

CHAPTER 2

ADDRESSING THE TERMS OF REFERENCE: THE IDENTIFICATION AND MEASUREMENT OF NEED

1. The terms of reference asked us to develop a method by which regional allocations of funds for Indigenous-specific purposes could be based on indexes that measured the relative needs of Indigenous people. They asked for relative needs to be measured for each ATSI region if possible. They also asked for a comparison of the existing regional distribution of resources available to provide health, housing, infrastructure, education, training and employment services with a needs-based distribution of those resources.

2. Doing this required us to:

- (i) decide how best to:
 - define needs;
 - identify and measure needs; and
 - calculate indexes of relative need for each region;
- (ii) identify the sources of funds used to meet the needs of Indigenous people;
- (iii) decide which funds are relevant to the Inquiry;
- (iv) identify and measure the links between needs and the funds necessary to meet them;
- (v) decide how the funds made available to meet needs should be allocated between regions; and
- (vi) compare the regional distribution of the existing expenditure with the allocations implied by the needs distribution arrived at in (v).

3. The terms of reference also asked us, if possible, to differentiate between the needs of Aboriginal people and Torres Strait Islanders.

4. This Chapter details the analysis we have made of the identification of need and presents some of the indexes of relative need we have developed.

Some Important Features of the Indigenous Population

5. To help the interpretation of the indexes, it is useful to note the more important differences between the Indigenous and the non-Indigenous populations. Some detailed data on the Indigenous population are provided in both Attachment A and the Supporting Material to this Report. The most relevant statistics are that:

- (i) at the time of the 1996 Census, Indigenous people represented 2.1 per cent of the Australian population;
- (ii) more than 55 per cent of the Indigenous population live in New South Wales and Queensland, 14 per cent in Western Australia and 13 per cent in the Northern Territory;
- (iii) about 83 per cent of the non-Indigenous population but only 44 per cent of the Indigenous population live in areas that are physically highly accessible¹ to government services (basically metropolitan areas and other large cities);
- (iv) about 26 per cent of the Indigenous population, but only 2 per cent of the non-Indigenous population, live in remote or highly remote areas²;
- (v) life expectancy for Indigenous people at birth is 56 years for males and 63 years for females (76 and 82 years for all Australian males and females)³;
- (vi) the Indigenous population is much younger than the non-Indigenous population — in 1996, the median age of the Indigenous population was 20 years but the comparable age for the non-Indigenous population was 34 years⁴; and
- (vii) Indigenous people have less income, on average, than non-Indigenous people — in 1996, the median individual weekly income of Indigenous people aged 15 and over was \$218 (\$294 for non-Indigenous people)⁵.

6. Figure 2-1 shows how areas are classified to highly accessible, accessible, moderately accessible, remote and very remote under the Accessibility/Remoteness Index of Australia (ARIA) classification.

¹ Based on the Accessibility/Remoteness Index of Australia (ARIA) developed by the National Key Centre for Social Applications of Geographical Information Systems at the University of Adelaide. This classification of localities measures accessibility and remoteness in terms of a location's road distance from service centres with populations of 5000 or more. Each location in Australia is classified into one of five categories: highly accessible; accessible; moderately accessible; remote; or very remote.

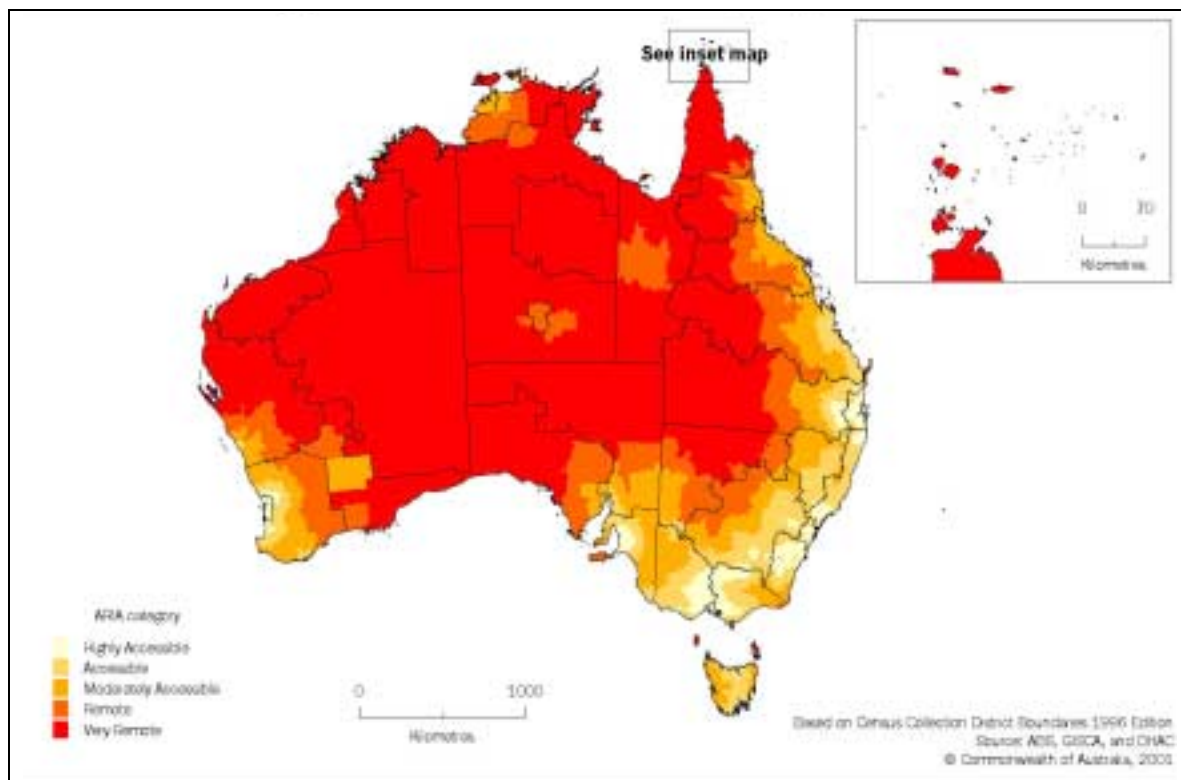
² Department of Prime Minister and Cabinet Submission, December 2000.

³ Australian Bureau of Statistics, *Deaths, Australia, 1999*, No. 3302.0.

⁴ ABS, Census of Population and Housing 1996.

⁵ ABS, Census of Population and Housing 1996.

Figure 2-1 ACCESSIBILITY/REMOTENESS INDEX OF AUSTRALIA (ARIA)



Economic Wellbeing

7. The Inquiry is aimed at improving the targeting of funds provided for the delivery of major government-type works and services intended to address the disadvantage faced by Indigenous people.

8. Our work indicates that Indigenous people experience a high level of disadvantage in comparison with non-Indigenous people in each of the functions covered by the Inquiry. That disadvantage is high in all areas but is greater in remote areas. There are many factors that contribute to Indigenous disadvantage, including high unemployment, low education achievements, poor health status and a high proportion of Indigenous people living in remote areas. All these factors are linked and contribute to the relative poverty of Indigenous people.

9. Despite the larger average size of Indigenous households (3.7 people compared with 2.7 people for non-Indigenous households) the median weekly household income of \$540 in 1996 was 15 per cent below that of non-Indigenous households.

10. A direct result of the lower incomes is that more Indigenous households live in poverty. Studies⁶ have estimated that about 30 per cent of Indigenous households compared with 13 per cent of non-Indigenous households have insufficient funds to meet their needs for housing and other necessities. In addition, there is a much lower accumulation of wealth as evidenced by the much lower proportion of households who live in homes that they own or are purchasing. In 1996, 31 per cent of Indigenous households and 70 per cent of non-Indigenous households lived in homes that they owned or were purchasing.

11. This relative poverty of Indigenous people means they are reliant on government programs and services to meet basic needs to a far greater extent than other groups. They do not have the resources to secure private access to services such as health and education, nor to be able to make a significant contribution towards their provision.

12. Until such time as Indigenous people have established a degree of economic and financial self-sufficiency comparable with other Australians, they will remain heavily dependent on government service provision. Overcoming economic disadvantage will not be achieved quickly. Designing service delivery programs and committing to their funding will need to reflect this reality. A focus on policies and approaches to support the economic and financial development of Indigenous people is outside the scope of our inquiry. But it is an essential adjunct to the on-going provision of services, and the essential building block for equity.

NEEDS

13. People are in need if their circumstances are below some acceptable standard. This implies that needs could be measured as the difference between an existing situation and an acceptable one.

14. Needs could be measured in terms of:

- (i) the *inputs* given to service providers — money, staff, buildings or other equipment — to use in providing facilities or services;
- (ii) the *outputs* service providers achieve with their given levels of input — such as the number of people treated or the number of hours of teaching provided; or
- (iii) the *outcomes* achieved as a result of the inputs and outputs — such as better educational attainment, health status, employment, living conditions and housing.

15. We think outcomes are the best focus for the Inquiry.

⁶ Jones, R. *Indigenous Housing 1996 Census Analysis — Indigenous Housing and Living Environments*, ATSIIC, Canberra, 1999, p79 and p123.

- (i) **A focus on outcomes allows us to consider whether the needs of Indigenous people are being effectively addressed. As such, it is consistent with the role of the Commonwealth in setting policy directions (which are often expressed in terms of expected outcomes) and monitoring the effectiveness of service delivery.**
- (ii) A focus on outcomes reduces any tendency to think that common approaches could be applied in the diverse circumstances of Indigenous people. It leaves decision makers with the flexibility to decide what services best suit the local circumstances, and how those services are best delivered.
- (iii) To the extent it is achievable, greater equality of outcomes is more consistent with broad equity principles than either inputs or outputs.

16. To use outcomes as the basis of needs measurement is also consistent with views put to us by government agencies and Indigenous organisations, communities and people.

