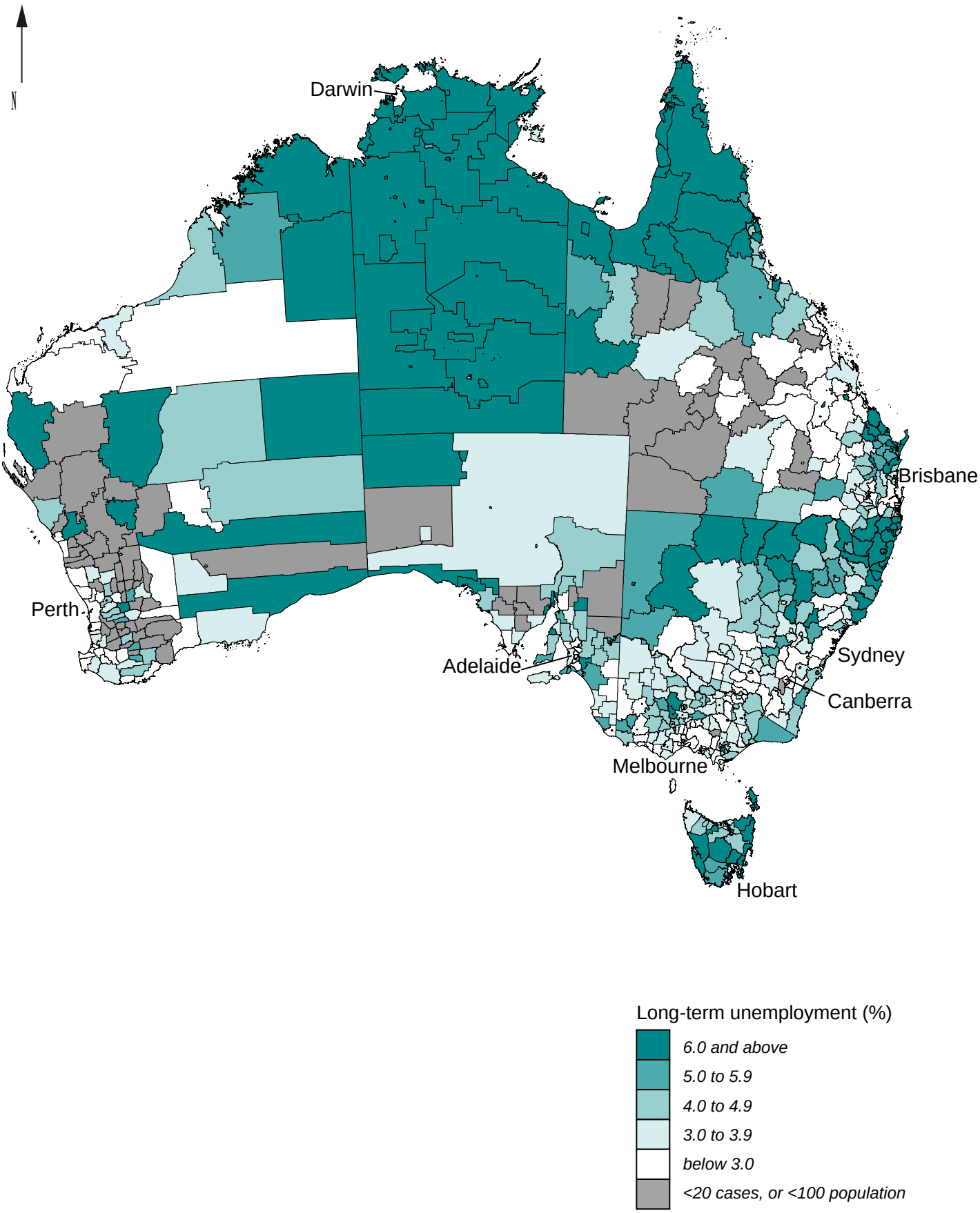
The highest long-term unemployment rates in the non-metropolitan areas of **Western Australia** were largely in the more remote areas of the State, with the highest in Kalgoorlie/Boulder (16.5%), Ngaanyatjarraku (12.1%), Meekatharra (10.5%), Halls Creek (8.0%) and Mount Magnet (7.5%). Harvey - Part A and Capel - Part B in the south-west recorded the lowest long-term unemployment rates.

In the non-metropolitan areas of **Tasmania**, the highest levels of long-term unemployment in 2011 were recorded in the SLAs of Break O'Day (7.7%, located on the east coast) and George Town - Part A (6.8%, in the north). A majority of areas with the lowest levels of long-term unemployment were also in the north of the State, with King Island, Northern Midlands and Circular Head recording the lowest. Of the southern SLAs, Kingborough - Part A had the lowest rate.

The majority of SLAs in the **Northern Territory** were mapped in the highest range, with long-term unemployment rates of 5% or above. The highest rates were recorded in Watiyawanu (15.5%), Tapatjatjaka (15.5%), Thamarrurr (15.4%) and Tanami and Ltyentye Purte (both 15.2%). Only the SLA of Jabiru recorded a rate below 3%.

Map 6: Long-term unemployment, Australia, June 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by Centrelink

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Children at greatest risk of long-term disadvantage

Children who are at greatest risk of long-term disadvantage include those living in poverty, especially in jobless families; those living with a disability or life-limiting chronic disease, and their siblings; those who identify as Indigenous; those who are subjected to neglect, abuse, family violence and other forms of trauma; those who are socially and/or geographically isolated; those with experience of the care and protection system; those who have a history of juvenile detention; those who suffer ongoing racism, discrimination and social exclusion; many young carers; and those who are refugees, including recently arrived, unaccompanied minors.[19-21,136]

In Australia, it has been argued that 'poverty is the single greatest threat to child and community health and wellbeing'.[22] There are many research studies on the issue of socioeconomic disadvantage, its long-term implications for the wellbeing of children and their families, and the eventual high costs to society.[16,23,24,127,136] The relationship between significant disadvantage and health and wellbeing is particularly crucial for younger children as they are more developmentally vulnerable, and can experience deleterious circumstances that are beyond their control.[25,26]

The short and long term consequences of poverty for children, and for society, are significant and well documented.[22,26,27,70,127] Childhood poverty can impair physical growth, cognitive development and social and emotional functioning.[16,23,26,28] At a population level, the incidence, duration and chronicity of childhood poverty may also have multiple negative effects on children's educational ability and attainment, social inclusion and later adult productivity (as measured by wage rates and hours worked), while increasing the likelihood of adult welfare dependency.[23,25,26] Research also indicates that being born into a relatively disadvantaged family can increase the probability of accumulating risks associated with that disadvantage. Adversity experienced early in the life course (before age five or seven) has the strongest impact on the formation of individual resources in later life.[26,29] Subsequent experiences of adversity then may add to the deterioration of already reduced resources.[28]

However, this does not mean that all children whose parents are socioeconomically disadvantaged will experience these problems. Many children from disadvantaged backgrounds are able to learn and develop well, despite adverse circumstances.[30,31] Such resilience is predicted by attributes of a child's disposition (e.g., temperament, cognitive abilities, self-belief), family characteristics (such as warmth, closeness and safety), and the availability and use of external support systems by family members.[32,33] A complex relationship exists between the risk factors that contribute to poverty (such as low socioeconomic status, low income or occupational class), protective factors (such as positive role models and relationships), and the resulting implications for children and families.[34,136] These inter-relationships are yet to be fully understood.

The indicators of poverty are numerous and are associated with factors such as infant and maternal mortality and morbidity, low birth weight and poor physical growth, developmental delay, discrimination and racism, disability, learning and behavioural problems, mental health issues, parental smoking habits and parental disability.[20,21,136] They also include lack of parental education, lack of safety of the home environment, harsh or indifferent parenting, and difficulties with families' access to and use of services. An individual's chance of encountering multiple adverse health risks throughout life is influenced powerfully by social and economic position.[34,35,136] Adult-disease risk factors do not emerge exclusively in mid-life, but can accumulate over decades. Investment early in educational and emotional development helps to strengthen prevention strategies relating to health behaviour, work-place environment, and income inequality.[30]

The indicators listed in bold type are included in this sub-section. The remaining indicators listed below and other indicators can be found online at www.adelaide.edu.au/phidu/.

- **Children in low income, welfare-dependent families**
- **Children in families where the mother has low educational attainment**
- **AEDI: children assessed as being developmentally vulnerable on one or more domains**
- **Women smoking during pregnancy**
- Low birth weight babies
- Total Fertility Rate

Children in low income, welfare-dependent families, capital cities

Low income limits** the opportunities parents can offer their children, and may cause significant stress on family relationships.[19,136] **Families with children living on disposable incomes, which are below the estimated Henderson Poverty Line (HPL), are considered to be living in poverty. The HPL is a relative measure of poverty, which rises as real incomes in the community rise (see Appendix A).[36]

Indicator definition: Children aged less than 16 years living in families with incomes under $31,786 p.a. in receipt of the Family Tax Benefit (A) (at the maximum level), as a proportion of all children aged less than 16 years.

