



Department of the Environment and Heritage

State of Indigenous languages in Australia - 2001

by

Patrick McConvell

Australian Institute of Aboriginal and Torres Strait Islander Studies

Nicholas Thieberger

The University of Melbourne

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Preface

The national State of the Environment Reporting System is a program for regular, systematic analysis and evaluation of Australia's environment. The first major product of the system, *Australia: State of the Environment 1996* (State of the Environment Advisory Council eds. 1996), was released in September 1996. This report contained a chapter addressing pressures on and the condition of natural, Indigenous and historic heritage, as well as addressing society's responses to those conditions and pressures (Purdie et al. 1996). Production of a State of the Environment Report covering the Australian jurisdiction every five years is now a legislative requirement under *the Environment Protection and Biodiversity Conservation Act 1999*, the next State of the Environment Report must be prepared by December 2001.

Since the publication of *Australia: State of the Environment 1996* a set of environmental indicators has been developed by technical and scientific experts for each of the seven reporting themes: Human Settlements; Biodiversity; Atmosphere; Land; Inland Waters; Estuaries and the Sea (now Coasts and Oceans); and Natural and Cultural Heritage. This work culminated the world leading research documented in the Environmental Indicators Series for National State of the Environment Reporting. The theoretical framework and sets of environmental indicators documented in these reports provide the fundamental basis for the collection and analysis of data that will be used for the 2001 Australian State of the Environment Report and beyond.

The 2001 Australian State of the Environment Report will concentrate on trends and changes since the 1996 report, cover new and emerging issues, and will pioneer the use of the environmental indicators on a continental scale.

In conjunction with the second reporting cycle, a new technical paper series has been initiated. The papers in this second series were commissioned to contribute to the preparation of the next national state of the environment report. The scope of the second series of technical papers includes analysis of trends in environmental indicator data, case studies, and reviews of particular issues.

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In particular we thank: Anna Ash, Paul Black, Claire Bower, Margaret Carew, Geoff Dane, Nicholas Evans, Robert Hoogenraad, Luisa Maffi, Doug Marmion, Merrin Mason, David Nash, Stephen Morey, Malcolm Ross, Kate Ross, and Pacific Linguistics.

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Abstract

This paper provides data for, or information about, nine environmental indicators related to the condition of Indigenous languages in Australia, being a contribution towards the 2001 national State of the Environment report. The indicators address the following key issues about the state of Indigenous languages in Australia:

- condition of Indigenous languages;
- state of documentation of languages;
- the wider use of Indigenous languages;
- funding, research and education.

The study found that in 1996:

- there has been a decrease in the percentage of Indigenous people speaking Indigenous languages from 100% in 1800 to 13% in 1996;
- there are about 55,000 speakers of Indigenous languages in Australia;
- the number of Indigenous languages, and the percentage of people speaking these languages have continued to fall in the period 1986-1996, accelerating over the ten years; and
- of the 20 languages categorised in 1990 as ‘strong’, 3 should now be regarded as ‘endangered’.

The paper comments on the usefulness of the indicators and makes recommendations to improve either the indicators or the source data collections.

1. Introduction

A recent book on the extinction of the world's languages begins with the following statement (Nettle and Romaine 2000:ix):

Few people seem to know or care that most of Australia's 250 languages have already vanished and few are likely to survive over the long term.

Just as this is true of the world at large, it is also true of Australia itself. The imminent loss of the Indigenous languages has not worried many Australians, or their governments. We are witnessing, in the last fifteen years, a change in attitude, but whether it will be effective enough to turn the tide of language loss, remains to be seen.

The Indigenous languages of Australia represent a great storehouse of knowledge and tradition about the environment and ancient culture of Australia, both for the Indigenous people themselves, and for all Australians. The Indigenous people of Australia are the owners and custodians of the languages, but in the spirit of 'two-ways' exchange and reconciliation, many groups are prepared to share access to this heritage, to preserve a unique national body of knowledge and tradition. This technical paper points out that the Australian nation has begun in recent years to recognise the value of the Indigenous cultures and languages, and to support Indigenous Australians in their efforts to maintain them. The level of commitment and resources made available by governments remains low, and there are no guarantees that even this level will be maintained in the future; indeed there are some ominous signs of major gains being wound back in the period since 1995.

Indigenous Australians are struggling to maintain and revive their languages and associated traditions against great odds. This paper documents some of the efforts that they are making to do this, and the positive steps taken in the last decade to recognise Indigenous languages and give them a place in our society, instead of destroying them as has happened all too often in our history. Yet the pressures working against the languages at the beginning of the twenty-first century remain as strong as ever. The facts and figures in this paper still present a bleak picture of language endangerment, which could all too easily lead to the loss of all Indigenous languages in this century.

This technical paper not only documents the state of Indigenous languages at this time, but through this documentation hopes to provide tools which will help maintain the languages. If we can find out where languages are staying strong and why, we have a much better chance of putting those favourable conditions in place in other areas. This paper is not in itself however a handbook for language maintenance, but provides some ways of working towards that goal.

The paper was commissioned as part of the State of the Environment reporting program by Environment Australia, and carried out as a consultancy by the Australian Institute of Aboriginal and Torres Strait Islander Studies, with Patrick McConvell as project officer and Nicholas Thieberger (Department of Linguistics and Applied Linguistics, University of Melbourne) as sub-consultant. Key findings of the paper will be incorporated into the Natural and Cultural Heritage Theme Report for the national 2001 State of the Environment Report. This paper provides more detail and background than the section of the theme report dealing with Indigenous languages.

The research for this paper was oriented towards providing a baseline set of data on the state of Indigenous languages with which subsequent surveys could be compared. Census data, which records speakers of individual named languages for the first time in 1996, has been used alongside other sources of information, and for the first time indicators have been rigorously defined and systematically applied to the data. The indicators used in the data collection were, in the main, those provided by Henderson and Nash (1997) and Pearson et al. (1998) (see Appendix 1), but some changes have been made to that list.

The concept of indicators is the key to the approach taken by the State of the Environment reporting project, and in this paper. Indicators are elements which can be measured relatively easily and cost-effectively, which do not give a complete picture of the state of a certain resource, but which indicate relatively reliably the overall condition of the resource and trends in its condition over time. In order to establish the robustness of indicators it will be necessary from time to time to carry out a more thorough study of the resource, or of sample taken from it, to check that the more detailed study does in fact echo the results from the indicators.

In the case of Australian Indigenous languages, it would be advantageous to undertake a more complete study of the state of the languages as is being done currently by New Zealand for the Maori language, and/or to study a sample of language situations in detail, so that feedback from these studies would be available in time for the next round of State of the Environment reporting in 2006. This paper also recommends changes in the Australian Census in order to capture more relevant data on languages.

Along with this paper we have established a set of linked databases that can be used to assess the state of Indigenous languages over time. We have also recommended how data could be obtained in advance of a future State of Indigenous Languages report by suggesting to agencies that their record keeping include useful types of data about Indigenous languages.

2. Main findings

2.1 State of Indigenous languages

1. There has been a decrease of 90% in the number of Indigenous languages spoken fluently and regularly by all age groups in Australia since 1800.
2. There has been a decrease in the percentage of Indigenous people speaking Indigenous languages from 100% in 1800 to 13% in 1996.
3. The number of Indigenous languages, and the percentage of people speaking these languages have continued to fall in the period 1986-1996, accelerating over the ten years.
4. If these trends continue unchecked, by 2050 there will no longer be any Indigenous languages spoken in Australia. It is unlikely that this prediction will be borne out in exactly this way since the trend will probably level out at the last leaving a handful of strong languages still spoken for another generation or two, but the overall scenario is nevertheless bleak.
5. Language revival has had an appreciable affect on increasing the number of people identifying as speakers of an Indigenous language in at least one region.

6. Undercounting of Indigenous people in the 1996 Census, together with an 8% greater number of respondents saying they know an Indigenous language than saying they speak it at home, suggests that there may actually be in the order of 55,000 speakers of Indigenous languages in Australia.
7. Of the 20 languages categorised in 1990 as 'strong', 3 should now be regarded as 'endangered'.
8. In some regions there is a decrease in speaker numbers in the 30-39 age group, but more people under 30 are now identifying as speakers, possibly heralding a revitalization of the language.
9. At the same time as there has been a large increase in the number of people identifying as Indigenous in the 1986-1996 period, there has also been an increase in the absolute numbers of Indigenous language speakers, but not proportional to the increase in total Indigenous population.
10. If we compare the figures for Australia with those of Canada where the situation of Indigenous languages is similar, the percentage of the Indigenous population who speak an Indigenous language in Australia is slightly lower than that in Canada. In both countries there had been a catastrophic decline in people speaking Indigenous languages. There are some indications of the trend leveling off in Canada from the 1980s due to more positive policies and evaluations of Indigenous languages. The increases in younger people identifying as speakers of Indigenous languages in Australia (see points 5-8 above) may also reflect this kind of trend.
11. There is a trend in most Indigenous languages for knowledge of language to be proportional to age, i.e. the younger people are, the less likely they are to speak an Indigenous language. This is considered to be a symptom of language shift, and of the language being endangered.
12. There was an unprecedented recognition in Australia of the rights of Indigenous languages and the need for support for them in the 1980s-90s, in a number of reports, by the Commonwealth Government in Australia, and also by international bodies. This has not however been reflected in any legislation guaranteeing rights or funding either nationally or in the states and territories.
13. There has been an increase in the amount of recording and documentation of Indigenous languages in the past ten years. Much of that activity followed the establishment of Commonwealth funding programs specifically supporting Indigenous languages (related to the previous point 10).
14. Particularly significant and productive has been the establishment of Regional Aboriginal Language Centres and language management committees under Indigenous control from the mid-1980s onwards; there are few parallels to this development elsewhere in the world.
15. There have been significant new initiatives developing curriculum and programs related to Indigenous languages in the last ten years for primary and high schools. Major new networks of Indigenous language programs have been set up in South Australia and Western Australia, although the reversion from Bilingual to English-only education in the Anangu lands in South Australia in the 1980s must be weighed on the other side of the balance.
16. There is some evidence however of a tailing off of support for Indigenous languages in other parts of Australia in the late 1990s. Particularly detrimental has been the

dismantling of the Bilingual Education programs in Aboriginal schools in the Northern Territory, where Indigenous people make up 29% of the population. The establishment of this program in 1974 was the single most important move in support of Indigenous languages that has ever occurred in Australia and its loss is a severe blow.

17. There has been an increase in public awareness of Indigenous cultures in Australia including Indigenous languages as witnessed by the number of popular publications and media coverage.
18. Funding for support of Indigenous languages is not reliable and existing projects have no guarantee of ongoing funding. Despite eight years of language program funding by the Commonwealth Government there is still no policy framework or evaluation procedure for this funding.
19. There has been a long-felt need (expressed as recommendations in a number of reports) for a national set of database resources which can be used to support language work by regional and community groups.
20. There has been an increase in use of Indigenous languages in popular music and on the World Wide Web in the last ten years.
21. There has been an increase in the number of Indigenous radio and television broadcasts, but it is not currently possible to determine what percentage of the content is in Indigenous languages.
22. There has been an increase in the recognition of Indigenous cultural heritage, for example through the use of Indigenous names for places or objects. This is not necessarily always with the agreement of, or to the benefit of Indigenous people. In fact in the recent period Indigenous people have increasingly contested the right of others to appropriate their cultural and intellectual property.
23. There is significant work being carried out by people working on Indigenous languages, including in particular in recent years Indigenous researchers, on Indigenous knowledge systems related to heritage and the environment.
24. Census and other quantitative data identifies broad trends but has great limitations in assessing the complexity of issues involved in the ongoing use of Indigenous languages. In-depth local or regional studies that took into account ethnographic issues (such as marriage patterns, multilingualism, code switching) could provide richer insights into the factors underlying language survival and the relationship of language and cultural heritage.

2.2 Data gathering, methods and outcomes

1. While many of the indicators proposed in Henderson and Nash (1997) could theoretically be used, the time constraints imposed by the contracts for the project mean that we were only able to deal with those indicators for which data are available.
2. We wrote to organisations and linguists working with Indigenous languages and received some very useful replies which have been incorporated into this paper.
3. However only a small proportion of those from whom information was requested by letter have responded. Enquiries about lack of response have indicated that the bodies thought that the deadline was too short to respond; on being told that they could supply information at a later date some have done so or have said that they would.

4. Some bodies (especially Regional Aboriginal Language Centres) pointed out that they had been approached by consultants for ATSIC to provide partially similar information for the 'Needs Survey' in 1996-7, but that no tangible or useful results emerged from that. Some did offer to update the results they obtained then.
5. ATSIC did not allow us access to the results of the Needs Survey on the grounds that it was a poorly done study and that it contained confidential information (see recommendation 10 below).
6. Following discussions with the reference group and with others familiar with particular indicators we determined that we would focus on data that would be readily available in the time frame permitted. Hence our data collection methodology is one that we would not recommend being replicated in the next state of the environment reporting process.
7. We researched sources of data that we could use directly, and located agencies who could supply data from their own records. A number of the indicators require specific research to be undertaken outside the capability of the present project, as they are not generally dealt with in other reporting processes. These include:
 - number of people who identify as knowing an Indigenous language. While Census data gives us a broad picture, it is based on self-reporting and only asks about main language used in the home, not mother tongue or ethnic origin, or second language used, or ability in languages. Regional surveys of language use, like Hoogenraad (1992), provide metrics against which to correlate Census data;
 - use of Indigenous languages in media (indicator IL.5); and
 - use of Indigenous languages in placenames (indicator IL.6).
 We were unable to conduct the research necessary to fully address these indicators.
8. Data such as population figures from existing sources related to individual languages has been entered into the Indigenous language database constructed for this project.
9. A national database of Indigenous language programs is also needed. FATSIL (the Federation of Aboriginal and Torres Strait Islander Languages) has begun work on such a database but has not been able to provide it or any data from it to us, in view of its early stage of development. We have had to construct a separate database to accommodate data gathered for this project.

2.3 Recommendations

1. We strongly recommend to Environment Australia that, for the next state of the environment report, the research on the state of Indigenous languages should be carried out over an extended period of time.
2. We suggest the following ideal model for data collection. Having established which indicators are realistically able to be documented, the state of the environment reporting program could advise relevant agencies annually of the reporting requirements and suggest ways of modifying their procedures to incorporate Indigenous language status reporting.
3. We recommend that the indicators be distributed to agencies at the beginning of the five-year period and that contact people within organisations be assisted throughout the reporting period to ensure that there are adequate records for use in the state of the environment reports.

4. We further recommend that Environment Australia approach some of the relevant agencies (FATSIL, ScreenSound Australia, ATSIC, AIATSIS, departments of education, media organisations) and request that they amend their record keeping in order to facilitate the next state of the environment report.
5. The South Australian Department of Education provided us with data on programs in a form which is close to what we would see as ‘best practice’ and with some additions we recommend that this model be followed by other agencies (for details see under ‘indicators’ for indicator IL.9 below).
6. At least two United Nations agencies are collecting data on endangered languages world-wide; while it has not been practicable to do so in this round, we recommend that in future the survey instruments used by them be consulted and where possible the state of Indigenous languages research be tailored to provide useful data to the UN agencies.
7. We recommend use of a standard national Indigenous language database to improve estimates of number of languages, populations and other indicators. We have produced an early version of such a database as an adjunct to the current paper. The current database needs to be improved and regularly updated (see recommendation 9).
8. We recommend that there be coordination between the FATSIL database and the present state of Indigenous languages project databases (Indigenous languages and Indigenous language programs) in such a way as to provide data to the next state of the environment reporting process without inconsistency or duplication of effort.
9. We recommend that national resources to monitor and support the state of Indigenous languages be created where they do not exist or supported where they do, both to satisfy that need and provide a more satisfactory way of monitoring data for subsequent reports on the state of Indigenous languages. These resources would include:
 - an Indigenous language database (a draft version of which has been produced with this paper), including standard and variant names, locations, Census and other data. This resource to be maintained by AIATSIS (the logical location for a central datasource on Indigenous languages);
 - an electronic archive of Indigenous languages documentation (based on ASEDA, created and maintained by AIATSIS);
 - a register of needs and expertise which can act as a clearing house between community and language centre needs and researchers and other technical experts in the Indigenous language field based on Indigenous language program databases being developed by this project and FATSIL; and
 - an electronic bibliographic database on Indigenous languages.
10. If and when arrangements can be negotiated with ATSIC to gain access to previous research done in the context of the Needs Survey, it would be worthwhile to analyse those parts of the survey that were carried out effectively and have reasonable results for some areas. It is unlikely however that the present funds available to AIATSIS would cover this exercise. It might be valuable to discuss with ATSIC the possibility of carrying this out in 2002, perhaps with some funding from them, in order to provide baseline data for later comparison (see finding 2.2.5 above).
11. The main data available for numbers of speakers of Indigenous languages is Census data, and in 1996 for the first time data on individual Indigenous languages was collected. With all the problems that this data has, it is our only source of national data taken at regular intervals. It is recommended that the Australian Bureau of Statistics make the following

changes to its Census questions to allow better monitoring of the state of Indigenous language in future:

- (a) ask respondents for their Mother Tongue (first language) and/or their main tribal identity as well as the language spoken at home;
 - (b) record multiple as well as single answers to questions on Indigenous languages;
 - (c) ask a question about ability in the languages spoken e.g. ‘can you have a conversation about a lot of everyday things in this language?’;
 - (d) record (and not discard) specific languages spoken presently listed as nec (not elsewhere classified); and
 - (e) consult with linguists after data is collected to avoid destruction of relevant answers on Census forms.
12. We recommend that the research on Indigenous knowledge systems and its relation to Indigenous languages being carried out by Indigenous researchers be recognised and supported, and in particular more explicitly recorded by indicators in the state of the environment report.
 13. We recommend that state and territory Nomenclature authorities be requested to notate placenames indicating how they were selected, whether they are the local name for the local place or not, and what sort of consultative process there may have been with local Indigenous people resulting in the use of that name.
 14. We recommend that researchers be required to deposit material with AIATSIS, and that AIATSIS and similar agencies (e.g. ScreenSound Australia) build in to their accessioning process an indication of the Indigenous language content of material deposited.
 15. We recommend that the same process currently in place for depositing books in the National Library (Cataloguing-in-Publication) be extended to all other forms of media to ensure that there is a copy deposited with the relevant state or national library together with good documentation about what is otherwise ephemeral and unavailable.
 16. We recommend that there be follow-up surveys to assess the validity of Census data on language questions. This could take the form of a dedicated Indigenous languages survey (along the lines of the Maori language survey in New Zealand) or as part of an omnibus Indigenous survey carried out by ATSIIC.
 17. In line with finding 2.1.24, we recommend that support be given to regional detailed studies of Indigenous language situations.
 18. We recommend a more detailed examination of Census data, based on comparison of earlier Census results (which were not available for the current work), and a correlation of educational and socio-economic data with language data.
 19. We recommend that the number of languages for which an adequate interpreter service exists be added to the indicators.

2.4 Indicators

Indicator IL.1: The first indicator relates to ‘knowledge of an Indigenous language’. However because of the availability of Census data, we will use their question (‘speaks an Indigenous language at home’) as the basis for establishing numbers of speakers of Indigenous languages at a national level and we would recommend changing this indicator accordingly.

Indicator IL.3: Instead of using a classification based on types of intervention programs, we focus instead on the situation itself in terms of the language ability of different age-groups (Table 13 from section 7.3)

Age	Strong	Endangered (Early Stage)	Seriously Endangered	Near-Extinct	Extinct
5-19	speak	don't speak	don't speak	don't speak	don't speak
20-39	speak	speak	don't speak	don't speak	don't speak
40-59	speak	speak	speak	don't speak	don't speak
60+	speak	speak	speak	speak	don't speak

It might also be possible to construct an indicator of language endangerment based on average age of speakers that may be feasible even with present Census data (see section 7.3). A number of other suggested indicators of endangerment used overseas are not feasible in Australia due to the limitations of the Census design: either the Census questions should change (recommendation 11) and/or supplementary studies be carried out (recommendations 16 and 17).

Indicator IL.4: We recommend using a range of categories to describe the state of documentation of Indigenous languages. Currently we have implemented a point system to describe the documentation of a language as follows:

Dictionaries, 1-4; Texts, 1-3; Grammar, 1-4; Ethnolinguistic information, 1-3; Audio recording, 1-3. (Explanatory notes appear in the database, but a higher score indicates more documentation)

Indicator IL.5: As indicated above the public use of Indigenous languages is an area in which it is difficult to obtain adequate data. Since public use of Indigenous languages is an important issue for raising their profile and prestige, we do recommend that the state of the environment reporting program persevere with this indicator. We recommend that a body such as ATSIC or AIATSIS sponsor dedicated research in this area.

Indicator IL.6: We propose a similar recommendation here as for indicator IL.5. It is important to pursue the question of Indigenous place names as it is one in which Indigenous heritage is most evident and salient for non-Indigenous people throughout the country.

Indicator IL.9: We recommend that departments and bodies be encouraged to record and make available details of Indigenous language programs including (a)-(d) (as provided by SA Department of Education) and (e)-(f) (additional):

- (a) number of programs (with a uniform definition of program);
- (b) number of sites/locations at which programs are delivered;
- (c) number of people involved in activity or students in program;
- (d) program type (according to the definitions in McKay 1996; the types of intervention programs not used for indicator IL.3)
- (e) number of hours of activity/class per year (to yield person/hours when multiplied by (c));
- (f) number of Indigenous people in the management and paid staff of program.

We also recommend that departments or some research body develop evaluation metrics for language maintenance and revival outcomes of programs.

3. Endangered languages: the global scene

3.1 Massive loss of Indigenous languages

All over the world, minority languages are dying out, giving way to the pressure of major world languages, regional lingua francas and national languages, which are rapidly expanding. This process picked up speed during the period of great European empires in the nineteenth and twentieth centuries, and is currently, in the present era of commercial and cultural globalisation, running at breakneck speed.

Indigenous languages are among those most threatened by these developments. These include traditional languages, which have been spoken by Indigenous people for at least some hundreds of years in the region, and new languages such as pidgins and creoles, which derive from language contact in the colonial period. The focus in this paper is on traditional languages, and the term 'Indigenous languages' is used in this sense.

Generally the nation-state has a national language which it decrees all citizens shall learn; those other languages which are spoken by Indigenous groups are generally not recognised, nor encouraged to be used outside very restricted contexts, and may be actively suppressed by governments. This has been the case in Australia over most of its history since colonisation by the British.

In some countries, minority Indigenous languages survive and are tolerated as languages of the home even if not promoted for any other use; the immediate threat in such regions, such as Africa and Asia, comes more from more powerful and populous local languages than from major world languages (Grenoble and Whaley 1998b:42; Brenzinger, Heine and Sommer 1991).

In those countries settled by Europeans in large numbers, like Australia, however, typically the Indigenous languages have been embattled from the beginning of colonisation and are in great danger of disappearing altogether within the next century. In the earlier years of settlement, massacres, disease and other social and environmental impacts of the colonial situation took their toll on the original inhabitants, often destroying whole language groups or so depleting them that they could no longer function as discrete units.

Those groups that did survive were however often able to learn English, or whatever the dominant language of the country was, as part of their multilingual repertoire, but retained their own tongue. Increasingly later, language shift to the nationally-dominant world language took place among the Indigenous populations, first in the regions most heavily occupied by settlers, then eventually even in the remote areas, resulting in the loss of the Indigenous languages.

The dominant culture of such nations typically does not value multilingualism in any form, and in particular regards the continued use of ancient Indigenous languages as a barrier to progress (Dorian 1998; Wurm 1996). The world languages, which are used by the majority in such countries, are economically and culturally powerful magnets that attract the remaining speakers of Indigenous and other minority languages. Moreover for most such peoples, we are not speaking here of a few languages spoken by large numbers of people but very many languages spoken by small numbers of people, often isolated in remote areas. This demographic characteristic also makes it harder for the speakers of these languages to band together to resist the trend towards extinction of the languages.

The consequences of this situation for cultural heritage are serious, as we shall see, for both the Indigenous groups themselves and for the national heritage of the states in which they live and in which they are the First people.

3.2 Prospects for the coming century

Linguists predict that the 6000 or so languages currently spoken in the world will be reduced by at least 50% within the next century and some put the figure as high as 90% (Krauss 1992:7). Crystal (2000) has speculated that the reduction to one language – English – by around 2100 AD, while not likely, would not be beyond the bounds of possibility at the present levels of attrition.

This loss of languages has affected the Indigenous people encapsulated in nation states occupied by colonial settlers more severely than any other group, and if the trend continues, will cause the complete loss of such languages in the next century. These languages are in most cases spoken by small populations, subject to social and health problems more severe than the mainstream, and under intense pressure to assimilate to the dominant society and culture, even if lip-service is given to a liberal ideology of self-determination and multiculturalism. The languages threatening them are not (as may be the case in Africa or Asia) medium-sized regional languages in the context of a patchwork of languages of different sizes spoken throughout the country, but the most powerful languages in the world, each having total dominance within the nation state.

Kinkade (1991:158) estimates that over 60 languages were originally spoken in Canada; that at least 8 were extinct as at 1990 (approx. 13%); and less than 50% of the remaining languages are likely to survive for the following 50 years (1990-2040). 13 languages of the original 60 (21%) are judged 'near-extinct' and 23 'endangered' (38%) the criterion for the latter being that they have few speakers under 50 years old and almost no children are learning them. Most of the remaining languages are seen as viable but having small populations which is seen as a risk in itself. Only 4 languages were seen to be viable in the long term. This fivefold classification of Kinkade is the basis of Norris's (1998) study using 1996 Census data. Norris revises the estimate of number of Indigenous languages likely to survive in Canada down to 3.

For North America as a whole it is difficult, because of the turbulent early history of colonisation and massive mortality due to introduced disease, to estimate the number of Indigenous languages originally spoken, but Bright (1994) and Mithun (1999:1) put it at around 300, that is, quite comparable to the original number of Australian languages. Chafe (1962) counted 211 languages as still living in the USA and Canada in 1960; of these only 89 (42%) had speakers of all ages, so that we might be justified in placing most of the other 58% in the categories 'endangered' or 'near-extinct' as defined by Kinkade (and the percentage in these categories is very similar to his figure of 59% for Canada in 1990). Thirty years later Zepeda and Hill (1991:136) estimate that 51 (approx. 24%) of the 211 languages alive in the USA and Canada in 1960 have disappeared, and that the number in the USA may be below 150. Campbell (1997:16) predicts that 80% of the North American languages spoken at the turn of this century 'will die in this generation'. Putting these figures together in a rough way, the prediction is for 20-30 Indigenous languages to remain spoken in North America by 2040.

