



Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure

Australia

July 2011

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AUSTRALIAN BUREAU OF STATISTICS

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CONTENTS

page

Preface vii
Abbreviations viii

CHAPTERS

1 Introduction 1
2 Remoteness Areas 3

APPENDIX

1 Effective Dates of Remoteness Structure Editions 7

PREFACE

This publication is the fifth and final volume of a series detailing the new Australian Statistical Geography Standard (ASGS). This publication describes the Remoteness Structure of the ASGS.

The Remoteness Structure provides a geographical standard for the publication of statistics by relative remoteness.

The ASGS brings all the regions for which the Australian Bureau of Statistics (ABS) publishes statistics within the one framework. It is the framework for understanding and interpreting the geographical context of statistics published by the ABS. The ASGS has been in effect since July 2011. The ABS encourages the use of the ASGS by other organisations to improve the comparability and usefulness of statistics generally.

As a whole the ASGS represent a more comprehensive, flexible and consistent way of defining Australia's statistical geography than the previous geographic classification used by the ABS, the Australian Standard Geographical Classification (ASGC). For further information, or to assist you to move from the ASGC to the ASGS please refer to the ABS website at <<http://www.abs.gov.au/geography>>.

This publication is volume 5 of a series detailing the ASGS. Already published are:

- *Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011* (cat. no. 1270.0.55.001) released in December 2010.
- *Australian Statistical Geography Standard (ASGS): Volume 2 - Indigenous Structure, July 2011* (cat. no. 1270.0.55.002) released in September 2011.
- *Australian Statistical Geography Standard (ASGS): Volume 3 - Non ABS Structures, July 2011* (cat. no. 1270.0.55.003) released in July 2011, updated in July 2012.
- *Australian Statistical Geography Standard (ASGS): Volume 4 - Significant Urban Areas, Urban Centres and Localities, Section of State, July 2011* (cat. no. 1270.0.55.004) released in October 2012.

The digital boundaries, codes and names for the regions described in this volume are available free of charge from the ABS website at <<http://www.abs.gov.au/geography>>.

Any enquires regarding the ASGS and the Remoteness Structure or suggestions for their improvement can be made by emailing <geography@abs.gov.au>.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ARIA	Accessibility/Remoteness Index of Australia
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
Aust.	Australia
GIS	geographic information system
GISCA	National Centre for Social Applications of GIS, University of Adelaide
NSW	New South Wales
NT	Northern Territory
OT	Other Territories
Qld	Queensland
RA	Remoteness Area
S/T	state or territory
SA	South Australia
SA1	Statistical Area Level 1
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia

CHAPTER **1** **INTRODUCTION**

CONTENTS

page

Purpose 2
Classification structure 2

PURPOSE

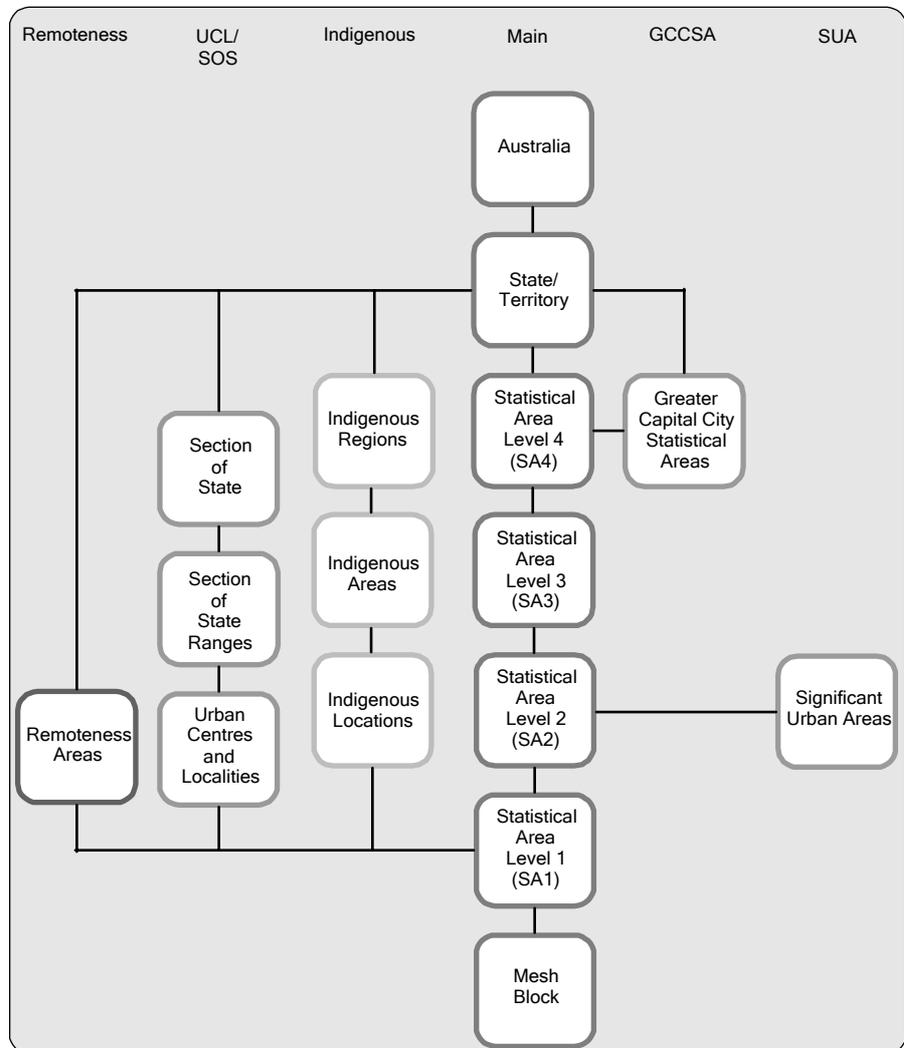
This volume describes the Remoteness Structure of the Australian Statistical Geography Standard (ASGS). For this structure it details:

- the purpose of the structure
- the hierarchy of regions
- the delimitation of the Remoteness Areas (RA)
- its comparability with past Remoteness Structures
- naming conventions
- coding conventions.

CLASSIFICATION
STRUCTURE

Diagram 1 below depicts the Remoteness Structure, its component regions and how they relate to the rest of the ASGS. The Remoteness Structure is an Australian Bureau of Statistics (ABS) structure as it is defined and maintained by the ABS.

Diagram 1: ASGS ABS Structures



PURPOSE

The Remoteness Structure of the Australian Statistical Geography Standard (ASGS) is used to disseminate a broad range of Australian Bureau of Statistics (ABS) social and demographic statistics. It divides each state and territory into several regions on the basis of their relative access to services.

THE STRUCTURE

The Remoteness Structure has only one level above the Statistical Area Level 1 (SA1) of the ASGS Main Structure. The Remoteness Structure is categorised into Remoteness Areas (RAs). RAs aggregate to states and territories (S/Ts) and cover the whole of Australia without gaps or overlaps.

From the Mesh Block level, the complete list of spatial units in this structure are:

- Mesh Blocks
- SA1s
- RAs
- S/Ts
- Australia.

For more information regarding the Mesh Blocks, SA1s and S/Ts, please refer to *Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011* (cat. no. 1270.0.55.001).

DELIMITATION OF RAs AND NAMING OF RAs

The delimitation criteria for RAs are based on the Accessibility/Remoteness Index of Australia (ARIA+) developed in 2000 by the then Commonwealth Department of Health and Aged Care (DHAC) and the National Key Centre for Social Applications of GIS (GISCA). GISCA is now incorporated into the Australian Population and Migration Research Centre (APMRC). ARIA+ measures the remoteness of a point based on the physical road distance to the nearest Urban Centre in each of five size classes. For more information on ARIA+ see the University of Adelaide website at http://www.adelaide.edu.au/apmrc/research/projects/category/about_aria.html.

The University of Adelaide provides the ABS with ARIA+ as a one kilometre grid covering all of Australia. Each grid point is allocated a value that is determined using the methodology found in the link above. The ABS utilises the ARIA+ grid to create RAs.

The ASGS SA1 boundaries are overlayed onto the ARIA+ grid and an average score is calculated based upon the grid points that are contained within each SA1. The resulting average score determines which remoteness category is allocated to each SA1.

Table 1 details each RA category including RA names and the SA1 average ARIA+ value ranges.