Table 8: Children in low income, welfare-dependent families, by capital city, June 2011

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
20.3	19.3	19.3	23.0	16.7	25.4	17.9	11.5	19.5

Capital cities

The proportion of children under 16 years of age living in low income, welfare-dependent families in June 2011 was highest in Hobart (25.4%) and Adelaide (23.0%), and lowest in Canberra (11.5%). There is a very strong association at the SLA level with socioeconomic disadvantage (see Section 7).

A large group of SLAs in **Sydney's** west and south-west had the highest proportions of children in these families. They include Fairfield - East (47.2%) and - West (33.4%), Bankstown - North-East (41.3%) and - North-West (39.2%), Parramatta - South (40.4%), Blacktown - South-West (39.4%), Auburn (35.0), Campbelltown - North (33.3%) and - South (33.2%).

The SLAs of Hume - Broadmeadows (50.0%), Whittlesea - South-West (40.3%), Brimbank - Sunshine (37.8%), Melton Balance (34.6%) and Melbourne - Remainder (33.1%), north and west of the city centre; and Greater Dandenong - Dandenong (35.6%) and Balance (32.9%), and Frankston - West (31.3%), in the south-east, recorded the highest proportions in **Melbourne**.

SLAs with the highest proportions of children in these low income families in **Brisbane** were in two main locations: one to the south (and south-west and south-east) of the Brisbane River, and the other in the outer north. The southern areas with the highest proportions included Redland Balance (52.7%), Stretton-Karawatha/Kingston (49.6%), Waterford West (35.2%), Loganlea (35.1%), Marsden (34.3%) and Inala/Richards (33.0%); those to the north were Deception Bay (39.4%), Caboolture - Central (34.5%) and - East (34.0%), and Bribie Island (33.0%).

In **Adelaide**, more than 50% of children under 16 years in Playford - Elizabeth (56.6%) were living in these families, with relatively high rates also in Playford - East Central (40.9%), - Hills (39.1%) and - West Central (36.5%); Salisbury - Central (40.8%) and - Inner North (37.5%); Port Adelaide Enfield - Park (39.5%), - Port (37.4%) and - Inner (36.8%); and Onkaparinga - Hackham (37.4%) and - North Coast (37.3%).

Rates were lower in **Perth**, with no areas mapped in the highest range. Rates above 25% were recorded in Belmont (27.2%), Bassendean and Kwinana (both 27.0%), Stirling - Central (25.8%) and Armadale (25.1%). The inner city areas of Nedlands, Cottesloe, Cambridge and Claremont recorded the lowest rates.

In **Hobart**, the SLAs of Glenorchy (36.6%), Derwent Valley - Part A (36.3%) and Brighton (36.1%) recorded the highest proportions of children in low income families.

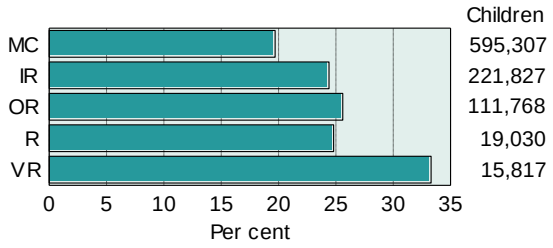
Children living in low income families in **Darwin** comprised 21.9% of children in Litchfield - Part B and 20.5% in Litchfield - Part A, with the lowest proportion, of 11.0%, in Darwin South West.

There were low proportions of children in these low income families across **Canberra**, with the highest rates in Belconnen West (17.3%), and Tuggeranong North West and Tuggeranong South East (both 15.0%), and the lowest in Woden North (6.2%) and Woden South (8.0%).

Remoteness

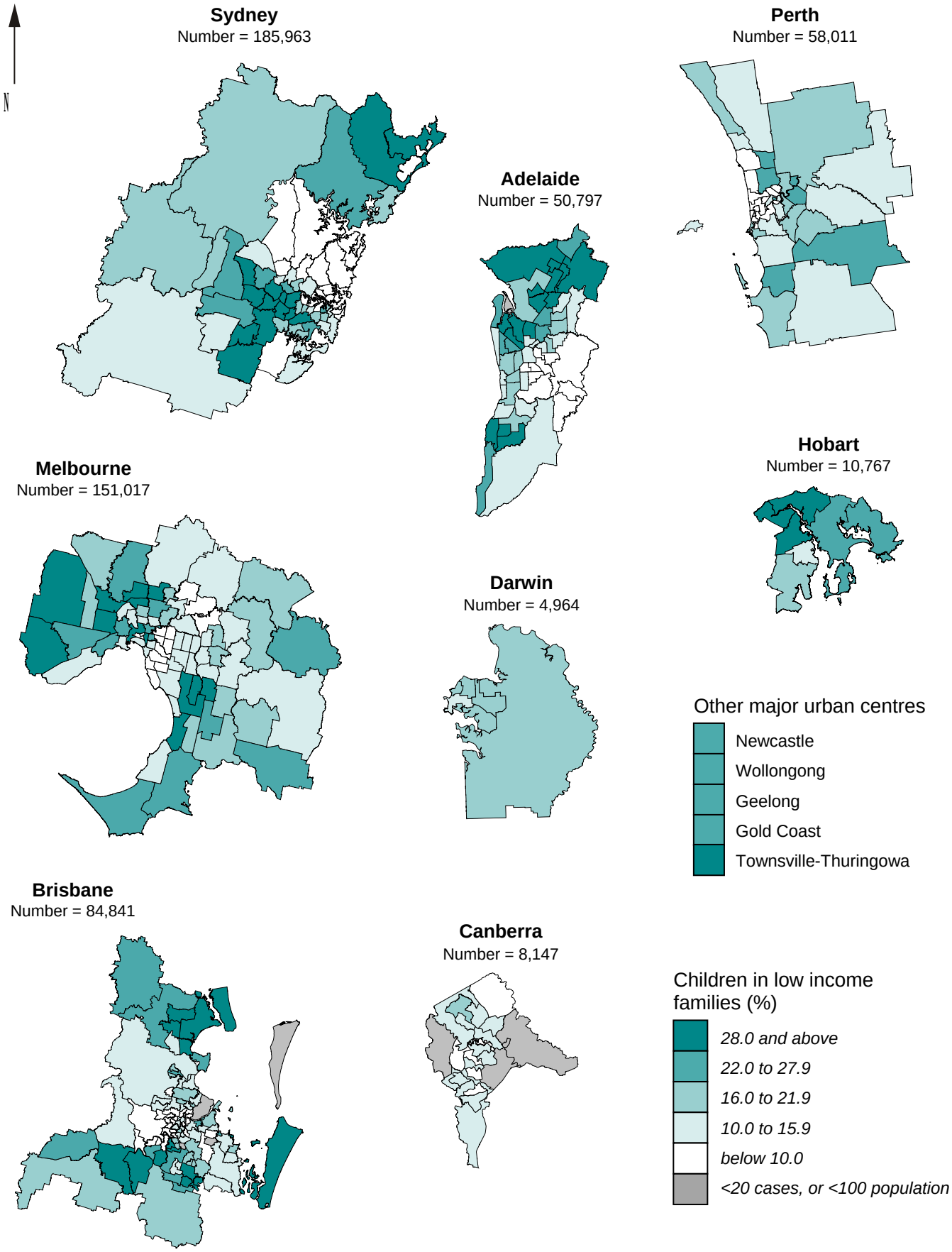
There is a clear gradient in the proportion of children in low income families when viewed by remoteness, increasing from 19.7% in the Major Cities to 24.0% to 26.0% in the middle remoteness classes, before increasing substantially, to 33.3%, in the Very Remote areas.

Figure 8: Children in low income, welfare-dependent families, by remoteness, 2011



Map 7: Children in low income, welfare-dependent families, major urban centres, June 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by Centrelink

Children in low income, welfare-dependent families, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 9: Children in low income, welfare-dependent families, by State/ Territory, Australia, June 2011

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	26.1	24.2	23.8	23.9	23.2	27.0	34.9	..	24.9
Total	22.5	20.7	21.8	23.0	18.6	26.4	26.3	11.7	21.5

Non-metropolitan areas

By far the highest proportion of children in low income families was recorded in the non-metropolitan area of the Northern Territory (34.9%), with the next highest rates in Tasmania (27.0%) and New South Wales (26.1%). In all States and the Northern Territory, rates were higher in the non-metropolitan areas than in the capital cities.

In 2011, a number of SLAs across the north of **New South Wales** had above-average proportions of children in low income families; the highest of these were in Brewarrina (48.8%), Walgett (47.9%), Coonamble (47.7%), Kempsey (45.4%) and Wellington (43.0%). Central Darling (41.7%), Nambucca (41.1%) and Bourke (40.6%) had similarly high proportions. The SLAs of Palerang - Part A, Yass Valley, Queanbeyan and Snowy River, in the south east, and Kiama on the coast, recorded the lowest proportions, with fewer than 14% of children in this category.

The majority of areas across **Victoria** are mapped in the lowest three classes, with proportions below 30%. The highest proportions of children in low income families were recorded in the SLAs of Latrobe - Morwell (43.6%) and - Moe (36.1%), Yarra Ranges - Part B (42.5%), Central Goldfields - Maryborough (40.2%) and Balance (37.9%), Greater Bendigo - Eaglehawk (40.1%), Corio - Inner (35.0%), Loddon - South (34.9%), Greater Shepparton - Part A (33.5%) and Swan Hill - Robinvale (33.0%).