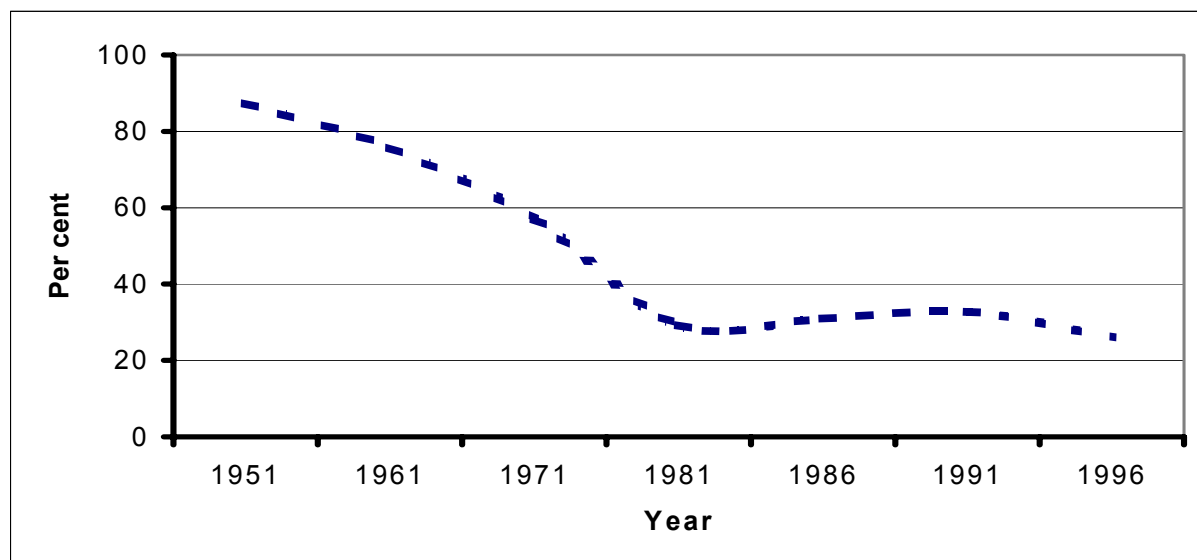
We can plot the decline in the percentage of speakers of Indigenous languages among the Indigenous populations of Canada in the following graph (Burnaby and Beaujot 1986:36).

Table 1: Percentage of Indigenous population that speaks an Indigenous language, Canada

	1951	1961	1971	1981	1986	1991	1996
Canada	87.4	75.7	57.1	29.3	?	32.7	26

Source: Burnaby and Beaujot 1986:36.

Chart 1: Indigenous language speakers as percentage of Indigenous population, Canada



Source: Burnaby and Beaujot 1986:36.

The figures as we have them for Australia are not strictly comparable because the Canadian figures are for Mother Tongue (MT), and the Australian figures are for Home Language (HL) (for speakers over 5 years old). The Canadian figure for ‘speaks Indigenous language at home’ for 1996 is 15%, 11% lower than the MT figure and much closer to the Australian HL figure. Neither the other Canadian figures nor the older figures for Australia are easily available and would require more resources than we have to obtain, since in both countries the relevant statistical bodies operate on a strict ‘user-pays’ basis. This is unfortunate, as a study comparing trends in Indigenous languages between different countries historically might reveal more about causes of language maintenance and shift.

ABS (1999a) summarises some points of comparison between the 1996 Census figures for Australia, New Zealand and Canada:

The New Zealand Census asks in which languages a person can carry on a conversation about everyday things. Of New Zealand Maori, 24.7% reported being able to carry on a conversation in the Maori language (SNZ 1997). The Canadian Census, on the other hand, asks both language spoken at home and ability to carry on a conversation. A similar proportion of Aboriginal Canadians spoke an Aboriginal language at home as Indigenous Australians (15.0% and 13.3% respectively); at the same time a similar proportion of Aboriginal Canadians could carry on a conversation in an Aboriginal language as New Zealand Maori (29.3% and 24.7% respectively) (Statistics Canada 1998).

The New Zealand question about ability asks whether a person can ‘have a conversation about a lot of everyday things’ in Maori (www.stats.gov.nz).

Summary figures for the United States appear to suggest a percentage of around 11.5% for Home Language speakers of Indigenous languages in the overall American Indian population

in 1990. While the HL indicator is comparable to the Australian indicator (measured at 14% in 1991) the figure for total population is based on the ‘top 25 Indian tribes in the US’ and a more realistic figure may be around 10% (www.census.gov/population/socdemo/race/indian/ailang1.txt).

While the decline of Indigenous language speaker percentages has been sharp over the last half-century in all four countries (Australia, New Zealand, the USA and Canada), there is a leveling off and even a slight rise in Canada’s figures during the 1980s. This is attributed to more positive evaluations by the speakers themselves of their own traditional languages. In the 1990s however the decline in Canada seems to have resumed and Australia too is undergoing an accelerating decline overall, with some slight positive counter trends in some regions.

3.3 Endangered languages research: documentation

One response to the urgent situation of Indigenous languages has been to advocate increased salvage work, to record and document languages ‘before it is too late’. Some of these efforts have a primarily scientific and academic motivation, either purely oriented towards a more comprehensive collection and archiving of languages, or additionally or especially to record examples of types of languages which are unusual in some respect, from the vantage point of linguistics.

Many of these efforts represent themselves as ‘helping’ the speakers of the languages in some way or even ‘saving’ languages, and it is probable that some of the success of some endangered languages documentation projects in attracting funds relies to a certain extent on this perception. Certainly Indigenous speakers and custodians of languages may support documentation projects on the basis that there will be a continuing record of their language if and when it dies out, to which they and their children and grandchildren can refer, in the absence of full speakers. However the aspects of a language which linguists might find interesting and worth recording in detail are not necessarily those to which the language custodians would give high priority.

Other people working on endangered languages have broadened the characterisation of ‘language’ to include the systems of knowledge and ways of thinking which are embodied in language. But these go beyond what mainstream linguists today document, or are trained to document. Such documentation might be extended to the semantics of the vocabulary or sub-fields within it (e.g. ethnobiology, the study of how the living environment is classified and described), which is part of the growing field of Indigenous Knowledge Systems. This trend in linguistic research is clearly of crucial importance to the present State of the Environment review since it straddles both natural and cultural heritage from the Indigenous view. Some linguists have seen in forms of language indications of the different philosophies of the human place in the world held by Indigenous people (Hale 1992).

Others too have included discourse, the way people talk to each other, tell stories and express themselves in verbal art, such as poetry, chants and songs (Woodbury 1993). Linguists generally do record ‘texts’ for the purpose of language analysis, and these also often include traditional stories which are of great value for their content as well as for their means of expression.

These collections of vocabulary and dictionary compilation, recording of stories and traditions, and studies of Indigenous knowledge and philosophy, are usually the aspects of

language research which Indigenous people most value. The broader project of language documentation has become an issue of some interest for linguists in the past few years (Himmelman 1998), especially with the growing realisation that linguistic research may be the only chance to record Indigenous knowledge systems.

Further if the language is still spoken, custodians may be more interested in programs that support maintenance of the language as a living system, than 'preservation' in books or computer files. Many in the language-custodian community would support the following sentiment:

Preservation is what we do to berries in jam jars and salmon in cans. Books and recordings can preserve languages but only people and communities can keep them alive (Lord 1996:68 quoting Tlingit oral historians).

When community people do try to use resources produced by academic research in language maintenance programs their inappropriateness for the task often becomes evident, and the language custodians become frustrated (Hudson and McConvell 1984:79; McConvell 2000). If the language is no longer spoken the descendants of the speakers may wish to revive the language in some way. Written records from previous research projects may be invaluable in this undertaking.

Clearly all efforts at language documentation should be counted in such a paper as this. For the future however, thought should be given to indicators IL.4 and IL.8 so that materials produced which are designed to suit speakers' needs should either be separately counted or appropriately weighted.

3.4 Endangered languages: action and intervention

It would not be too much to ask that states permit all ethnolinguistic groups to acquire cultural and even territorial organisations to protect their living languages... At a time when so much effort is being expended to protect the endangered species of plant and animal life, it seems little to ask that cultural treasures like endangered languages be similarly protected (Breton 1991:134).

Over the last decade or so, an 'endangered languages' movement has grown up internationally. This has various strands in it and represents a loose alliance of groups and interests. These have included prominent activists campaigning for some of the threatened minority languages of Europe, and linguists, as mentioned above. Indigenous 'fourth world' groups are not well represented in this movement, although language issues have begun to become more important in the international Indigenous movement too in recent years, alongside its fight for human rights and land rights (see below).

The campaign to recognise language endangerment and try to do something about it has been influenced quite heavily by environmentalist ideas and politics. In particular an analogy is drawn between biological diversity and its preservation on the one hand, and linguistic diversity on the other. The endangered languages movement has grown in the wake of the world-wide concern with endangered species which has intensified over the last 30 years particularly with realisation that biodiversity is not only a matter of academic or emotional interest, but also a key to human survival and quality of life.

The analogy between natural species and languages is useful at various levels but also breaks down in various ways if pushed too far. It is hard to persuade people, for instance, that a

world in which only a handful of languages, or even one language, are spoken would be in any significant way threatening to the quality of human life. Many people (especially monolingual speakers of major world languages like English) tend, quite wrongly, to attribute social and ethnic conflict to the multiplicity of languages in a region.

In this light, appeal to the biological analogy is not particularly helpful in attracting support for endangered languages. The question of endangered and minority languages is much more related to the defence of human rights, where human rights are taken to include the right to cultural diversity, and the right to maintain distinct cultural practices within a nation-state.

One way in which the biological analogy is useful is in the concept of '*language ecology*'. The understanding of biological species endangerment, of its potentially deleterious effects and how to combat it, is based on the ideas of ecology. Haugen introduced the concept of language ecology (1971) and also called for the development of a typology of such ecologies. Although this idea has not been used significantly in the field of sociolinguistics or language maintenance it has undergone something of a resurgence recently. The idea of ecology when applied to a bilingual or multilingual language situation emphasises that different languages perform complementary functions and occupy specific niches, and interact with one another.

McConvell (1991) emphasises that the aim in Indigenous language maintenance is better conceived as *maintaining bilingualism* than simply *maintaining a language*, and proposes a functional theory of maintenance/shift to assist with this. Mühlhäusler (National Languages and Literacy Institute of Australia 1995) makes similar points and advances the notion of *linguistic ecology* as a helpful concept. In a number of ways this conception of the multilingual situation is preferable to the more influential concept of *domains* of social interaction introduced by Fishman 1966, which limits the kinds of parameters of language function which one pays attention to, and does not emphasise the complementarity and interactivity of languages in the way that ecology does.

When we look at the implications for language maintenance of the biological analogy and the concept of linguistic ecology there is also much of value. Few biological scientists today would content themselves with documenting a species as they witnessed its disappearance; usually they would look for ways to help it to continue in the wild. In order to preserve a biological species one must pay attention to its ecology, and maintain or recreate the environment in which it thrives. Research must be oriented to the goal of understanding the ecology in which the species has its place, as much as or more than just recording peculiarities of that species. Of course in many cases the ecology has been significantly disturbed by forces outside the observer's control. In such cases the applied ecologist looks for measures which will moderate these destructive changes or provide new ecological circumstances which, while not the same as the former ones, might be ones to which the species can adapt and survive.

Language maintenance interventionists (or applied linguistic ecologists) can readily take leaves from this book. The linguistic ecology, which sustained Indigenous language multilingualism in Australia in pre-contact times, has been radically altered and English and English-based varieties are now a fixture in the landscape. This does not mean however that Indigenous languages cannot survive in a particular niche of the multilingual ecology alongside English and creoles. This niche might involve elements from the traditional linguistic ecology as well as new elements.

What must be borne in mind though, when discussing language situations in these terms, is that some kind of outside expert cannot just rearrange the uses and functions of languages. These languages are part of the cultural property and heritage of groups of people. Those people must make the decisions on how a new role for their language might be planned. What is useful for these language-speakers and language-owners is to be aware of what the research community (including Indigenous researchers) knows about what assists languages to survive – what is ‘best practice’ in language maintenance interventions.

Such a ‘best practice’ would not be a ‘one size fits all’ model but would vary depending on the language situation. How well programs are matched to situations is something that could be tracked by indicators using McKay’s (1996) distillation of early typologies of situations and program types, although this remains marred by Fishman’s unhelpful conflation of situations and interventions (McConvell 1992). Ideally indicators on language programs should go beyond counting the programs and their funding as suggested by Henderson and Nash (1997) and Pearson et al. (1998), or even adding further detail of people involved and hours spent as we suggest here, to assessing how well the programs are addressing situations and needs. One step in this direction would be to classify programs according to the scheme of McKay and match that to the situation as defined by the endangerment measure provided by the new indicator IL.3 proposed here.

Another way in which the biological endangerment analogy can be useful is to emphasise taking action on language maintenance before the language is lost. As with biological species, it is much easier to build from an existing basis of a living system, no matter how embattled or small, than to revive something which is gone. This is not to say that language revival cannot work – it is certainly not in the class of reviving an extinct species – but it is certainly a difficult challenge. With language maintenance the adage of ‘a stitch in time saves nine’ battles against ‘you don’t know how much you need the well until it runs dry’. It is a paradox often observed by language practitioners that the most concern is expressed by speakers of languages on the point of extinction, rather than thirty years before when all the signs of language shift were there to be read. As Topsy Chestnut, a speaker of the severely endangered language Gooniyandi of the Kimberley region notes:

Young people don’t care about the language, but when they get older they feel sorry about. That’s why we want to keep the languages (Hudson and McConvell 1984:37, cited in McConvell 1991:155).

Short-circuiting this lag in motivation over that crucial period is another task to which language endangerment researchers can bring a wealth of examples.

In the grass-roots struggle of peoples to maintain their languages, no matter what theories like ‘linguistic ecology’ may or may not contribute, it is leadership and involvement of the speakers and custodians themselves in language maintenance that is essential. While this key element may not be easy to measure for the baseline that we are setting down, it deserves to be at the centre of our attention, and we recommend that in future the level of involvement of Indigenous people in management of programs be incorporated into indicators.

The overall position of Indigenous languages in Australia may seem to be bleak, as we shall discuss in the next section. However Australian Indigenous people themselves are creating and leading organisations that bridge the gap between academic researchers and Indigenous aspirations; and between international and national policy and local community efforts to keep their languages strong.

4. Endangered languages in Australia

4.1 Number of Indigenous languages in Australia before settlement

Estimates of the number of languages spoken in Australia before white settlement have varied, but most sources give a figure between 200-300, often settling for 250 (Walsh 1991; 1997:401-404; Schmidt 1991). The main reason for variation is the difficulty of drawing a line between 'language' and 'dialect'. When 'dialects' are counted, often a figure of 500-600 is reached, although if all recognised traditional varieties were added together the figure might well go higher. In technical linguistic parlance, different dialects are varieties of languages that are mutually intelligible, whereas speakers of separate languages cannot understand each other when talking in their different languages. While this criterion is a handy rule-of-thumb it is notoriously hard to operationalise, especially in situations like Australia where most Indigenous people were (and many still are) multilingual so can in fact understand a number of neighbouring languages. A more 'objective' criterion used by some linguists is that of percentage of vocabulary shared (above 70% being judged dialects, below 70% separate languages). Obviously this is an arbitrary cut-off point, and it is possible also for languages which are not closely related and which have widely different grammars to have quite similar vocabulary in some areas.

There has also been considerable debate on the pre-settlement Indigenous population of Australia, with earlier estimates by Radcliffe-Brown of 300,000 being revised upwards to 750,000, or perhaps a million or more (Butlin 1983), especially in the light of the probable effects of introduced disease moving ahead of the settlement frontier, and the secrecy which has surrounded much of the violence on the frontiers. If the revisionist figures are closer to the mark, then given the figure of 250 languages (in the linguist's sense) the average number of people per language would have been 3000-4000. This is around the size of the largest language populations at present (e.g. Warlpiri) but there are very few of this size now. However it seems quite likely that there were quite a number of language groups larger than this before 1788, which were depleted or decimated later, as well as smaller groups, and groups which have died out altogether.

The linguists' definition of 'language' and 'dialect' are also based on classifications invented by outsiders, and it has been widely recognised that the distinction between a 'language' and 'dialect' even among European languages is more a matter of politics than objective measurement of difference. Attention also needs to be given to the classification of languages used by Indigenous people themselves. Aboriginal people do not necessarily accept the lumping together of what linguists classify as 'dialects' under the head of one 'language' and are now often insisting that these dialects all be called 'languages' in their own right. This is the case for Gurramay for instance, described linguistically as a dialect of Dyrirbal (Dixon 1972) and in North East Arnhem Land great emphasis is placed on this point by local Aboriginal people since they want to revive clan languages, formerly downgraded, in their view, as 'dialects'. The use of the term 'Aboriginal dialects' in general Australian speech for Aboriginal languages is now considered demeaning by Aboriginal people since it puts their languages in a different and lower category from European languages.

4.2 Decline in numbers of languages and speakers

There has been a severe decline in the numbers of Indigenous languages spoken in Australia since white settlement, and that decline is accelerating. Dixon (1980:18) estimates that at

1980, roughly 25% of the original languages were extinct; 50% threatened with extinction; and 25% relatively healthy. At 1990, Schmidt (1990:2) estimates that 64% are either extinct or have only a few elderly speakers left; 28% severely threatened; and only 8% relatively healthy. She also gives a total figure of 90 as 'surviving' (36%; 1990: 8), which evidently does not include languages with just a few elderly speakers. We might add 35 languages of the latter kind, bringing the number of surviving languages including the near-extinct to about 120 or 50% of the original number, but over the period 1990-2000 many of those last speakers would have died. One of us (McConvell 1991) estimated that over 50% of Australian Indigenous languages would no longer be spoken in 2000 and this has been borne out.

Of the 90 languages described by Schmidt in 1990 as 'surviving', 70 are said to be 'threatened' or 'severely endangered' and 20 'strong' i.e. spoken by all age groups regularly. Below we discuss how these concepts can be operationalised by the construction of indicators of endangerment. These are the figures that were included in the Natural and Cultural Heritage chapter of the 1996 State of the Environment Report (see Purdie et al. 1996:9-23).

Even taking into account different criteria and judgements used, there would appear to be a noticeable shift towards extinction and further endangerment in the twenty years between 1980 and 2000. As we shall see, this perception is also backed up by Census data from 1986-1996 which shows a sharp decline in numbers of speakers of Indigenous languages, which would include the end of some languages, when their last speakers died. Data from individual languages, where we have it, supports the picture of a slide: Dixon (1997:105) for instance says that there were 100 speakers of 'Dyirbal' in 1963 and 6 in 1993 – a 94% decline over 30 years. See also the case of Wajarri discussed in section 7.3 below and illustrated in (Chart 5). This is based on fluent speakers – there are younger people who have varying degrees of passive knowledge.

Having said all that, we also need to be aware of factors involved in reporting about language use in situations with few speakers, especially for Indigenous languages being surrounded by the metropolitan language (English) with all of the attendant political pressures. Definitions of what constitutes a speaker will vary in this context, and as the number of speakers declines so too may the qualifications for being the 'best' speaker. Evans (2001) discusses this in an article appropriately titled 'The last speaker is dead, long live the last speaker.' Being fluent in a language is not necessarily a prerequisite to identifying oneself as being a speaker of that language.

Another known effect of language loss is that the language itself is seen either as a worthless or a sacred object (Dauenhauer and Dauenhauer 1998, Donaldson 1985) associated with shame and embarrassment, or on the other hand with a revival in cultural pride (Maffi in press:10). Self-reporting of language ability reflecting either of these attitudes will be under or over-estimating the number of people who can use the language fluently in everyday situations.

The following table shows the decline in the percentage of the Australian Indigenous population that reports speaking an Indigenous language at home in the last three censuses.

Table 2: Percentage of Indigenous people speaking an Indigenous language, Australia

	1986	1991	1996
Australia*	18	20	14

*Census data for Indigenous people over 5 years old who speak an Indigenous language.

Although, as already noted, these figures are not strictly comparable to the Canadian ‘mother tongue’ figures already discussed, there is an apparent rise in speaker percentages in 1991 before a recent decline, parallel to the Canadian case. This is probably linked to the rise in the numbers of people identifying themselves as Indigenous in the 1980s, a shift which tailed off in the 1990s (for further discussion see section 7.1.c below)

4.3 Measuring language loss and endangerment: Canadian models

The judgement about whether a language is endangered, severely endangered, ‘on the path to extinction’ etc rests on certain assumptions, such as if the children and young people are not speaking a language now, it will not be spoken in future. It is theoretically possible for young people to start learning a language in their middle age but it is justifiable to regard this as extremely unlikely under normal circumstances. It is probably better to base any indicator on levels of language proficiency and use in different age groups directly and make the predictions that flow from such indicators a separate matter.

Canadian statisticians have been leaders in developing measures of language status and endangerment based on the census. In part this has been possible because of the wider range of questions asked by the Canadian Census about language use and ability than found in the Census of other countries such as Australia. The Australian Census has asked only about the main language used at home, and ability in English. The Canadian census, on the other hand, has asked about both the ‘mother tongue’ (first language learnt) and separately about the main language used at home; and about ability in a number of languages spoken (Harrison 1997: 290). It also, unlike the Australian census, distinguishes between people who can speak and understand an Indigenous language; can understand but not speak an Indigenous language; and cannot understand or speak an Indigenous language (Drapeau 1998:146). Single and multiple responses are recorded for mother-tongue and home language (Drapeau 1998;147) whereas the Australian Census only records a single response (the first/main one) in a situation where multilingualism is often the norm.

The Australian Bureau of Statistics (1999) released standards for cultural and language diversity. The language variables in the core set of indicators are:

1. Main language other than English spoken at home (the current Census question);
2. Proficiency in spoken English;
3. First language spoken (equivalent to “Mother Tongue”);
4. Languages spoken at home;
5. Main language spoken at home.

Only the first two are the recommended minimum set and therefore all that will be included in the Census. This is in line with the set included in the US Census (1990):

1. Does this person speak a language other than English at home?
2. What is this language?

3. (For those who speak another language) How well does this person speak English? - very well, well, not well, not at all.

(Source: www.census.gov/population/www/socdemo/lang_use.html)

Crawford (2000:53) notes that while ability in English is addressed, ability in American Indigenous languages is not asked about in the US census. Only the ‘vague and ambiguous’ question 1 is used, which can yield, for instance, numbers of ‘speakers’ for Indigenous languages which underestimate the threat to them, because non-fluent speakers tend to be counted with the fluent. The question can be misinterpreted as *Can this person speak, at any level of proficiency, a language other than English?* or *Does this person ever speak another language at home?* and the answers can be ‘...contaminated with ethnic feelings, such as pride in the native language’ (2000:64). The same kind of distortion appears to occur with this same set of Census questions in Australia (see further below), at least in some places.

For the purposes of understanding what is happening with languages other than English, such as Indigenous languages, however, it would be better to include the language variables 3 and 4 from the ABS list above in the Census, along with the variables 1 and 2 currently used. This would bring the Australian practice closer to that of Canada, which, as we shall see, is able to provide much clearer measures of endangerment of languages. An additional useful question would be an indication of ability in the languages spoken at home as well as in English, perhaps using the yardstick of ability to carry on a conversation on a lot of everyday topics, as used in New Zealand.

The distinction between ‘mother tongue’ or first language on the one hand, and home language on the other, has been utilised in examining language shift in a number of studies, more recently in the case of Canada’s Indigenous languages (Norris 1998; Cook 1998:138-9; Drapeau 1998:147). The indicator of ‘language shift’ is arrived at by expressing the difference between the number reporting a particular language as mother tongue and the number reporting the same language as home language, as a percentage of the figure for mother-tongue identifiers. One can take this a step further and compare indicators at different times e.g. (Cook 1998, extracted from Languages Commissioner 1993).

Table 3: Language shift indices, Canada

LANGUAGE	MOTHER TONGUE	HOME LANGUAGE	% OF SHIFT
Inuktitut 1986	14,535	12,155	16
Inuktitut 1991	16,565	13,585	18
Cree 1986	155	30	81
Cree 1991	195	20	90

Cook is able to arrive at a generalisation from consideration of a wider range of figures like this. Where the rate of shift is less than 25%, the number of people who have retained the mother tongue as home language has increased over the five-year period 1986-91. Where it is more than 40% the number who have retained the mother-tongue as home language has dropped dramatically. Inuktitut and Cree, above illustrate these two types respectively; the apparent rise in numbers of mother-tongue speakers of Cree is attributed by Cook to the more positive evaluation of Indigenous languages in the 1990s. (Cree is only a small and severely

declining language in the North West Territories, elsewhere in Canada it is widely spoken and much healthier). While this needs more confirmation, there seems to be a prima facie case here for adopting a figure of perhaps 30% as a low threshold for applying the term 'endangered' using this indicator. Australian Indigenous language situations may be similar enough to Canadian ones to make this applicable to Australia too.

Drapeau (1998:149) uses the same pair of figures (mother-tongue and home-language in a language group) but expresses the indicator in the opposite way to Cook as a ratio of home language to mother-tongue and calls it an indicator of language 'vitality' rather than shift.

Norris (1998:10) uses the same measure but calls it the index of continuity (or vitality). She plots this figure from the 1981, 1986, 1991, and 1996 Census results, showing a 'steady decline' from 76% to 65% over the total Canadian Indigenous population. This is despite a rise in those reporting having an Indigenous mother-tongue in the period of 24%; the corresponding rise in home language use was only 6%. The rise in mother-tongue speakers is attributed to the high fertility rates among Indigenous peoples; some adults relearning the language; and more people reporting themselves as mother-tongue Indigenous language speakers (a change in attitude discussed by Cook also).

There are dramatic differences between viable and endangered languages, with endangered languages having much lower viability indices, according to Norris. There is a potential problem of circularity here; the distinction viable/endangered is drawn from Kinkade but the criteria are vague and others (e.g. Cook) have tried to operationalise it using this very same viability index.

It is not possible, unfortunately, to use such an indicator in Australia based on Census data because the question about mother tongue is not asked. We are recommending that Mother Tongue be added to the Australian Census in addition to the one language use question (home language).

One of the first desiderata is the organization and implementation of linguistic censuses, especially censuses that distinguish mother-tongue from, for example, languages in use... (Breton 1991:134)

Norris and Drapeau, like Kinkade, also regard low absolute numbers of speakers (of a few thousand) as an indicator of endangerment - only those languages which have both higher absolute numbers and a higher vitality/transmission ratio may be judged viable (Norris 1998:10; Drapeau 1998:149).