17. We also decided to measure indicators of outcomes at the functional level rather than the narrower program or service level. We think this is more consistent with the Commonwealth's policy focus. It was also relevant that:

- (i) programs change over time;
- (ii) several programs generally contribute to an outcome; and
- (iii) a single program can contribute to several outcomes.

18. We sought to identify indicators of outcomes for each function by considering the broad policy objectives.

19. In many cases, outcomes have been measured using indicators of status. We measured needs as the difference between the current and a desirable level of the outcome indicator. A region would be in greater need if, compared to other regions, its population has a lower health status, poorer educational attainment, lower employment rates or fewer people in adequate housing. The main indicators we examined for each function are in Table 2-1. Further discussion of these and other indicators is in the Chapters dealing with each function.

The Requirement for a Standard

20. Once needs have been measured, converting them to indexes of relative needs requires a common point or standard against which the position of each region can be measured and ranked. That standard could be based on any one of many alternatives, including: a notion of a 'best' situation; an average of the circumstances of all Australians; an average of non-Indigenous people; an average of Indigenous people; or the average position of non-Indigenous people in the region.

21. Generally, we have used the Australian average position in calculating indexes of relative need. This is consistent with commitments by all Governments to ensure that Indigenous people ‘receive no less a provision of services than other Australian citizens’⁷. The choice of the standard is of most relevance in considering initiatives aimed at overcoming barriers to accessing mainstream programs, such as the cashing out of Medicare and the additional funding provided for the Indigenous Employment Program.

Table 2-1 MAIN INDICATORS EXAMINED FOR EACH FUNCTION

Function	Indicator	Measure
Health	Mortality (death rates)	Proportion of people dying each year by cause of death.
	Morbidity (sickness rates)	Hospital separations per person each year by type of treatment.
Housing	Overcrowding	Additional bedrooms required to overcome overcrowding and homelessness per household.
	Housing quality	Proportion of households in housing that requires major repairs.
	Affordability	Proportion of households in poverty.
Infrastructure	Lack of, or inadequate, facilities	Proportion of population with water restrictions, inadequate power supply or sewerage system.
Education	Educational attainment	Proportion of Indigenous Year 3 students who achieve a benchmark score in a national literacy or numeracy test.
	Drop-out rate	Proportion of Indigenous population aged 15 and over that left school before age 15.
	Educational attainment	Proportion of Indigenous population aged 18 and over with post-secondary qualifications.
Training	Training attainment	Proportion of Indigenous population aged 15 and over who have a VET qualification.
Employment	Effective employment, including/excluding CDEP	Proportion of Indigenous population aged 15 to 64 who are in any employment, including/excluding CDEP.

Multi-dimensional Nature of Needs

22. Table 2-1 indicates that different aspects of outcomes and need require different measures. For example, we could measure education outcomes in terms of the proportion of the population with school level qualifications, who achieve certain literacy or numeracy outcomes or with post-school qualifications. Similarly, several aspects of

⁷ *National Commitment to Improved Outcomes in the Delivery of Programs and Services for Aboriginal Peoples and Torres Strait Islanders*, Council of Australian Governments, December 1992, Clause 3.5.

housing need could be measured — such as the requirement for extra houses, the quality of existing housing and housing affordability.

23. Importantly, an Indigenous perspective to measures of outcomes may differ from that of non-Indigenous people. For example, an Indigenous perspective of health status is broader than physical health status and includes emotional, social, spiritual and cultural wellbeing. In addition, Indigenous people in metropolitan areas may have different views from those in remote areas.

24. We also note that an aspect of need that an indicator might be measuring can influence other indicators. For example, better educational participation may improve educational attainment, and better attainment may then lead to better employment. In addition, we will see that in regions where socio-economic disadvantages are entrenched, indicators of needs suggest high degrees of disadvantage across all functions.

25. In most cases, fully reflecting outcomes at the functional level would require several indicators to be used together, each reflecting a different aspect of outcome. This raises a question: is a better picture of outcomes and needs achieved by combining the measures that reflect each aspect of need, or is it better to treat them separately?

26. Generally, we have used single measure indexes of need. However, statistical approaches have been developed to construct ‘multi-measure’ indexes of need in some areas. For example:

- (i) the Office of Aboriginal Health in the Health Department of Western Australia has developed a multi-measure approach for health; and
- (ii) in the housing area, several different approaches that combine indicators of overcrowding, homelessness, housing quality and affordability have been developed⁸.

27. A multi-measure index provides a single summary indicator of need across a function. As such, they would appear to satisfy the terms of reference by providing an objective basis for allocating funds. But they are not as objective as they seem. In their preparation, **important judgements are necessary about the priorities to be given to each aspect of need, how the different measures of need should be combined, and how to allow for the impact of local circumstances.** For example, a combined indicator of housing need would require weights to be given to the needs for extra houses and for upgrading. Further analysis later in this Chapter illustrates the difference CDEP makes to the measurement of employment needs when CDEP participants are treated first as employed and then as unemployed (see Figure 2-2).

28. We have combined measures of need into composite indexes where they have common features. For example, we combined the requirement for extra housing

⁸ The consultants engaged by the Commonwealth-State Working Group on Indigenous Housing have developed one approach, and the New South Wales Aboriginal Housing Authority has developed another. The Supporting Material to this Report illustrates the wide dispersion of possible funding allocations that result from assigning different weights to each aspect of need.

arising from homelessness and overcrowding but, in general, we have produced single measure indicators for which adequate data are readily available.

DATA ISSUES

29. The terms of reference asked us to use existing or readily available data in undertaking calculations, where possible. This implied that the major sources of non-financial data available to us were to be:

- (i) the 1996 ABS Census of Population and Housing;
- (ii) other ABS surveys (such as the 1994 National Aboriginal and Torres Strait Islander Survey and the 1999 Community Housing and Infrastructure Needs Survey (CHINS)), that cover selected topics;
- (iii) the administrative records of Commonwealth and State agencies and other service providers; and
- (iv) outputs from research organisations, which tend to cover selected topics or localities.

Census of Population and Housing

30. The Census is the major source of data on population and a number of other social and economic variables for Australia as a whole, the States, regions and smaller areas. Information obtained from the Census (and other ABS national surveys) has been collected using uniform definitions and is generally comparable across regions. However, there is evidence that the level of accuracy of people's responses to some questions (such as those on Indigenous identification or household size) differs between regions.

31. Other issues with data from the Census are:

- (i) not all outputs from the Census are adjusted for differences between where people were on Census night and where they usually live — the high mobility of Indigenous people implies this difference could be important, especially in data for small areas;
- (ii) they relate to mid 1996 and are thus not up-to-date; and
- (iii) they do not provide information on some issues, such as health status.

32. **Population data.** Even the most basic data — the number of Indigenous people living in each region — are thought by many to be unreliable.

33. ABS estimated an under-enumeration rate of about 7 per cent for Indigenous people in the 1996 Census. It was less than 2 per cent for the total Australian population. There were more people who did not respond to the question on Indigenous status than

people who identified as Indigenous⁹. To adjust for these and other factors, the ABS prepared the *Experimental Estimates of the Aboriginal and Torres Strait Islander Population, 30 June 1991-30 June 1996*. These estimates provide better information on the Indigenous population, although the ATSI region is the smallest geographical area for which they are produced. The experimental estimates also do not address many of the issues raised during the Inquiry where local knowledge and the records of service providers indicate that the ABS estimates of population are understated. Nevertheless, we have used the experimental estimates in our analysis at the national, State and regional levels because they are the most comprehensive data available.

34. The ABS is constantly refining the collection processes for the five-yearly Census. This action is essential given the importance of the Census as the base source of information. **However, given the diversity in the circumstances of Indigenous people and the reliance of many funding arrangements on ‘per person’ allocations, it is necessary for additional effort to be put into improving the accuracy of the estimates of Indigenous population for communities and other small areas.**

Other ABS National Surveys

35. National surveys such as the 1994 National Aboriginal and Torres Strait Islander Survey and the 1995 National Health Survey were of limited use to us. The small sample sizes meant remote area data were either not available or not reliable. The data are also now out-of-date.

36. However, we have used data from the 1999 CHINS extensively. It contained current information for discrete Indigenous communities¹⁰ and Indigenous community housing organisations.

Administrative Collections

37. Information available from administrative collections is generally not reliable and suffers from high and variable levels of under-counting of Indigenous people. The under-counting arises because the ways of obtaining information on Indigenous identification differ between collections, between States, between regions and between institutions in the same collection, and because people do not always declare their identity. The ABS claims that the most reliable collections are the births, deaths and hospital statistics; but even in these, there are wide variations between the States in the identification of Indigenous people¹¹.

⁹ Kate Ross, ABS Occasional Paper: *Population Issues, Indigenous Australians, 1996*: ABS Catalogue No. 4708.0.

¹⁰ A ‘discrete Indigenous community’ is defined by the ABS as ‘a geographic location, bounded by physical or cadastral boundaries, and inhabited or intended to be inhabited predominantly by Indigenous people, with housing or infrastructure that is either owned or managed on a community basis’.

¹¹ For example, *Deaths 1999* (ABS catalogue 3302.0) indicates that, for Australia, registered deaths of Indigenous people are 56 to 85 per cent of those expected from the Census-based population projections, and there are large variations between States.

38. Some aspects of these administrative collections are co-ordinated by the ABS, the Productivity Commission or the Australian Institute of Health and Welfare (AIHW), and processes have been established to improve their quality and comparability.

Other Data Issues

39. Some other features of the data that are currently available and that affect measures of relative needs include the following.