Some of the highest proportions of children in low income families were recorded in the non-metropolitan areas of **Queensland**, with more than half of the children in Burke (86.2%), Woorabinda (69.1%), Etheridge (66.3%), Mount Morgan (59.7%), New Mapoon (57.7%), Murgon (54.1%), Lockhart River (53.6%), Boigu (51.7%) and Cairns - City (50.6%) living in these families. A cluster of SLAs south-west of Mackay recorded proportions below 14%.

Coober Pedy (53.5%) and Peterborough (50.7%) recorded the highest rates of children in welfare-dependent, low income families in the non-metropolitan areas of **South Australia**. The next highest rates were in Whyalla (36.3%), Port Augusta (36.1%) and Port Pirie Central Districts - City (35.3%). Other than Murray Bridge (33.6%), other areas with rates of 30% or higher were largely in the north and far west of the State. Few children in Roxby Downs (4.4%) were living in families with low incomes, with rates below 14% also in a number of areas to the east of Adelaide, in the south-east and along the Eyre Peninsula.

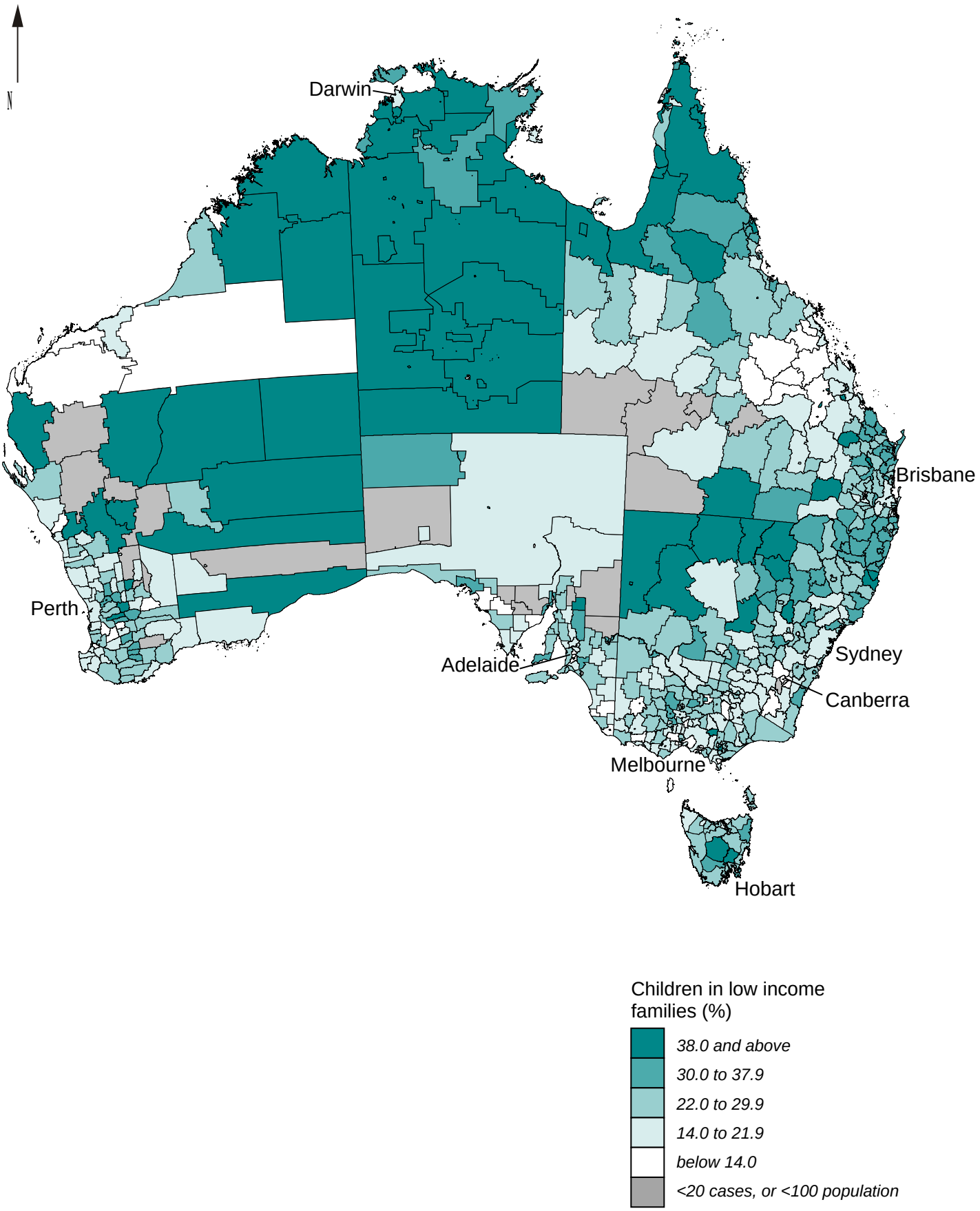
Many of the more remote non-metropolitan areas of **Western Australia** recorded high proportions of children in low income families, with proportions of 50% or more recorded in the SLAs of Meekatharra (88.4%), Yalgoo (79.0%), Mount Magnet (61.7%), Mullewa (58.6%), and Halls Creek (50.0%). High rates were also recorded in Laverton (48.6%), Trayning (48.5%), Ngaanyatjarraku (47.2%), Derby-West Kimberley (45.6%), Menzies (44.6%), Wiluna (44.1%), Dundas (42.9%) and Wyndham-East Kimberley (40.1%). The lowest rate was recorded in Ashburton (8.6%), just north of Exmouth, with rates below 12% in Dardanup - Part B, Capel - Part A, Cuballing and Chapman Valley.

The SLAs of Central Highlands (48.6%), George Town - Part A (42.1%) and Southern Midlands (41.0%) recorded the highest proportions of children living in low income families in **Tasmania**. The SLAs of Tasman, Devonport, Burnie - Part A, Break O'Day and Derwent Valley - Part B were in the next highest grouping, with rates of 30% to 33%. The lowest rate was recorded in King Island (13.3%) followed by George Town - Part B (14.9%).

As suggested by the overall high proportion of children in low income, welfare-dependent families in the **Northern Territory**, the majority of SLAs were mapped in the highest range: the highest of these was in Coomalie (83.5%), Petermann-Simpson (76.5%), Cox Peninsula (71.4%), Ltyentye Purte, Watiyawanu and Tapatjatjaka (all 55.6%), Tanami (54.7%) and Sandover (51.3%), with another six SLAs having rates around 50%. The lowest rates were recorded in the SLAs of Groote Eylandt, Jabiru and Alice Springs - Larapinta.

Map 8: Children in low income, welfare-dependent families, Australia, June 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by Centrelink

Children in families where the mother has low educational attainment, capital cities

Strong relationships between education and health outcomes exist in many countries, favouring the survival and health of children born to educated parents, especially mothers; but the pathways are culturally and historically complex and vary between and within countries.[37-39, 136] A lack of successful educational experiences of parents may lead to low aspirations for their children; and may be related to parents' attitudes, their ability to manage the complex relationships which surround a child's health and education, and their capacity to control areas of their own lives.[40-42,136]

Indicator definition: Children aged less than 15 years living in families where the female parent's highest level of schooling was year 10 or below, or where the female parent did not attend school, as a proportion of all children aged less than 15 years.

Table 10: Children in families where the mother has low educational attainment, by capital city, 2011

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
22.8	15.2	21.2	17.1	21.9	30.9	23.3	14.4	19.8

Capital cities

In 2011, the proportion of children aged less than 15 years living in families where the mother had low educational attainment was highest in Hobart (30.9%) and lowest in Canberra (14.4%) and Melbourne (15.2%). Of note is the marked decline in these proportions since the 2006 Census, down by 16% in Darwin, 17 % in Adelaide, and by 25%and over in the other capital cities. There is a strong to very strong association at the SLA level with socioeconomic disadvantage (see Section 7).

In **Sydney**, high proportions in this population group were recorded in the outer north, in Wyong - North-East (44.5%) and - South and West (39.9%), Hawkesbury (38.4%), and Gosford - West (34.6%); and in the west and south-west, in Fairfield - East (38.8%), Penrith - East (38.6%) and - West (34.6%), Wollondilly (37.7%), Campbelltown - South (36.6%) and - North (33.4%), Blacktown - South-West (35.1%) and Parramatta - South (33.6%). The lowest proportions were in inner areas.

In **Melbourne**, high rates for this population group were found in the SLAs of Hume - Broadmeadows (33.3%), Greater Dandenong Balance (30.8%) and - Dandenong (28.9%), Cardinia - South (29.4%), Brimbank - Sunshine (27.3%) and Melton Balance (27.1%). Several inner eastern areas had low proportions.

In **Brisbane**, the highest proportions were recorded east of the city, in Pinkenba-Eagle Farm (39.1%); in the outer north-east, in Caboolture - Central (37.6%), - Hinterland (35.1%) and - East (33.7%), Morayfield (37.1%) and Deception Bay (34.7%); and with high rates also in the south and south-west, in Ipswich - West (36.9%) and Central (33.1%), Stretton-Karawatha/Kingston (36.7%), and Redland Balance (35.8%).