It is not clear if this criterion might apply to Australian Indigenous languages: if so they are all endangered on the basis of low populations. Neither Schmidt (1991:8) nor Wurm (1996) regards absolute size of populations speaking a language as a reliable index of language vitality or endangerment, although it is used in this way in many overseas studies. One might argue that many of the Australian languages probably never had higher populations, but this is not necessarily a powerful argument for what constitutes a viable language in today's altered world.

As Harrison (1997:290) points out,

A richer methodology for the study of longer-term language integration involves the comparison of language attributes between generations.

Drapeau (1998: 146) uses the age profile of speakers of Indigenous languages to show the decline in the languages from Census figures. A number of distinctions are made among Indigenous Canadians which are not relevant in Australia (registered/non-registered; Metis; Inuit) which enables her to pinpoint which of these groups are most at risk of losing their languages. The indicators which she seems to find most useful are the percentages of speakers in the 5-14 age group (less than 10% representing ‘critical condition’; and 29% representing ‘very poor condition’) and the gap between the percentage of speakers in the highest (55+) and lowest (5-14) age groups, which she terms ‘language transmission’. The percentages involved here are number of speakers in the age group over total population in the age group, which cannot be used in Australia because of absence of the second type of data. However some variation of this indicator using age profiles may be usable in Australia.

The total figures for age groups from the 1991 Canadian Census that Drapeau uses are as follows:

Table 4: Age groups speaking an Indigenous language, Canada, 1991

AGE	5-14	15-24	25-54	55+	Total Speakers/Indigenous
	21.9	27.4	36.7	63.1	32.7

Source: Drapeau, 1998.

The Australian Census language data is broken down into age groups so that a rough indication of attrition of language between generations within local communities can be extracted. In Canada however because family units are identified within the Census data, it is possible to compare the language used (either mother tongue or home language) by parents and by their children (e.g. Lachapelle and Grenier 1988); this is not possible using Australian Census data without complicated analysis. It is, and was even on the basis of the 1971 census, also possible apparently to track changes in individual’s language profile between two Censuses. This, according to Mackey and Cartwright (1979), is preferable to just looking at figures in a geographical area without individual tagging because of the skewing that migration in and out of the area causes.

A simpler index of the health of a language is the average age of those who speak an Indigenous language and have it as a mother tongue. The higher these indices are, the more endangered the language (Norris 1998:12). In Canada, these indicators have risen over the period 1981-1996 although this effect results from a combination of language attrition and slowing fertility rates. Not only do endangered languages have higher average ages (in the 40s – 50s, compared to 20s – 30s for viable languages) but the average age of speakers of endangered languages also rises quicker over time, by 5 to 10+ years over 15 years, compared to 2 to 4 years over 15 years for viable languages.

These indicators can only be implemented in Australia for home Indigenous language, and with modifications due to lack of mother tongue data. In Canada the home language average age has risen from 25 to 27 years over the period 1981-1996.

Another method used by Norris for Canada, which might be used in Australia in a modified form, is to compare age cohorts in different Census periods to see if there is a decline in speaking an Indigenous language. In Canada this points up the teenage years and early

employment and marriage period as a site of decline in Indigenous language use. Norris found, like Cook, that Indigenous people on reserves and in remote locations are more likely to keep their language.

Profiles of language groups can further be enhanced by an ability index related to the questions in the Canadian Census on ability to conduct a conversation in a language. Norris defines an 'index of ability' as the ratio of people who can speak the language to mother-tongue speakers. One would normally expect mother-tongue speakers to be able to speak the language; Norris however intends this to capture cases where there may be language revival or renewal going on, with non-speakers learning the language at a later stage of life.

The only question in the Australian Census dealing with language ability is one that asks whether the respondent can 'speak English well'. Inability to speak (one or both of) the national languages (defined as adequate to conduct a conversation) is used as an indicator in some studies of groups in Canada, but there are difficulties with the self-report aspect of the answers to this question which may impair its usefulness.

Self-report is generally not a particularly reliable means of ascertaining speaker numbers in a situation of competition and change between languages. People will over-report (as in the case of ability in English) and under-report where the behaviour is not highly regarded generally or by the peer group (Fasold 1984:116-7). This very characteristic has made self-report as compared to actual use of a language or variety a means of measuring language attitudes (Trudgill 1983:176). Eagerness to claim the status of a speaker of a language can be an indirect measure of the status and prestige of a language, which is a major factor in language maintenance. Cook (1998:137) reports that in Canada there has been a swing from under-reporting use of Indigenous languages to over-reporting among young people over the last 20 years in line with the changing attitudes from negative to positive among that age-group. This same attitudinal change may explain some of the apparent rise in numbers of younger speakers in some areas in Australia where there have been language revival activities and the attitude to the traditional language has become more positive. Some increased use of traditional language accompanies this change but whether it constitutes 'speaking the Indigenous language at home' in the usually accepted sense is unclear.

However even whether a language is or is not spoken by a group can be a matter of debate. How much knowledge, or use, qualifies a group of people to be called 'speakers of a language'? After Schmidt's 1990 report appeared many Indigenous people, particularly in southern Australia, objected to the characterisations of their languages as 'dead', since there were elders in the community who remembered quite a lot of words and phrases, especially related to artifacts and the environment (Hill 1997), and some of these words and phrases were in general use.

4.4 Other measures of linguistic vitality

As well as extracting measures of shift, continuity and vitality from numbers of speakers and ability levels, other profiles of vitality predicting spread or decline have been proposed and implemented, using wider institutional factors of language function and contact situation, drawing on psycholinguistics, where these models were initially developed (Giles et al 1977, Giles and Coupland 1991:123-137). McConnell has developed this field as 'geolinguistics' (1991, 1997) and used such detailed and long-standing data sources on language function as the Linguistic Survey of India to test vitality indicators. Studies in this tradition tend to add more and more variables until the survey is just about eliciting the entire socio-cultural

pattern of the region and its history, like Edwards' (1992) proposal. These studies also tend to be heavily weighted towards the 'high end' of languages, with languages with an 'army and navy' or other attributes of political power, and a strong literary tradition, scoring highly on the survival stakes, which is understandable given recent history in most places. However these schemes tend to be of less use in dealing with Indigenous languages like those of Australia, which uniformly lack such 'vitality' markers.

Nevertheless, Crystal (2000:130-143) seems to be generalising from this tradition of research when he proposes that 'an endangered language will progress' if it meets the following six criteria:

1. its speakers increase their prestige within the dominant community;
2. its speakers increase their wealth relative to the dominant community;
3. its speakers increase their legitimate power in the eyes of the dominant community;
4. its speakers have a strong presence in the educational system;
5. its speakers can write their language down;
6. its speakers can make use of electronic technology.

In Australia the Indigenous people who still speak languages are low on most if not all of these counts, which may cast some doubt on its applicability in this situation. Further, it has been shown for Canada (Norris 1998) and some Indigenous language groups in the USA, and argued for in Australia (cf. McKay 1996:243) that living in remote areas and/or on the group's traditional lands is conducive to language maintenance (but see the discussion in section 7.1.c.ii below). This style of life tends to be incompatible with the kind of 'progress' envisaged by Crystal, at least under present conditions and funding arrangements. It has not been possible to obtain data correlating the above six factors, or living in remote homelands, systematically with Indigenous language speaking because of resource constraints on the present project. It is recommended that indicators related to the above factors be constructed and relevant Census data be collected and analysed before the next state of the environment report.

Fishman might be thought of as an author who distances himself from schemes that emphasise the 'high end' of public activity in language maintenance. He stresses instead 'home' and 'community' activity and is quite critical of schemes which waste valuable resources in promoting use of Indigenous languages higher education, media etc. before the aim of diglossia, or use of Indigenous languages in the home domain has been achieved (Fishman 1991) Yet his 'domains' scheme itself is thoroughly imbued with assumptions about the Western institutional structure, which is quite different from the social organisation of speakers of Indigenous languages in Australia, at least traditionally (McConvell 1992; LoBianco and Rhydwen 2000; cf. Silverstein 1998:406). One might argue that the scheme advanced by Crystal is similarly based on a Western view of essential conditions for language maintenance whose relevance might be questioned by at least some groups of Indigenous people.

Schemes like Crystal's embody assumptions that high levels of public use of languages, and written use of languages, are of great importance in predicting maintenance. Both these assumptions have been strongly challenged. Fishman (1991) argues that public use of languages is of no great value unless the language in question is in full use in the home and community domains, and may be worse than useless if it wastes effort and resources which could be directed to local community ends. McConvell (1992) has pointed out that this view

neglects the importance of public and media uses of a language in raising its profile and symbolic value, and its evaluation by the speakers themselves, particularly the young ones. Dressler (1982) sees the turn to unfavourable evaluation of their own language by speakers as the critical turning point in language shift (cf. Hill 1993). Psycholinguistic tests such as 'matched guise', as well as direct questionnaires, have been used to assess such language attitudes, but this has not been done with Indigenous languages in Australia and this type of indicator is not therefore used in this paper.

One of the main reasons for Aboriginal people in Australia choosing to read and write in their own traditional languages is to maintain, reclaim and revitalise the languages (Gale 1997:52, 215-216). The positive effect of literacy in enhancing a language's survival chances has been questioned, however. Mühlhäusler (1996) indicates that the standardising process, which usually accompanies literacy programs, can threaten varieties not chosen as the standard. Sometimes this results in conflicts between speakers of different varieties - a situation which can threaten language maintenance activities more generally (Hill 1993). Many Indigenous language programs put a strong emphasis on literacy, in some cases because they are run or influenced by missionaries who regard the reading of the Bible as the main aim. In other cases the education authorities see vernacular literacy as a stepping stone towards literacy in the national language; and in the more 'critical' or radical variant, because literacy enables Indigenous people to become empowered and see through the oppressive uses of literacy. The impression may be given that it is a 'magic wand' which can be waved over a language to save it: people subscribing to this view can be sorely disappointed as language shift continues unabated while literacy programs are implemented. The majority view in language maintenance intervention circles now seems to be that oracy in the threatened language is a prerequisite to literacy and must be addressed but that development of literacy (and of a literature base) remains an important adjunct to language maintenance efforts.

Because of the lack of agreement about which social functions point unambiguously towards 'vitality' or viability of a language, we have not attempted here to quantify uses of a language in those terms, or to roll measurements of different functions together to produce complex vitality indicators.

There are more basic indices which perhaps could be used as indicators, which do not buy into these arguments, nor do they multiply the variables to be recorded as do survey methods such as those of Edwards (1992). McConvell (1991) has discussed the amount of time exposed to a language as being (together with motivation to learn it, an attitudinal factor tied in some way to evaluation of the language mentioned above) a key to whether language transmission between generations can occur. Burnaby (1997:296) writes of a 'critical mass' of communication - 'an essential amount of language use, and if that use goes below a certain point, the language will decline rapidly, no matter how many people there are who know how to speak it'. This notion is perhaps related to Dorian's concept of 'tip' in language shift (Dorian 1981:51; Dorian 1989:9; McConvell 1991). It seems possible to measure the amount of use in an adequate way by an ethnographic study, but not reliably by self-report survey or census. It has not been possible to carry out such ethnographic research for this paper, nor has it been done systematically in research on Indigenous language decline in Australia. After collecting data on use of, and exposure to, a language, a subsequent step could be to ascertain what the 'critical amount' is and implement that as a viability indicator.

Anecdotal evidence abounds, both in Australia and overseas, of the importance of the 'grandmother factor' in language and culture transmission. People who have been able to

spend more time with the grandparental (as well as parental) generation in their childhood are generally those who retain more of the traditional language and culture and are thus more able to pass them on to their own children and grandchildren.

If it is true, as seems likely, that exposure to people speaking a language is a prerequisite to natural learning of the language and therefore of language maintenance, then this has policy implications. Many health and aged-care programs for Indigenous people in Australia involve removing them from their home communities to hospitals or care centres in towns quite far away. Not only does this often deprive the removed people their home communities of opportunities to speak their traditional language; it also robs the community of some key people from whom community people might learn the language. Given the low health status of Indigenous people, and the epidemic proportions of kidney disease, for instance, which leads to removal to towns for dialysis (Devitt and McMasters 1998), the numbers affected by these policies are relatively large. While an indicator to address these issues cannot be implemented in this round, measurement of programs which increase or reduce interaction between old and young people in the language community could be a focus for future research.

4.4.a Wurm's indicators of language endangerment

In 1963 Stephan Wurm set out the state of research on Australian languages for the inaugural AIAS conference (Wurm 1963). He used the criteria below to establish directions for research and applied them to languages of New South Wales and South Australia. We have adopted a similar format for the Indigenous language database as outlined in section 7.4 below.

RANKING OF LANGUAGES

1. *Extinct*
2. *Some, usually very old, individuals remember a little of the language, usually vocabulary*
3. *A few, mostly very old, individuals can speak the language more or less fluently*
4. *The language is still spoken but no longer in full tribal use*
5. *The language is still in full tribal use*

NUMBER OF SPEAKERS

1. *single individual*
2. *under 5*
3. *5-10*
4. *10- 50*
5. *over 50*

VOCABULARY: lexical information secured to date

1. *some vocabulary*
2. *approximately 500 items*
3. *500 – 1,000 items*
4. *over 1,000 items*
5. *lexical information is satisfactory by modern linguistic standards*

STRUCTURE: information on language structure secured to date.

1. *some information is available*
2. *a fair amount of information is available on main structural features*
3. *good information is available on main structural features, with additional information on subsidiary features*
4. *good information is available both on main and subsidiary structural features*
5. *information on structure is satisfactory by modern linguistic standards*

4.5 Social role of languages and multilingualism

An essential feature of the linguistic situation of Indigenous languages in Australia both in the past and today, is the prevalence of multilingualism. In traditional times many people would have spoken the language of their mother and of their father (which were quite frequently different because of intertribal marriage) and one or two others through contacts through their life. 200 years ago very few, if any, lingua francas or languages of wider communication would have existed but since then a number of these have emerged, both Indigenous languages which gained more second-language speakers in some regions, and pidgin English varieties. The latter eventually spread across many parts of the continent as a second language of wider communication for many Indigenous people and then later became the first language of some groups (a creole) as language shift away from traditional languages occurred. A form of Aboriginal English somewhat closer to standard Australian English took over from the pidgins and creoles in some places. In other places the traditional languages survived but with pidgin/creole or Aboriginal English added to the community speech repertoires as second, third or fourth language.

A stretch of country is usually uniquely associated with a single language in the view of Indigenous Australians, this association having been created by creator beings (Dreamings) for all time (Rumsey 1993). However it would probably have been rare for any community or co-residential group to have only one language spoken in it. In-laws and other relations would be found camping with the 'traditional owner' group whose primary language was spiritually connected with the land they are on. There is no reason to think that this use of several languages within the group would have threatened any of the languages with shift before white settlement. The use of different languages remained functional as a symbolic marker of difference (McConvell 1988,1991), which would have tended to reinforce the survival of a number of languages.

It has been argued that the mixture of different language groups in settlements and fringe camps in the colonial era has tended to cause the loss of languages. People adopt lingua francas to communicate with each other, and these are adopted as first languages by the next generation. This language shift can be towards another Indigenous language at first but eventually Aboriginal English or an English-based creole becomes dominant. It is uncertain however if it is multilingualism as such which causes this (for, as noted above, this was the original condition of many residential groups anyway), or all the other disruptions which accompanied this move into settlements and urban centres. Some languages are maintained in such multilingual situations, like Arrernte in Alice Springs.

There is further discussion of this question below under 'indicators' (indicator IL.1), based on dispersion of languages which can be examined from 1996 census. This paper has not been able to obtain sufficient data on individual or community multilingualism (something which the Census records poorly) or urban/rural dimensions of the issue (feasible but requiring more

time and resources) which we could have correlated with language shift, but we recommend that this be given attention in the future.

5. Language, cultural heritage and environment

Language is often overlooked because it is in an intangible part of culture and something which is used constantly by people, without them reflecting on it or being conscious of it. Nevertheless language is one of the most significant aspects of the cultural heritage of any group. It is both part of culture and the most important means of expressing culture and communicating culture to others and transmitting it to the next generation. Indigenous languages are also the key to each Indigenous culture, including for example vital and kinship.

Klaus Toepfer, Executive Director of the United Nations Environment Programme (UNEP) said in a statement in 2001:

Indigenous peoples not only have a right to preserve their way of life. But they also hold vital knowledge on the animals and plants with which they live. Enshrined in their cultures and customs are also secrets of how to manage habitats and the land in environmentally friendly, sustainable, ways.

Much of this knowledge is passed down from generation to generation orally... So losing a language and its cultural context is like burning a unique reference book of the natural world. (Business World February 15, 2001).

Recent research (Posey ed 2001) links the loss of environmental knowledge to the fact that many Indigenous languages and cultures are already teetering on the brink of extinction in the face of globalization. More than 2,500 languages are in danger of immediate extinction and many more are losing their link with the natural world. That report also links a profusion of languages with a wealth of wildlife underscoring how native peoples have thrived on a rich natural environment and managed it for the benefit of animals and plants.

New sources of medicines may also be being lost as a result of the decline of Indigenous languages, cultures and traditions. Many Indigenous peoples have intimate, local, knowledge of plants, such as herbs, trees and flowers and parts of animals, and their use as medicines which in turn could give clues to new drugs. They also know the right part, such as the root, leaf, seed or flower, to pick and season in which to harvest these "natural medicines" so they contain the maximum amount of health-giving compounds.

This knowledge is often enshrined in ritual, ceremony and magic underlining how culture, language, religion, psychology and spiritual beliefs can often not be separated from their understanding of the natural world. The Convention on Biological Diversity, which is managed by UNEP and which grew out of the Rio Earth Summit of 1992, makes specific reference to the need to protect the world's Indigenous cultures and traditions.

Hunn (1990:80-81) says the traditional language is the 'key' to the culture of the Indigenous people. People are known by the language they speak; language dramatically increases memory capacity by labelling thoughts and images so that they can be called up by name at will; it has survival value in that it allows the social transmission of information; languages express culture and Indigenous knowledge systems such as how to get food from the local environment. The mythical stories in the traditional tongue are regarded as the very important by the Indigenous people.

These points were made with regard to North America, but the same points can be made about the cultural heritage value of the traditional languages for the Indigenous people of Australia. The role of language in Indigenous knowledge systems, and in particular environmental and ecological knowledge, is rarely recognised by non-Indigenous people. The knowledge which a people possesses, which enables them to live fruitfully in a particular ecological niche in the physical and biological environment is encoded in the language that they use to describe and work with the land, animals and plants. Studies both overseas and in Australia have shown the immense richness of the language associated with Indigenous ethnobiological concepts and practices. Once again there is often a strong element of documentation of such systems as they die out in such studies, rather than an orientation towards maintenance of language and knowledge together.

However some of the research is oriented towards how Indigenous knowledge and language maintenance actually can help preserve biological diversity through maintaining beneficial human-environment relationships (Maffi ed. 2001).

In Australia the huge biological diversity found, for instance, in the North Queensland rain forest is reflected in the detailed vocabulary of the languages of the region, but these languages are at least as severely endangered as the biological species in the region. The young people only know a few of the names of species in the traditional language, nor do they compensate for that with English names. Schmidt (1985) writes that Dyirbal young people use only one term for 'eel' *jaban* in contrast to the several names for different species known by the handful of remaining full speakers. Even grammatical categories embody ecological knowledge – the feminine gender in traditional Dyirbal includes dangerous species as well as females. Young people use the feminine only to refer to females, thus losing a way of classifying species behaviour which is inherent in the way the language was organised (Nettle and Romaine 2000:66-68, citing Schmidt 1985).

If this linguistic knowledge could be passed on to the younger generation it would also increase their sensitivity to biological diversity and conservation in their own country, where they live, and to continue their traditional role as caretakers of the land and sea in the most effective way. This knowledge and linguistic expertise could realise its potential if combined with greater involvement of these Indigenous people in major conservation projects in the region, such as the Wet Tropics World Heritage Area in north Queensland, which includes the traditional country of the Dyirbal and their neighbours. Some elders of the region are making determined efforts to do this by mentoring young people. The training not only involves learning the names of species and places, but how to use the traditional language to perform ritual obligations while guiding people through the rainforest, such as addressing invocations to the ancestors to ensure the safety of the visitors.

Research on ethnobiological knowledge such as in the language used to describe threatened and extinct species can go hand in hand with an emphasis on reclamation of both the language and the knowledge, and in some cases, the reintroduction of lost species. Some of this kind of research is being carried out and written up by Indigenous people who are both trained in the relevant disciplines and speakers of Indigenous languages (Ellis 2000; Dobson 2000). The level of this kind of research, and the maintenance of traditional ecological knowledge in language, might be indicators to be adopted in future State of the Environment reporting.

Indigenous ways of relating to the environment have changed with the enormous changes in way of life of the recent past, so there may be a tendency for some elements of the talk associated with the old life to be lost, as noted above for Dyirbal young people. On the other hand though, many Indigenous people – even those living in cities – are going back more and more to old bush camps and runs, and as this process continues, more of the language of the old lifeways will be revived. In many of the calls for language maintenance programs that are now being heard throughout the country, this movement to get back in touch with country is linked strongly with the push for language.

Indigenous maintenance of wild resources is, in effect, Indigenous 'conservation' of wild species... By identifying ecologically adaptive aspects of traditional resource management, ethnobotanists contribute to the development of resource-conservative, sustained-yield agroecosystems. (Alcorn 1997:31)

Perhaps the most important contribution of ... ethnobotany will be its ability to promote actively a dialogue between these two world views [the indigenous and that of western developers] such that folk wisdom will temper and guide the inevitable development processes that today ride roughshod over much of the earth. (Davis 1997:49)

'Bush tucker' can significantly contribute to the health of Indigenous people (Goddard and Kalotas 1985:7). Indigenous health is significantly worse than that of non-Indigenous Australians (McLennan and Madden 1999:4-6). Many of the problems stem from a change to a static lifestyle and a diet based on a poor variety of European foods. The knowledge and language associated with the wild foods and medicines and their harvesting and processing are needed in order to reap the benefits of them. This knowledge goes hand in hand with knowledge of workings of the human body also encoded in Indigenous languages in ways very different from those found in English (Peile 1997).

Indigenous languages provide a complex conceptual framework not only for the living things that inhabit the land, but also for the landscape itself. For many Indigenous peoples, including those in Australia, getting to know the place names and narratives of places is a road not only to knowledge but also to wisdom (Basso 1996:134). The highly developed sense of place in Australian Indigenous culture and its central place in their heritage is becoming better known to the Australian public especially through the popularity of Aboriginal art, which often depicts country as maps traversed by the founder Dreamings. The linguistic expression of this sense of place is less generally known but no less foundational, including the thousands of Indigenous place names, the songlines and stories that link these places in a complex web; and the elaborate systems of directional terms which are in everyday use among many Indigenous groups. Together these knowledge systems help to retain detailed memory of the land and its resources, and help to guide people through landscapes which often appear barren or threatening to non-Indigenous people.

Crystal (2000:ix) commenting on the current rapid loss of languages today and the need for urgent efforts to combat this situation, remarks that '...everyone should be concerned, because [the loss of the languages] is everybody's loss'. This loss is especially a matter of concern for all the people of Australia who are the guardians and beneficiaries of a huge treasure constituted by the hundreds of Indigenous languages, which are slipping away as we write. It is not only part of the Australian nation's duty of care to the Indigenous population to make every effort to help them maintain their heritage, it is also part of the national responsibility to preserve the languages as part of the nation's cultural heritage. In years to come this heritage will be valued highly – governments and bodies which failed to make every effort to conserve it will be judged harshly.

6. Keeping languages strong

In the last 30 - 40 years the world seems to be emerging from a period where minority languages were almost universally denigrated, marginalised and in some cases ruthlessly suppressed by nation-states. A new mood of recognition and respect for small languages, and the rights of ethnic groups to use them, is spreading (Crystal 2000: 133) although still far from universal. The Universal Declaration of Linguistic Rights first proposed in Barcelona in 1996, is gaining support and some version of it may be passed as policy before too long by the United Nations. This includes the following inalienable personal rights (Universal Declaration of Linguistic Rights Article 3.1):

1. to be recognized as a member of a language community;
2. to the use of one's language both in private and in public;
3. to the use of one's own name;
4. to interrelate and associate with other members of one's own language community of origin;
5. the right to maintain and develop one's own culture

Collective rights of language groups (Universal Declaration of Linguistic Rights Article 3.2) include the rights:

1. for their own language and culture to be taught;
2. of access to cultural services;
3. of equitable access of their language and culture in the communications media;
4. to receive attention in their own language from government bodies and in socio-economic relations.

It seems possible to base indicators of the status of Indigenous languages in Australia on at least some of these criteria, such as level of public use of the Indigenous language permitted (3.1.2); teaching of the Indigenous language (3.2.3); access to media (3.2.3); and receiving attention from official and other bodies in their own language (implying officials who speak the relevant language and/or interpreters supplied) (3.2.4).

Other articles of the Declaration spell out a number of other rights of language communities such as use by government departments, courts of justice and other official bodies of their language; an education system ensuring the transmission of their language and cultural heritage; preservation of personal names and place names.

The Draft Declaration of the rights of Indigenous Peoples also encompasses linguistic rights of Indigenous peoples in broad terms. While land rights, native title and issues of human and legal rights before the courts have dominated Australian Indigenous pleas to international bodies such as the United Nations, occasionally language issues are raised, especially the absence of Indigenous language interpreters in courts in Australia, and the abandonment of Indigenous language Bilingual Education in the Northern Territory in 1998.

ATSIC's report to a UN committee (2000) had this to say of the removal of Bilingual Education (see also 7.9.d.i below):

The decision by the Northern Territory Government to remove bilingual education programs fails to recognise the right of Aboriginal people to full enjoyment of their culture and languages (Article 15). The lack of Indigenous participation in the Northern Territory decision breaches the obligation of self-determination and is a further example of undermining the control of Indigenous people over their own lives by denying the choice of mode of education for their children and by not supporting the viability of remaining languages. (ATSIC 2000:30-31)

The end of bilingual education in the Northern Territory represents a serious setback for Indigenous languages and should be registered as such in this survey (see also section 7.9.d.i). Not only have some language programs and positions related to Indigenous language programs been lost but the status of Indigenous languages has been downgraded significantly within the education system, even though the Northern Territory Education Department argues that some programs may proceed in individual schools within a ‘Two Ways’ framework.