DELIMITATION OF RAs AND
NAMING OF RAs *continued*

TABLE 1, 2011 REMOTENESS AREAS FOR AUSTRALIA

RA Category	RA Name	SA1 Average ARIA+ Value Ranges
0	Major Cities of Australia	0 to 0.2
1	Inner Regional Australia	greater than 0.2 and less than or equal to 2.4
2	Outer Regional Australia	greater than 2.4 and less than or equal to 5.92
3	Remote Australia	greater than 5.92 and less than or equal to 10.53
4	Very Remote Australia	greater than 10.53
5	Migratory - Offshore - Shipping	
9	No usual address	

Further criteria are used by the ABS to refine RAs. These criteria are applied to remove anomalies that the index may produce and are consistent with the methodology that was applied in the delimitation of the 2006 Remoteness Structure. These criteria are listed below:

- A single SA1 that is not an Urban Centre or Locality and is completely surrounded by SA1s of a different remoteness category is merged into the surrounding remoteness category.
- A cluster of SA1s that make up a Locality of less than 1000 persons that is surrounded by SA1s of a different remoteness category is merged into the surrounding remoteness category.

Note that the above rules do not apply to coastal SA1s where neighbouring SA1s are classed as a different remoteness category as they are not considered to be completely surrounded.

The Urban Centre and Locality referenced in the above criteria are defined according to the ABS publication *Australian Statistical Geography Standard (ASGS) Volume 4 – Significant Urban Areas, Urban Centres and Localities, Section of State, July 2011* (cat. no. 1270.0.55.004) released in October 2012.

Within each S/T, each RA represents an aggregation of non-contiguous geographical areas which share common characteristics of remoteness. While statistical data classed to this structure may be available by S/T, characteristics of remoteness are determined in the context of Australia as a whole, consequently not all RA categories are represented in each S/T as illustrated in Table 2.

SUMMARY TABLE

Table 2 summaries the number of RA categories for each S/T. Not all RA categories are represented in each S/T.

TABLE 2, COUNTS FOR 2011 REMOTENESS AREAS

S/T	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	OT(a)
RA(b)	7	6	7	7	7	6	5	4	4

- (a) Other Territories (OT) includes the Territories of Cocos (Keeling) Islands, Christmas Island and Jervis Bay.
- (b) Includes records for Migratory - Offshore - Shipping and No usual address for each State and Territory.

COMPARABILITY WITH EARLIER ASGC DEFINITIONS OF REMOTENESS

There has been no substantial change in the methodology used to define the RAs and therefore in most cases it is possible to make a valid comparison of the same RAs across several Censuses. In doing such a comparison it is important to realise:

- remoteness is dynamic, it generally declines over time as new services are built and the road network is improved
- the regions from which they are built (Census Collection Districts prior to 2011 and SA1s in 2011) also change with the underlying settlement pattern.

RA CODING STRUCTURE

A RA is identifiable by a 2 digit hierarchical code. This comprises a S/T identifier code and a RA identifier code. A RA identifier is only unique if it is preceded by the S/T identifier.

For example, the RA coding structure for New South Wales (NSW) is illustrated below in Table 3.

TABLE 3, RA CODING STRUCTURE FOR NSW

S/T Code	S/T Name	RA Category	RA Code	RA Name
1	New South Wales	0	10	Major Cities of Australia
1	New South Wales	1	11	Inner Regional Australia
1	New South Wales	2	12	Outer Regional Australia
1	New South Wales	3	13	Remote Australia
1	New South Wales	4	14	Very Remote Australia
1	New South Wales	5	15	Migratory - Offshore - Shipping (NSW)
1	New South Wales	9	19	No usual address (NSW)

RELATED MATERIAL

The following related material is available for the 2011 Remoteness Structure at <<http://www.abs.gov.au/geography>>

- Maps of the 2011 RAs for each S/T in '.pdf' format
- Digital boundaries for the RAs as ESRI Shape files and as MapInfo Interchange Format files (mid/mif)
- Codes, labels and hierarchies for RAs in '.csv' format
- Selected correspondences between RAs and other ASGS regions.

APPENDIX

EFFECTIVE DATES OF REMOTENESS STRUCTURE EDITIONS

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<i>ASGS Edition</i>	<i>Effective Date</i>
2011	1 July 2011

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<i>ASGC Edition</i>	<i>Effective Date</i>
2006	1 July 2006
2001	1 July 2001

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INTERNET **www.abs.gov.au** the ABS website is the best place for data from our publications and information about the ABS.

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