In **Adelaide**, the highest proportions of this population group were recorded in the outer north, in Playford - Elizabeth (40.9%) and - West Central (36.3%). A large cluster of eastern and inner southern SLAs had low rates.

The highest proportions in Perth were recorded to the south, in Kwinana (34.1%) and Serpentine-Jarrahdale (32.8%). The lowest proportions were in a cluster of inner city SLAs.

In **Hobart**, proportions were high, with 47.9% in Derwent Valley - Part A, 45.2% in Brighton, 39.6% in Sorell - Part A and 39.4% in Glenorchy.

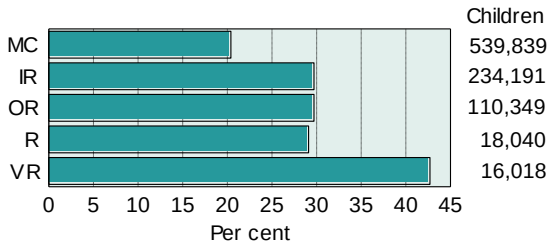
The proportion of children in families with mothers with low educational attainment in **Darwin** ranged from 17.2% in Darwin South West, to 27.9% in Litchfield - Part A.

Rates in **Canberra** were generally lower, with by far the highest rate recorded in the Eastern Fringe (33.3%). Rates were lowest in Woden North and Canberra Central.

Remoteness

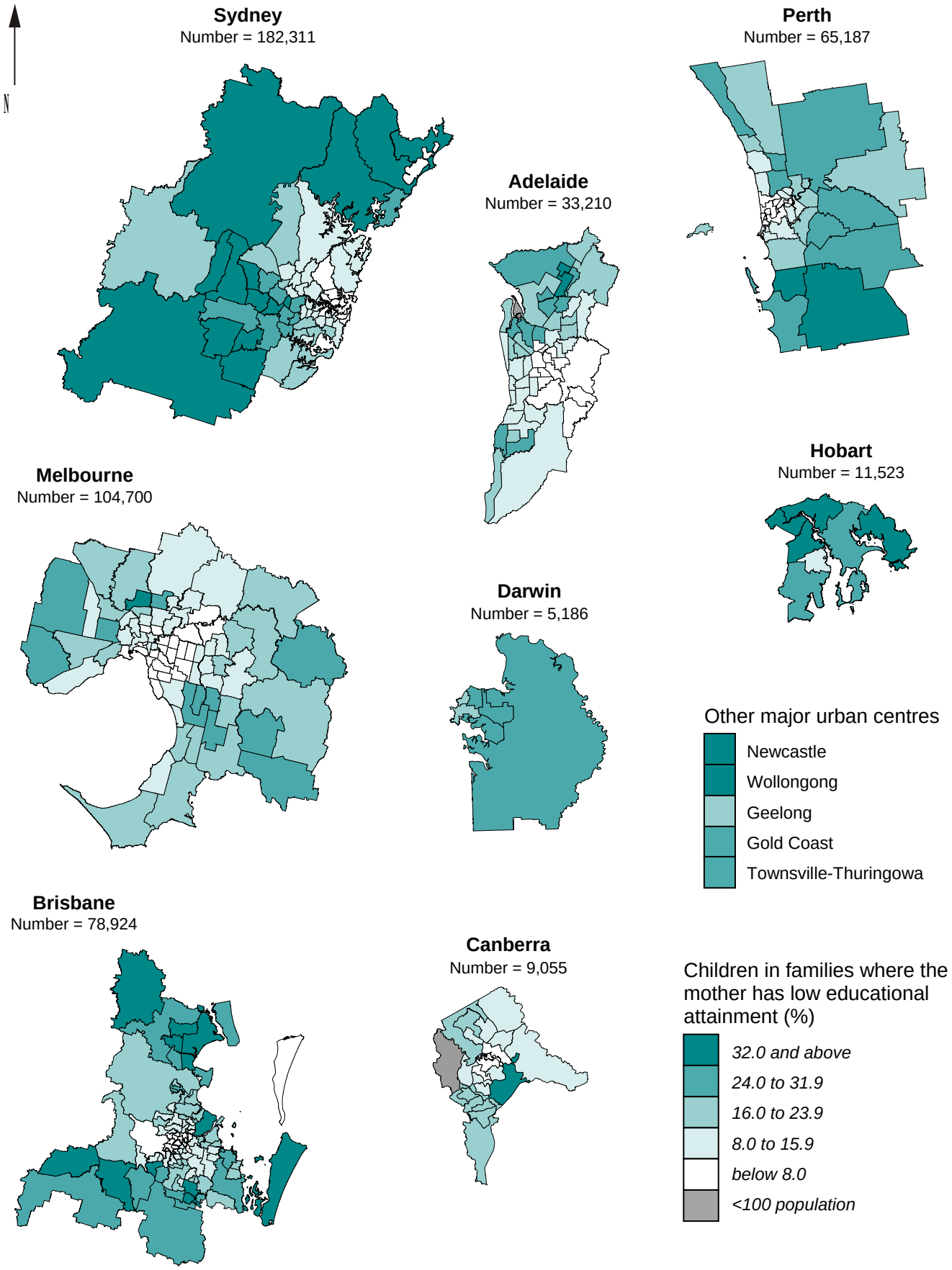
The highest proportion of children in these families (42.7%) was in the Very Remote areas, with proportions of around 30.0% in the Inner and Outer Regional, and Remote classes, and 20.4% in the Major Cities areas.

Figure 9: Children in families where the mother has low educational attainment, by remoteness, 2011



Map 9: Children in families where the mother has low educational attainment, major urban centres, 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on unpublished data from ABS 2011 Census

Children in families where the mother has low educational attainment, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 11: Children in families where the mother has low educational attainment, by State/ Territory, Australia, 2011

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	36.0	22.0	27.9	20.1	30.7	41.9	47.5	25.0	30.0
Total	27.6	17.0	24.9	17.9	24.3	37.3	35.1	..	23.5

Non-metropolitan areas

The highest proportions of children aged less than 15 years in families where the mother had low educational attainment were in the non-metropolitan areas of the Northern Territory (47.5%) and Tasmania (41.9%), with the lowest in South Australia (20.1%) and Victoria (22.0%). The proportions in the non-metropolitan areas were higher than those in the capital cities. Although the decline in these proportions since the 2006 Census is less than in the capital cities, it is still notable, ranging from 24% (Queensland) to 12% (South Australia).

In **New South Wales**, the highest proportions were in SLAs in the far west in Central Darling (55.2%), Brewarinna (53.4%) and Broken Hill (50.9%); to the north of Sydney, in Richmond Valley Casino (51.0%), Cessnock (49.5%), Greater Taree and Kempsey (both 45.7%), Clarence Valley Balance (44.8%) and Mid-Western Regional - Part B (44.3%) and Great Lakes (44.0%); and just west of Sydney, in Lithgow (45.0%). The lowest proportions were in SLAs in the south of the State, in Jerilderie, Palerang - Part A and Snowy River; and in the north, in Armidale Dumaresq Balance.

The rates in non-metropolitan **Victoria** were generally low, with the highest proportions of children in families where the mother had low educational attainment in the third highest map range. Areas with the highest proportions included Greater Bendigo - Eaglehawk (35.7%), Latrobe - Morwell (34.7%) and - Moe (32.7%), and Northern Grampians - St Arnaud (30.1%). The lowest proportions, of below 12%, were in the south and south coastal areas of Newtown, Queenscliffe, and Surf Coast - East; and just north of Melbourne, in Macedon Ranges Balance.

Children in these families in non-metropolitan **Queensland** were generally located in the far north and in other scattered areas across the State. SLAs with proportions above 50% included Doomadgee (76.0%), Pormpuraaw (74.5%), Aurukun (68.7%), Boulia (63.7%), Cherbourg, (63.2%), Woorabinda (60.9%), Lockhart River (57.0%), Palm Island (54.8%), Boigu (53.1%), Kowanyama (52.5%), Mornington (51.4%) and Yarrabah (50.2%). Proportions below 15% were recorded in Poruma, Diamantina, Hammond, Warraber and Tambo.

There were relatively few of these children in **South Australia**, and proportions at the SLA level were below 35%, except in Unincorporated Riverland (79.2%), Anangu Pitjantjatjara (73.3%) and Unincorporated Whyalla (63.2%), areas with relatively large Indigenous populations. Low proportions were recorded for many SLAs in the south-east, to the north and east of Adelaide, and on the Yorke and Eyre Peninsulas. Areas with the lowest proportions, of below 12%, included Robe, Kimba, Cleve, Tumby Bay and Elliston.