As Nicholls (2000) argues, the impact of the Bilingual Education program should be assessed not just in terms of academic performance of the children involved in the program, but measured also by the ‘social capital’ engendered by the program. The Bilingual Education program in schools, the commitment of the Northern Territory government to Aboriginalisation of school staffing, and the training offered to Indigenous education students by Batchelor College (now Batchelor Institute) and the School of Australian Linguistics, which recognised the value of Indigenous language knowledge and curriculum skills alongside those based on English, grew up alongside each other. This combination produced a cadre of Indigenous bilingual graduates in the 1970s – 90s who took on leadership roles in education and community representation. These people for the first time could embody professional status and salary, together with confidence and pride in being bilingual and bicultural, and provided a role-model for the children.

Whatever the Northern Territory government now says about the continuation of some marginal Indigenous language programs in schools, probably influenced by the widespread protest in Aboriginal communities over the move, this positive nexus seems to have been broken or at least severely threatened by the abandonment of the Bilingual Education program in 1998.

There is a need to measure, as well as the numbers of Indigenous language programs in education and their funding, some of these ‘social capital’ effects for Indigenous language speakers.

In Australia major advances for the status and recognition of Indigenous languages came in the late 1980s and early 1990s with a number of Commonwealth Government reports (notably the National Language Policy 1987) recognising the right of Indigenous people to use and maintain their languages. This paved the way for the funding of regional Aboriginal language centres and other programs which began to be set up in the mid-80s. Various funding programs were established, the current main successor to these being ATSILIP (the Aboriginal and Torres Strait Islander Language Initiatives program) administered by ATSIC. This program is currently about to be reviewed. No legislation has been passed in Australia either nationally or in the states and territories to guarantee language rights for Indigenous people or ongoing funding for the Indigenous language programs.

This contrasts with the situation in New Zealand where the Maori language is enshrined as a 'treasure' (*taonga*) in the Waitangi treaty and recent legislation supporting and protecting the language. The preamble to the Maori Language Act 1987 states:

Whereas in the Treaty of Waitangi the Crown confirmed and guaranteed to the Maori people, among other things, all their *taonga*. And whereas the Maori language is one such *taonga*: BE IT THEREFORE ENACTED by the Parliament of New Zealand...

In the past 10 years in Australia there have been several government reports that touch on Indigenous languages, and recognise the importance of increasing support for recording and promoting Indigenous language use.

- In its report titled 'Desert Schools', (Department of Employment, Education, Training and Youth Affairs and the National Languages and Literacy Institute of Australia. 1996) DEETYA noted the importance placed on learning English in Aboriginal schools, but that "...communities expressed strong concern that English language and literacy development not be at the expense of community languages" (Vol 1:6).
- The Council for Aboriginal Reconciliation (1993), in its paper Addressing the key issues for Reconciliation includes a section on Indigenous languages, titled 'Keeping it alive'.
- The Department of Employment, Education and Training (1995) produced a booklet titled *Alive and deadly* that was provided to schools around the country specifically to raise awareness of the nature of Australian Indigenous languages.
- The Royal Commission into Aboriginal Deaths in Custody (1991), Recommendation 55 of which deals with the importance of Indigenous languages.
- The Aboriginal and Torres Strait Islander Commission (ATSIC) Native Title Social Justice Advisory Committee (1995) wrote a report in which extensive reference is made to the importance of maintaining Indigenous languages.

General public awareness of Indigenous languages has been raised in the past ten years especially by the use of Indigenous languages in popular music and in the publication of a number of popular books, for example Lonely Planet's *Australian phrasebook* (Angelo et al. 1994), and *Macquarie Aboriginal Words* (Thieberger and McGregor 1994).

7. Indicators of the state of Indigenous languages

In the following sections we address each of the Indigenous language indicators recommended by Pearson et al. (1998) and assess the data available. Where comparisons are possible with Henderson and Nash (1997) we provide data for the period following their study, i.e. for the period 1995-2000.

7.a Number of Indigenous language interpreters

An additional indicator of the use of Indigenous languages is the number of interpreters/translators available. While not one of the indicators suggested by Henderson and Nash (1997), we have included it here as a further benchmark that can be reassessed in future state of Indigenous language projects. According to the national body (NAATI, www.naati.com.au) the number of qualified interpreters for Australian Indigenous languages is as shown in Table 5.

Table 5: Interpreters for Australian Indigenous languages

Anindilyakwa	3	Luritja	13
Anmatyerre	4	Martu Wangka	2
Arrente (Eastern)	11	Miriuwung	1
Burarra	6	Nyangumarta	3
Djambarrpuynu	9	Modern Tiwi	4
Djapu	1	Murrinh Patha	2
Gajerrong	1	Nunggubuyu	1
Garrwa	2	Pitjantjatjara	28
Gumatj	3	Walmajarri	6
Gupapuyngu	3	Wangkatha	1 (dec)
Iwaidja	1	Warlpiri	14
Jaru	3	Warumungu	4
Kala Lagaw Ya	12	Western Arrente	16
Kaytej	1	Wik Munkan	2
Kija	1	Yankunytjatjara	3
Kukatja	2	Yanyuwa	2
Kunwinjku	2	Yindjibarndi	1
Liyagalawumirr	1		

Source: NAATI website, 9/10/01 (<http://203.49.127.130/pracdir.html>)

Carroll (1995:26) reports NAATI having 65 Aboriginal interpreters from 11 languages. However, there are a number of untrained interpreters working in government offices for which we do not have figures. In the early 1990s the Department of Social Security had interpreters in 9 offices (Babban 1995:36). In December 2000, the Northern Territory government announced that a 24-hour interpreter service for Indigenous languages was being set up. This follows unsuccessful lobbying by many people for more than thirty years, and was finally made possible by a grant of money from the federal government designed to offset the effects of mandatory sentencing on Aboriginal communities. It is too soon to present any details of the service but it would be advisable to review this development in five years' time.

7.1 Number of people who identify as knowing an Indigenous language [Indicator IL.1]

The formulation of this indicator by Henderson and Nash (1997) is slightly different to the available national data, for example Census data, which reports on responses to the question Do you 'speak a language other than English *at home*?' and to other sources (such as handbooks of Indigenous languages) which note 'numbers of speakers'. While the difference may appear slight, we present figures below from the 1994 ABS survey in which there is on average an 8% greater number of people who identify as being speakers of a language than as speaking it as the main language at home. Because of the availability of Census data, we will use their question – Home Language - as the basis for establishing numbers of speakers of

Indigenous languages at a national level and we would recommend changing the wording of this indicator accordingly.

Henderson and Nash (1997) recommend using (i) interview surveys of speakers, (ii) Census data and (iii) surveying linguists who know a particular area. They question the value of (iv) incorporating information from *Ethnologue* (Grimes 1996) due to some of the data in that source being quite old. However a new edition of *Ethnologue* has recently become available (Grimes 2000) and we have prepared a correspondence set of names matching *Ethnologue* and the Indigenous language database.

Accordingly, we are using a number of sources for this indicator:

- Language surveys or handbooks
- Census data from 1986, 1991, and 1996.
- Data from the 1994 National ATSI survey (Australian Bureau of Statistics. 1996)

We have contacted linguists using established networks and have arranged a mailing list of over 150 addresses, including language centres, community organisations, language courses, linguists, and others. While this survey may not result in usable data from all correspondents, it will publicise the project among key organisations.

7.1.a The Indigenous language database

We have incorporated these data into a database which will be a baseline against which future information can be mapped. We see it as a source of data that will continue to grow as more information is received. The database currently draws on the following sources:

- a combination of language name lists held at AIATSIS
- language names from Tindale's (1974) map
- Speaker numbers from Indigenous language handbooks (WA, Kimberley, Central Australia, Top End)
- Census 1996 totals per language and break up by age by language
- Annette Schmidt's report speaker figures (1990)
- Senate Report on Languages 1984
- AIATSIS library (MURA) thesaurus map references
- Top End Handbook (TEHB) data (for language name, language family and number of speakers) has been placed into fields of this data base, as well as being amalgamated into its own field
- Robert Hoogenraad's 1992 survey of the Barkly and Sandover regions (RH) language names and population data
- Maningrida language survey (1996)

At present there are 764 records in the database, each representing a named language variety (although there is always going to be more work to be done on editing this data). Fields used in the database are listed in Table 6.

Table 6: Fields in the Indigenous language database

AIATSIS code	the unique code assigned to each Indigenous language by AIATSIS.
Tindale	the name used by Tindale for the language (this field is the link to a digitised MapInfo version of the Tindale map)
AIATSIS standard	the standard name used by AIATSIS
Speakers	the number of speakers, from the best source available
Source	the source of the information on speaker numbers in the preceding field
Alternatives	a list of alternative forms and spellings of the language name
Logical alternatives	a set of alternative spellings generated from the first five letters of the name on a <i>soundex</i> table of typical alternations found in spellings of Australian language names (useful for searching)
State	in which state(s) the language territory is found
Group name	name used to refer to a group of languages including this one (hypernym)
Map sheet	1:250,000 sheet on which the language territory occurs
Notes	'meta-data' information about the entry, queries and so on
SIL code	three-letter code assigned by Ethnologue (Grimes 1996)
Ethnologue	link to the Ethnologue (Grimes 1994) entry on the language
Census 1996	speaker figures from the 1996 census
Census 1996 age	speaker figures in four age groups from the 1996 census
Schmidt	speaker figures from Annette Schmidt's (1990) report
Yallop	speaker figures from Colin Yallop's (1982) book
Senate	speaker figures from the 1984 Senate Standing Committee on Education and the Arts report
Linguistic group	language family or group based on linguistic criteria
Hoogenraad name	name used in Hoogenraad's (1992) survey.
RH Full speakers	number of full speakers from Hoogenraad's (1992) survey.
RH part speakers	number of part speakers from Hoogenraad's (1992) survey.
Top End Handbook	listing from the Top End Handbook (ultimately to be incorporated into the rest of the entries)
Maningrida survey	number of speakers from the Maningrida survey (Bawinanga Aboriginal Corporation 1996)
Language program	information on any language programs operating
SCAL	link to the entry for the language in the <i>Sourcebook for Central Australian Languages</i> (Menning and Nash 1981) (not included for general release for copyright reasons)

Kimberley Handbook	link to the entry for the language in the <i>Handbook of Kimberley languages</i> (McGregor 1988) (not included for general release for copyright reasons)
Western Australian Handbook	link to the entry for the language in the <i>Handbook of Western Australian Aboriginal languages south of the Kimberley region</i> (Thieberger 1993) (not included for general release for copyright reasons)
Dictionary	reference to any dictionary or wordlist of this language (linked by AIATSIS code to a database of dictionaries)
Linguist	who is/ are the linguist /s associated with this language

Early surveys of Australian Indigenous languages were published by Capell (1963), Oates (1975), O’Grady, Voegelin and Voegelin (1966), and Wurm (1972). Paul Black (1983) surveyed languages of the Top End. All of this material informed the creation by linguists at AIATSIS of a standard list of Indigenous language names (see for example Black and Walsh (1982)). We have built on this list in the current database.

This work also makes clear the difficulty of assigning standard names in what can sometimes be complex language situations. In Arnhem Land, for example, there are a number of named language varieties, some of which are associated with clan groups, some of which are local names. A database should be able to show these different levels of language naming and allow users to search and find both group names and individual language names, and their variant forms.

Naming Indigenous languages is not a simple issue. There are a number of lists of Australian Indigenous language names, each produced for a particular purpose. Our database combines several lists and cross-references names and alternative forms. It provides fields for both linguistic group names, as well as currently used group names (like Nyungar, Yamaji, Yolngu and so on).

This database should be maintained into the future to ensure its currency. AIATSIS is the logical location to ensure the database continues to be updated.

7.1.b Australian Bureau of Statistics data

Every five years the Census asks about language use. The number of speakers of Australian Indigenous languages according to these Censuses is given in Table 7 below, compared with percentage increase in the Indigenous population. The 1986, 1991 and 1996 Censuses each asked if a language other than English was spoken at home. The 1996 Census was the first to ask about named Indigenous languages (see below). From these figures it is clear that there is an increase in the number of speakers of Indigenous languages in absolute terms, but not proportionally to the general increase in Indigenous population. We address the 1996 Census data in more detail below.

Table 7: Indigenous language Speakers in Australia, Census 1986-96

Aged 5+, Census results 1986-1996

Census	Indigenous language speakers	% increase	Total Indigenous	% increase
1986	36, 078	..	195, 796	..
1991	42,716	18	225,944	15
1996	42,922	0	302, 683	34

Source: ABS Censuses.

The Bureau ran a survey in 1994 (ABS 1996) which sampled some 17,500 Indigenous people nationally (and projected the results onto national figures). It provides the results of this work by ATSI region and is clearly not a reliable source for language information at this level, mainly because of the sampling and projection methodology. It is however interesting, in that it provides data on two language-related questions, the first is 'Speaks an Indigenous language' for which it finds 21% of the total sample of Aboriginal and Torres Strait Islanders (aged over 5 years); the second is 'Speaks mainly an Indigenous language at home' for which it finds 13%. This 8% difference indicates the margin that could be considered in assessing responses to the usual Census question which asks only about home use.

Table 8: Difference between those who *can* speak an Indigenous language and those who do so in the home, 1994 survey, by ATSI region

(For regions where the difference is greater than 10%)

Location	% difference	Location	% difference
Tennant Creek	41.18%	Alice Springs	15.22%
Derby	34.84%	Katherine	13.67%
Broome	27.88%	Cairns	11.86%
Mount Isa	24.96%	Adelaide	11.50%
Torres Strait	23.80%	Kununurra	11.35%
Cooktown	23.05%	Geraldton	10.60%
Port Augusta	20.54%	Ceduna	10.60%
Kalgoorlie	17.99%	Warburton	10.13%

Source: Australian Bureau of Statistics 1996.

These figures may also provide a crude indication of degree of, or at least rapidity of, language shift, in much the same way as the difference between 'mother tongue' and 'home language' is taken to provide such an indicator in Canada, as discussed above, although because of the nature of this survey this can only be assessed regionally, not language by language. That is, if people *can* speak a language but no longer do so at home, this might be judged a symptom of language shift. In fact other factors such as migration and mixed-language marriage may be involved in people not using their original language in the home. These factors may lead to language shift for some individuals, but do not necessarily mean language endangerment. Nonetheless if significant numbers of individuals are shifting away from using an Indigenous language, given the small speaker populations of these languages, it will tend to mean higher levels of endangerment for the languages concerned.

If this proposed indicator has validity, it does not measure endangerment as such but only the rate of change in the present living generations. A number of the highest percentages in Table 8 above are in areas which had relatively strong languages until recent times, so a slump in speaking (some of) the languages will produce high figures (e.g. Tennant Creek, Derby), as can be seen in Chart 2 below. On the other hand if the situation of say thirty years ago was already one of small speaker numbers, the drift downwards will only be represented by low numbers (e.g. Darwin). Low numbers can therefore be ambiguous between a situation of high maintenance of languages and one of language shift which has already nearly run its course. Some situations are more complex in that some local languages have virtually stopped being spoken a generation ago but Indigenous language speakers have been augmented by immigrants from more outlying areas.

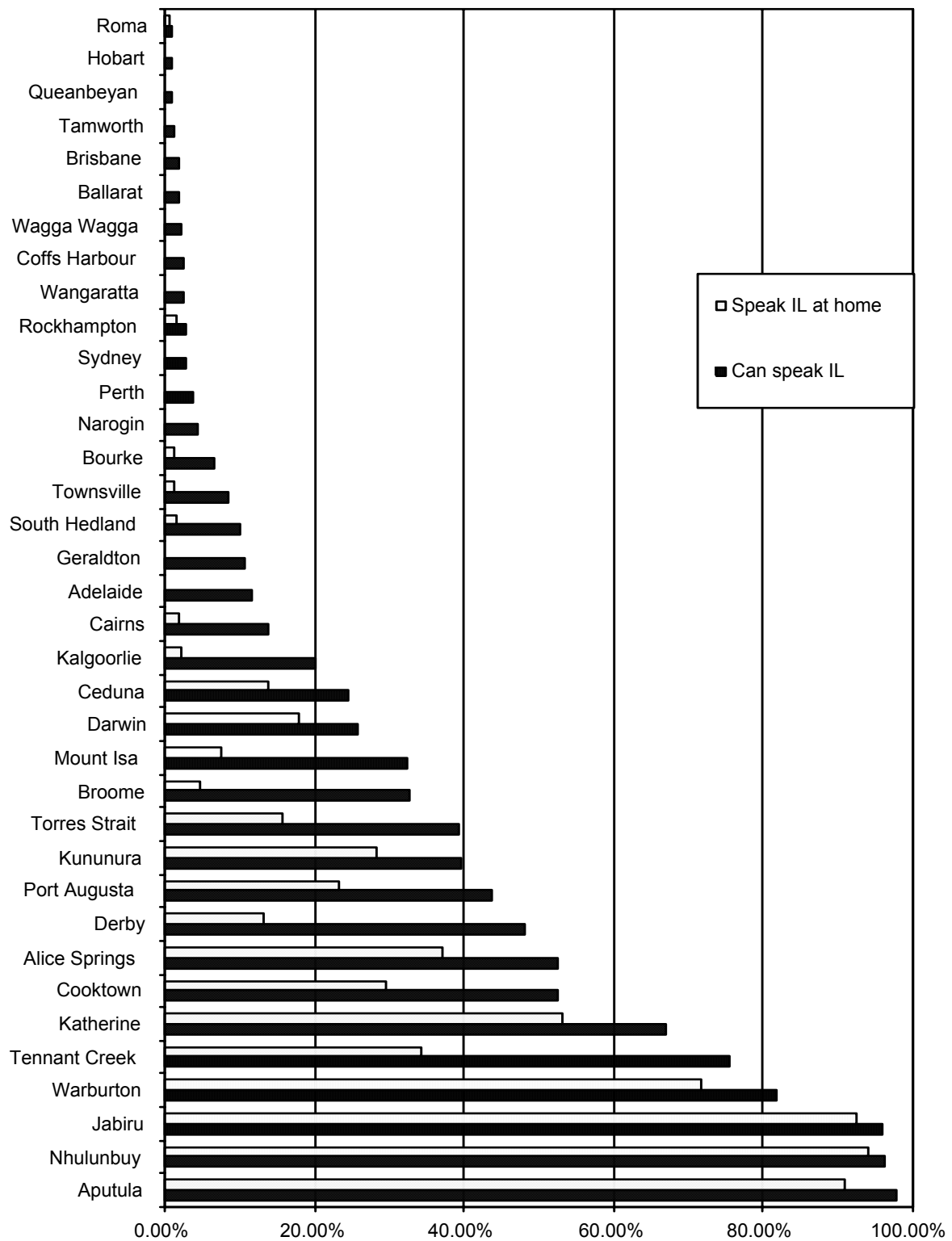
We do not adopt this language shift rate indicator (can speak minus do speak at home) as an indicator here as there is no guarantee of this kind of survey being repeated. However we do recommend that the Census incorporate two questions (one on ‘mother tongue’ and one on ‘home language’) which will capture this type of information on rate of language shift, but with differentiation of languages as well as regions.

This dual measurement of ‘speaking’ versus ‘speaking at home’ in this 1994 survey, despite its shortcomings, does provide a cross-check of some of the more interesting results from the 1996 Census, discussed further below, or at least raises interesting questions about them. For instance, the unusual pattern noted in relation to the Adelaide region in the 1996 figures that higher numbers of younger people are reported speaking an Indigenous language than older people, although all the percentages are less than 10%. This is ascribed below to positive attitudes about Indigenous languages and attempted language revival in recent years. However if we look at the 1994 survey for Adelaide there is virtually no Indigenous language reported as being spoken at home but 12% report being able to speak an Indigenous language. This indicates that probably at least some respondents in the 1996 Census interpreted the question ‘do you speak a language other than English at home?’ as ‘can you speak an Indigenous language?’ without qualification as to whether it is used at home.

The very fact of having two distinct questions no doubt served to clarify each of them in the 1994 survey and produced more realistic answers. This is a further argument for having both a ‘mother tongue’ and a ‘home language’ question in the Census in future.

Chart 2 shows the survey results by ATSI region. Clearly, in some regions, the difference between those who *can* speak an Indigenous language and do so in the home is greater than 8%, as is shown in Table 8 above.

Chart 2: ABS 1994 Survey of Aboriginal and Torres Strait Islanders, by ATSIC regions
 Relative proportions of those who can speak an Indigenous language and those who speak an Indigenous language as the main language at home.



Source: ABS 1996.

7.1.c The 1996 Census

The ABS Census of 1996 showed an increase in the population of Indigenous Australians from 1991 of 33%; twice what can be explained by demographic reasons. Ross (1999) says the increase is due to fluidity in identification, with a mixed population having the possibility of drawing on its ancestry to identify as Indigenous and choosing to do so more in the last Census than in the preceding one. This has implications for the reporting of the use of Indigenous languages.

While we could expect to see an increase in numbers of speakers of Indigenous languages in proportion to this general increase, it is more likely that the population increase will not be reflected in an increase in numbers of people identifying as speakers of Indigenous languages as the increase is in areas in which Indigenous languages are no longer spoken. This could account for some of the decrease apparent in the proportion of speakers of Indigenous languages from the 1986 and 1996 Census as we have a larger number of people identifying as Indigenous, and so the proportion of speakers of Indigenous languages is reduced, even though the number of speakers increased.

However, the decline in numbers of speakers of Indigenous languages is also spread across the urban/rural divide. Henderson and Nash (1997:9) provide three tables showing use of Indigenous languages in urban and rural areas. Table 7.5 of ABS (1998a) gives urban and rural figures for 1996 data. We present the totals below:

Table 9: Indigenous language spoken at home, proportion of Indigenous people

	1986	1996
Rural	42%	35%
Urban	6%	5%

Source: Australian Bureau of Statistics (1991:42) (1998:82), but note that the 1986 data is for persons *above five years of age* and the 1996 data is *all* persons.

Ross (1999:55) notes that the “largest proportional increases in Census counts for Indigenous people were in the highly urbanised south-eastern states”. As this increase could well include both urban and rural areas, we suggest that there may still be a lowering effect on proportions of Indigenous people counted as speaking an Indigenous language at home, and that the decrease in proportion of enumeration of speakers to non-speakers could therefore be an effect of the overall increase in number of Indigenous people. With comparative data for 1991 and 1996 Censuses it would be possible to compare the percentage increase in use of Indigenous languages in the south-eastern Australia and in other parts of the country to see if the 33% increase in population is reflected in the increase in numbers of Indigenous language speakers.

7.1.c.i ABS Census procedures

The question in the Census asked “Does the person speak a language other than English *at home?*” and then provided a space in which the language name was to be written. As discussed above, there is some difference in the response to this question and to the question “Can you speak an Indigenous language?” We would expect that people might identify as speakers of a language even when they may not be using it everyday in the home or in other places. Conversely, speakers of a language who only use it in ceremonial or group activities may not be recorded in the Census figures. Group identity in Indigenous Australia is primarily in terms of language group. We would expect, therefore, that if the only place on a

Census form for a person's group identity to be written is the language question, we would find people identifying as *being of* a particular language group and ignoring the wording of the question which relates to *speaking* a language.

The ABS identifies the main concentrations of Indigenous language speakers as rural and remote areas, especially in the north. While this pattern undoubtedly reflects a reality of language speaker distribution, there is also a potential difference in Census methods used in different regions. In remote areas there is an option provided by ABS for questionnaires to be filled out in an interview rather than by being dropped at the household. It is difficult to judge however what impact this may have had on the results.

Variations of spellings and forms of the language names written on the Census form are allowed for up to a point. The ABS thesaurus, *Australian Standard Classification of Languages* (Australian Bureau of Statistics 1998b) lists a number of variants, but anything unrecognisable at the time of data entry was discarded, and the response was coded to either 'nec' ('not elsewhere classified') or 'nfd' ('not further defined'). For example, these are the variants provided for the language name Anindilyakwa in the thesaurus:

Alyanduwka, Alyanuwka, Andilagwa, Andiljaugwa, Andiljaukwa, Andilyakwa, Andilyaugwa, Aninailyakwa, Anindiljaugwa, Anindilyaga, Anindilyagwa, Anindilyakna, Anindilyakua, Anindilyakwa, Anindilyaugwa, Anindilyukua, Aninilyakwa, Aninyogwa, Anjndilyagwa, Awarikpa, Endiljaugwa, Enindhilyagwa, Enindiljaugwa, Enindilyagwa, Groote, Groote Eylandt, Groote Eylant, Ingura, Lamadalpu, Wani Ndiljaugwa, Wanindilyaugwa.

Ross (1999) discusses at some length issues that need to be taken into account when using Census data related to Indigenous people. She advises using percentages where both the denominator and the numerator are from one census. In particular she lists known errors in the 1996 data, and any interpretation of the data must take her caveats into account.

Further, she notes the problem of naming one language only, when we know that Aboriginal people are multilingual, especially when we consider varieties of English and creole as well as Indigenous languages. "If two or three languages were listed then only the first one in the list was coded as the main language. No secondary language information was kept. Results show that just over 2,000 Indigenous people were recorded as speaking Kriol... The ABS thinks that either the question was interpreted by respondents as referring to traditional languages only or that Kriol was written down as a second response and therefore not coded." "It appears that 2,800 Torres Strait Islanders were coded as speaking Oceanian Pidgins and Creoles, not further defined, but only 1,500 coded as speaking Torres Strait Creole. Oceanian Pidgins and Creoles are not classified as Indigenous languages whereas Torres Strait Creole is. I suspect that these people were mistakenly coded to Oceanian Pidgins and Creoles rather than Torres Strait Creole." (Kate Ross pers comm. August 2000) The under reporting of creoles (often understood as forms of English) may also be compounded by the use of the term 'language' in Census questions, since 'language' refers unambiguously to traditional Indigenous languages in the Indigenous English usage of many areas.

Hoogenraad (1992) in his comparison of his own data collection in the Barkly/Sandover region of the Northern Territory with that of the 1991 Census concludes that the ABS Census under-recorded Aboriginal people by up to 15%.

The Australian Indigenous languages listed in the 1996 Census are listed in Table 10. The terms 'nec' and 'nfd' are explained below.