- (i) Much of the data (such as that on hospital inpatients) reflect met rather than 'unmet' needs. Thus, from the perspective of resource allocation, they measure the wrong thing. They may also be affected by how the service is delivered (for example, the accessibility and location of hospitals). Using these data as a basis for decisions about total needs (met plus unmet) requires a great deal of care.
- (ii) The use of ATSI regions as the basis of comparisons can mask variations in needs between locations within the region. The data for the region are an average of all locations in the region and do not reflect accurately the position of any individuals or localities.
- (iii) Access to data, especially for small areas, is often not available for privacy reasons. Information is often collected by health and education bodies but little of that information, even in confidential form, was provided to us.
- (iv) Since improved outcomes will only be achieved over time, it is necessary to have comparable data for several years for monitoring and analysis of achievements. Even though they are improving, the data that exist for successive periods (such as those from the 1992 and 1999 Community Infrastructure Needs Surveys) were often not fully comparable.

40. The Supporting Material to this Report includes details of the data we sought and the major databases available. It also comments on the suitability of the data for measuring the needs of Indigenous people.

41. Much of the data required to measure needs on a regional basis are not available or are inadequate. Efforts are being made to improve the data including defining performance indicators, standardising data definitions and improving collection processes. However it is likely to be some years before data are available to provide a firm basis for measuring relative Indigenous needs at the regional level.

INDEXES OF RELATIVE NEED

42. This section presents some of the indexes of relative need we have calculated. The indexes rank regions from highest to lowest relative need. Further details are in later Chapters and in the Supporting Material to this Report.

43. The indexes in Tables 2-2 to 2-11 were calculated as need per Indigenous person, per Indigenous person in a relevant age group or per Indigenous household, depending on which group the service best relates to. We have ranked regions on the basis of their average need per person or household. We refer to this average need as the ‘depth’ of need — it indicates the need of each person or household in the region, on average.

44. Depth of need differs from the total need in a region because total need combines the depth of need and the number of people in need. A ranking of regions based on the depth of need will usually differ from one based on total need.

45. Depth of need is a way of looking at the relative needs of different regions. It identifies group where numbers on average are relatively more in need. It is particularly helpful when considering the distribution of funds to satisfy capital needs, such as infrastructure.

46. At the functional level, however, it may be more appropriate to allocate funds for recurrent services between regions using shares of total need. This helps to ensure, for example, that all Indigenous students get some assistance, but that those in most need get more. We have used depth of need to rank regions in each of the tables in this Chapter.

Health Needs Indicators

47. Mortality (death rates) and morbidity (sickness rates) are two simple measures of health outcomes. They are not totally appropriate to the measurement of outcomes or need for primary health care (the focus of need in health services for Indigenous people) but other comprehensive data are not available. And even data on mortality and morbidity of Indigenous people are limited.

48. Mortality data are not reliable at the ATSI region level in any State and are only reliable at all in three States — Western Australia, South Australia and the Northern Territory. For those States, the data are available on the basis of remoteness using the ARIA classification. Morbidity data are available for all States but cannot be obtained on either the ARIA classification or ATSI regions. Those data are only available on the Rural, Remote and Metropolitan Area (RRMA) classification¹².

¹² Both the ARIA and the RRMA classifications seek to classify locations on the basis of remoteness. The RRMA classification was the first remoteness classification system developed. In essence, it classifies locations on the basis of population size and distance from nearby centres. It is being replaced by ARIA for most analytical purposes.

49. Table 2-2 shows the Indigenous death rate in each ARIA zone and the Australian average Indigenous death rate. In each case, the figures, of necessity, are based on the data for Western Australia, South Australia and the Northern Territory¹³. A ratio above 1 indicates a greater than average death rate. A ratio below 1 indicates a lower than average death rate.

Table 2-2 AGE STANDARDISED DEATH RATES (per 100 000 PEOPLE) FOR INDIGENOUS AUSTRALIANS, 1994–1998

		ARIA Category					Indigenous total
		Highly accessible	Accessible	Moderately accessible	Remote	Very remote	
Males	Death rate	1416	1667	2146	2392	2164	2006
	Ratio	0.71	0.83	1.07	1.19	1.08	1.00
Females	Death rate	1010	1317	1099	1701	1492	1384
	Ratio	0.73	0.95	0.79	1.23	1.08	1.00

Note: Data presented are for the residents of Western Australia, South Australia and the Northern Territory.

Source: AIHW National Mortality Database, 1994-98, calculated on ARIA classification, Department of Health and Aged Care.

50. Table 2-3 shows the rate of hospital separations per 1000 Indigenous people (morbidity rate) in each State and each RRMA region. It also shows the ratio of the morbidity rate for each region and State compared to the Australian average Indigenous morbidity rate.

51. Both sets of data indicate that health status is worse in the more remote areas. However, the morbidity data in suggest that the general pattern does not hold for all States. For example, in Western Australia, the lowest rate of hospitalisation is in small rural centres.

52. These indicators present a broad picture of relative health status. But, for conceptual and practical reasons, they do not by themselves provide a reliable guide to the need for resources.

(i) *Conceptual issues*

- Hospitalisation and deaths do not reflect all aspects of physical health status, such as the need for primary health services that are delivered outside hospitals.
- The perspective Indigenous people have of health status includes emotional, spiritual and social wellbeing, which are not reflected in morbidity and mortality data.

¹³ Thus the figures may not accurately reflect the regional pattern in the south eastern part of the country.

- Morbidity, as measured by hospital separations, reflects met, not unmet, need — an important distinction in the case of Indigenous people where access issues often restrict them from seeking help.
- The indicators we have calculated give the same weight to all deaths and each incidence of hospitalisation, but some conditions have a greater impact on health outcomes and some require more resources to deal with them.

Table 2-3 RATE OF HOSPITAL SEPARATIONS (per 1000 PEOPLE) BY RRMA FOR INDIGENOUS AUSTRALIANS, 1996-97

	Capital city	Other metro	Large rural	Small rural	Other rural	Remote centre	Other remote	Total
Rate Per 1000								
NSW	99.93	97.85	230.89	278.45	297.49	n.a.	636.01	224.77
Vic	125.54	126.62	246.79	437.46	375.73	n.a.	184.96	232.55
Qld	235.25	335.61	372.13	192.76	377.39	421.07	420.07	346.69
WA	424.62	n.a.	n.a.	374.49	420.53	604.76	584.27	508.56
SA	302.91	n.a.	410.16	745.53	386.22	n.a.	389.91	413.60
Tas	13.9	n.a.	60.84	13.17	13.50	n.a.	28.99	20.03
ACT	139.59	n.a.	n.a.	n.a.	100.00	n.a.	n.a.	139.15
NT	801.52	n.a.	n.a.	n.a.	80.26	990.13	301.94	463.96
Total	245.78	191.33	302.46	331.89	311.14	639.07	421.19	333.757
Ratio								
NSW	0.30	0.29	0.69	0.83	0.89	n.a.	1.91	0.67
Vic	0.38	0.38	0.74	1.31	1.13	n.a.	0.55	0.70
Qld	0.70	1.01	1.11	0.58	1.13	1.26	1.26	1.04
WA	1.27	n.a.	n.a.	1.12	1.26	1.81	1.75	1.52
SA	0.91	n.a.	1.23	2.23	1.16	n.a.	1.17	1.24
Tas	0.04	n.a.	0.18	0.04	0.04	n.a.	0.09	0.06
ACT	0.42	n.a.	n.a.	n.a.	0.30	n.a.	n.a.	0.42
NT	2.40	n.a.	n.a.	n.a.	0.24	2.97	0.90	1.39
Total	0.74	0.57	0.91	0.99	0.93	1.91	1.26	1.00

Note: Data presented are for the residents of Western Australia, South Australia and the Northern Territory.

Source: AIHW, Hospital Morbidity Database, 1996-97.

(ii) Practical issues

- Although there have been improvements in data quality in recent years, they are still not reliable below a broad geographical level.

- Identification of Indigenous people is problematic.
- For the purposes of regional analysis, morbidity data have the disadvantage that they reflect the location of hospitals and access to services. As a result, they are imperfect indicators of health status based on where people live. This is a particular problem for analysis involving Indigenous people who often travel long distances for treatment or relocate to where treatment is provided.

Housing Needs Indicators

53. Data required to measure the relative needs for housing are more readily available at the State and regional levels than data for other functions. This is largely due to the collaborative work of ATSIC, the Department of Family and Community Services and the State Indigenous housing bodies, and the co-ordinating efforts of the Commonwealth-State Working Group on Indigenous Housing. The surveys of housing and infrastructure needs conducted in 1992 by Australian Construction Services and in 1999 by ABS at the request of, and paid for by, ATSIC have been particularly useful. We have confined our work to examining the data produced by those processes.

54. Table 2-4 provides an indication of the relative need in each ATSIC region for additional bedrooms to overcome overcrowding and homelessness. The calculations were based on work done for ATSIC, using data from the 1996 Census¹⁴.

55. It shows the average number of additional bedrooms required for each Indigenous household in each region, compared to the average number for all Indigenous households in Australia. Thus, for example, the average requirement for additional bedrooms by each Indigenous household in the Nhulunbuy region is 13.3 times the average requirement of Indigenous households in Australia.

56. Table 2-4 shows that on average the greatest need for additional housing to address overcrowding and homelessness is in remote areas. The depth of need in remote areas is much greater than that in the more urbanised ATSIC regions. However, the figures do not present a complete picture of relative housing need because the elimination of overcrowding and homelessness is only one aspect of action required to improve housing outcomes.

57. It is also necessary to take account of differences in the condition and the affordability of housing. Housing needs arising from affordability can be measured in several ways. Table 2-5 ranks regions on one measure of affordability needs. It measures affordability in terms of the proportion of Indigenous households in each region who would suffer poverty relative to the Australian average proportion for Indigenous households. Households are considered to experience poverty if they have insufficient income to meet

¹⁴ Jones, R, *Indigenous Housing 1996 Census Analysis, Indigenous Housing and Living Environment*, ATSIC, Canberra, 1999.

basic living requirements or if, after paying a reasonable rent¹⁵ for their house, they have insufficient income to meet basic living requirements.