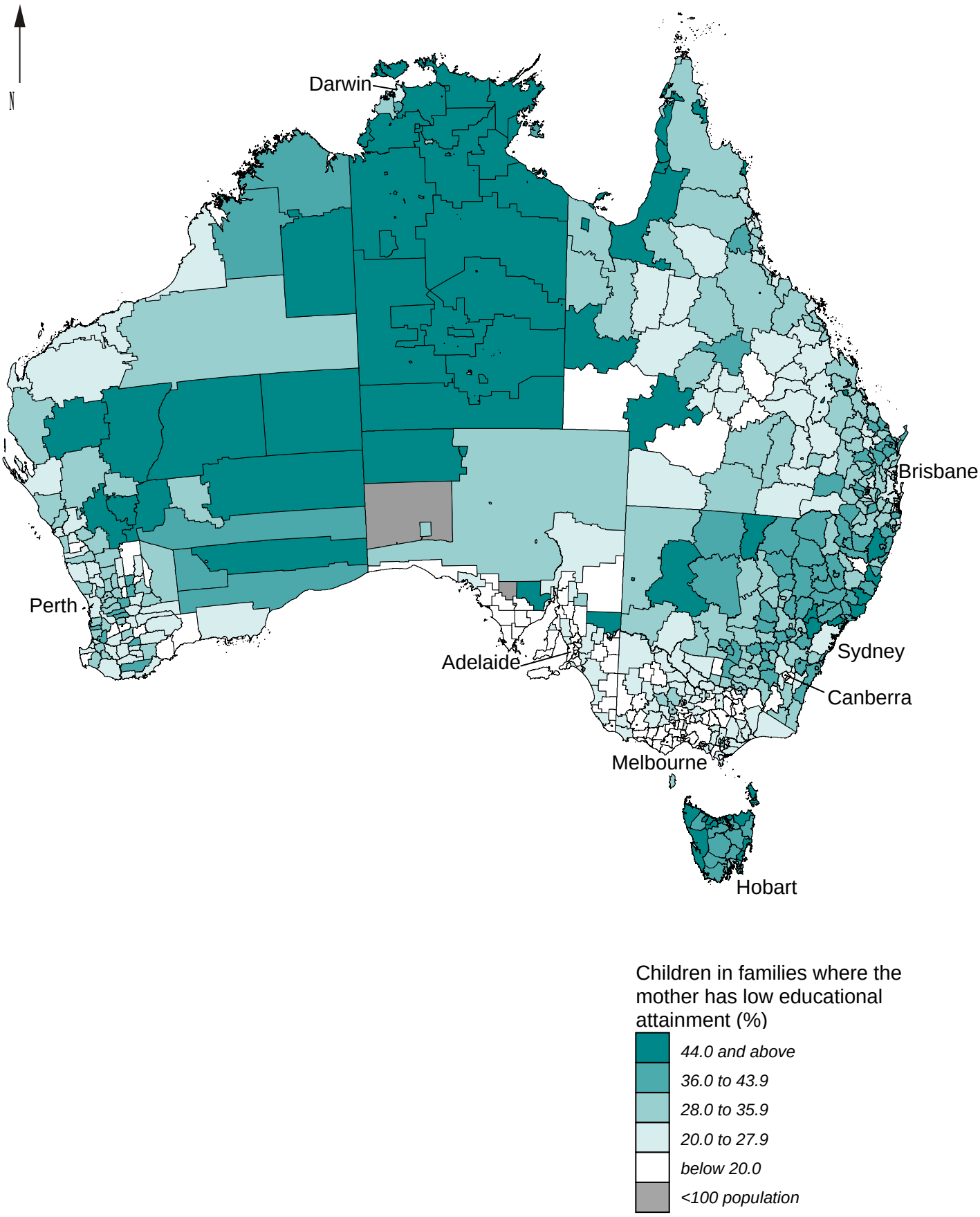
Non-metropolitan areas in **Western Australia** with the highest proportions of the population aged less than 15 years in families where the mother had low educational attainment were Sandstone (75.0%), Laverton (71.3%), Ngaanyatjarraku (66.3%), Upper Gascoyne (61.2%), Mount Magnet (50.4%) and Wiluna (50.0%), in central Western Australia; and Halls Creek (58.4%), in the far north. The lowest proportions were generally found in SLAs in the south-west of the State.

Proportions were high in **Tasmania**, with the highest being in the coastal areas of Burnie - Part B (51.2%), Glamorgan/Spring Bay (50.0), West Coast (48.8%), Kentish (48.1%), Latrobe - Part A (47.9%) and - Part B (47.6%), George Town - Part B (47.8%) and - Part A (46.3%), Dorset (47.3%) and Devonport (46.5%).

In the **Northern Territory**, proportions above 70.0% were recorded in Belyuen (83.3%), Alpurrurulam (72.3%); Tennant Creek - Balance, Tableland and Elliott District (all 72.3%); Tapatjatjaka, Ltyentye Purte and Watiyawanu (all 72.2%); Sandover (71.5% and Tanami (70.7%). The lowest proportions, of below 30.0%, were recorded in Nhulunbuy (the lowest, with 18.4%), all the Alice Springs SLAs and Jabiru.

Map 10: Children in families where the mother has low educational attainment, Australia, 2011

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on unpublished data from ABS 2011 Census

The Australian Early Development Index, capital cities

The Australian Early Development Index (AEDI) program collects information on Australian children in their first year of full-time school, using a teacher-completed checklist. The results from the AEDI provide communities and schools with information about how local children are faring by the time they start school, across five areas of early childhood development: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication skills and general knowledge.[43]

Indicator definition: AEDI results are presented in this report as the proportion of children assessed who are considered to be 'developmentally vulnerable' (score in the lowest 10%) on one or more domains.

Table 12: Children assessed as being developmentally vulnerable on one or more domains, by capital city, 2009

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
20.9	20.1	29.3	23.0	23.5	20.8	25.3	22.3	22.5

Capital cities

The proportion of children assessed as being developmentally vulnerable on one or more domains under the AEDI varied little between capital cities, other than Brisbane (29.3%) and Darwin (25.3%). With the exception of Canberra, where the association was weak, there is a strong to very strong association at the SLA level with socioeconomic disadvantage (see Section 7).

The distribution in **Sydney** of children with these characteristics was strongly associated with socioeconomic disadvantage, with above-average proportions in Sydney - Inner (32.8%) and in western SLAs, including Fairfield - East (31.9%), Blacktown - South-West (31.2%), Auburn (30.8%), Bankstown North-East (30.8%) and North-West (28.7%), Parramatta - Inner (29.6%), and Strathfield (29.4%). The lowest proportions were found in the SLAs on the north shore.

There was a similarly strong association with socioeconomic disadvantage in **Melbourne**, with high proportions in SLAs in the inner city and to the west, north and south-east of the city centre, including Hume - Broadmeadows (40.3%), Greater Dandenong - Dandenong (31.5%) and Balance (33.8%), and Casey - Cranbourne (31.8%) and - Hallam (30.9%).

A cluster of areas in the outer south of **Brisbane** recorded high proportions of children in this category, the highest being in Marsden (50.1%), Stretton-Karawatha/Kingston (48.8%), Logan Balance (46.2%), Rocklea (43.8%) and Inala/Richlands (42.4%), the four highest capital city rates.

In **Adelaide**, the distribution of children in this category showed a very strong socioeconomic pattern, with high proportions in the outer north, in Playford - Elizabeth (43.5%) and Salisbury - Inner North (37.3%); north-west, in Port Adelaide Enfield - Inner (39.1%); and the outer south, in Onkaparinga North - Coast (39.4%).

In **Perth**, the distribution was similar to that of the IRSD, with the highest proportions of children considered to be developmentally vulnerable on one or more domains under the AEDI in Kwinana (32.5%); Belmont (32.3%), Stirling - Central (31.8%), Armadale (30.9%) and Bassendean (30.7%). Areas surrounding the city centre recorded the lowest proportions.

Derwent Valley - Part A recorded the highest proportion (36.2%) of children in this category in **Hobart**. Rates below 20% were recorded in Hobart - Remainder, Kingborough - Part A, and Sorell - Part A.

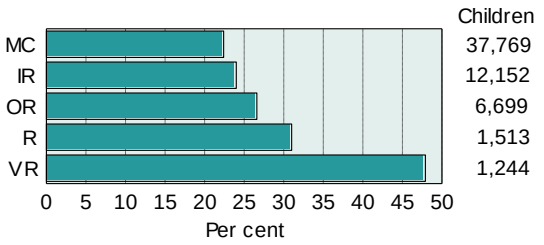
Darwin North West (30.6%), Darwin North East (30.4%) and Litchfield - Part B (29.5%) had the highest proportions of children in this category in **Darwin**. Darwin South West had the lowest (12.2%).

Woden Central (28.2%), Weston Creek (27.9%), Belconnen Balance (27.5%) and Tuggeranong North West (27.3%) recorded the highest proportions of children in this category in **Canberra**. The lowest proportions were recorded in the central areas of Canberra South, and Woden South and North.