Table 10: Listing of Australian Indigenous languages from the ABS Standard Classification thesaurus

(48 named languages plus two creoles) (Australian Bureau of Statistics 1998b)

8	Australian Indigenous Languages		
81	<i>Northern Aboriginal</i>	8215	Ngaatjatjara
8101	Anindilyakwa	8216	Nyangumarta
8102	Burarra	8217	Pintupi
8103	Dhaangu	8218	Pitjantjatjara
8104	Dhay'yi	8221	Walmajarri (Walmadjari)
8105	Dhuwal-Dhuwala	8222	Warumungu (Warumunga)
8106	Djinang	8223	Warlpiri
8107	Karrwa (Garawa, Garrwa)	8224	Yulparija
8108	Kunwinjku (Gunwinggu)	8225	Yankunytjatjara
8111	Maung	8299	Central Aboriginal, nec
8112	Murrinh-Patha	83	<i>Cape York Peninsula Aboriginal</i>
8113	Ngangkikurungurr	8301	Gugu Yalanji
8114	Nunggubuyu	8302	Guugu Yimidhirr
8115	Rembarrnga	8303	Kuuku-Ya'u
8116	Ritharrngu	8304	Wik-Mungkan
8117	Tiwi	8399	Cape York Peninsula Aboriginal, nec
8118	Yanyuwa (Anula)	84	<i>Torres Strait Island</i>
8199	Northern Aboriginal, nec	8401	Kalaw Lagaw Ya (Kalaw Kawa Ya)
82	<i>Central Aboriginal</i>	8402	Meryam Mir
8201	Alyawarr (Alyawarra)	85	<i>West Coast Aboriginal</i>
8202	Anmatyerr (Anmatyirra)	8501	Ngarluma
8203	Arrernte (Aranda)	8502	Nyungar (Noongar)
8204	Bardi	8503	Yindjibarndi
8205	Bunuba (Bunaba)	8599	West Coast Aboriginal, nec
8206	Jaru (Djaru)	86	<i>Eastern Aboriginal</i>
8207	Kija (Gidya)	8601	Adnymathanha (Yura Ngawarla)
8208	Kuurinji (Gurindji)	8602	Arabana (Arabuna)
8211	Kukatha (Gugada, Kokatha)	8699	Eastern Aboriginal, nec
8212	Kukatja (Gugaja)	87	<i>Australian Creoles</i>
8213	Miriwoong	8701	Kriol
8214	Mutpurra (Mudburra)	8702	Torres Strait Creole (Broken)

nec (not elsewhere classified) is a category that includes languages that were named on the Census response, but which were not part of a Census list. Thus Jawoyn is in the nec category. Here are the example entries for **8699 Eastern Aboriginal nec**:

8699 A Bool, Adjabdurah, Adjadura, Adjah, Alkaiyana, Aluri, Alury, Amberu, Awaba, Awabagal, Awabaka, Awabakal, Baagandji, Badjalang, Badjela, Badjelang, Badtala, Badyala, Bagundji, Bahkunj, Bandj, Bandjalang, Bandjalong, Bandjalung, Banjalang, Barutadura, Batjala, Bellingen Tribe, Bellingier Tribe, Berrembeel, Boanawari, Boorkutti, Bundjalung, Burgadi, Burr, Butchulla, Cabbee, Cabee, Carby, Carl, Chirpa, Chirpalji, Choolngai, Coorn, Darrook, Dhangadi, Dhangatti, Dhanggatti, Dharuk, Dharug, Dharung, Dhauhurtwurru, Djirbal, Doora, Dungutti, Dyirbal, Eacham, Eashim, Eaton, Eora, Eura, Gabi Gabi, Gaiamba, Gamilaraay, Gara Wali, Garuwali, Giabal, Gidabal, Gidabul, Gnarrinyeri, Goore, Gormjanyuk, Gournditch, Gourmjanyuk, Gubbi Gubbi, Gumbaynggir, Gundidy, Gunditjmarra, Gurnai, Gurndidy, Iora, Iyora, Jiddu Bul, Jirrabal, Junamildan, Kamilaraay, Kamilaroi, Kanai, Karawala, Karawalla, Karorinje, Karuwali, Kaurala, Kauralaig, Kaurna, Kuri Walu, Kurmai, Kurnai, Kurrawulla, Marawari, Marraa Warree, Muralag, Murawari, Muruwari, Muruwari, Nagrindjeri, Naranga, Narangga, Narran, Narrinyari, Narrinyeri, Narrunga, Negunbah, Ngadjan, Ngadjuri, Ngadyan, Ngadyuri, Ngajan, Ngarindjeri, Ngarinyeri, Ngarranjeri, Ngarrindejeri, Ngarrindhevi, Ngarrindjeri, Ngarrindjevi, Ngiyambaa, Ngiyampaa, Nuguna, Nugunu, Nukunu, Nurigeria, Paakantji, Palawa, Wagaya, Wakaya, Wamba Wamba, Wangkumara, Warra, Wemba Wemba, Wiradjiri, Wiradjuri, Wiradyuri, Yabula Yabula, Yoda Yoda, Yorta Yorta, Yubumbee, Yugambeh, Yugumbir

The total of speakers of nec languages in the 1996 Census was 5376.

nfd (not further defined) is the category for responses that do not specify a language at all. The total of nfd responses in the 1996 Census is 6646.

Apparently some parts of the Pitjantjatjara lands did not participate in the 1996 Census so there is a gap in the data for that geographic region (Indigenous Areas 1901, 1902, 1903, 1904). Other problems were found with data from Indigenous Areas 1506 (Yam Island(s)), 2203 (Wyndham-Ekimb, Oombulgurri), 3202 (Warlpiri/ Redgum/ Wallaby camps) and 3204 (Rockhole) (Ross 1999:63).

We compared the 1996 ABS data with other estimates of speaker numbers (see Table 11). In some cases there is a reasonable correspondence between the lists, for example Alyawerre and Mudburra in Hoogenraad and the Census have similar figures. On the other hand, Warumungu has nearly double the speakers in the Census than in Hoogenraad, but he distinguishes part/full speakers in a way that the Census does not.

Schmidt (1990) and the Senate Standing Committee on Education and the Arts (1984) figures should only be seen as approximate (and six or twelve years distant from the ABS timeframe). However these approximations, as the only data publicly available at the time, informed the ABS choice of languages to be enumerated. As Schmidt's data is largely based on linguists' estimates, we would expect them to be conservative in comparison to speaker self-reports, and this is true for all but 13 languages in which her figures are higher than the ABS figures.

Table 11: Comparison of speaker numbers from various sources

Language	Maningrida survey (speakers)*	ABS Census 1996	Hoogenraad (1994)		Schmidt (1990)	Senate (1984)
			Full speakers	Part speakers		
Adnyamathana		127			20+	
Alyawarr / Alyawarre		1452	1476	159	incl. with Arrente	400 - 500
Anindilyakwa		1240			1000+	1000
Anmatyerr / Anmatyerre		1224	415	24	incl. with Arrente	800
Arabana / Arabunna		21				
Arrente		3817			3000+	2000
Bardi		380			100 - 200	
Bibbulman		157			20	
Bunuba / Punuba		165			50 - 100	
Burarra	939	696			400 - 600	400 - 600
Central Torres Strait (KKY)		928			3000 - 4000	2800
Dhayyi		70				

Language	Manningrida survey (speakers)*	ABS Census 1996	Hoogenraad (1994)		Schmidt (1990)	Senate (1984)
			Full speakers	Part speakers		
Dhuwaya		3645			1700 - 2000	1600 - 1700
Djinang	271	120			200 - 300	
Garrawa		110	143	302	200+	300 - 400
Gugu Yau		21				
Gurindji		545			250	250
Guugu Yimidhirr		739			400	600
Ildawongga					with Pitjantjatjara	800 (with Luritja)
Jaru		341			250	250
Jaru		344				
Kija		408			300	300
Kukatja		580				300
Kuku Yalanji		245			300	300
Kunwinjku	632	1405			900	900
Maung	63	239			200	
Meriam Mir		317			100+	700?
Miriwoong		111			10-20	
Mudburra		115	122	131	50	
Murrinhpatha		1430			900+	800
Ngaatjatjara		993			1000+	700
Nganawongka, Ngaanyatjarra		989				700
Ngangikurunggurr		222			100-	
Ngarluma		21			100	
Nunggubuyu		356			300 - 400	300 - 400
Nyangumarta		259			700 - 800	
Nyungar		167				
Pintupi		390				
Pitjantjatjara		2121			3000+	1000
Rembarnga	171	69			150	
Ritharrngu		94			300	300
Tiwi		1832			1400	1400
Walmajarri		858			1000	1300
Warlpiri		2666			3000+	2800
Warumungu		518	279	414	200	
Wik-Mungkan		845				

Language	Maningrida survey (speakers)*	ABS Census 1996	Hoogenraad (1994)		Schmidt (1990)	Senate (1984)
			Full speakers	Part speakers		
Yankunytjatjara		73			with Pitjantjatjara	
Yanyuwa		52	85	161	70 - 100	
Yindjibarndi		332			500 - 600	600
Yulparija		96			with Ngaatjatjara	200

*The Maningrida survey provides number of speakers of an Indigenous language in the survey region, not total numbers of speakers per language.

Note that Eastern Western Desert figures are unexpectedly low, due, we expect, to the partial lack of enumeration of the Pitjantjatjara lands in the Census.

Note that the figures for Dhuwaya/ Dhuwala are problematic in that Dhuwaya is a children's language (Amery 1985) (hence the skewing towards the younger age-group).

7.1.c.ii Geographical distribution of languages

The greatest concentrations of populations speaking Indigenous languages today are in northern and central Australia, mainly in areas remote from towns.

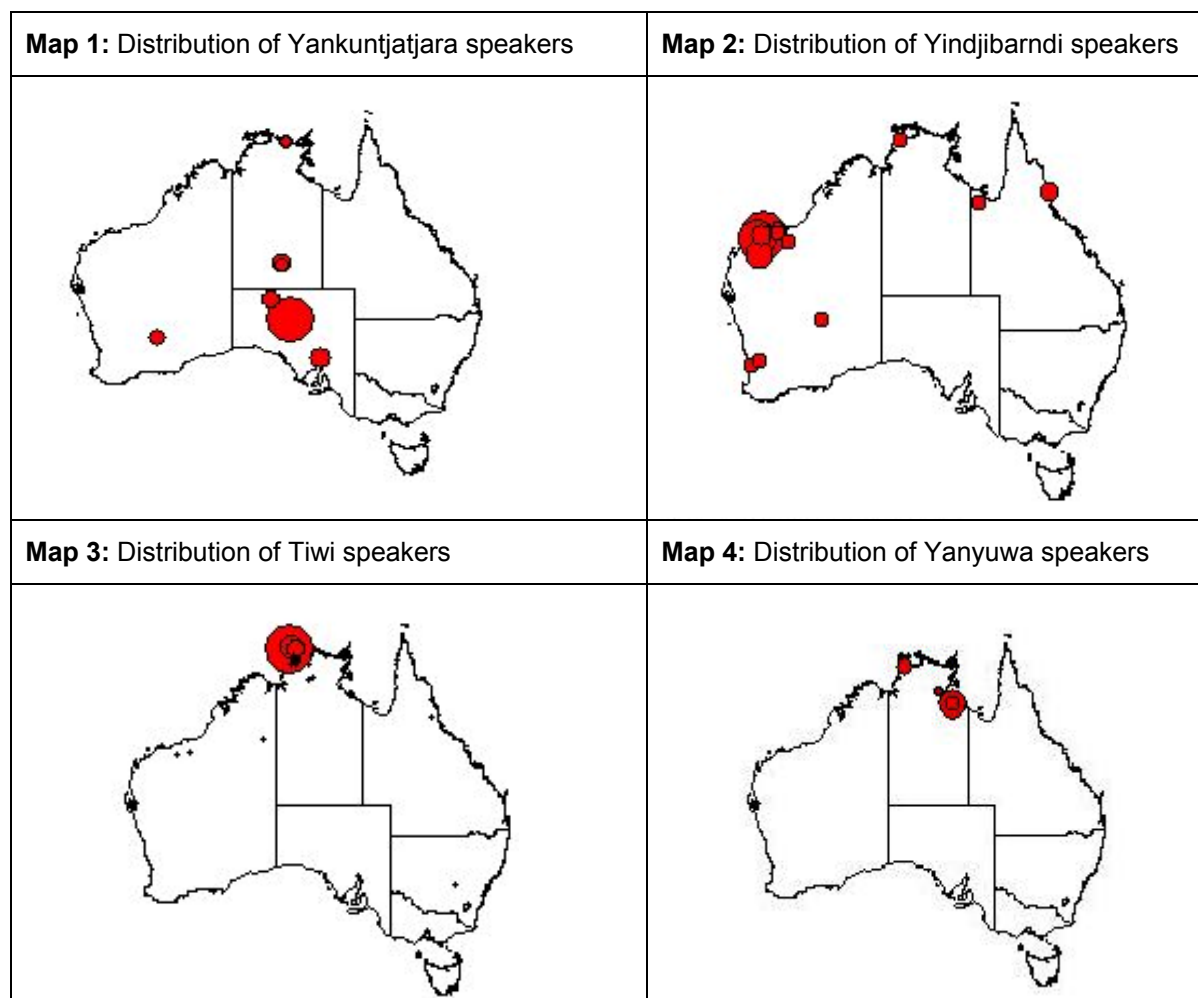
In all three countries [Australia, New Zealand and Canada], Indigenous language use was highest among older Indigenous people and those living outside urban areas (ABS 1998c, SNZ 1997, Statistics Canada 1998). In Australia, most Indigenous language speakers were concentrated in the north and west. (Australian Bureau of Statistics 1999) [See also the discussion of Canadian data in section 4.3]

Map 5 shows raw population numbers of speakers of Indigenous languages (according to the Census HL definition) by Indigenous Areas. While these numbers might seem to lack meaning in the absence of total Indigenous populations for each Area, the pattern produced is in fact largely in line with the distribution of percentages of the Indigenous population speaking Indigenous languages, shown on Map 6. Both these distributions can be correlated with the historical spread of settler populations, shown on Map 7. The number and percentage of Indigenous language speakers is generally speaking inversely related to the degree and age of white settlement in the region.

There are some exceptions to this generalisation however. Remoteness in itself does not guarantee maintenance of an Indigenous language: for instance the northern Kimberleys are extremely remote and have not been occupied by white settlers to any extent, yet the languages are in a weak condition. In contrast, Alice Springs is a centre of early white settlement yet the Arrernte language is still strongly spoken there.

Maintenance of Indigenous languages may also be threatened by a dispersal of speakers away from traditional homelands, to local towns or further afield, often for medical or legal reasons. The Census data gives locations of speakers of particular languages and we have mapped four below. This distribution is not atypical for the Census data. While there was a concentration of speakers of Indigenous languages in the immediate region associated with that Indigenous language, there was a spread of small numbers of speakers in regional and larger metropolitan centres around the country. We also provide a table (Table 12) of each Census Indigenous language and the number of ATSI regions in which it has more than ten speakers, as a rough metric of the degree of dispersal of speakers.

Maps 1-4 show the distribution of speakers of 4 Indigenous languages from 1996 Census data. These maps use larger dots to show concentrations of speakers, and relative numbers of speakers within, but not across maps. They show that there is a 'heartland' for each language, as expected, but there is a spread of speakers in other parts of the country.



Source: ABS Census 1996.

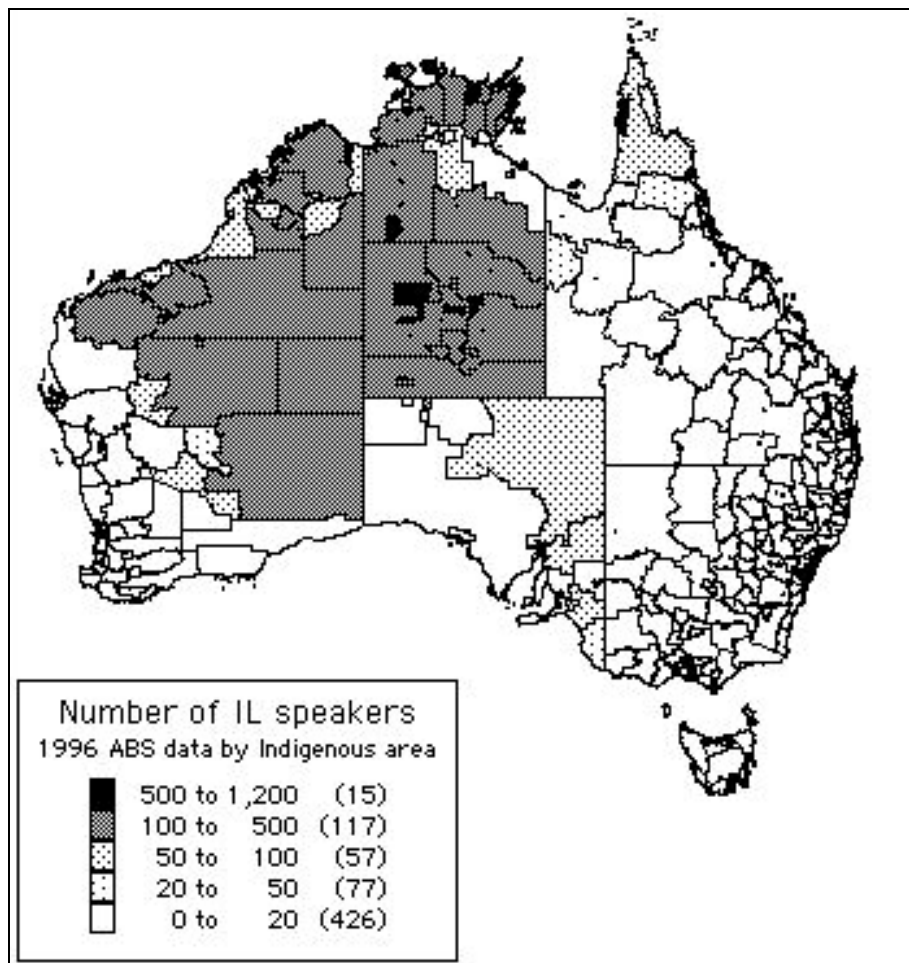
Table 12: Dispersal of speakers of Indigenous languages

Indicated by the number of ATSI regions in which ten or more speakers were recorded by the 1996 ABS Census.

8211 Kukatha (Kokatha, Gugada)	1	8215 Ngaatjatjara	3
8103 Dhaangu	2	8216 Nyangumarta	3
8104 Dhay'yi	2	8217 Pintupi	3
8107 Karrwa (Garwa, Garawa)	2	8225 Yankuntjatjara	3
8111 Maung	2	8301 Gugu Yalanji	3
8113 Ngangkikurungurr	2	8502 Nyungar (Noongar)	3
8116 Ritharrngu	2	8108 Kunwinjku (Gunwinggu)	4
8118 Yanyuwa (Anula)	2	8112 Murrinh-Patha	4
8205 Bunuba (Bunaba)	2	8117 Tiwi	4

8222 Warumungu (Warumunga)	2	8202 Anmatyerr (Anmatyirra)	4
8224 Yulparija	2	8206 Jaru (Djaru)	4
8303 Kuuku-Ya'u	2	8304 Wik-Mungkan	4
8501 Ngarluma	2	8201 Alyawarr (Alyawarra)	5
8503 Yindjibarndi	2	8302 Guugu Yimidhirr	5
8601 Adnymathanha (Yura Ngawarla)	2	8401 Kalaw Lagaw Ya (Kalaw Kawa Ya)	5
8602 Arabana (Arabuna)	2	8402 Meryam Mir	5
8101 Anindilyakwa	3	8212 Kukatha (Gugaja)	6
8102 Burarra	3	8221 Walmajarri (Walmadjari)	6
8106 Djinang	3	8105 Dhuwal-Dhuwala	8
8114 Nunggubuyu	3	8204 Bardi	8
8115 Rembarnga	3	8208 Kuurinji (Gurindji)	8
8207 Kija (Gidya)	3	8203 Arrente (Aranda)	9
8213 Miriwoong	3	8218 Pitjantjatjara	9
8214 Mutpurra (Mudburra)	3	8223 Warlpiri	10

Map 5: Spread of speakers of Indigenous languages by absolute numbers



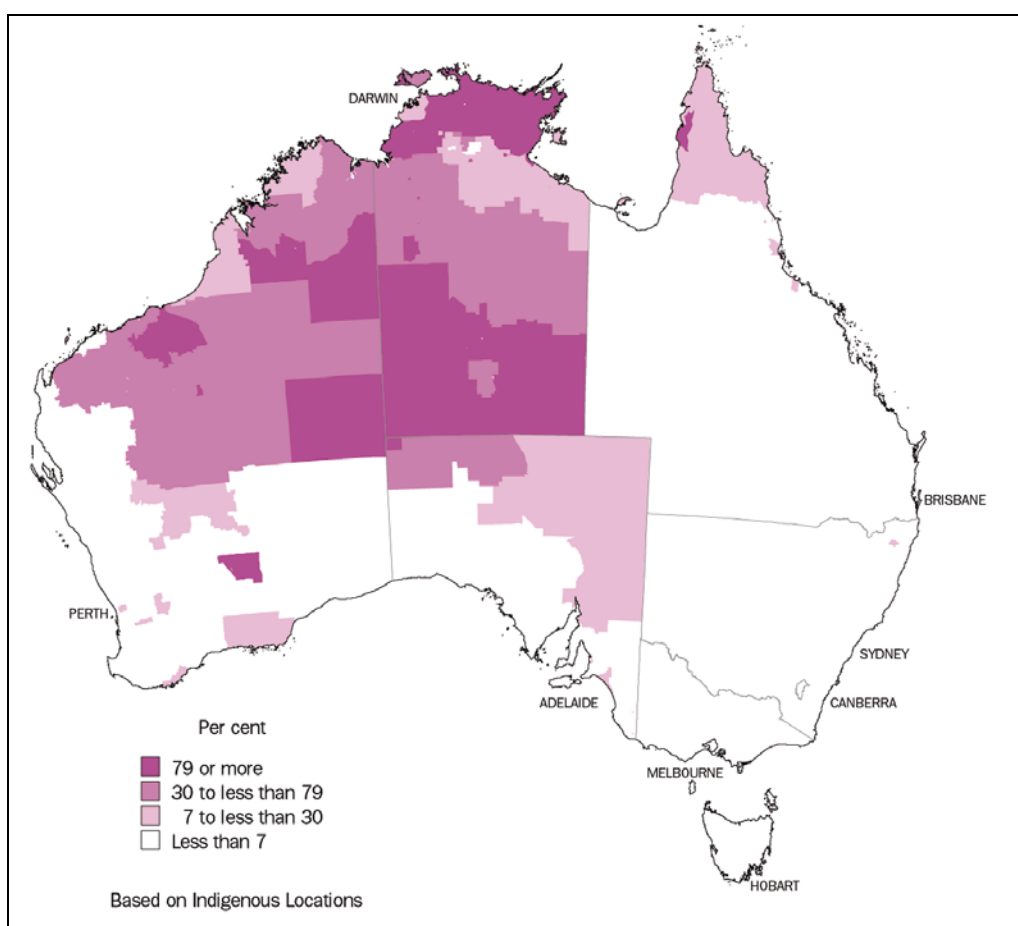
Source: ABS Census 1996, including nec and nfd categories.

7.1.d Other survey data

In 1997 the Western Australian Aboriginal Affairs Department conducted a survey of housing needs of Aboriginal people in WA which included a question about which languages are spoken in a community. They have kindly provided us with their results which list language names by community. However, their aim was to establish languages spoken by communities, rather than enumerating speakers of languages and so we cannot use their data here.

We are also aware of several language surveys conducted in response to the ATSIIC Needs Survey. We have obtained a copy of the Maningrida language survey (Bawinanga Aboriginal Corporation 1996) and incorporated their results into the database. The Kimberley Language Resource Centre and the Katherine Regional Aboriginal Language Diwurruwurru-Jaru also sent us their responses to the Needs Survey, which are referred to elsewhere in the paper and parts of which will be incorporated into our Indigenous language Database. As ATSIIC have not released the Needs Survey results, we cannot include them in this paper.

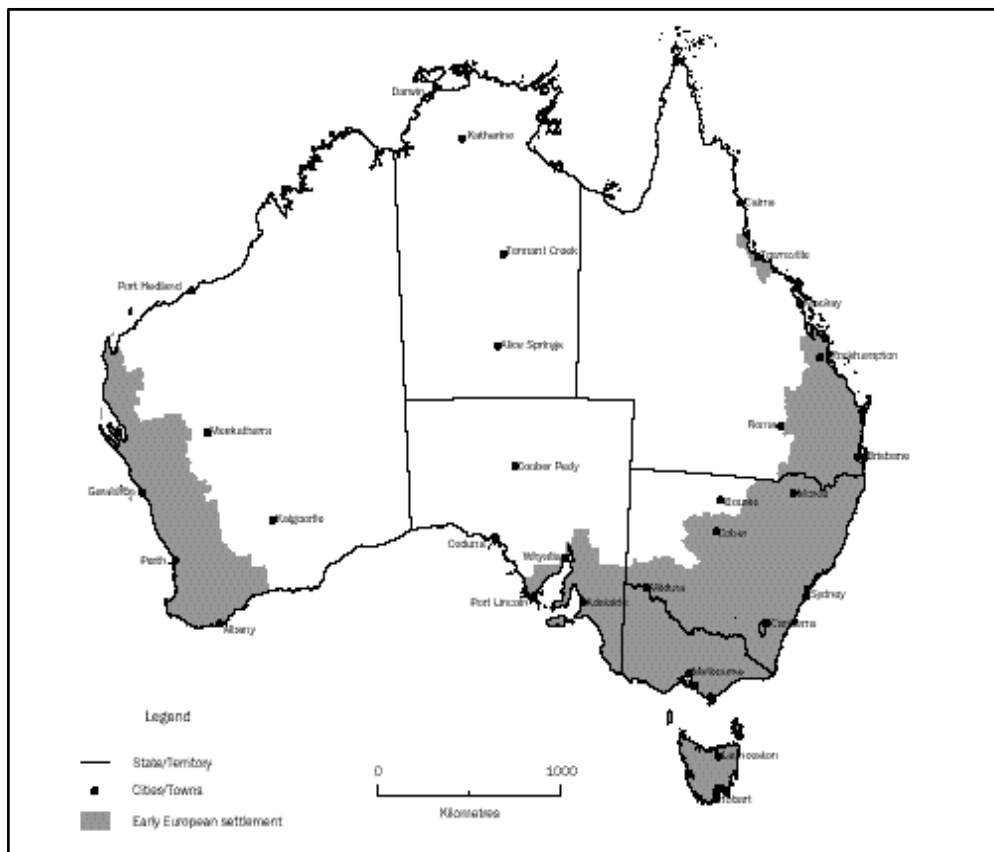
Map 6: Proportion of Indigenous people who spoke an Indigenous language or creole, 1996



Source: ABS 1998a.

Comparison with the distribution of speakers of Indigenous languages (Map 6) shows that few Indigenous language speakers are located in regions of long-term European settlement (see Map 7).

Map 7: Early settlement of Europeans in Australia (around 1860)



Source: Ross 1999.