Table 2-4 ILLUSTRATIVE INDEX OF RELATIVE NEED FOR HOUSING ARISING FROM HOMELESSNESS AND OVERCROWDING

ATSIC Region	Rate	ATSIC Region	Rate	ATSIC Region	Rate	ATSIC Region	Rate
Nhulunbuy	13.3	Torres Strait	3.4	Townsville	1.1	Coffs Harbour	0.4
Aputula	9.5	Broome	2.1	Bourke	1.1	Wagga Wagga	0.4
Jabiru	8.2	Mt Isa	1.9	Darwin	1.0	Adelaide	0.3
Katherine	6.5	Alice Springs	1.6	Geraldton	1.0	Ballarat	0.3
Tennant Creek	6.0	South Hedland	1.6	Roma	0.7	Brisbane	0.3
Warburton	5.4	Ceduna	1.6	Rockhampton	0.7	Sydney	0.3
Kununurra	4.1	Port Augusta	1.4	Narrogin	0.6	Queanbeyan	0.3
Cooktown	4.0	Kalgoorlie	1.4	Perth	0.5	Wangaratta	0.3
Derby	3.5	Cairns	1.2	Tamworth	0.5	Hobart	0.2

Notes: Calculated as the ratio of additional bedrooms required by Indigenous households in each region to overcome homelessness and overcrowding relative to the average bedroom need per Indigenous household in Australia. On average, each Australian Indigenous household requires 0.36 additional bedrooms to overcome overcrowding and homelessness. The average requirement in the Nhulunbuy region is 4.8 bedrooms per household (0.36 by 13.3). Indigenous Australian average = 1.0.

Source: Jones, R, *Indigenous Housing 1996 Census Analysis - Indigenous Housing and Living Environment*, ATSIIC, Canberra, 1999.

58. Table 2-5 indicates that the affordability needs are in regions containing large urban centres. This is because the measure of poverty is basically restricted to households in private rental property or those buying their home — rents for households in public and community housing where the majority of Indigenous people are housed are set at levels that households are generally considered to be able to afford.

59. Comparison of the index of relative need for additional housing arising from homelessness and overcrowding with the index for affordability indicates that:

- (i) the range of variation between regions in measured needs arising from homelessness and overcrowding is greater than the variation in affordability; and
- (ii) the regional pattern of the two indexes is different, with the higher needs arising from homelessness and overcrowding in the remote

¹⁵ The reasonable rent levels are defined as the amount that should allow a household to rent housing in the area where they live that meets minimum standards of adequacy — Jones, R, Neutze, M, Sanders, W, *Measures of Indigenous Housing Need and Resource Allocation in the ARHP and CHIP*, quoted in Jones, R, *Indigenous Housing 1996 Census Analysis - Indigenous Housing and Living Environment*, ATSIIC, Canberra, 1999.

regions and the higher affordability needs in the more urbanised regions.

Table 2-5 INDEX OF AFFORDABILITY — MEASURED BY REFERENCE TO BEFORE AND AFTER HOUSING POVERTY

ATSIC Region	Index	ATSIC Region	Index	ATSIC Region	Index	ATSIC Region	Index
Coffs Harbour	1.6	Perth	1.2	Bourke	0.3	Alice Springs	0.1
Brisbane	1.5	Queanbeyan	1.1	Port Augusta	0.2	Tennant Creek	0.1
Roma	1.4	Cairns	1.0	Kalgoorlie	0.2	Broome	0.0
Darwin	1.4	Townsville	1.0	Mt Isa	0.1	Cooktown	0.0
Rockhampton	1.3	Narrogin	1.0	Derby	0.1	Kununurra	0.0
Wagga Wagga	1.3	Adelaide	1.0	Torres Strait	0.1	Warburton	0.0
Tamworth	1.2	Sydney	0.9	Ceduna	0.1	Jabiru	0.0
Wangaratta	1.2	Hobart	0.8	Katherine	0.1	Nhulunbuy	0.0
Ballarat	1.2	Geraldton	0.8	South Hedland	0.1	Aputula	0.0

Note: Before housing poverty occurs when a household's income is insufficient to cover non-housing need. After housing poverty occurs when a household's income, after paying housing costs, is reduced below its non-housing income need. Housing costs are limited to a 'norm' rent which reflects the amount that Indigenous tenants need to pay for adequate rental housing. Rents for public and community rental housing are set at levels that the occupants are judged to be able to afford. Hence, this measure reflects only households in dwellings that rented privately or are being purchased. Indigenous Australian index equals 1.00.

Source: Derived from Jones, R. *Indigenous Housing Analysis 1996 Census Data – Indigenous Housing and Living Environments*, ATSI, 1999, p24, Table 3.6 and p92, Table 7.14.

60. Although Table 2-4 illustrates reasonably well the pattern of need arising from homelessness and overcrowding, great care should be taken in using it to come to conclusions about the depth of need for additional housing. It may not accurately reflect the relative requirement of the different regions for funds.

- (i) There are doubts about the accuracy of the Census data used. CHINS 1999 data indicate that there are twice as many houses in some regions (such as Nhulunbuy) as were identified in the Census, and there are many unoccupied houses.
- (ii) Census data on homelessness primarily reflect the number of people living in improvised dwellings — they do not count the people who are 'living on the street'. As a result, they record very few homeless households in metropolitan areas.
- (iii) The requirement for additional bedrooms may not reflect regional differences in cultural preferences or practices.
- (iv) There may be some under-reporting of household size (due to overcrowding in rented houses) and this may differ between regions.

- (v) The figures do not allow for housing construction since 1996, which has been primarily directed towards remote areas.

61. Similarly, the index of affordability needs may not accurately reflect relative needs because:

- (i) the derivation of after housing poverty reflects people's current housing arrangements (including the quality of their housing) and where they actually live;
- (ii) there are doubts about the accuracy of Census data on income; and
- (iii) judgement enters into the calculation of reasonable rent levels used in measuring the extent of after housing poverty.

Infrastructure Needs Indicators

62. Table 2-6 shows a possible index for assessing infrastructure based on the proportion of the Indigenous population with a high need for water, power or sewerage services in each ATSI region, compared with the Australian average proportion of the Indigenous population in need of infrastructure. It was compiled using data from the 1999 CHINS. Consequently it reflects needs experienced by people living in discrete Indigenous communities only — it does not take account of any infrastructure needs experienced by Indigenous people who live in other communities, such as larger urban centres. This may not be a serious limitation because urban people generally receive infrastructure services from State and local government providers in the same way as non-Indigenous people.

63. We considered people to be in high need for infrastructure if they had:

- (i) water restrictions three or more times in the previous year; or
- (ii) no power supply or were supplied from a source described in the survey as 'other'; or
- (iii) no sewerage system or had systems described as 'pit', 'pan' or 'other'.

64. We have treated the need for each form of infrastructure equally. A more comprehensive index would weight each according to its contribution to wellbeing or quality of life. If the index were to be used to allocate resources, it should also take account of regional differences in the mix of infrastructure required, the cost of providing each type of infrastructure and the appropriate technology required.

65. Table 2-6 shows that the greatest needs are in the remote, sparsely populated northern regions — particularly in the Nhulunbuy, Jabiru, Aputula and Katherine regions of the Northern Territory, and the Cooktown Region and the Torres Strait in Queensland. No needs are shown for the regions where Indigenous people generally receive their infrastructure services from mainstream providers.

Table 2-6 ILLUSTRATIVE INDEX OF RELATIVE NEED FOR INFRASTRUCTURE^(a)

ATSIC Region	Rate ^(b)	ATSIC Region	Rate ^(b)	ATSIC Region	Rate ^(b)	ATSIC Region	Rate ^(b)
Nhulunbuy	6.94	Broome	0.84	Coffs Harbour	0.20	Wangaratta	0.00
Torres Strait	6.41	Derby	0.79	Ceduna	0.15	Ballarat	0.00
Jabiru	4.96	Geraldton	0.77	Darwin	0.09	Brisbane	0.00
Cooktown	3.82	Mt Isa	0.69	Adelaide	0.09	Rockhampton	0.00
Aputula	2.83	Bourke	0.65	Wagga Wagga	0.07	Roma	0.00
Katherine	1.45	Tennant Creek	0.43	Alice Springs	0.06	Townsville	0.00
Kununurra	1.45	South Hedland	0.33	Queanbeyan	0.00	Perth	0.00
Port Augusta	1.44	Kalgoorlie	0.29	Sydney	0.00	Narrogin	0.00
Warburton	0.95	Cairns	0.28	Tamworth	0.00	Hobart	0.00

(a) Regional need for water, power or sewerage infrastructure per person compared to Indigenous average need for water, power or sewerage infrastructure. Indigenous Australian index = 1.00.

(b) Standard calculated as sum of population in need, divided by 36.

Source: *Community Housing and Infrastructure Needs Survey*, produced by ABS on behalf of ATSIC, Canberra 1999.

66. Of the 480 communities that had high needs, about 80 per cent of them had fewer than 50 people, although communities of over 1000 people were in need in the Nhulunbuy, Torres Strait and Jabiru Regions.

Education Needs Indicators

67. Data to measure the relative needs of Indigenous people in small areas for schools education services are practically non-existent. At present, the only data that link indicators of education needs to regions are in the 1996 Census and they are not as closely related to measures of outcome as is necessary for analysis. The options are to measure outcomes using either the number of Indigenous people who stayed at school after 15 years of age or the number of Indigenous people with a post-secondary qualification. The number of Indigenous students achieving year 12 or equivalent tertiary entry qualifications would be a better indicator of schools education outcomes, but comparable regional data are not available.