Remoteness

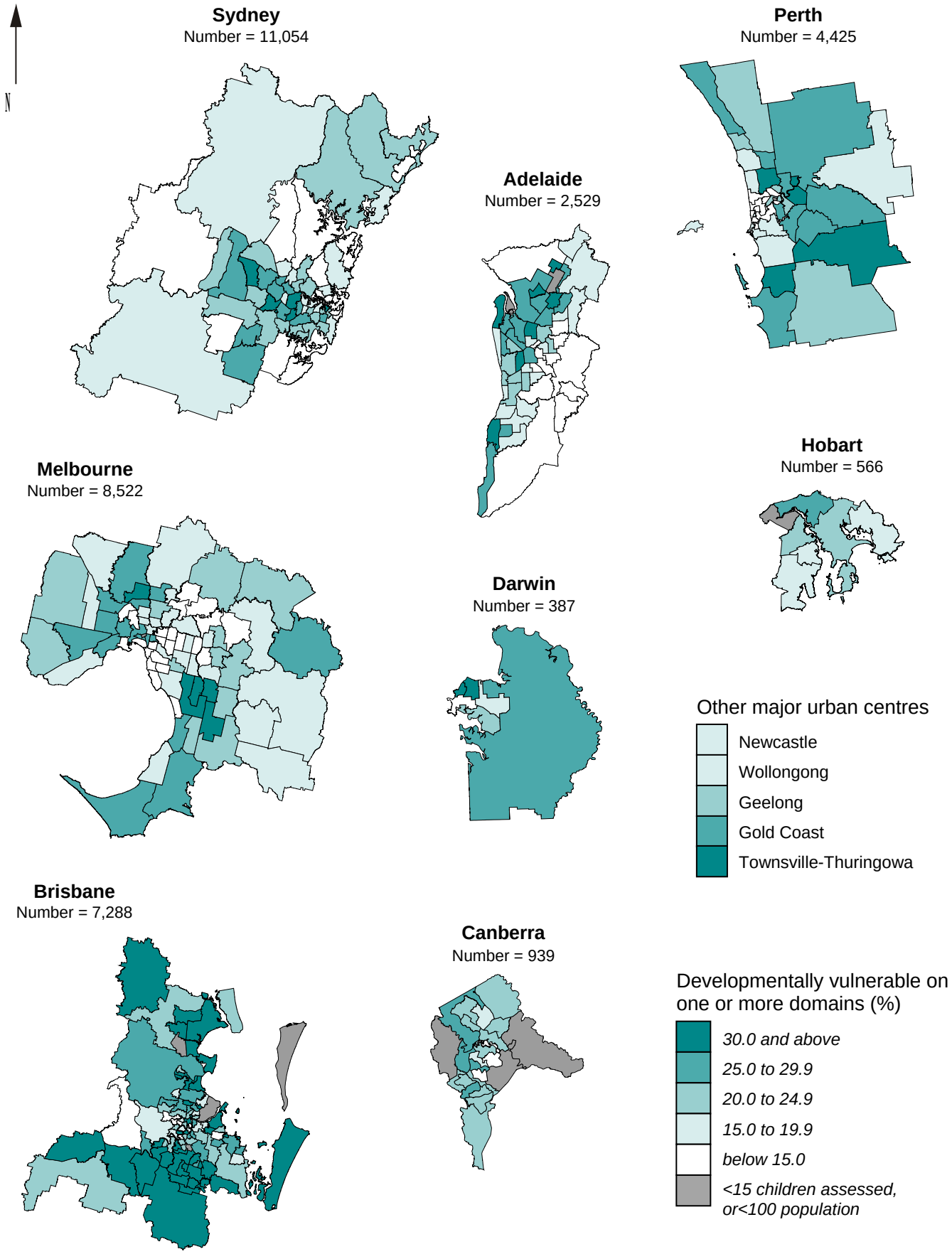
The proportion of children assessed as being developmentally vulnerable on one or more domains under the AEDI increases steadily over the first four remoteness classes, before increasing substantially in the Very Remote areas.

Figure 10: Children developmentally vulnerable on one or more domains, by remoteness, 2009



Map 11: The Australian Early Development Index - children assessed as being developmentally vulnerable on one or more domains, major urban centres, 2009

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by DEEWR/ RCH

The Australian Early Development Index, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 13: Children assessed as being developmentally vulnerable on one or more domains, by State/ Territory, Australia, 2009

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
Non-metropolitan	22.1	20.8	30.1	22.6	27.7	22.7	56.8	..	25.4
Total	21.3	20.3	29.7	22.9	24.8	21.9	40.7	22.3	23.6

Non-metropolitan areas

Overall, one quarter of the children in the non-metropolitan areas of Australia assessed under the AEDI were considered to be developmentally vulnerable on one or more domains, with the highest proportion in the Northern Territory, where over half of the children were in this category (56.8%).

SLAs with high proportions of children developmentally vulnerable on one or more domains were scattered throughout inland areas of **New South Wales**, with more than 35% of children in Central Darling (61.1%), Wellington (43.3%), Dubbo - Part B (40.0%), Bourke (37.0%), Moree Plains (36.3%) and Parkes (35.1%) in this category. Areas with lower proportions were located throughout the State, in particular along the southern border.

There were two main concentrations of SLAs with high proportions of developmentally vulnerable children in **Victoria**, with low proportions predominant throughout much of the State. Proportions of 34% or above were recorded in the north-eastern area of Central Goldfields - Maryborough (39.8%), and in the north-western areas of Loddon - South (39.4%), Swan Hill - Robinvale (39.1%), Yarriambiack - South (34.6%), and Mildura - Part B (34.5%).

There was wide variation between SLAs in the non-metropolitan areas of **Queensland**, with proportions ranging from 100% in Injinoo to 4.8% in Flinders. More than three quarters of children assessed in Naparanum, Yarrabah, Boigu, Mornington, Palm Island, Lockhart River and Erub were considered developmentally vulnerable on one or more domains. Low proportions were recorded in SLAs near Brisbane, along the coast and in a block inland from Mackay.

A relatively large number of SLAs in the non-metropolitan areas of **South Australia** were not mapped due to the small numbers of children assessed. Of the areas mapped, those with the highest proportions of children considered to be developmentally vulnerable on one or more domains under the AEDI were recorded in the far northern areas of Anangu Pitjantjatjara (73.7%), Unincorporated Far North (38.3%); and in Orroroo/Carrieton (41.2%), Whyalla (40.2%) and Loxton Waikerie - East (40.0%). Roxby Downs recorded the lowest proportion of children in this category (5.6%).

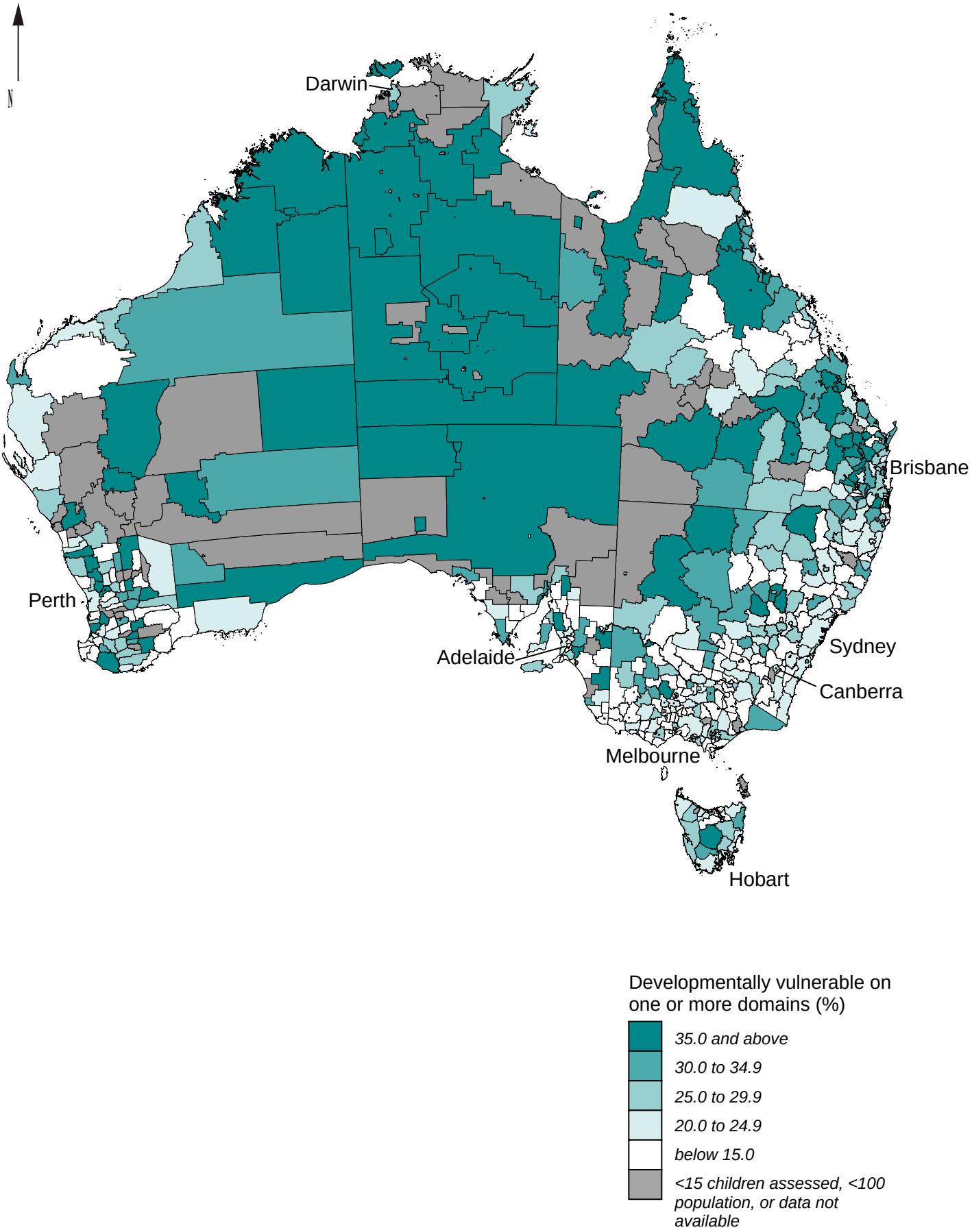
In the non-metropolitan areas of **Western Australia,** many SLAs were also not mapped due to the small numbers of children assessed. At least half of the children assessed in Ngaanyatjarraku (78.3%), Meekatharra (68.4%), Mount Marshall (66.7%), Halls Creek (61.5%), Dumbleyung (57.9%), Toodyay (54.2%), Katanning (52.3%), Derby-West Kimberley (50.0%) and Boddington (50.0%) were considered developmentally vulnerable on one or more domains. SLAs with the lowest proportions were almost exclusively in the more populous south-west of the State.