7.1.e Gender

While not one of the indicators, it is important to consider whether gender is a factor in use of Indigenous languages. There does not appear to be a significant difference in the number of men or women reporting to be speakers of Indigenous languages. The total number of male Indigenous language speakers in the 1996 Census is 20,833 (12.06% of the Indigenous population). Female Indigenous language speakers in the 1996 Census number 21,552 (12.09% of the Indigenous population). It is reported that there are more female than male speakers of Maori in New Zealand under 20 years old, and more male speakers in older age groups (www.stats.govt.nz). This may relate to informal observations in Australia that female networks maintain Indigenous languages somewhat longer than males. Given the importance of females in primary care-giving of young children, this is potentially a key issue. In New Zealand women have been central to the *Te Kohanga Reo* or ‘Language nests’ movement for introducing pre-schoolers to Maori. This concept is being adopted in some places in Australia (Kimberley Language Resource Centre Newsletter October 2000).

Local surveys may well provide more information about the role of gender in language maintenance.

7.2 Number of people in age group who identify as knowing each Indigenous language; proportion of total identifying as Indigenous [Indicator IL.2]

Comparison of age-related data from the 1986 and 1996 censuses is presented in Chart 3. It should be noted that the data available for this analysis from the 1986 Census only listed speakers of five years and older, so the comparison with 0–14 year olds from the 1996 data is with 5–14 year olds in the 1986 data. As both are given in percentages of the relevant age group it is felt that the comparison is valid.

Comparison of data over time can give an indication of the speed of language loss. Chart 3 shows a clear decline in the national number of people who claim to speak an Indigenous language at home, for all age-groups. It also shows the trend for fewer younger people to be Indigenous language speakers, consistent with a general trend to language shift away from Indigenous languages. This is shown more clearly in the regional breakdown of 1996 figures presented below.

Chart 3 plots two censuses ten years apart, and also has the bars of the graph ten years apart in age (at least for the two youngest groups). Since we are dealing with basically the same population, we might expect the pattern of one age-group in 1996 to reflect the pattern of the age-group ten years younger in 1986. This is the case: the 5-14 and 15-24 age groups have almost level percentages in 1986, and ten years later in 1996, the 15-24 and 25-44 age groups again have almost level percentages.

We should note that the figure for speakers in the 5-14 group in 1986 was 16% but that the equivalent group in 1996 had dropped to 14.46%, about 2.5% less. This represents attrition in Indigenous language speakers of close to 16% in that age-group in that decade.

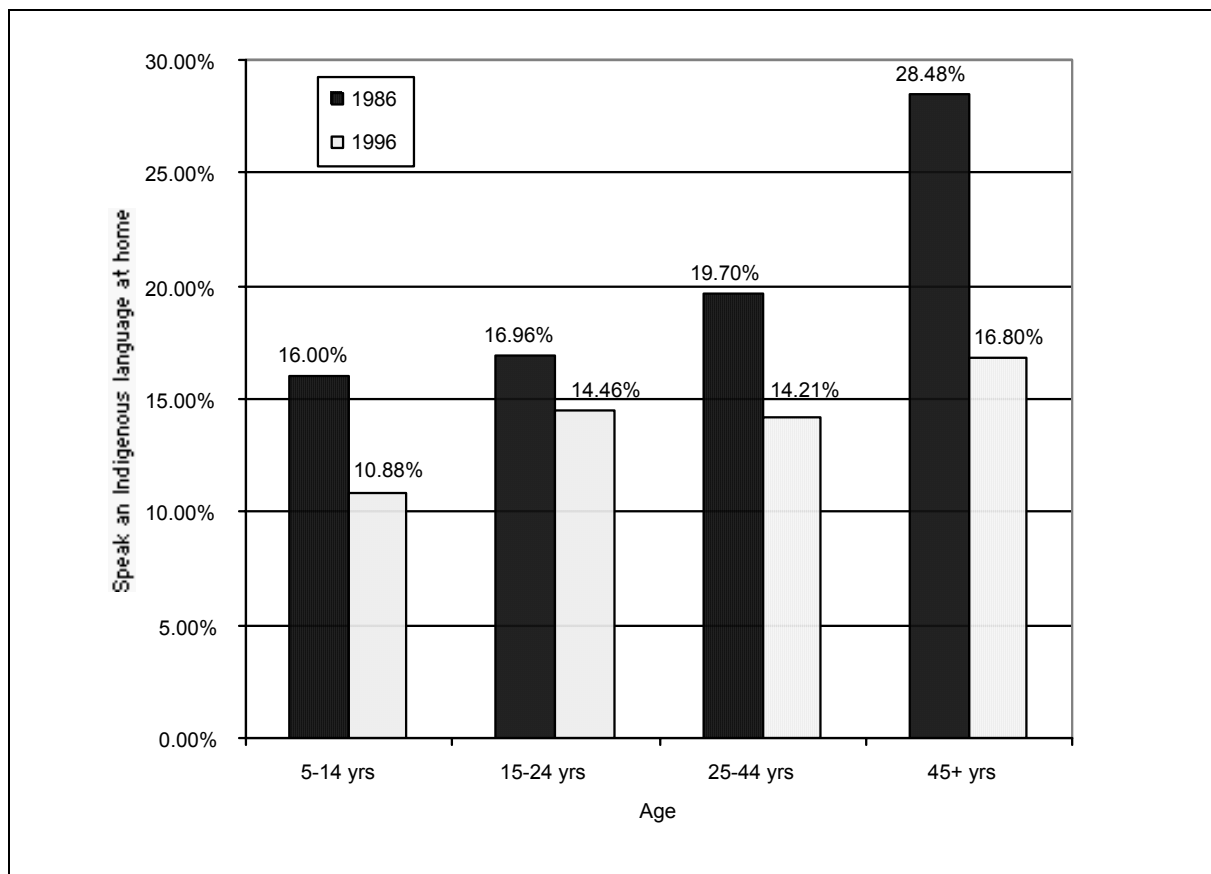
The 25-44 age-group of 1996, representing a 20 year band, is not comparable strictly to the 1986 15-24 group. Once again though, there is a similar drop, of 2.8%, which would be 16.5% attrition. The 35-44 age-group of 1996 would be matched to the 25-34 age-group of 1986 which is not shown. However the figure for 25-44 for 1986 is relatively high, at 19.7% so it is unlikely that the attrition for either the 25-34 or 35-44 groups at 1996 is any less than 16%.

The 25-44 age-group in 1986 can be roughly matched to the 45+ age-group in 1996. Once again there is a drop from 19.7% to 16.8% of 2.9% or close to 15% attrition. Since this figure is stretched over 20 years, and similar figures for attrition in younger age groups relate to 10-year periods, it seems clear that the attrition is accelerating.

In the youngest group in 1996, the figure is much lower at 10.88% than the previous equivalent group at 16%, indicating a failure of transmission between generations of 32%. If we combine the attrition rate (even assuming that it does not continue to accelerate) with the failure of transmission to the youngest generation we are looking at a decline in percentage of speakers of around 40% per decade at present rates. This will bring the percentage of people who speak Indigenous languages at home to around 1% of the Australian Indigenous population in 40-50 years time. In that condition nearly all the languages will be gone and those that survive will be at the brink of extinction, since it is doubtful that languages can be sustained at that level more than a few years in a few isolated pockets.

Of course this is merely a projection of current trends and is not destined by fate to occur in that way. The decline may level out or even be reversed, but that is unlikely to happen without thoughtful and concerted action.

Chart 3: Comparison of 1986-1996 Census data on Indigenous language use in the home



Source: ABS 1986, 1996.

Chart 3 should be read in conjunction with the discussion under indicator IL.1 on the unexpectedly high Indigenous population figures in the 1996 Census, especially as the number of speakers rose 30% in absolute terms from 36, 078 in 1986 (ABS 1991:42), to 46,811 in 1996 (ABS 1998:85). A projection of the increase in raw numbers of Indigenous language speakers of this order into the future would tend to produce a more optimistic picture than the projection of proportions carried out above, with numbers of Indigenous language speakers reaching around 150,000 in 40-50 years time.

The increase in Indigenous population may largely be accounted for by a surge in self-identification of people as Indigenous in the 1980s to 1990s – an event that is unlikely to be repeated on that scale. This probably did not contribute significantly to the rise in Indigenous language speaker numbers, although the increase in fertility and the decrease in infant mortality, which does lie behind some of the increase in the period, may likewise be a surge based on better health care and nutrition which will not be repeated. There may be a component of the increase in apparent Indigenous language speaker numbers, which is related to pride in cultural heritage, rather than actual increase in everyday or thorough use of a language. As loss of older language speakers and attrition eats into the speaker numbers as the present generation grows up, and this is magnified as the languages are not transmitted, it is

doubtful if the Indigenous language speaker population increase will keep pace in future with that recorded in 1986-1996.

7.3 Number of traditional languages at each recognised stage of inter-generational dislocation [Indicator IL.3]

Indicator IL.3 deals with a scale of intergenerational disruption of language transmission as formulated by Fishman (as the Graded Intergenerational Disruption Scale ‘GIDS’; 1991) and modified by McKay (1996). This mixes a typology of stages in language shift with recommended measures for reversing language shift (RLS) (see McConvell 1992 for criticism of such conflation). Fundamentally what is at stake here is to classify the situation of a language or community according to a scale of ability in the Indigenous language in different age groups. What is most desirable is to be able to produce a picture of this situation from existing data since proficiency testing lies beyond what can be done in this project.

Canadian studies of language loss have assigned a continuity or vitality index to languages on the basis of contrast between ‘mother tongue’ and ‘home language’ percentages and this can be done with age groups also. Another way used in Canada is to assign a rating 0 – 4 to people depending on where they fit on a profile of ability.

Census data in Australia only gives a ‘yes’ or ‘no’ answer on whether someone speaks an Indigenous language at home, without any gradations of ability, any distinctions between understanding and speaking, or even a more general category of semi-speaker. Information from regional sources, ethnographic and regional surveys can supplement this information and add considerably more to the picture at least for some areas, especially if this involves local Indigenous researchers (Dalton et al. 1995). Testing of levels of Indigenous language proficiency in communities is feasible to provide an even more fine-grained appreciation of the changes in language situation but has not been carried out anywhere to our knowledge (McConvell 1994). Previous surveys have referred to levels of ability or proficiency in age groups but using only vague criteria like ‘speaks well’ or ‘speaks fluently’ which are hard to compare reliably across different surveys (McConvell 1994:302).

A further complication is how radical changes in languages are to be assessed in a proficiency framework. The children’s language may be so different from the old people’s as to be hard for each to understand, and is often condemned by the old people as ‘baby talk’ or ‘rubbish language’. These situations seem common in Australia (Lee 1983, Dalton et al. 1995; also reported in a response to this survey by the Northern Territory education department for Burarra and Ndjebbana in Maningrida) but can be analysed as language change rather than language shift, or even symptoms of language endangerment or impending language shift.

Also the ‘semi-speaker’ situation – in which numbers of people, typically in the younger generation speak the language less well (Dorian 1998, Schmidt 1990) – does not inevitably accompany language shift. Marmion (response to this survey) points out that while some younger speakers of the endangered language Wajarri (further discussed later in this section) have lesser proficiency, others do not. While quality of transmission is a valid issue, the key is the extent to which transmission occurs at all, and this is another reason (apart from greater feasibility) that simple proportions of speakers might be chosen in preference to some proficiency metric. In future it might be possible to implement a metric (e.g. counting ‘semi-speakers’ as 0.5). For now it is probably better just to count ‘speakers’ on the basis of self-report in the census, but perhaps consider for later some simple metric such as defining (full)

‘speakers’ as those who can carry on a conversation in the language (as in the Canadian, New Zealand and other Census instruments).

McConvell (1986) suggested the following typology for the stage of disruption of Indigenous languages:

Type 1

Adults and children speak the target language most of the time amongst themselves.

Type 2

Adults understand the target language and speak it fluently and quite frequently (although not necessarily to the children); children understand the target language to some degree but do not necessarily speak it.

Type 3

Old people may speak the language sometimes; middle-aged adults may know some of the language; children neither speak nor understand the language except for a few significant words.

Wurm (1996:25) (see also section 4.4a above) has a five-fold categorisation of degree of language endangerment:

1. autochthonous language not in danger
2. endangered language
3. seriously endangered language
4. moribund language
5. extinct language

This classification conforms to both Kinkade’s (1991) work in Canada which has been followed in most recent Canadian work, and roughly to the five-fold classifications in Schmidt (1990) and Dixon (1991) for Australia. Wurm suggests a definition of ‘endangerment’ whereby any language which is not learnt by 30% of the children of the community should be considered endangered (Wurm 1996:1). Krauss (1996) also uses a four-fold classification (which would have five categories if ‘extinct’ were added), based on which age groups speak the language, and applies this to the United States:

- Category A, still being learned by children, 20 languages, 12%
- Category B, still spoken by the parental generation, 20 languages, 12%
- Category C, spoken by grandparents and up only, 70 languages, 40%
- Category D, spoken by only a few very oldest, 55 languages, 36%

Bearing the generational divisions used by previous authors in mind, probably the easiest way to operationalise indicator IL.3 with our present data is to use ‘generational’ (20 year) age groups and simply have ‘speaks’ vs. ‘does not speak’ in each age group cell. ‘Speaks’ will be construed to mean that a certain high proportion (we recommend greater than 70%, to conform to Wurm’s suggestion) of that age group speaks the language as the main home language (to conform to the Census question), with ‘speaks’ remaining undefined as to level of ability. Where possible the criterion could be interpreted to mean ‘carries on conversations’, which implies some level of productive proficiency in grammar and lexicon, and at least a moderate level of understanding. If and when systematic data on proficiency becomes

available this could be incorporated into a more elaborate instrument. For the moment, Table 13 below represents our recommended scale of language endangerment. Table 14 is recommended schema for an indicator for language revitalisation.

Table 13: Recommended language endangerment indicator

Age	Strong	Endangered (Early Stage)	Seriously Endangered	Near-Extinct	Extinct
5-19	speak	don't speak	don't speak	don't speak	don't speak
20-39	speak	speak	don't speak	don't speak	don't speak
40-59	speak	speak	speak	don't speak	don't speak
60+	speak	speak	speak	speak	don't speak

Schmidt calls languages which are spoken by all age groups 'strong' so this is roughly equivalent to 'strong' in this scheme, (or 'not in danger' in Wurm's terminology). Her 'threatened' is a combination of the categories 'endangered (early stage)' and 'severely endangered'. 'Near-extinct' ('moribund' according to Wurm) and 'extinct' are also the same as her terms, but Schmidt aggregates the figures for these two.

This is an implicational scheme that assumes that language shift will proceed in a regular fashion across age groups. We have data from some languages and regions that do not strictly conform to this picture, e.g. where there is apparently a lesser proportion of middle aged speakers than young speakers. If this trend is strong enough to justify saying that language shift is being reversed and that there is a younger group of 'speakers' than 'non-speakers' then a further set of terms may need to be introduced to deal with this scenario (cf. Norris's 1998 discussion of how to capture language revival using an 'index of ability'). We suggest the terms usually related to intervention schemes (McKay 1996) below, although it is doubtful that any of these will be needed to deal with the data we presently have to hand.

Table 14: Recommended indicator of language revitalization

AGE	REVITALISING			RECLAIMING			
	(middle stage)	(early stage, adult led)	(early stage, child led)	(late stage)	(middle stage)	(early stage, adult led)	(early stage, child led)
0-19	speak	don't speak	speak	speak	speak	don't speak	speak
20-39	speak	speak	don't speak	speak	speak	speak	don't speak
40-59	don't speak	speak/don't	speak/don't	speak	don't speak	speak/don't	don't speak
60+	speak	speak	speak	don't speak	don't speak	don't speak	don't speak

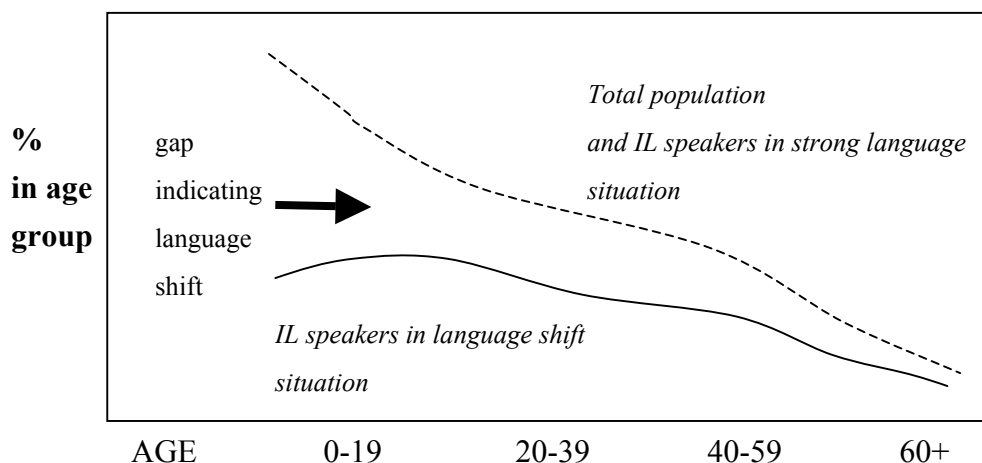
Another potential measure of endangerment is the difference in percentage of speakers between the generations, as modeled by the age-groups used above. While we have data on

the proportion of speakers in each age group for regions (provided by the ABS census), we do not have such data for individual languages except for a few that have been supplied by linguists about language groups they know well. As Census data does not report on group identity in any way other than language identity, it is not possible to state how many people who identify as “x” actually speak “x-ish”.

However the percentage of speakers in each age group over the total population of speakers of a language may also be used to measure roughly the degree of language shift in the younger speakers and thus the level of endangerment.

In order to do this it is necessary to assume that the age profiles of Indigenous populations as recorded by the Census either generally in Australia, or more specifically in the region where the language is spoken, also roughly represent the age profile of the language. If the language speaking percentages of younger age-groups are significantly lower than the general population percentages expected, then the inference is that this proportion of the age-group has stopped speaking the Indigenous language – i.e. language shift is underway to that extent.

Chart 4: Age groups in endangered and strong language situations



According to the schemes discussed above, putting a language in the ‘endangered (early stage)’ category would involve a judgement or finding that less than 70% of the people in the youngest age category (5-19) speak the language. Census data does not provide this figure directly.

Another way would be to measure the discrepancy as shown on the above hypothetical graph (Chart 4) between the expected distribution of age groups and the distribution of language speakers. A variation on this method would be to construct an indicator of language shift/endangerment from the shape of the curve of percentages of language speakers. With a strong language, speaker numbers increase as age decreases because they follow the shape of the age pyramid, which is strongly skewed towards the young in Indigenous Australian populations and contrasts strongly with the general Australian population in that regard (ABS 1999a:12-13; the median age of the Indigenous population is 21 whereas that of the general population is 34). With a few specific languages where the region is almost coincident with the language speaking area, we are able to model the percentages of speakers in the total population in age-groups reasonably realistically. The cases discussed below (Tiwi and

Anindilyakwa) are both 'strong' languages so they provide real instances of the upper curve in the hypothetical diagram above.

In a language undergoing shift, however, the numbers of speakers in the younger generation do not keep up with the total population figures.

Say the average difference between the 0-19 and 20-39 age groups proportion of the total population in a hypothetical community undergoing language shift from an Indigenous language is 10% - between about 40% in the 0-19 group and 30% in the 20-39 group (these are also the kinds of break-ups of speakers we generally find with relatively 'strong' languages like Tiwi and Anindilyakwa discussed in the Case Study below). Let us assume further that Indigenous language speakers in the 20-39 group make up 100% of that age group. If the percentage of speakers within the total speaker population, within each age group, between the 20-39 and 0-19 groups, does not rise but remains the same then the proportion of speakers in the 0-19 group is 30/40 of the total age-group, or 75%. This is just above the 70% used above as the threshold of endangerment in the youngest generation.

So one measure (on the assumption that Indigenous population profiles are roughly similar) could be that if the percentage of speakers within the whole speaker population drops between the 20-39 and 0-19 age groups then language shift can be said to be occurring. The index for endangerment then is the ratio of the 0-19 to 20-39 speaker percentages: if it is 1 or less then the language might be said to be endangered; if the index is above 1 then it is not put in that category.

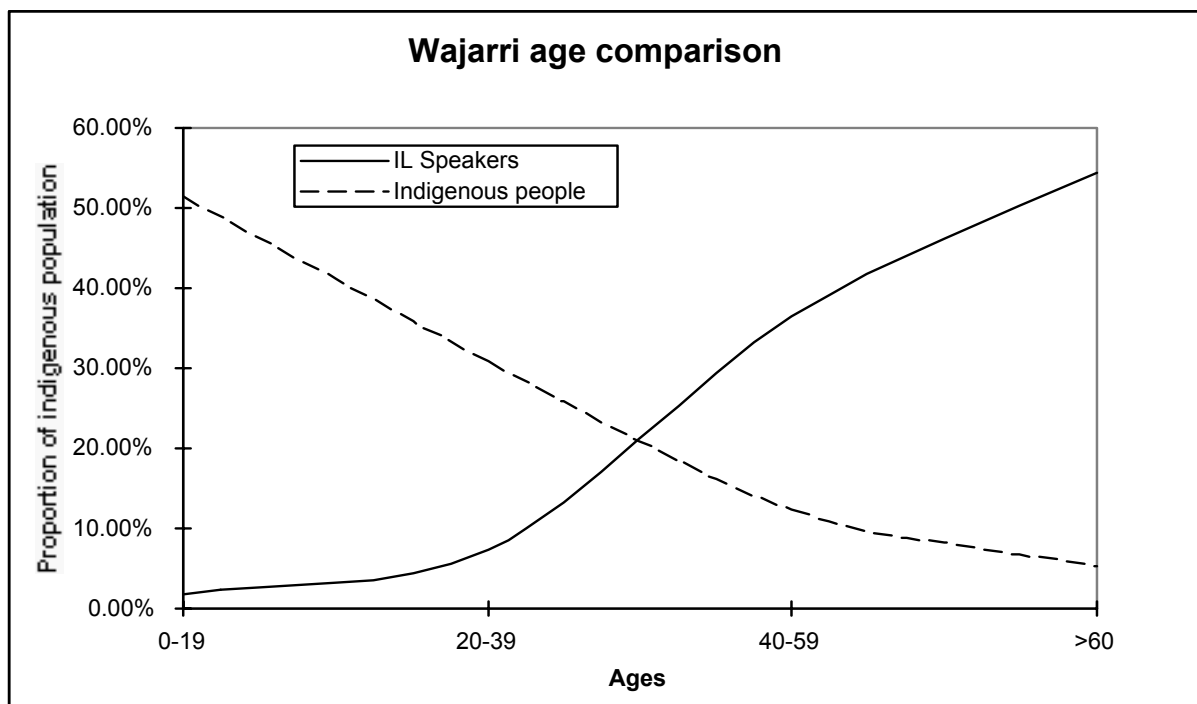
<p style="text-align: center;">Age-profile index of language endangerment of Indigenous language</p> $\frac{\text{number of Indigenous language speakers in 20-39 age-group}}{\text{total number of Indigenous language speakers}}$ <p style="text-align: center;">divided by</p> $\frac{\text{number of Indigenous language speakers in 0-19 age-group}}{\text{total number of Indigenous language speakers}}$
--

This is obviously a pragmatic, and somewhat conservative, index, and one which only works with population pyramids like those of present-day Indigenous people in Australia. Clearly if the 20-39 age group are not 100% speakers but less, even endangerment indices (of the kind outlined) above 1 might indicate endangerment since the percentage of the youngest age group speaking the Indigenous language could be below 70% of the total population identifying culturally with the Indigenous language in question. Until more sophisticated indices can be worked out with better data, however, it will be used here.

Let us take a real example where we have speaker numbers (the language Wajarri in Western Australia, reported by the linguist Doug Marmion). Wajarri has been noted as a language in severe decline for some time (Douglas 1981:199). Chart 5 below shows the radical decline of speaker numbers over our four age groups as recorded by Marmion (dotted line). The other line (solid) shows the total population ratios for the Geraldton (Yamatji) region in which

Wajarri is spoken, to give a rough guide to age pyramid of the Wajarri population (speakers and non-speakers).

Chart 5: Decline of Wajarri plotted against regional population



Source: Marmion (pers comm.).

In this case there is a radical decline in speaking Wajarri in middle and younger age groups. Not only is the transmission rate less than 100% between the youngest two age groups, it is also significantly less than 100% between the 40-59 age group and the 20-39 age group. It would be justifiable on this basis to call this language not just ‘endangered’ but also ‘seriously endangered’. Putting into practice this kind of refinement to the proposed index needs more work and is not carried out in this paper.

We may use this proposed age-profile index of language endangerment to reassess the classification of Australian Indigenous languages by Schmidt (1990). The index is shown together with age-group data in Table 15. Use of this endangerment index with 1996 speaker age percentages reveals that 3 of the 20 languages classified ‘strong’ in 1991 fall below the 100% cut-off point: Gugu Yalanji (61%) far below and Yindjibarndi (97%) only marginally so.

In Table 15 we also present the analysis of age-group data for the kind of indicator outlined above, and for a possible type of indicator of endangerment using average or median age of speakers. We took the ABS data for each named language and combined the age-data into four groups, 0-19, 20-39, 40-60, >60 years old. We then expressed the totals for these groups as a percentage of the whole number of speakers for each language. The Census does not give us the data to express speakers of an Indigenous language as a proportion of the Indigenous population (but it does tell us about speakers of Indigenous languages by region as a proportion of the total Indigenous population; this is analysed in the case study below). We excluded languages that totaled less than 30 from these calculations, partly because the

public Census data assigns 0 or 3 to any figures of 1 or 2 (to ensure privacy) and thus figures less than 12 (given 4 age-groups) are not reliable. Languages excluded on this basis were 8602 Arabana (Arabuna), 8501 Ngarluma, 8303 Kuuku-Ya'u and 8103 Dhaangu.

We would expect more older speakers to be represented as the language declines in use, but in fact we find a larger proportion of younger speakers in Table 15. Two possible explanations are:

1. Reporting for the Census is done by adults, who may say their children speak a language at home when in fact they do not, and;
2. Life expectancy for Indigenous people is not high, so that the older age-range actually represents very low numbers (as can be seen in the Case study below).

Note that where Schmidt has a super category, like 'Western Desert, eastern' which corresponds to several named languages in the ABS data, we have placed those entries after the main heading, italicised those entries and included their figures in the main category.

In this table we have compared Schmidt's (1990) estimates of numbers of speakers of what she calls the twenty strong Indigenous languages, with the 1996 Census results for the same languages to show what changes there may have been in the intervening time period. We have also provided an age break-up of the Census results in order to provide an indication of the loss of intergenerational balance in the number of speakers. In a strong language situation the number of speakers in an age group conforms to the general Indigenous age-cohort, so that if there are 50 people in a particular age-group we would see 50 speakers of the Indigenous language represented in that group. See the case study on Tiwi and Anindilyakwa (below) for a typical age distribution for two of the 'strong' languages.