68. Table 2-7 presents indexes of outcomes based on the proportion of people aged 15 and above who left school at age 14 years and younger. It indicates that the Warburton region has the worst outcome (and thus the highest relative need¹⁶). The outcome in the Warburton region was 255 per cent of the Australian average outcome, which implies that about 35 per cent (255 x 13.7 per cent) of the Indigenous people aged 15 and above left school at age 14 or less in that region.

¹⁶ The relative needs index for each region is calculated as one minus its relative outcomes index.

Table 2-7 ILLUSTRATIVE INDEX OF RELATIVE OUTCOMES FOR EDUCATION: BASED ON THE PROPORTION OF POPULATION AGED 15 AND ABOVE WHO LEFT SCHOOL AT 14 OR LESS, 1996

ATSIC Region		ATSIC Region		ATSIC Region		ATSIC Region	
Worst outcome	Rate		Rate		Rate	Best outcome	Rate
Warburton	2.55	Geraldton	1.30	Katherine	1.12	Nhulunbuy	1.03
Apatula	1.91	Jabiru	1.26	Port Augusta	1.11	Torres Strait	0.98
Tennant Creek	1.57	Townsville	1.26	Adelaide	1.11	Coffs Harbour	0.98
Roma	1.50	Ballarat	1.26	Wagga Wagga	1.10	Ceduna	0.96
Alice Springs	1.43	Cooktown	1.20	Cairns	1.09	Queanbeyan	0.95
Narrogin	1.41	Bourke	1.16	Wangaratta	1.06	Darwin	0.95
Kalgoorlie	1.39	Brisbane	1.16	Broome	1.05	South Hedland	0.94
Perth Noongar	1.32	Kununurra	1.14	Tamworth	1.04	Sydney	0.94
Rockhampton	1.31	Mount Isa	1.13	Derby	1.03	Tasmania	0.83

Notes: A higher index indicates a worse outcome. On average, 13.7 per cent of Australian people aged 15 and over left school at age 14 years and younger. Australia equals 1.00.

Source: 1996 ABS Census of Population and Housing.

69. Table 2-8 shows relative outcomes based on the ratio of the Indigenous post-secondary qualification rate in each ATSIC region compared to the Australian average post-secondary qualification rate. The post-secondary qualification rates have been measured as the proportion of the Indigenous population in each region (or the total Australian population) aged 18 years and over with post-secondary qualifications.

70. To the extent that obtaining post-secondary education qualifications is an indication of schools education outcomes¹⁷, the table suggests that outcomes are poorest (need is greatest) in the most remote ATSIC regions. Conversely, Indigenous people living in capital cities and in east-coast regions are relatively better qualified.

71. However, the educational outcomes of Indigenous people in all regions are low and thus their needs are great in all regions. The table indicates that there is a considerable qualifications gap between an average Australian and an average Indigenous Australian, even in the Wangaratta region where Indigenous educational attainment appears to be best.

72. In general, the conclusion from both these indicators of education outcomes is that the greater average need (or the greater depth of need) is in the remote areas.

¹⁷ The suitability of post-secondary qualification rate as an indicator of outcomes for school education is limited because it reflects the results of all the factors that influence the progression from school to post-school education and success in post school education. We have used this measure only because comparable data are not available to measure secondary qualifications.

Table 2-8 ILLUSTRATIVE INDEX OF RELATIVE OUTCOMES FOR EDUCATION: BASED ON THE PROPORTION OF POPULATION AGED 18 YEARS AND OVER WITH POST SECONDARY QUALIFICATIONS, 1996

ATSI Region		ATSI Region		ATSI Region		ATSI Region	
Lowest Outcome	Rate		Rate		Rate	Highest outcome	Rate
Apatula	0.05	Bourke	0.19	Broome	0.29	Perth	0.44
Nhulunbuy	0.05	Port Augusta	0.19	Alice Springs	0.30	Coffs Harbour	0.50
Warburton	0.05	Mount Isa	0.19	Ceduna	0.32	Adelaide	0.51
Jabiru	0.07	Geraldton	0.21	Townsville	0.32	Ballarat	0.52
Cooktown	0.10	Kalgoorlie	0.23	Tamworth	0.33	Brisbane	0.54
Derby	0.11	Narrogin	0.25	Wagga Wagga	0.34	Hobart	0.54
Katherine	0.11	Torres Strait	0.26	Cairns	0.34	Queanbeyan	0.56
Tennant Creek	0.12	Roma	0.26	Rockhampton	0.34	Sydney	0.58
Kununurra	0.12	South Hedland	0.27	Darwin	0.43	Wangaratta	0.62

Notes: Australia equals 1.00. On average, 31.7 per cent of Australian people aged 18 and over hold some form of post secondary qualification — either a VET qualification or a university qualification.

Source: 1996 ABS Census of Population and Housing.

73. The indicators we measured provide some insights into the achievements at the end of the education process, but they say nothing about the quality of those qualifications. Indicators that provide some insights into both attainment and quality would include measures of the proportion of people with an acceptable level of literacy and numeracy, or a tertiary entry level year 12 qualification. Comparable information on literacy is currently limited to the results of year 3 literacy testing. However, while every State undertakes this testing, confidentiality meant that the data were not made available to us below the State level. Limited data on year 12 qualifications collected from Western Australia and South Australia show that in 1999 and 2000:

- about 55 per cent of Indigenous students who started Year 12 (or equivalent) graduated from secondary school, compared with about 80 per cent of non-Indigenous students; and
- although small, the numbers of Indigenous secondary school graduates are increasing.

Training Needs Indicators

74. Table 2-9 shows the relative training outcomes based on the Indigenous VET qualification rate in each ATSI region compared to the Australian average VET qualification rate. The data used in the calculations were obtained from the 1996 Census and measure the proportion of people 15 and over with VET qualifications.

Table 2-9 ILLUSTRATIVE INDEX OF RELATIVE OUTCOMES FOR TRAINING: BASED ON THE PROPORTION OF POPULATION AGED 15 YEARS AND OVER WITH VET QUALIFICATIONS, 1996

ATSI Region		ATSI Region		ATSI Region		ATSI Region	
Lowest Outcome	Rate		Rate		Rate	Highest outcome	Rate
Nhulunbuy	0.05	Bourke	0.27	Broome	0.39	Darwin	0.55
Apatula	0.06	Port Augusta	0.29	Alice Springs	0.39	Ballarat	0.63
Warburton	0.07	Mount Isa	0.29	Ceduna	0.40	Queanbeyan	0.64
Jabiru	0.10	Geraldton	0.30	Townsville	0.43	Adelaide	0.64
Derby	0.13	Kalgoorlie	0.32	Wagga Wagga	0.46	Brisbane	0.66
Cooktown	0.14	Roma	0.33	Cairns	0.47	Coffs Harbour	0.67
Kununurra	0.15	Narrogin	0.35	Tamworth	0.47	Sydney	0.69
Katherine	0.15	Torres Strait	0.35	Rockhampton	0.47	Hobart	0.73
Tennant Creek	0.17	South Hedland	0.39	Perth	0.52	Wangaratta	0.77

Notes: Australia equals 1.00. On average, 16.1 per cent of Australian people aged 15 and over hold some form of training qualification.

Source: 1996 ABS Census of Population and Housing.

75. The table shows that, on average, Indigenous people over the age of 15 years living in the Nhulunbuy region have the lowest training outcomes, being 5 per cent of the Australian average. They therefore have the highest relative needs. More generally, it shows that the less qualified Indigenous people live in the remote areas, and that the greatest needs are accordingly in those regions.

76. It could be that some VET qualified people from those regions have moved to larger urban areas to find work, but the urban areas do not have unusually high rates of VET qualified people. The table also indicates that Indigenous people have lesser training outcomes than the Australian average across all regions.

77. In recent years, there has been a higher Indigenous enrolment in VET courses. However, we do not think these changes would invalidate our general conclusions.

Employment Needs Indicators

78. Table 2-10 shows relative employment outcomes based on the employment ratio of Indigenous people in each ATSI region compared to the Australian average employment rate. We have used 1996 Census data to measure the proportion of the Indigenous population aged 15 to 64 years in any employment, excluding CDEP participation. The table indicates that the poorest outcomes for Indigenous employment (the lowest employment rates) are in the most remote ATSI regions. That is, the greatest relative needs for employment are in those regions. Compared to Australian averages, there are high levels of need for employment for Indigenous people in all regions, but the average

level of need among the Indigenous population is comparatively lower in capital city and east coast regions.

Table 2-10 ILLUSTRATIVE INDEX OF RELATIVE OUTCOMES FOR EMPLOYMENT: BASED ON THE EFFECTIVE EMPLOYMENT RATE (EXCLUDING CDEP PARTICIPATION), 1996

ATSI Region		ATSI Region		ATSI Region		ATSI Region	
Lowest outcome	Rate		Rate		Rate	Highest outcome	Rate
Apatula	0.16	Kununurra	0.38	Alice Springs	0.51	Darwin	0.55
Warburton	0.18	Broome	0.41	Mount Isa	0.51	Rockhampton	0.55
Nhulunbuy	0.18	Tamworth	0.46	Wagga Wagga	0.52	Adelaide	0.59
Jabiru	0.20	Ceduna	0.48	Cairns	0.52	Queanbeyan	0.66
Cooktown	0.25	South Hedland	0.48	Perth	0.52	Ballarat	0.67
Tennant Creek	0.27	Bourke	0.48	Roma	0.53	Brisbane	0.68
Katherine	0.28	Geraldton	0.48	Townsville	0.54	Sydney	0.72
Derby	0.29	Torres Strait	0.50	Narrogin	0.54	Wangaratta	0.74
Port Augusta	0.29	Kalgoorlie	0.51	Coffs Harbour	0.54	Hobart	0.76

Notes: Effective employment rate is calculated as the number of Indigenous people in employment (full or part time) relative to the Indigenous population aged 15 to 64 years. Participation in CDEP is not treated as employment. On average, 64.8 per cent of Australian people aged 15-64 were in employment (excluding CDEP participation) in 1996. Australia equals 1.00.