The highest proportions of children considered developmentally vulnerable on one or more domains under the AEDI in **Tasmania** were in the northern areas of George Town - Part A (40.0%), and Break O'Day (34.5%); and the central areas of Central Highlands (36.7%) and Derwent Valley - Part B (34.0%). Kingborough, Waratah/Wynyard - Part A, Launceston - Part C and Tasman had less than 15% of children in this category.

The majority of the small, community-based SLAs in the **Northern Territory** could not be mapped due to the small numbers of children assessed. However, more than 80% of the children assessed in Thamarrurr (92.3%), Tanami (91.7%), Tennant Creek - Balance (89.1%), Lajamanu (83.3%), and Hanson (82.1%), were considered vulnerable on one or more domains. The SLAs with proportions below the Territory's average were Groote Eylandt and Alice Springs - Heavitree.

Map 12: The Australian Early Development Index - children assessed as being developmentally vulnerable on one or more domains, Australia, 2009

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by DEEWR/ RCH

Women smoking during pregnancy, capital cities

Maternal smoking during pregnancy carries a higher risk of adverse outcomes for the baby before and after delivery, which include premature birth, miscarriage and perinatal death, poor intra-uterine growth and Sudden Infant Death Syndrome (SIDS).[44] Other problems include a higher risk of disability and developmental delay, decreased lung function, and increased respiratory illness, which may affect children through to adulthood.[45]

Indicator definition: Women who reported that they smoked during a pregnancy, as a proportion of the number of pregnancies, over the time period (three years).

Table 14: Women smoking during pregnancy, by capital city, 2006 to 2008

Per cent

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra*	Total#
8.8	n.a.	n.a.	14.7	13.4	25.7	20.5	13.3	11.3

* The figures for Canberra are for the years, 2005 to 2007.
# The 'Total' excludes data for Melbourne and Brisbane.

Capital cities

Over the period from 2006 to 2008, 11.3% of pregnant women living in the capital cities, for which data were available, reported smoking during pregnancy. Proportions varied greatly between the capital cities, from 8.8% in Sydney to 25.7% in Hobart.

The correlation analysis showed a strong association at the SLA level between women smoking during pregnancy and socioeconomic disadvantage in **Sydney**. SLAs with a high proportion of women smoking during pregnancy were located to the west and south-west of the city centre, in Campbelltown - North and - South, and Blacktown - South-West; high proportions were also evident in the outer north, in Wyong and Gosford. The lowest proportions were in a group of high SES areas, from Ku-ring-gai in the north, through the city and eastern suburbs, to Sutherland Shire - East in the south.

Data for **Melbourne** and **Brisbane** were not available.

The distribution in **Adelaide** of women smoking during pregnancy has a very strong association with socioeconomic disadvantage, with the highest proportions recorded in SLAs in the outer north (42.9% in Playford - Elizabeth and 42.0% in Playford - West Central, the second and third highest capital city rates) and south (Onkaparinga - North Coast, 30.3% and - Hackham, 28.7%). The lowest proportions were in the east, south and south-east.

The correlation analysis showed a strong association at the SLA level between women smoking during pregnancy and socioeconomic disadvantage in **Perth**. The highest proportions were recorded in the outer southern SLAs of Kwinana (28.5%) and Rockingham (21.8%), and the south-eastern SLAs of Armadale (24.9%) and Gosnells (21.6%). No women in Peppermint Grove, Perth - Inner or Fremantle - Inner were recorded as smoking during their pregnancy.

Very high proportions of women smoking during pregnancy were recorded across much of Hobart, with the highest in Brighton (47.1%, the highest capital city rate), Derwent Valley (36.2%) and Glenorchy (33.2%) (the third and fourth highest).

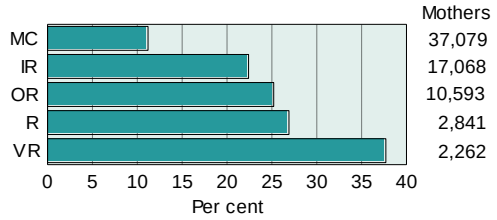
All but one area (Darwin South West) in **Darwin** had more than 18% of women smoking during pregnancy, with the highest proportion in Litchfield - Part B (23.5%).

In **Canberra**, with proportions of above 18% recorded in Tuggeranong South East and North West, Kambah and Eastern Fringe, the correlation analysis showed a moderate association at the SLA level between women smoking during pregnancy and socioeconomic disadvantage. The lowest proportions were found in Kowen and Majura, Weston Creek, Woden North and South, and Gungahlin.

Remoteness

The proportion of women smoking during pregnancy increased substantially with increasing remoteness, from 11.2% in the Major Cities areas to 37.7% in the Very Remote class. The higher smoking rates reported by Indigenous women are reflected in these figures; data for Australia, excluding Victoria and Queensland, showed smoking rates among Indigenous women during their pregnancy were around 50.0%, compared with 13.4% for non-Indigenous women.

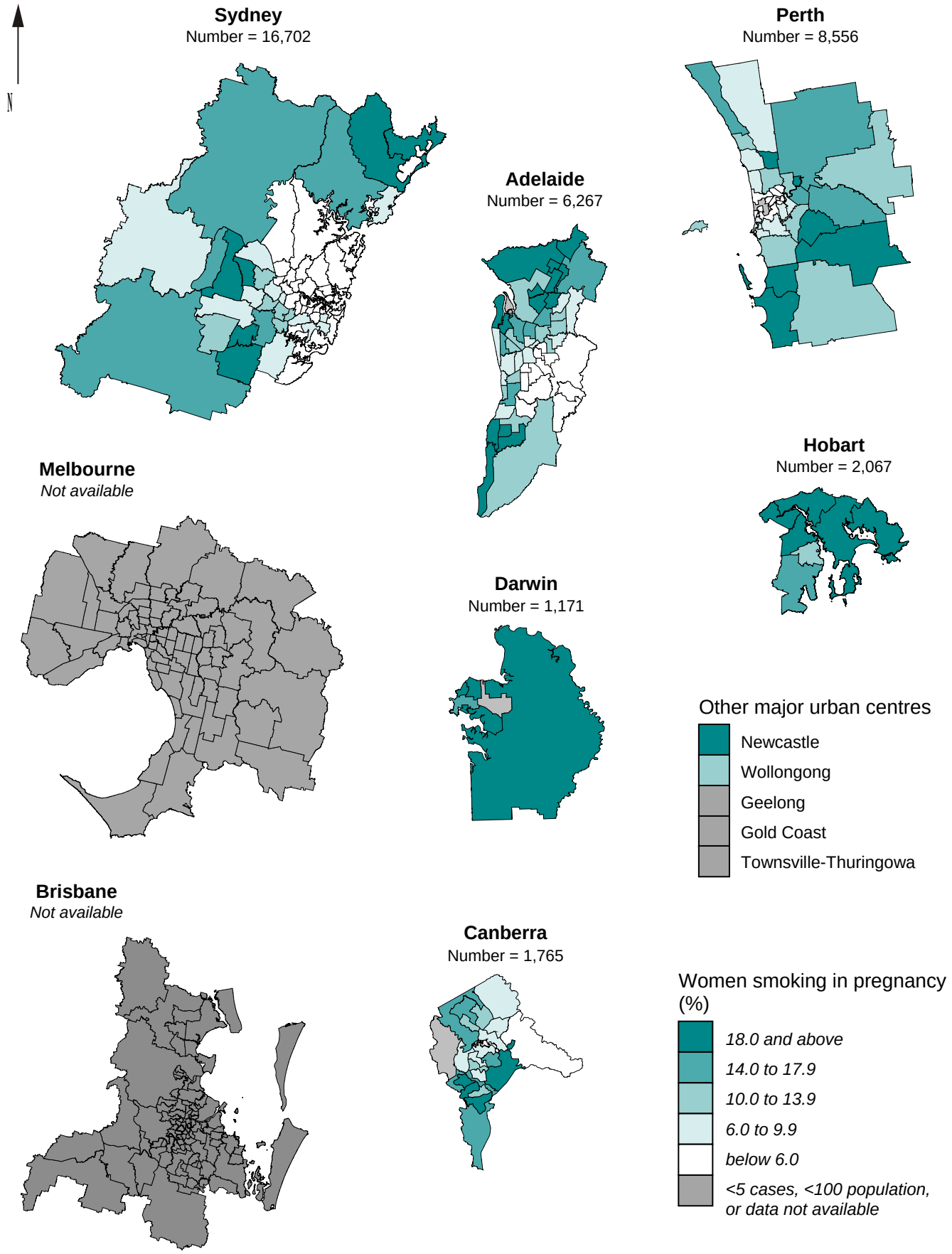
Figure 11: Women smoking during pregnancy, by remoteness, 2006 to 2008



Note: Excludes Victoria and Queensland

Map 13: Women smoking during pregnancy, major urban centres, 2006 to 2008

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by State and Territory health authorities

Women smoking during pregnancy, Australia

Notes: See comments on previous text page for details of this indicator. 'Non-metropolitan' refers to the area of the State or Territory outside of the capital city. 'Total' refers to the whole State or Territory.