The column titled 'endangerment index' shows the ratio of 0–19 age-group speakers divided by 20–39 age-group speakers. The indices in bold are those indicating an 'endangered language' because the index is less than 1; the other languages are 'strong'.

Table 15: Comparison of Schmidt's figures with 1996 Census data, and the age-profile endangerment index

Those languages above the dividing line are considered 'strong' in Schmidt's 1990 report.

Language	No. of speakers from 1996 Census	No. of speakers from Schmidt (1990)	Endangerment index	Percentage of total speakers aged 0-19	Percentage of total speakers aged 20-39	Percentage of total speakers aged 40-59	Percentage of total speakers aged 60 and over
Strong Indigenous Languages in 1990							
Anindilyakwa	1224	1000+	1.24	45.97%	37.10%	14.11%	2.82%
Arrernte total	6493	3000+	1.27	43.83%	34.46%	14.77%	6.93%
8203 Arrente (Aranda)	3817		1.24	43.57%	35.13%	15.43%	5.87%
8202 Anmatyerr (Anmatyirra)	1224		1.23	41.58%	33.82%	15.60%	8.99%
8201 Alyawarr (Alyawarra)	1452		1.35	46.35%	34.44%	13.29%	5.92%
Burarra	702	400 - 600	1.49	49.14%	33.05%	13.79%	4.02%

Language	No. of speakers from 1996 Census	No. of speakers from Schmidt (1990)	Endangerment index	Percentage of total speakers aged 0-19	Percentage of total speakers aged 20-39	Percentage of total speakers aged 40-59	Percentage of total speakers aged 60 and over
Central Torres Strait (KKY)	929	3000 - 4000	1.19	38.15%	32.11%	18.97%	10.78%
Dhuwaya / Dhuwala	3648	1700 - 2000	1.4	49.19%	35.12%	13.36%	2.33%
Jaru (Djaru)	344	250	1.48	43.02%	29.07%	16.86%	11.05%
Gugu Yalanji	256	300	0.61	25.71%	42.45%	22.45%	9.39%
Kunwinjku	1400	900	1.28	45.55%	35.52%	13.52%	5.41%
Maung	234	200	1.08	39.75%	36.82%	19.67%	3.77%
Murrinhpatha	1434	900+	2	56.85%	28.39%	11.61%	3.15%
Nyangumarta	263	700 - 800	1.1	38.22%	34.75%	13.13%	13.90%
Tiwi	1822	1400	1.07	40.99%	38.37%	16.92%	3.71%
Warlpiri	2667	3000+	1.25	42.99%	34.43%	14.63%	7.95%
Western desert, Eastern total	2584	1000+	1.02	36.20%	35.64%	19.84%	8.31%
8218	2121		1.04	38.90%	37.29%	17.35%	6.46%
<i>Pitjantjatjara</i>							
8217 Pintupi	390		1.2	42.31%	35.38%	16.15%	6.15%
8225	73		0.8	27.40%	34.25%	26.03%	12.33%
<i>Yankuntjatjara</i>							
Western Desert, Western total	1669	3000+	1.12	39.81%	35.49%	14.52%	10.17%
8215	993		1.19	41.59%	34.84%	16.41%	7.15%
<i>Ngaatjatjara</i>							
8224 Yulparija	96		0.94	35.42%	37.50%	12.50%	14.58%
8212 Kukatha (Gugaja)	580		1.24	42.41%	34.14%	14.66%	8.79%
Wik Mungkan	845	900-1000	1.14	39.64%	34.91%	18.46%	6.98%
Yindjibarndi	324	500 - 600	0.97	34.94%	35.84%	21.08%	8.13%
Threatened Indigenous Languages in 1990							
8118 Yanyuwa (Anula)	51	70-100	0.62	25.49%	41.18%	19.61%	13.73%
8115 Rembarrnga	69	150	0.94	42.03%	44.93%	13.04%	0.00%
8104 Dhay'yi	70		1.32	47.14%	35.71%	8.57%	8.57%
8116 Ritharrngu	94	300	1.32	35.11%	26.60%	24.47%	13.83%
8107 Karrwa (Garwa, Garawa)	110	200+	0.59	20.91%	35.45%	27.27%	16.36%
8213 Miriwoong	111	20-Oct	1.39	47.75%	34.23%	15.32%	2.70%
8214 Mutpurra (Mudburra)	115	50	0.67	26.96%	40.00%	20.87%	12.17%
8106 Djinang	120	200-300	1.09	41.67%	38.33%	15.00%	5.00%
8601	127	20+	0.68	29.92%	44.09%	21.26%	4.72%
Adnymathanha (Yura Ngawarla)							
8205 Bunuba (Bunaba)	165	50-100	0.83	33.33%	40.00%	12.73%	13.94%
8502 Nyungar (Noongar)	167	20	1.28	46.11%	35.93%	11.38%	6.59%
8113	223	100-	1.37	47.98%	34.98%	10.76%	6.28%
Ngangkikurungurr							
8402 Meryam Mir	317	100+	0.54	17.03%	31.55%	37.54%	13.88%
8114	356	300-400	1.22	39.61%	32.58%	18.82%	8.99%

Language	No. of speakers from 1996 Census	No. of speakers from Schmidt (1990)	Endangerment index	Percentage of total speakers aged 0-19	Percentage of total speakers aged 20-39	Percentage of total speakers aged 40-59	Percentage of total speakers aged 60 and over
Nunggubuyu							
8204 Bardi	380	100-200	0.66	23.42%	35.26%	25.53%	15.79%
8207 Kija (Gidya)	408	300	1.39	48.53%	34.80%	8.33%	8.33%
8222 Warumungu (Warumunga)	518	200	1.01	37.26%	36.87%	17.95%	7.92%
8208 Kuurinji (Gurindji)	545	250	1.43	47.52%	33.21%	14.50%	4.77%
8302 Guugu Yimidhirr	739	400	1.3	42.35%	32.61%	16.78%	8.25%
8221 Walmajarri (Walmadjari)	858	1,000	0.87	31.70%	36.36%	22.03%	9.91%

While it has not been possible to analyse all the 70 languages falling within Schmidt's 'threatened' category, of the 20 examined, 11 actually come up as having an index higher than 1 and 6 significantly higher than 1 (1.30 or more). One might therefore consider if these should be moved into the 'strong' category pending further investigation. It may be that these languages were incorrectly categorised in the first place, or perhaps some have undergone a revitalisation recently with more children speaking them. If the latter is the case it is worth further study to see what is causing this phenomenon.

However there have to be doubts about whether these languages, classified as threatened, but exhibiting 'endangerment indices' above 1, are in fact now 'strong'. One of us (McConvell) knows the situation of Kija speakers (index 1.30) well as of 10 to 15 years ago. At that time few children spoke Kija except for a few words although many understood it to a certain extent. In answer to the question about what language is spoken at home, responses could truthfully be Kija, since some people at home would speak it at least some of the time. At the same time identification with and loyalty to the language is strong, and there is a language program in the school, so parents might be more inclined to class their children as Kija speakers. In the same area, Miriwoong has an even higher index (1.39) but from local observation it is evident that this language is in an even weaker position than Kija. With Kuurrinji, also in the same region and studied by McConvell and Gurindji researchers, the high index (1.43) may reflect a local perception of continuation of the language by the children, although these children generally speak a mixed language heavily based on Kriol (Dalton et al. 1995).

Loyalty to a language-based identity might also explain a number of other cases of indices higher than 1 where high numbers of children are said to be speaking a language at home, when it has been generally reported that the language is extinct and only occasional words and phrases used. These factors indicate some problems with the Census data and of indices based on it unless confirmed by other observations.

In some cases this problem may be exaggerated by the factor mentioned above, that if the drop in speaker percentages has already occurred in previous generations, an index greater than 1 may indicate stabilisation at a low level rather than a strong language. This shows that the whole matrix of figures should ideally be examined rather than just this single index. However in the list none of the languages actually have this kind of profile. Only Meryam Mir of the Eastern Torres Strait has a drop in percentage between the 40-59 and 20-39 age groups, reminiscent for instance of the rapid decline of percentage of speakers of Maori

between the ages of 60 and 40. It remains to be seen if this perhaps has to do with different demography of Torres Strait Islanders versus Aboriginals, since this pattern of language shift would not seem to be so uncommon. There may be a need for further adjustment if the proposed index is to deal with other generations than the two youngest.

The 1996 State of the Environment report (Purdie et al. 1996) reported that there were only 20 strong Indigenous languages. On the basis of our analysis, we conclude that 17 languages remain strong. In view of this while we are inclined to think that the reclassification of Gugu Yalanji, Yindjibarndi and Kaytetye as ‘endangered’ is justified. Also we are not prepared to endorse the reclassification of any of Schmidt’s ‘threatened’ category as ‘strong’ at this stage.

The discrepancy between the total of 20 strong languages in Schmidt’s report (1990:4; cited by Henderson and Nash 1997) and the 17 languages considered ‘strong’ in this report (i.e. listed at the top of Table 15) is caused by the fact that three of the strong languages listed by Schmidt (9. Kaytetye (Kaytej), 12. Ndjebbana and 19. Thaayore) were not assigned a specific classification by the ABS *Australian Standard Classification of Languages* (McLennan 1997:19) but are included in ‘nec’ (not elsewhere classified) for Northern, Central and Cape York Peninsula Aboriginal respectively, so no Census figures are available for them.

What we have done on this occasion is to attempt an estimate of the strength of the three missing languages based on the information of linguists familiar with the groups, using a similar endangerment index but without use of figures; and in addition using other local survey data in the case of Maningrida, where the results of the 1996 ATSIC survey are quite detailed.

For the sake of completeness we include this information here, but recommend that these languages either be counted in future Census work *or* not assessed for endangerment in future state of Indigenous languages reports.

The result of our enquiry is that Ndjebbana and Thaayorre are both still ‘strong’ but that Kaytetye (Kaytej) has moved from the ‘strong’ to the ‘endangered’ category. Consequently the total figures combining the 17 using Census figures and the 3 using other means described above is: in 1996, 17 of the previous 20 ‘strong’ languages were still strong, and 3 (Kuku Yalanji, Yindjibarndi and Kaytetye) were endangered.

The assessment of Ndjebbana is based partly on linguists’ recent observations. They report that the language is in constant use among adults. Young people use a different variety of the language but this is interpreted as a children’s variety which will change to resemble the adult variety as they get older. This is accepted for present purposes but it would be advisable to study this variety to determine if this is the case rather than some language shift phenomenon going on. The figures from the Maningrida survey back up the assessment as a ‘strong’ language. This survey, unlike the national census, distinguishes between ‘speakers of X’ and ‘people who speak X most of the time’, as follows:

	0-19	20-39	40-59	Over 60	TOTAL
1. Ndjebbana speakers	224	164	71	14	473
2. Speak Ndjebbana most of the time	133	70	23	3	229
2/1	0.59	0.43	0.32	0.21	0.48

For either measure, the figure is far higher for the youngest age group than for the 20-39 age-group, putting this language in the 'strong' category. This contrasts with a number of other languages of the Maningrida region (e.g. Nakkara, Gurrioni, Kunbarlang) where the numbers of speakers in the youngest group is less than that of the 20-39 age-group, and which would therefore be classed as endangered.

The difference between the two sets of figures (row 1 and row 2 in the data above) reflects the intense multilingualism in the Maningrida region (Elwell 1979). People generally speak more than one language but usually use one more than others. However difference between the figures may also reflect language shift, which is also reportedly going on in some groups at Maningrida. If that were the case however, one would expect a decline of the proportion speaking Ndjebbana most of the time relative to the speaker numbers and this is not the case (see figures in third row; this type of measure is similar to other measures of language shift using two figures used in Canada but not identical). In fact the proportion of 'speakers speaking Ndjebbana most of the time' is rising in the younger Ndjebbana population. The fact that the Ndjebbana are recognised as traditional owners in the Maningrida township and the bilingual education program at the school is based on this language may relate to this development.

For Thaayorre unfortunately we have not been able to assemble such convincing evidence, but the impression of linguists is that all or most children and young people were still speaking the language in the late 1990's, putting it in the 'strong' category. In contrast, Kaytetye was seen by linguists to be losing ground to Alyawarre and English even in the middle aged group and although it has not been studied, the language of the group younger than 20 is some kind of mixture of languages which is quite different from traditional Kaytetye, although some children may call it 'Kaytetye'. This kind of case, which is far from uncommon in Australia today, presents problems for applying indicators of endangerment. However in this case there is little doubt that Kaytetye now falls into the 'endangered' category.

We do not favour the use of total numbers of speakers alone as an indicator of endangerment for reasons discussed (Schmidt (1991:8) and Wurm (1996)). However where the numbers are very low this does indicate endangerment independently of the decline in speakers from old to young. We therefore recommend that any language which has less than 50 speakers be put in the 'endangered' category. This does not affect the status of any of Schmidt's 20 'strong' languages which all had more than 50 speakers in 1996.

Case Study: Tiwi and Anindilyakwa

Tiwi and Anindilyakwa are two languages spoken on groups of large islands off the coast of the Northern Territory by groups leading a distinctive and relatively traditional lifestyle.

We have the age break-up by language from the Census data, but it does not allow us to express the number of speakers as a proportion of the total relevant population because speakers of the named Indigenous languages are to be found in a number of regions and hence we do not have totals of Indigenous people for those languages. However, for Anindilyakwa and Tiwi the number of speakers outside of a few regions is negligible and so we can express the number of speakers of these two languages as a proportion of the total Indigenous population of the relevant regions. This method assumes that the residents of the region are the same as the members of the language group, whether or not they currently speak the language. Furthermore, any speakers of languages other than Anindilyakwa or Tiwi in the geographic areas can be excluded from the calculations on the assumption that they are foreigners to the region. Indigenous areas represented by more than ten speakers of each language are as follows ('Indigenous areas' is a technical term used by the ABS. There are 692 Indigenous areas nationally, of which no data is available for 8):

Table 16: Numbers of Tiwi and Anindilyakwa speakers in different areas

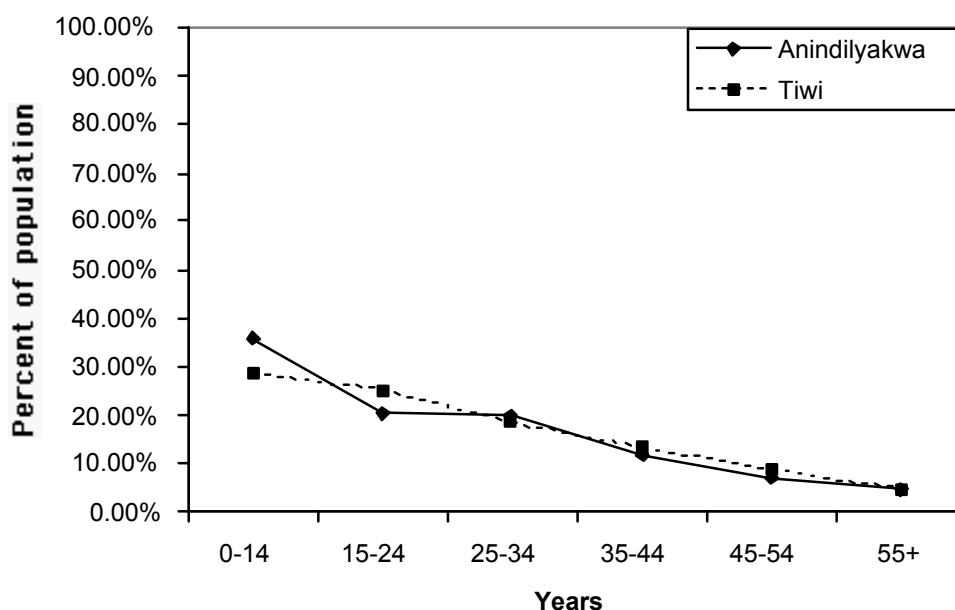
Tiwi		Anindilyakwa	
Karama*	14	Alyangula/Bal Groote	13
Litchfield*	15	Ludmilla/Coconut Grove*	29
Tiwi/Wanguri/Lee Point/Leanyer*	17	Milyakburra	178
Marrara/City Rem/Winnellie*	19	Umbakumba	378
Darwin/Inner Suburbs*	37	Angurugu	574
Pirlangimpi	195		
Milikapiti	323		
Nguiu	1083		

*Excluded from the analysis as they are outside of the geographic region

Since there is what amounts to a heartland for speakers of these languages it is possible to show the age distribution for the speakers of Indigenous languages as a proportion of the whole Indigenous population of these areas¹. This age distribution, presented in Chart 6, is what we would expect to see reflected in age-related language data. Having such cases assists in the validation of the index of endangerment based on age-group data discussed above.

¹ In order to arrive at a figure for total Tiwi or Anindilyakwa people for each area, we deducted all speakers of languages other than Tiwi or Anindilyakwa from the total indigenous populations for their respective Indigenous Areas.

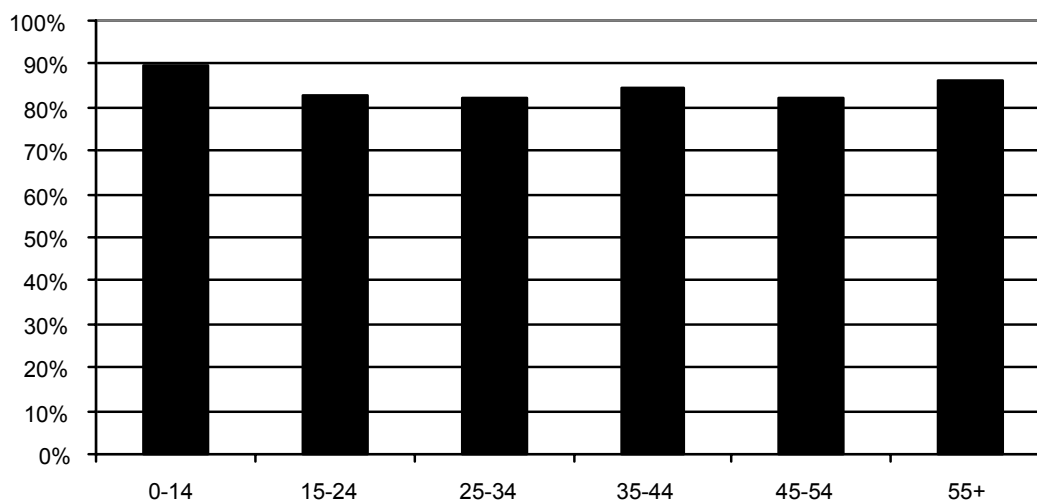
Chart 6: Age profiles of Tiwi and Anindilyakwa speakers



Source: ABS data 1996.

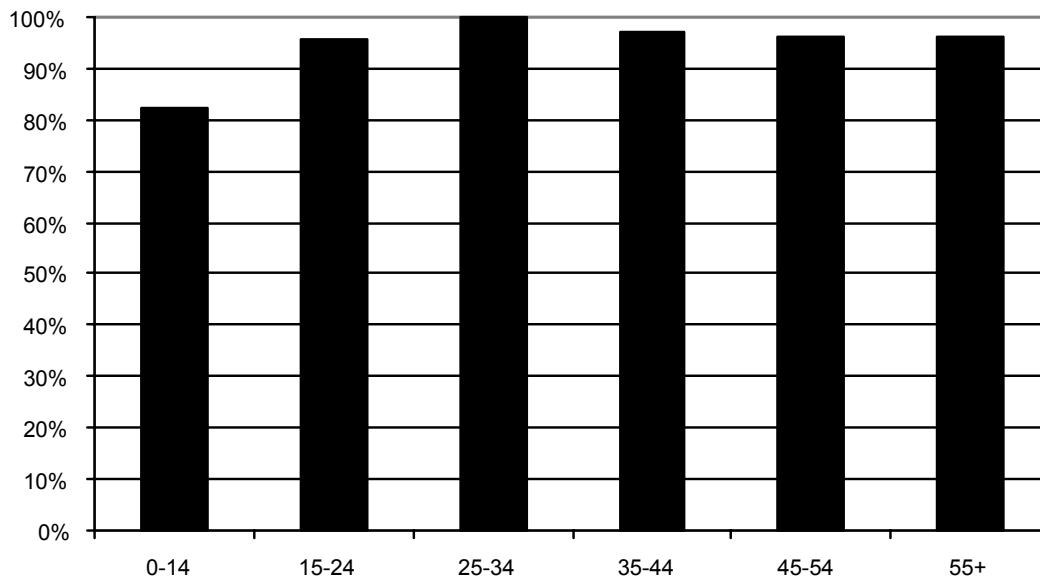
Both Anindilyakwa and Tiwi are ‘strong’ languages in that some form of the language is spoken by nearly all people of that ethnicity in all generations. Tiwi has a complication: the language spoken by the young people differs radically from that spoken by the older people (Lee 1983), but is not a form of English or a regional creole in the normally understood sense. This is a circumstance which is affecting a number of languages (cf. the discussion of Gurindji/Kuurindji above) but which is not well encompassed within the methods of studying endangerment used in this paper. Since young people regard their language as a continuation of Tiwi, it is generally recorded by the Census as such, so the profile of the language will appear like that of a strong language.

Chart 7: Proportion of Tiwi people located in Tiwi areas who speak Tiwi, by age group



Source ABS data 1996.

Chart 8: Proportion of Anindilyakwa people located in Anindilyakwa areas who speak Anindilyakwa, by age group



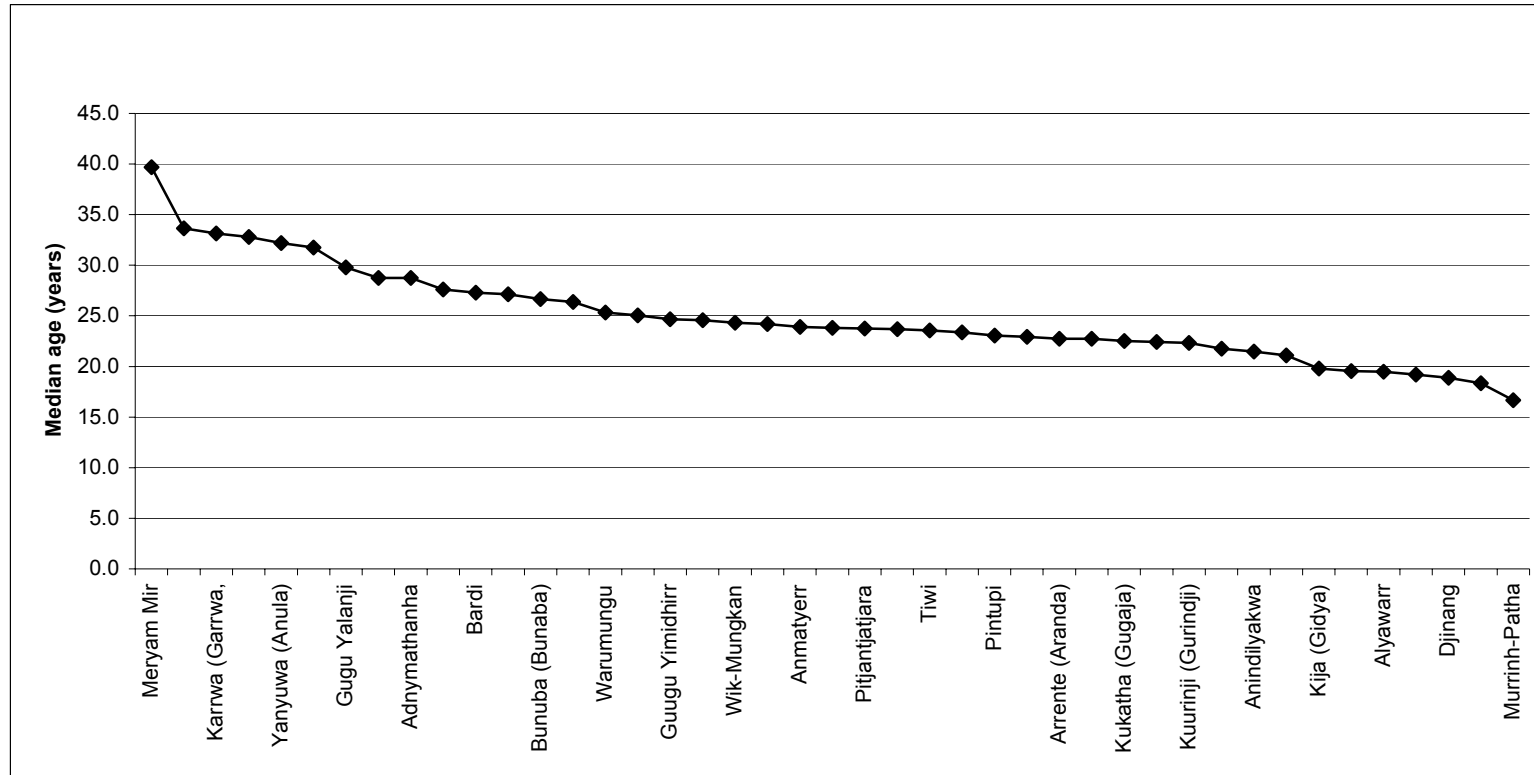
(Source ABS data 1996)

Chart 9 shows the median age for each of the named languages in the 1996 ABS census². Recall that average age of the Indigenous language speaking population was one of the indicators used for the state of endangerment of languages in Canada: the higher the average the more endangered the language. Once again use of this measure suffers from the same problems of the Census discussed above in relation to the age-profile endangerment index, that Indigenous language speaking may be over-reported among the young in some communities. Further low numbers of older people which may be due to high middle-age mortality typical of many communities will lower the median or average age. In Chart 11, for instance, Warlpiri apparently has a higher median age for speakers than Miriwoong. As discussed earlier, we know independently that Miriwoong is a highly endangered language with few young speakers, whereas Warlpiri is a strong language spoken by all generations. Median age of speakers based on currently available Census figures is not therefore a good indicator of language endangerment.

If we take the age-related data by geographic location, expressing the number of speakers in each of six age-groups as a proportion of the total population for that age group, then we get the results graphed in Charts 10 and 11. For the regions in which speakers are a majority of Indigenous people we can see that the spread of speakers across the population is fairly even. However for those regions with few speakers, like Mt. Isa, Kalgoorlie or Geraldton, the graph shows proportionally more older speakers.