Source: 1996 ABS Census of Population and Housing.

79. The index in Table 2-10 tells us something about the need for employment services at the time of the 1996 Census. However, the pattern of employment may not be a good indicator of the need for employment assistance. The lowest proportions of people in employment are in areas where the demand for workers is limited by the low level of economic activity. In those cases, the requirement is to increase economic activity rather than to provide employment assistance services for non-existent jobs.

80. Table 2-11 shows relative employment outcomes based on the ratio of the Indigenous employment rate in each ATSI region to the overall Australian employment rate, with participation in CDEP treated as employment. Like Table 2-10, it is based entirely on 1996 Census data.

81. The number of CDEP participants in major urban areas is relatively small. So the index numbers for the Hobart, Wangaratta, Sydney, Brisbane, Ballarat, Queanbeyan and Rockhampton regions are the same in Table 2-10 and Table 2-11; and the figures for the Perth, Adelaide, Darwin and Coffs Harbour regions differ by only 0.01.

82. However, in remote regions, large proportions of the Indigenous population participate in CDEP. In those regions, treating CDEP as employment has a large effect on the apparent employment outcomes (and thus need). Such an index could not be used as an indicator of need for CDEP funding as it would be affected by decisions on CDEP.

Table 2-11 ILLUSTRATIVE INDEX OF RELATIVE OUTCOMES FOR EMPLOYMENT: BASED ON THE EFFECTIVE EMPLOYMENT RATE (INCLUDING CDEP PARTICIPATION), 1996

ATSIC Region		ATSIC Region		ATSIC Region		ATSIC Region	
Lowest outcome	Rate		Rate		Rate	Highest outcome	Rate
Apatula	0.38	Geraldton	0.54	Adelaide	0.60	Sydney	0.72
Port Augusta	0.49	Kalgoorlie	0.54	Cairns	0.62	Wangaratta	0.74
Tamworth	0.50	Rockhampton	0.55	Townsville	0.62	Ceduna	0.75
Nhulunbuy	0.52	Coffs Harbour	0.55	Mount Isa	0.65	Hobart	0.76
Jabiru	0.52	Darwin	0.56	Katherine	0.65	Broome	0.80
Bourke	0.52	Alice Springs	0.56	Queanbeyan	0.66	Kununurra	0.81
Perth	0.53	South Hedland	0.57	Ballarat	0.67	Torres Strait	0.83
Tennant Creek	0.53	Narrogin	0.58	Warburton	0.68	Derby	0.91
Wagga Wagga	0.53	Roma	0.60	Brisbane	0.68	Cooktown	0.93

Notes: Effective employment rate is calculated as the number of Indigenous people in employment (full or part time) relative to the Indigenous population aged 15 to 64 years. Participation in CDEP is treated as employment. On average, 64.9 per cent of Australian people aged 15-64 were in employment (including CDEP) in 1996. Australia equals 1.00.

Source: 1996 ABS Census of Population and Housing.

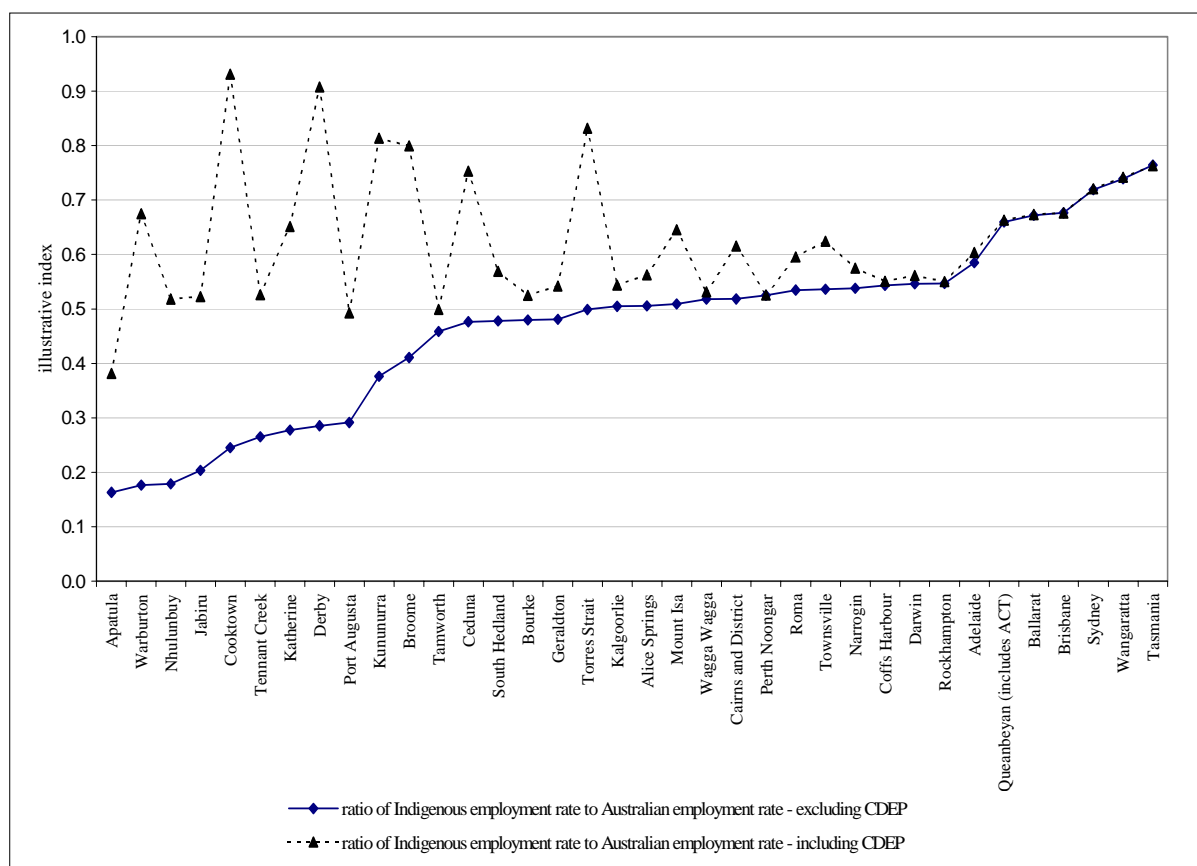
83. Figure 2-2 compares the illustrative indexes of relative outcomes for employment excluding and including CDEP participation — as set out in Table 2-10 and Table 2-11. It shows how the average outcomes for employment vary according to the importance of CDEP in each region. It also shows how differences in the average outcomes diminish (that is, the indexes converge) as regions become less remote and more populated.

The Regional Dimension

84. Overall, the indexes in Table 2-2 to 2-11 indicate quite clearly that the more remote parts of Australia generally have the greatest average need per person or per household. However, more Indigenous people live in the regions that include large urban areas. A question arises as to whether a needs based allocation of resources should be aimed at assisting the region where, on average, people are more disadvantaged; or the region with the most disadvantage, even if the individuals in that region are relatively better-off.

85. Any administrative region contains a mix of locations with different characteristics. For example, some ATSIC regions contain metropolitan areas, large regional centres, smaller towns and rural areas, each of which have different needs and requirements for services. Consequently, the use of data at a regional level will mask differences between localities within regions. Dealing with those differences requires needs indicators to be determined for small areas or specific localities within each region. This creates requirements for both better data and greater involvement in decision making by people with knowledge of local conditions.

Figure 2-2 ILLUSTRATIVE INDEXES OF RELATIVE OUTCOMES FOR EMPLOYMENT, EXCLUDING AND INCLUDING CDEP PARTICIPATION, 1996



Source ABS, 1996 Census of Population and Housing.

86. Detailed information is rarely available on a consistent basis for all regions for all States, let alone all localities within a region. However, the demand for information can be reduced if relationships can be established between some of the indicators and other variables, such as geographic characteristics or socio-economic status. Two tools that can be used to examine the general conclusions we have reached that the greater depth of need is in the remote regions are: the ARIA classification; and the experimental indexes of Indigenous socio-economic disadvantage produced for us by the ABS.

Accessibility/Remoteness Index of Australia (ARIA)

87. The ARIA classifies locations on the basis of remoteness or physical accessibility. This is useful for some policy and analytical purposes because it provides a means of considering whether there is any relationship between remoteness and other variables — such as depth of need.

88. Table 2-12 presents some of the indicators of relative need for the health, education and employment functions shown in the previous tables, using the ARIA classification. In general, it shows that:

- (i) mortality rates increase as locations become more remote;
- (ii) the proportion of the Indigenous population with no post school qualifications increases with remoteness; and
- (iii) the proportion of the Indigenous labour force that is employed (excluding CDEP activities) declines with remoteness, with a very large drop in very remote areas.

Table 2-12 SELECTED INDICATORS BY ARIA CLASSIFICATION

	Highly Accessible	Moderately Accessible	Remote	Very Remote	Total	
	accessible	accessible				
	%	%	%	%	%	
HEALTH						
Indigenous age standardised death rates, 1994–1998 (per 100 000 population)	1 210	1 497	1 661	2 095	1 891	1 692
EDUCATION						
Proportion of population with no post secondary qualification ^(a)						
Indigenous people	84.8	88.9	92.7	92.5	97.0	89.3
Non-Indigenous people	68.0	73.2	74.5	69.2	66.7	68.9
EMPLOYMENT						
Indigenous employment rate (excl CDEP) ^(b)	75.0	69.1	63.8	64.0	38.9	65.7
Non-Indigenous employment rate	91.0	89.7	92.8	93.7	95.2	91.0
Indigenous labour participation rate ^(c)	54.1	48.3	49.3	48.1	45.4	50.4
Non-Indigenous labour participation rate	68.3	65.1	68.7	73.9	69.1	68.0

(a) Calculated as the percentage of the population aged 15 and over that are not qualified or did not state a post secondary qualification in the 1996 Census.