Table 15: Women smoking during pregnancy, by State/ Territory, Australia, 2006 to 2008

Per cent

Area	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT*	Total#
Non-metropolitan	22.0	n.a.	n.a.	22.4	24.3	29.3	34.8	..	23.4
Total	13.0	n.a.	n.a.	16.8	16.4	27.7	27.3	13.3	15.0

* The figures for the Australian Capital Territory are for the years 2005 to 2007.
# The 'Total' excludes data for Victoria and Queensland.

Non-metropolitan areas

In the non-metropolitan areas of Australia, almost a quarter of women smoked during pregnancy, with the highest proportions recorded in the Northern Territory (34.8%) and Tasmania (29.3%), and the lowest in New South Wales (22.0%) and South Australia (22.4%).

Note that, although the data are self-reported, the authors believe that data from this source, based on information collected by midwives, are among the most reliable, in particular for the Indigenous population. However, the accuracy of the data at the SLA and community level is less reliable, due to the extent of movement across the country by Aboriginal and Torres Strait Islander women to give birth.

In the non-metropolitan areas of **New South Wales**, high proportions of women smoking during pregnancy were distributed throughout much of the State, with the highest rates in the north, north-west and north-east (in Central Darling, 57.7% and Brewarrina, 47.6%). High proportions were also recorded in a number of towns, including Queanbeyan, Broken Hill, Grafton and Casino. The lowest proportions were largely recorded in southern SLAs, including Kiama, Snowy River, and Wagga Wagga - Part B. Balranald, Greater Hume Shire - Part A, Albury and Wentworth had no cases recorded over this period.

Data for **Victoria** and **Queensland** were not available.

The towns and areas in non-metropolitan **South Australia** with the highest proportions of women smoking during pregnancy were in the far west of the State, in Unincorporated West Coast (48.8%) and Ceduna (41.1%); and in the north, in Peterborough (42.3%), Port Augusta (41.0%), Coober Pedy (49.2%) and Anangu Pitjantjatjara (37.5%). Below average proportions were recorded in areas surrounding Adelaide, in Tanunda, and Adelaide Hills - North and Balance; on the Eyre Peninsula, in Le Hunte, Streaky Bay, and Elliston; and in the mid-north, in Mount Remarkable and Northern Areas.

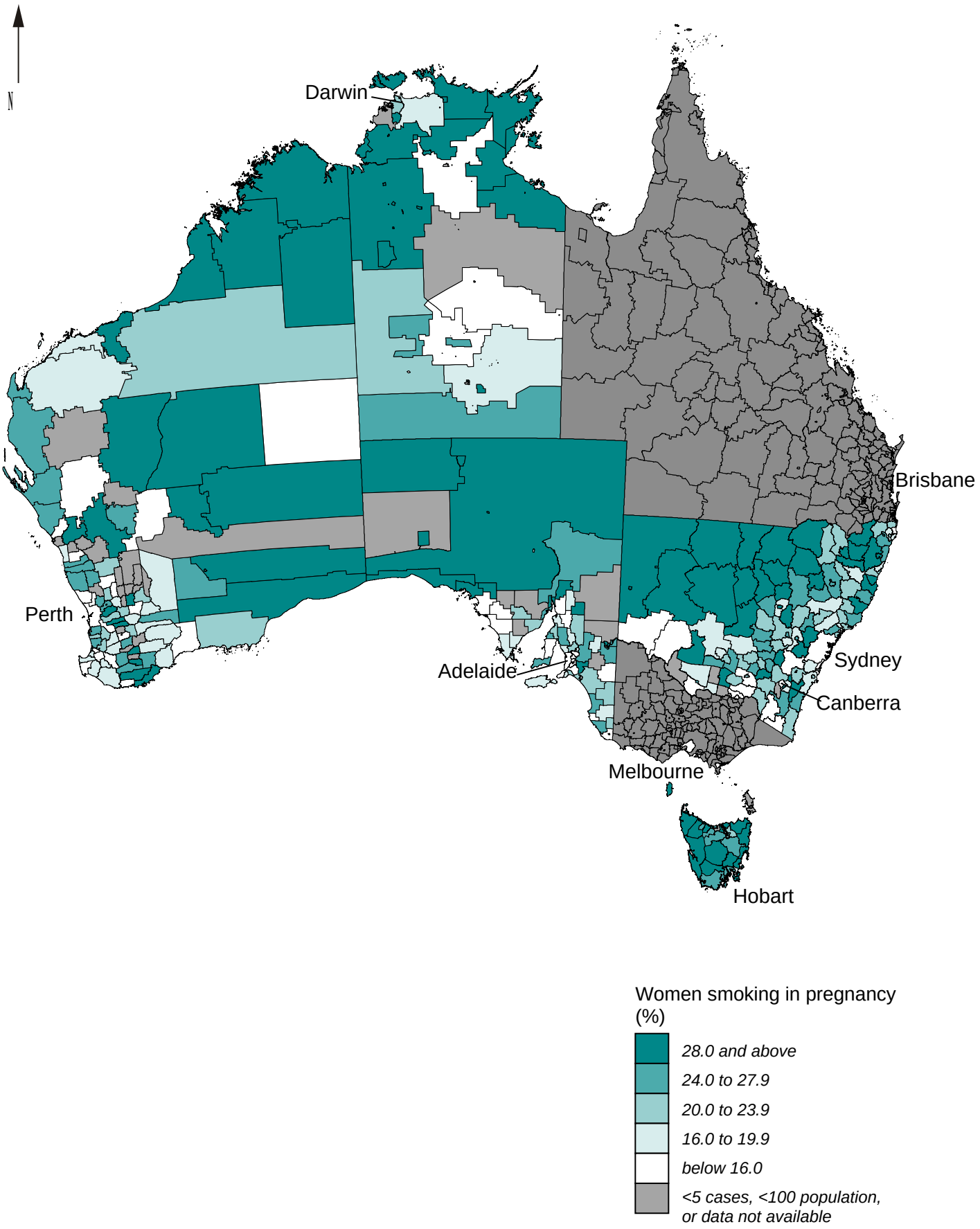
High proportions of women smoking during pregnancy were recorded in the more remote areas of **Western Australia**, with proportions of over 40% in Yalgoo (63.6%), Halls Creek (59.8%), Kalgoorlie/Boulder Part B (57.7%) and Derby-West Kimberley (57.0%), Wyndham-East Kimberley (44.7%), Wiluna (44.7%), Meekatharra (44.3%) and Albany Balance (42.3%). SLAs with the lowest proportions were generally in the south-west, including the SLAs of Ravensthorpe, Dowerin, and Augusta-Margaret River; and several areas had no women who reported smoking during their pregnancy over this period.

All but two SLAs in the non-metropolitan areas of **Tasmania** had 20% or more women who reported smoking during their pregnancy; these were Launceston - Inner (no cases) and Sorell - Part B (19.0%). SLAs with the highest proportions were West Coast (48.4%), George Town - Part A (42.0%), Derwent Valley - Part B (39.6%), and Central Highlands (38.4%), Glamorgan/Spring Bay (37.7%), George Town - Part B (37.5%) and Tasman (37.3%).

The highest rates of smoking during pregnancy were recorded in the north of the **Northern Territory**, while the lowest were generally in central areas, and near Darwin. Proportions of 50% or more were recorded in the SLAs of Marngarr (85.7%), Angurugu (80.0%), Timber Creek (73.9%), Gulf (68.2%), Nyirranggulung Mardrulk Ngadberre (67.1%), West Arnhem (59.3%), East Arnhem - Balance (52.3 %), and Pine Creek (52.0%). Indigenous Australians make up relatively high proportions of the population in these areas. A further 28 areas had proportions over 20%, with proportions below that level in Tennant Creek - Balance, South Alligator, Sandover and Nhulunbuy. In addition, the SLAs of Tapatjatjaka, Hanson, Alpurrurulam, Watiyawanu, Alice Springs - Stuart, Elsey and Artarlpilta had no cases recorded over this period.

Map 14: Women smoking during pregnancy, Australia, 2006 to 2008

per cent by Statistical Local Area/ Statistical Local Area group



Source: Compiled in PHIDU based on data supplied by State and Territory health authorities

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