(b) The percentage of people in the labour force who are employed (with CDEP treated as not employed).

(c) The percentage of people in the 15 to 64 years age group who are looking for work.

Source: Department of Prime Minister and Cabinet Submission, December 2000.

ABS Experimental Index of Socio-economic Disadvantage

89. At our request, the ABS constructed an experimental index that ranks ATSI regions on the basis of general socio-economic disadvantage as measured by indicators of income, educational attainment, occupation, housing condition and health. The experimental index does not provide any information about the absolute level of disadvantage or about the relative size of differences between regions in their disadvantage. Table 2-13 provides the ranking of ATSI regions produced by the index, grouped into four categories — most disadvantaged; more disadvantaged; less disadvantaged; and least disadvantaged. The rankings shown in the table are mapped in Figure 2-3.

90. The ABS work generally supports the thrust of the indexes shown in Tables 2-2 to 2-11. The more remote ATSI regions tend to be those with the greatest level

of socio-economic disadvantage, and those in physically accessible areas have the least disadvantage.

91. The indicators used in preparing the experimental index reflect factors that are related to the services that are the focus of our Inquiry. As such, the experimental index may not reflect broader issues of social disadvantage, such as cultural disadvantage. The full report by the ABS is in the Supporting Material that accompanies this Report.

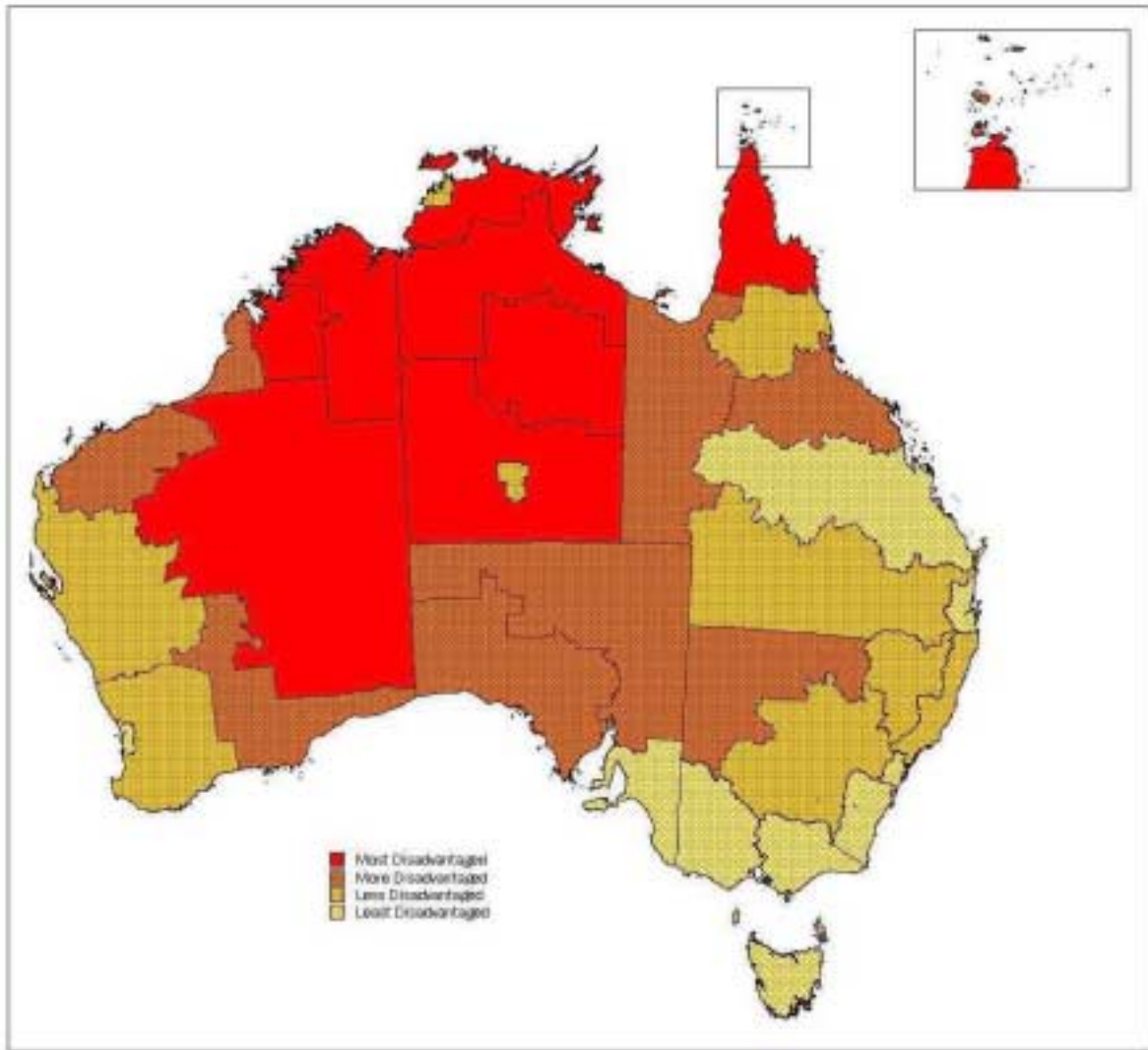
Table 2-13 RANKING OF ATSIIC REGIONS BASED ON EXPERIMENTAL INDEX OF INDIGENOUS SOCIO-ECONOMIC DISADVANTAGE ^(a)

Most disadvantaged		More disadvantaged		Less disadvantaged		Least disadvantaged	
	Rank		Rank		Rank		Rank
Apatula	36	Port Augusta	27	Cairns	18	Ballarat	9
Nhulunbuy	35	Broome	26	Alice Springs	17	Rockhampton	8
Tennant Creek	34	Torres Strait	25	Narrogin	16	Sydney	7
Jabiru	33	Bourke	24	Tamworth	15	Perth	6
Cooktown	32	South Hedland	23	Geraldton	14	Adelaide	5
Derby	31	Ceduna	22	Coffs Harbour	13	Queanbeyan	4
Katherine	30	Mount Isa	21	Roma	12	Wangaratta	3
Warburton	29	Townsville	20	Darwin	11	Brisbane	2
Kununurra	28	Kalgoorlie	19	Wagga Wagga	10	Hobart	1

(a) Index based on data from 1996 Census, 1994 National Aboriginal and Torres Strait Islander Survey, and National Perinatal Data.

Source: ABS *Experimental Indigenous Socio-Economic Disadvantage Indexes*, Report to Commonwealth Grants Commission, November 2000.

Figure 2-3 SOCIO-ECONOMIC DISADVANTAGE ACROSS ATSI REGIONS



COMPARISONS OF NEEDS BASED AND CURRENT DISTRIBUTION OF RESOURCES

92. The terms of reference asked us for a comparison of the existing regional distribution of resources available to provide health, housing, infrastructure, education, training and employment services with a needs-based distribution of those resources.

93. This request assumes that there is a reasonably proportional relationship between the relative needs of the regions and their relative requirements for funds. However, as we discuss in Chapter 3, the relationships between relative needs and the requirement for funds are complex and are unlikely to be proportional.

Data Availability

94. The additional data required before these comparisons could be attempted were expenditure from all sources on Indigenous people in each region. Table 2-14 indicates what expenditure data were available.

95. Table 2-14 shows that expenditure data were not usually available at the regional level. Little data were available for mainstream programs because apportioning expenditure realistically between groups of clients and on a regional basis is problematic and is generally not done. The States that responded to our requests for data on expenditure were often only able to provide partial details for some Indigenous-specific programs.

Table 2-14 EXPENDITURE DATA AVAILABLE TO COMMISSION

	Health	Housing	Infrastructure	Education and Training	Employment
Commonwealth					
Mainstream	Some at State level ^(a)	Not available ^(b)	Not applicable	Not relevant	State level ^(c)
Indigenous-specific SPPs	State level	Regional level	Not relevant	State level	Not relevant
Indigenous-specific own-purpose outlays	Regional level	Regional level	Regional level	State level	Regional level
State					
Mainstream programs	State level	Not available ^(d)	Not available	Not available ^(e)	Not relevant
Indigenous-specific	Not available	Regional level ^(f)	Not available	Not available ^(e)	Not relevant

(a) SPPs paid under the Australian Health Care Agreements are available at the State level, but Medicare and PBS expenditure were only available at the national level and for the ARIA classification.

(b) Estimated expenditure on rent assistance was available at the national level.

(c) Estimates were available based on administrative data.

(d) No data were available for public housing.

(e) Information was requested from all States but some did not respond and others provided only partial responses.

(f) Information was not available for some States.

96. The function where the data were most complete was employment. However, in this case, the quality of the data was not high because mainstream expenditure by the Commonwealth attributed to Indigenous people was estimated on the basis of administrative data. Since the identification of Indigenous people in the administrative data is incomplete, the expenditure estimates were underestimated.

97. For housing, data were not available on expenditure from mainstream public rental housing or rent assistance, but regional level data were generally available for Indigenous-specific expenditures (excluding home ownership assistance).

98. For health services, up-to-date data at the State level were available for hospital expenditure but not for Medical Benefits Scheme (Medicare) and Pharmaceutical Benefits Scheme (PBS) expenditure, or State community health and other non-hospital expenditure. Regional data were available for Commonwealth own-purpose outlays.

99. For education and training, little data were available other than the State allocations of Commonwealth SPPs to the States.

100. We considered filling the gaps in data with our own estimates. However, we decided not to proceed because very broad and unrealistic assumptions would have been required.

101. In general, little is known about the existing pattern of expenditure on a regional basis. Notwithstanding the data and conceptual difficulties, we made some comparisons between available expenditure data and our measures of the relative needs at the functional level for employment and housing. These are set out in Chapter 4 and in the Supporting Material to this Report. Chapter 4 includes descriptions of the processes used by the Commonwealth to distribute funds in all functions covered by the Inquiry. At the program level, the functional Chapters contain comment where evidence exists on the extent to which particular programs reflect relative needs.

SEPARATE IDENTIFICATION OF TORRES STRAIT ISLANDERS

102. The terms of reference asked us to identify, where possible, the needs of Torres Strait Islanders, including those living outside the Torres Strait region, separately from those of Aboriginal Australians.

103. The Commonwealth has formally recognised Torres Strait Islanders as a separate Indigenous cultural group, but we are not aware of any Commonwealth programs specifically aimed at Torres Strait Islanders, other than the funds for the Torres Strait Regional Authority.

104. Of the States, Queensland gives greater attention to Torres Strait Islander issues than do other States — it provides some State health programs specifically for Torres Strait Islanders. There is a bilateral housing agreement between the Commonwealth, Queensland and representatives of the Torres Strait Islands. A Torres Strait Framework Agreement relating to education services was signed between the Queensland Government and representatives of the Torres Strait Islands in October 2000.

105. In terms of data, we have been limited to the Census, although we understand that attempts have been made to separately identify Torres Strait Islanders in some Queensland health and housing statistics¹⁸.

106. Table 2-15 provides ABS estimates of the number of people living in each State at the time of the 1996 Census who identified themselves as being of Torres Strait Islander origin or of both Aboriginal and Torres Strait Islander origin. It indicates that Torres Strait Islanders are 11 per cent of the Indigenous population and that about 55 per cent of them live in Queensland (about 15 per cent in the Torres Strait and about

¹⁸ Arthur, W S. *Access to Government Programs and Services for Torres Strait Islanders Residing on the Mainland of Australia*, Centre for Aboriginal Economic Policy Research, Australian National University, July 1998, p5.

40 per cent elsewhere in Queensland). A little less than 20 per cent live in New South Wales. However, our consultations indicated that these data need to be treated with caution. There were several indications of misidentification involving people who formerly inhabited Bass Strait or South Pacific islands. Details of the Torres Strait Islander usual resident population in each ATSI region is in the Supporting Material for this Report.

Table 2-15 PEOPLE OF TORRES STRAIT ISLANDER ORIGIN, 1996^(a)

State of usual residence	People	Proportion of Total Torres Strait Islander population	Proportion of Total Indigenous population
		%	%
New South Wales	8 226	19.3	7.4
Victoria	3 299	7.8	14.6
Queensland			
Torres Strait Regional Authority Area	6 335	14.9	6.0
Rest of State	16 705	39.4	16.0
Western Australia	1 937	4.6	3.4
South Australia	1 632	3.8	7.4
Tasmania	2 089	4.9	13.6
ACT	187	0.5	6.6
Northern Territory	1 993	4.7	3.8
Total	42 403	100.0	11.0

(a) People who identified themselves in the 1996 Census as 'Torres Strait Islander only' or 'Both Aboriginal and Torres Strait Islander'.

Source: Unpublished data provided by ABS.

107. *Special Needs in the Torres Strait Region.* During the Inquiry, representatives of the Torres Strait Region argued that it had several special needs that should be reflected in our analysis.

- (i) The culture of Torres Strait Islanders increases the costs of delivering services because of the requirement to incorporate culturally appropriate practices.
- (ii) High transport costs increase the costs of providing services on the many small islands in the region.
- (iii) The open international border with Papua New Guinea results in extra demand for health services.

108. We accept that each of these points has some validity.

- (i) The implementation of culturally appropriate practices is likely to increase the costs of providing some services. However, we have no

information on how Torres Strait culture affects the cost of providing services differently from Aboriginal culture¹⁹.

- (ii) Differences between regions in the cost of providing services due to transport costs should be reflected in any allocation of resources. This is reflected in the illustrative work we have done on the effect of location on education costs.
- (iii) The flow of residents of Papua and New Guinea into the Torres Strait does increase the demand for health services in the region. Those services are provided and funded by the Queensland Government and the extra costs are taken into account in the State's share of Commonwealth general revenue assistance. However, the residents of Papua New Guinea do not affect our calculations of health status in the Torres Strait because they are excluded from the mortality data used in the illustrative indicator of relative health outcomes. The submission from the Torres Strait Regional Authority estimated that Papua and New Guinea residents accounted for at least 500 consultations per month at medical facilities in the Torres Strait.

109. *Torres Strait Islanders living outside the Torres Strait Region.* On the question of whether the needs of mainland Torres Strait Islanders differed from the needs of Aboriginal people, the views expressed to us by organisations representing them were similar to the findings of a 1998 report to the Office of Torres Strait Islander Affairs²⁰.

- (i) Torres Strait Islanders feel excluded from Indigenous-specific programs and services in States other than Queensland.
- (ii) Access to ATSIC funding is limited by the perception that Torres Strait Islanders cannot compete successfully with Aboriginal people in the Regional Council applications. This perception is maintained even when there is a Torres Strait Islander on a Regional Council.
- (iii) Torres Strait Islanders believe that their access to housing co-operatives and medical services is limited when compared to Aboriginal people.
- (iv) Under native title processes, Torres Strait Islanders have no access to land outside the Torres Strait region.

110. While these arguments were put forcefully and supported by anecdotes, data are not available to allow us to conclude whether or not the needs of Torres Strait Islanders living on the mainland, and their access to services, differ from those of Aboriginal people.

¹⁹ The report by the Office of Aboriginal Health in Western Australia estimated that providing culturally secure health services for Aboriginal people increased service delivery costs by about 10 per cent.

²⁰ Arthur, W S. *Access to Government Programs and Services for Torres Strait Islanders Residing on the Mainland of Australia*, Centre for Aboriginal Economic Policy Research, Australian National University, July 1998, pp25-27.

Table 2-16 COMPARISON OF SELECTED POPULATION FEATURES, 1996

	Torres Strait Islander only origin, living in the Torres Strait area	Torres Strait Islander only origin, living outside Torres Strait area	Both Torres Strait Islander and Aboriginal origin	Aboriginal only origin	All Australian
	%	%	%	%	%
Age distribution					
0-14 years	41	37	44	40	22
15-34 years	31	34	32	36	30
35-54 years	18	20	17	18	28
55 years and over	10	9	7	6	20
Proficiency in English					
Speaks English only	18	75	84	81	82
Speaks a language other than English at home	77	20	14	16	15
Education					
Left school aged 15 or under ^(a)	28	36	37	41	34
No post school qualification ^(b)	80	72	75	77	58
Labour force status					
Employed ^(c)	51	44	40	38	55
Unemployed	5	10	12	12	6
Not in labour force	41	43	45	45	37
Median weekly income					
Individual (\$)	195	229	195	188	292
Household (\$)	618	538	n.a.	539	630
Average number of people per household					
	4.7	3.4	n.a.	3.7	2.7

(a) Responses by persons aged 15 years and over.

(b) Includes persons with a qualification outside the scope of the ABS Classification of Qualifications.

(c) Includes persons in the CDEP Scheme.

Source: ABS, *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* Catalogue No. 4704.

111. Table 2-16 uses data from the 1996 Census to compare several characteristics for people of Torres Strait Islander origin, living either in or outside the Torres Strait region, with other groups. It indicates that, compared to people of Aboriginal origin, people of Torres Strait Islander origin who live on the mainland:

- (i) are slightly older;

- (ii) are slightly less likely to speak English at home;
- (iii) are a little more likely to stay at school after age 15 years and to have post-school qualifications;
- (iv) are more likely to be employed; and
- (v) have a higher weekly income.

112. However, because of the small size of the data set and the reservations about its quality, no specific conclusions can be drawn about the needs of Torres Strait Islanders who live on the mainland relative to the needs of Aboriginal people.

113. If the issue is to be examined further, Commonwealth, State and community controlled service providers will need to collect details on Torres Strait Islanders in their administrative data collections. Without such data, informed decisions cannot be made on what changes in service delivery policies may be required.

CONCLUSIONS

114. The terms of reference asked us to develop a method by which regional allocations of funds for Indigenous purposes could be based on indexes that measured the relative needs of Indigenous people. They also asked for a comparison of the existing distribution of funds with a needs-based distribution of those funds. Our conclusions are as follows.

- (i) For this Inquiry, needs should be defined in terms of outcomes, or indicators of the relative status of Indigenous people. A focus on outcomes allows us to consider whether the needs of Indigenous people are being effectively addressed.
- (ii) There are several aspects to the identification of need, and measuring outcomes for each function requires judgement about which aspects are most relevant to the circumstances of Indigenous people. Judgements are necessary about the priorities to be given to each aspect of need, how the different measures of need should be combined, and how to allow for the impact of local circumstances.
- (iii) It is difficult to construct suitable regional indexes of relative needs because of the absence of comprehensive, comparable and up-to-date data. However, we did construct some illustrative indicators, mainly on the basis of 1996 Census data.
- (iv) The indicators we measured consistently point to the highest needs per person (or per household) being in the remote ATSIC regions. More Indigenous people live in the regions that include large urban areas, particularly the capital cities. The question is whether a needs based allocation of resources should aim at assisting the region where on

average people are more disadvantaged individuals, or the region with the greatest overall disadvantage, even if the individuals in that region are relatively better off.

- (v) Indicators can be useful as a guide to assisting judgements on how resources might be distributed to better target the relative needs of Indigenous people.
- (vi) The Torres Strait region has similar needs to other remote ATSI regions, but data are not available to distinguish between the needs of Torres Strait Islanders who live on the mainland and the needs of Aboriginal people in each region.