² A median range is first found and then a median value within the range is calculated. t = total count for the distribution $(t+1)/2 = n$. If n = a whole number, the median range is the range where n falls, calculate the median for this range using the formula below. If n = a fraction find the ranges where $t/2$ and $(t/2 + 1)$ fall. If both fall in the same range use this range as the median range and use the formula below. If both fall into different ranges calculate a value for the $t/2$ th observation using the formula below AND calculate a value for the $(t/2 + 1)$ th observation substituting $(t/2 + 1)$ for $t/2$ in the formula below. Average these two values to determine the mean. u = upper bound value; l = lower bound value; b = no. occurrences in the range; c = sum of the occurrences below the range. Median is calculated as $l + \{(t/2-c)(u-l)/b\}$. Thanks to Kate Ross for providing this calculation.

Chart 9: Median age of speakers of Indigenous languages



(Source ABS 1996 Census data)

It appears from these charts that there are five patterns: three characteristic age-profiles in the data and two aberrant patterns:

Group 1 In regions with many speakers and strong languages (Nhulunbuy, Apatula, Jabiru, Apatula, Jabiru, Warburton) there is relatively little variation in the ability of speakers in various age-groups, and language shift to a non-Indigenous language is either absent or just beginning.

Group 2 This is a common pattern of steep and uninterrupted decline from old to young (Kalgoorlie, Broome, Port Augusta, Alice Springs, Torres Strait, Cooktown, Katherine) associated with language shift having taken hold in many groups 20-50 years ago.

Group 3 In these regions (all others except Groups 4 and 5) associated with old white settlement and early language loss over 50 years ago there is a very low level of speakers in all age groups, usually continuing to decline slightly.

Group 4 In this aberrant group of languages there is a dip in language ability in one or more of the middle age groups and a slight recovery in the younger age groups. Kununurra, has a pronounced dip in the 30-39 age-group and Cooktown and South Hedland much less of a dip. Previous discussion of probable over-reporting of language use of Miriwoong and Kija in the 1996 Census (two of the main languages of this district) may have a bearing on this. If the figures for the two youngest age groups are adjusted downwards, the curve would fall into the Group 2 class, sharp decline across all age groups. Ceduna and Geraldton show aberrant patterns of swings back and forth in numbers between successive age groups, in the context of overall decline. This may be due to patterns like those of Group 2 but with two or more language groups which experienced drops at different periods interfering with each, and perhaps also due to distinct waves of migration from more outlying areas into areas where language shift sets in (this requires further research).

Group 5 Adelaide is significant in that it is the only region which shows an increase in the number of younger speakers (from an already low level) most likely attributable to the high level of activity and interest in language and language revival in Adelaide recently (including the revival of Kaurna discussed following in section 7.5.d). Otherwise Adelaide fits into the pattern described for Group 3.

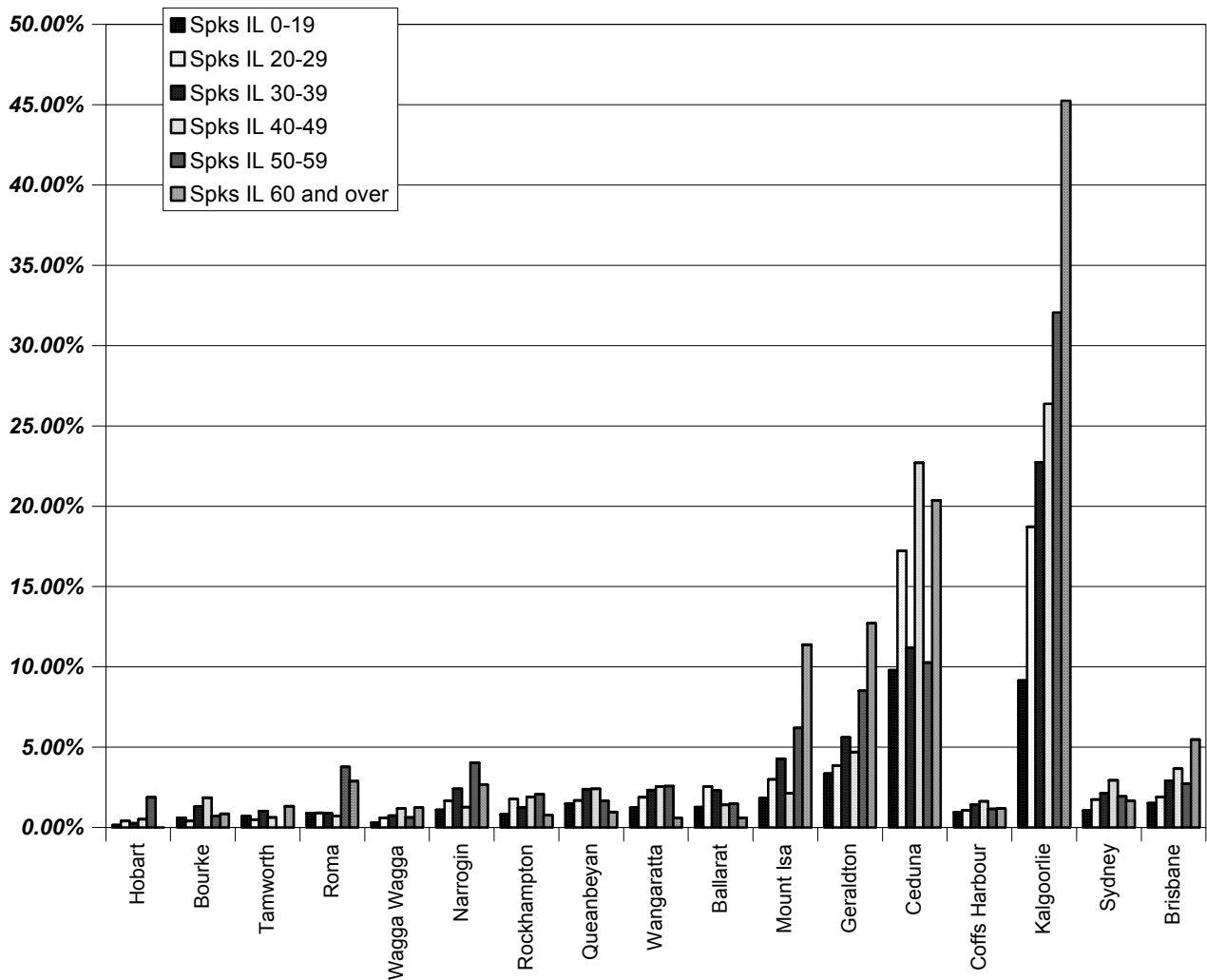
Apart from the early signs of some success in language revival activities in Adelaide, Group 4 in particular appears to show a slightly more positive trend than other declining situations and deserves more detailed study of the individual languages and situations on the ground in those regions. Generally the patterns can be associated with a dominant type of endangerment category in each region as follows:

Group 1 - Strong

Group 2 - Endangered

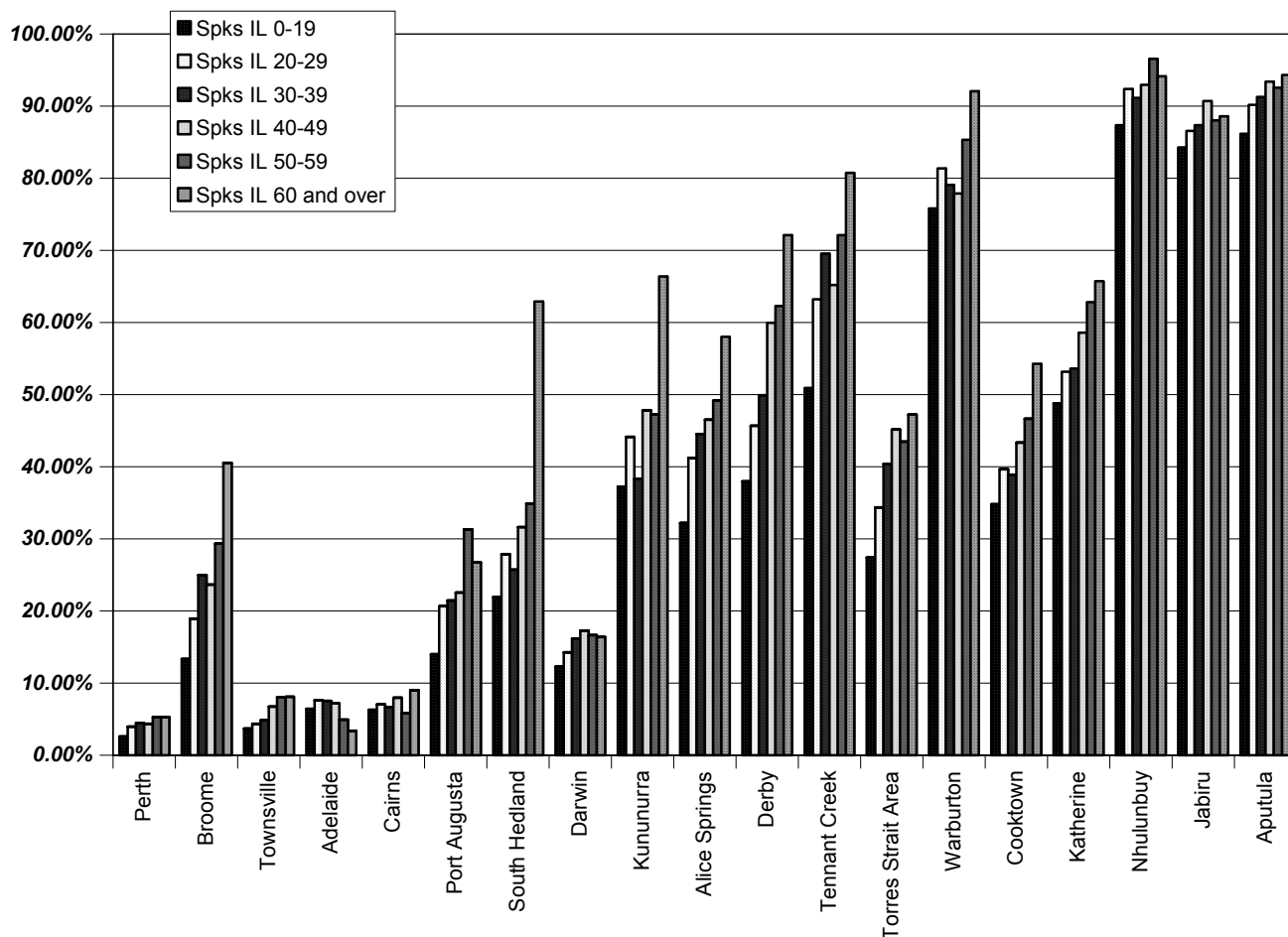
Group 3 - Severely endangered/extinct

Chart 10: Proportion of Indigenous people who speak an Indigenous language, by age, by ATSI region (for regions with less than 800 speakers)



Source: 1996 ABS data.

Chart 11: Proportion of Indigenous people who speak an Indigenous language, by age, by ATSI region (for regions with more than 800 speakers)



Source: 1996 ABS data.

7.4 Documentation of Indigenous languages [Indicator IL.4]

The number of Indigenous languages for which

- (a) documentation is:
 - (i) good
 - (ii) adequate
 - (iii) inadequate
- (b) documentation is close to complete (given the state of the language).

Two indicators proposed by Henderson and Nash (1997) and Pearson et al. (1998) aim to measure documentation. Indicator IL.4 does so by amount of existing documentation per language, and indicator IL.8 by number of documentation projects. IL.4 is certainly a useful indicator of the state of documented knowledge about languages. IL.8 has a number of problems, which are discussed under the heading of that indicator. Funding, measured by indicator IL.7 is also a relevant factor for the state of health of documentation projects, although high funding levels may not guarantee high levels of outcomes.

Initially it is useful to provide more definite correlates for the three categories in Indigenous

language.4(a). Currently we have implemented a point system to describe the documentation of a language as follows (with a possible total of 17 points for a well-documented language):

Dictionaries: Detailed dictionary (e.g. Arrernte, Kayardild) (4); Medium dictionary (3); Small dictionary/ wordlist (e.g. Warnman) (2); Simple wordlist (e.g. Bates, Curr) (1).

Texts: Extensive text collection (3); Several texts (<10) (2); Elicited/example sentences (1).

Grammar: Detailed grammar (e.g. Gooniyandi, Kayardild) (4); Middle-sized grammar (e.g. Handbook) (3); Grammar sketch or many technical articles (2); Few technical articles only (1).

Ethnolinguistic information: Substantial ethnolinguistic work (e.g. thesis) (3); Ethnolinguistic description (2); Some ethnolinguistic information (1).

Audio recording: More than several hours of audio (3); Less than several hours of audio (2); Less than an hour of audio (1); No audio recorded (0).

We have linked a list of known wordlists and dictionaries in Indigenous languages to the database and so are able to show that 141 Indigenous languages in the database have one or more wordlists or dictionaries. We have also linked handbooks of Indigenous languages for Western Australia and the Northern Territory, so that the amount of material available on the languages is shown in the database. These links will only be available in the AIATSIS based copy of the database due to copyright restrictions.

A further refinement would be to measure the amount of documentation produced in the current 5-year period. This is further discussed under indicator IL.8 below.

We suggest also including a category for the amount of literature produced in the language, that is material authored by a speaker of an Indigenous language in that language and published, including by local Literature Production centres attached to schools, including newspapers and magazines. This might be added to the above documentation index with a 3-point scale of small (1) medium (2) and large amount (3), bringing the index up to a 20 total. This may be best implemented in terms of numbers of words (say 1 point for less than 10,000; 2 points for over 10,000 and less than 100,000; and 3 for greater than 100,000 words), rather than pages or books. This discriminates against highly polysynthetic languages with less very long words and against books with a high picture-to-text ratio.

Another possibility would be a separate indicator for literature separate from documentation. Further elaboration could include breadth of genres covered. Another aspect would be tracking of current output of literature (say in a five-year period). This could be on the impressionistic basis that several books in one year from a literacy production centre is considered a 'substantial' amount.

Assessing material available on each language is a time-consuming process and we have provided a framework in which this can continue. We have attempted to obtain a copy of an ATSIIC-funded survey of language needs, in which information about language documentation would be recorded, but have been unsuccessful to date.

7.5 Public use of Indigenous languages [Indicator IL.5]

The number of/proportion of traditional language used in:

- (i) broadcast media: radio, TV, published books, magazines, cinema, WWW, distinguishing:

- (a) programs aimed at speakers;
- (b) programs aimed at a general audience;
- (ii) signage in public places (streets, parks), advertisements.

We know of no work that surveys the amount of Indigenous language use in these media.

We have written to media organisations (CAAMA, National Indigenous Media Association etc.) asking about Indigenous language content broadcast but had no response.

In the absence of any quantified data it may be possible to state impressionistically that there is more awareness of Indigenous languages based on a comparison of the following over time:

- the number of films using Indigenous languages deposited in AIATSIS or ScreenSound Australia (the National Film and Sound Archive). We attempted a search of films and videos deposited at AIATSIS, but found no way of identifying whether they included Indigenous languages or not. This is due to the cataloguing policy of identifying the Indigenous group in the video by language group, regardless of whether the content is actually in that Indigenous language.
- publication of books dealing with Indigenous languages.
- the number of web sites dealing with Indigenous languages.

The above information could be produced and used as the basis for comparison in the next state of the environment report.

7.5.a World Wide Web references to Australian Indigenous languages

The Web presence of Australian Indigenous languages has increased exponentially in the last five years. We know this from our own experience of using the web, and from the general growth in the user base. We include below some quantitative data, but recognise that there may be significant changes to the way we deal with the Web over the next five years that may make this kind of search meaningless in the future.

Hobson (1997) surveyed web sites relevant to Australian Indigenous issues (not just Indigenous languages). He reports an upward trend in the number of sites as shown in Table 17 between 1993 and 1997.

Table 17: Websites, by date

Year	97/02-97/07	96/08-97/01	96/02-96/07	95/08-96/01	95/02-95/07	93/01-95/01
No. of websites ³	14	8	11	8	1	7

(Source: Hobson 1997)

We have chosen some examples of the public use of Indigenous languages, on the World Wide Web and in everyday contexts.

³ Sites which are "by, for or about Aboriginal and/or Torres Strait Islander people and contain some meaningful cultural, social or political material, or act as an information or research resource specific to Indigenous Australians" (Hobson 1997:1)

Rob Amery (pers comm.) reports the following web statistics for Kurna, a language of Adelaide (see Table 18): “A search for ‘Kurna’ on the web now yields many hundreds of hits (e.g. a search using *Lycos* on 16 June 2000 yielded 743 web sites). The only result to a netsearch for ‘Kurna’ in 1995 were references to the ASEDA databases.”

Table 18: Number of Internet hits on Australian language names

Number of hits when searching Google.com for ‘X language’ (only one spelling was used, but note that ‘Djabugay’ had 126 hits, and ‘Jabugay’ had 3):	
Arnernte	445
Dyirbal	263
Jiwarli	198
Pitjantjatjara	736
Tjapukai	137
Tiwi	1210
Walmajarri	171
Warlpiri	1020
Yindjibarndi	141
Yolngu	489

Searching on ‘Aboriginal language’ & ‘.au’ gives 1,010 hits.

There is a clear and increasing emblematic use of words and phrases from Indigenous languages on the Web, as in the following example from the University of South Australia Web site: (<http://www.unisa.edu.au>).

The Adelaide Plains of South Australia are home to the Kurna Aboriginal people. This welcome message:

Ngai wangandi marni nabudni Kurna yertaanna

is in Kurna language (pronounced garna) and translates to:

First let me welcome you all to Kurna country

This kind of use of Indigenous language names and fragments raises the profile of the Indigenous language and groups and is gratifying to many Indigenous and non-Indigenous people. Use of language elements and names without necessary permissions and understandings on the part of publishers, organisations and web-site owners can however give offence to Indigenous groups. Discussion of intellectual property rights and copyright is being extended to language elements for Indigenous groups both overseas and in Australia, in the face of widespread ‘appropriation’ of language elements without proper consultation (Janke 1998:19-23).

More substantial references to Australian Indigenous languages on the web can be found in the form of online dictionaries, stories and bibliographic guides. The site with the best current links to other sites about Indigenous languages is <http://www.dnathan.com/VL/austLang.htm> and the languages currently listed with links are the given in Table 19.

Table 19: Australian languages mentioned on Indigenous language web-sites

Arabana	Arnernte	Awabakal
Ayapathu	Bunuba	Dyirbal
Eora	Gooniyandi	Gunggari
Ilgar	Jagera/Yuragubul	Jiwarli
Kamilaroi/Gamilaraay	Kaurna	Kriol and pidgins
Marriammu	Meriam Mir	Murrinh-Patha
Ngarrindjeri	Ngiyampaa	Pakanh (Uw Oykang and / Uw Olkola)
Palawa Kani	Pitjantjatjara	Tjapukai
Wagiman	Walmajarri	Wambaya
Warlmanpa	Warumungu	Wemba Wemba
Woi wurrung	Yanyuwa	Yindjibarndi
Yolngu	Yorta Yorta	Yugambeh

Another important linking site for Australian Indigenous languages is:

<http://www.anu.edu.au/linguistics/nash/aust/> which lists links for the following languages:

Warlpiri, Ngumpin-Yapa languages, Western Desert languages, Warlmanpa, Warumungu and Mudburra, with a link also referencing languages of South-eastern Western Australia.

7.5.b Use of Indigenous languages in print media

There is little in the way of Indigenous newspapers. *Koori Mail* is the only national English-medium newspaper (<http://www.koorimail.com/>) and with a national focus it only occasionally includes items in Indigenous languages. Very occasionally too, *Land Rights News*, the newspaper of the Northern and Central Land Councils of the Northern Territory, includes small items in Indigenous languages.

Local community-based newsletters in Indigenous languages, or substantially so have been produced since the 1970s (and apparently one in Pitjantjatjara as early as 1958) in a number of communities and some of these are still going (Gale 1997). Impressionistically, there may have been a decline in these activities in recent years associated with the cutbacks in Bilingual Education but further research is required.

7.5.c Use of Indigenous languages on radio and television

While there are a number of Indigenous radio programs and films or videos, the use of Indigenous languages in these media is not easily determined. Some films have used Indigenous languages with subtitles and have had broad coverage, including national television (e.g. Rijavec et al 1992). Regular broadcasts in Indigenous languages occur mainly at the level of small local radio stations, although CAAMA has broadcast half-hour segments in Arnernte and Pitjantjatjara and also broadcast in Kaytetye, Luritja and Warlpiri (Laughren 2000:24).

A number of Indigenous television and radio broadcasters exist around the country, including the following media associations:

- Central Australian Aboriginal Media Association (CAAMA) (Alice Springs, NT)
- Warlpiri Media Association (WMA) (Yuendumu, NT)
- Torres Strait Media Association (TSIMA) (Thursday Island, Torres Strait)

It is not possible to quantify the use of Indigenous languages in these media, but we provide a case study to show that Indigenous languages are integral to the rationale for Indigenous broadcasting, even if we are unable to show that Indigenous languages are used in those broadcasts.

Case study: Broadcast media and Indigenous languages

The Australian Broadcasting Authority (ABA) (1998) in a report on the application for a broadcast licence in the Top End, notes that there is a significant number of speakers of Aboriginal languages in the region and that should be taken into account in reviewing the licence. The Top End Aboriginal Bush Broadcasting Association (Aboriginal Corporation) (TEABBA) which represented 29 Top End Indigenous communities proposed to broadcast 168 hours per week including Indigenous language and other Indigenous programs, music, news and community notices. 30% of this programming was to be in Indigenous languages.

At the Hearing, TEABBA indicated that programming would include English (70%) as well as Indigenous language programs (30% or 4 hours per day of the initial 12 hours per day programming). TEABBA stated that it had no predetermined view on what languages would be broadcast. This was open to negotiation with the BRACS communities and would be sourced directly from the communities as well as from programs produced in its Darwin studio by BRACS operators. (Its current service provides approximately 50% Indigenous language programs, broadcasting 12 BRACS communities (language programs) with a breakfast show produced in its Darwin studios). Some programming segments are provided by organisations such as Land Care, Nungalinga College, Kormilda College, Northern Land Council and BRACS communities, with other segments related to topics such as current news, native title news, sports, football, requests, youth issues, golden oldies, country, world.” (Australian Broadcasting Authority 1998:38)

TEABBA used 1996 Census data to show that there were a large number of speakers of Indigenous languages in the Darwin region who would benefit from broadcasting in Indigenous languages. They state that:

“...the region has a significant Aboriginal population (7.9% of the total population of the licence area), a reasonable number of whom speak an Aboriginal language (1.2% of the total population of the licence area according to the Census but this could be significantly higher if second, third, or fourth languages are taken into account).”

They further note (Australian Broadcasting Authority. 1998:26):

“The proposed constitutional changes to Radio Larrakia tendered at the hearing in Exhibit P 31 indicate a continued commitment to the promotion and enhancement of Aboriginal language, culture and tradition generally, including Larrakia specifically.”

BRACS broadcasters are now operating in 80 localities (each with both television and radio) (Community Broadcasting Licenses (Previous BRACS Licenses) *03-Jul-2000* www.aba.gov.au), compared to some 70 radio licenses in 1990 (Aboriginal and Torres Strait Islander Commission (1990)). We have no figures on how much Indigenous language broadcast time there is and suspect that it varies considerably. The program descriptions for one of these services, Radio 5NPY (based in the Anangu Pitjantjatjara lands) claims that ten out of fourteen sessions are “all or part in Pitjantjatjara Language”. (Source: <http://pymedia.in-sa.com.au/pymedia/radio/radio3.html>)

Another description of a BRACS comes from Maningrida, which used to broadcast “a weekly half-hour television program consisting of local news and interviews in Burarra and Ndjébbana. This was an extremely popular program in the community. However, in 1992 the BRACS operator left to take up a job with the ABC in Darwin and since then no programs have been broadcast through BRACS.” (Bawinanga Aboriginal Corporation 1996)

There is a great potential for Indigenous languages to be broadcast using existing infrastructure. From these case studies it appears that the use of Indigenous languages depends on having dedicated people willing to undertake the work of speaking and broadcasting in the local language, otherwise the default path is either an end to broadcasting, or using material generated outside of the local area.

7.5.d Use of Indigenous languages in signage

One of the indicators of public awareness about Indigenous languages is their mention in public places. For example, a response to our questionnaire described a series of monuments to the Gamilaraay and neighbouring people. These rock pillars each bear an inscription in Gamilaraay. It is this local use of Indigenous languages that can be indicative of a deeper understanding in the population that Indigenous languages exist. We would like to think that this then corresponds to an increase in prestige for these languages which itself results in confidence in speaking the Indigenous language.

In Adelaide, Amery (pers comm.) reports the following public uses of Kaurna:

- Yerrakartarta mural within the Adelaide Plaza off North Terrace, installed 1 February 1995. The sentence *Natta atto nanga; yakko atto bukki nakki. Kaurna yerta.* and a number of salient words appear.
- 1996 Ruins of the Future Exhibition in the Festival of Adelaide (*in situ* for the duration of the Festival).
- Piltawodli plaque erected 26 May 2000 - it incorporates the Kaurna songline *Wanti nindo ai kabba kabba? Ningkoandi kuma yerta.* (where have you pushed me to? You belong to another country).
- A set of 18 signs are about to be erected at Warriparinga. All incorporate some Kaurna language, some feature extended Kaurna text with English translation. One sign features a Kaurna translation of Georgina Williams' poem 'Coming Home'.

The New South Wales Strategic Language Study (Hosking et al. 2000:14) says there are many examples in NSW of moves to have place and street names in local languages. "Examples of this process were noted at Eden, Coffs Harbour and Tamworth, while in Bundjalung country there are signs in Bundjalung and English explaining the importance of the country to its traditional owners. Muurbay Language Center at Nambucca Heads has recently negotiated with NSW National Parks and Wildlife Service to have a sacred mountain renamed using a Gumbayngirr name."

Case study: Kurna, Public use of language,

(From material provided by Rob Amery)

Kurna language revival has been discussed in a number of radio and TV programs: 7.30 Report ABC TV in 1992; Lateline program with David Crystal 7 May 1998; Earshot on Radio National 24/6/00 with Nicole Steinke; interview with Philip Satchell on ABC Radio, May 1999; several interviews with 5UV, the local University of Adelaide radio station.

A number of reports have appeared in *The Australian*, *The Advertiser* and *The Adelaidean* (university newspaper) and DECS Press (education department newspaper). In addition an article appeared in 'The Aboriginal Independent Newspaper' August 6, 1997: 20 and 'The Lutheran' 10 April 2000: 68). Articles have been written about Kurna language reclamation and Kurna placenaming proposals.

In the last two decades numerous Kurna names have been used to name Aboriginal organisations and other bodies dealing with Aboriginal people. These include Aboriginal support units in universities (e.g. *Wilto Yerlo* and *Yunggorendi*), education providers (e.g. Tauondi), sporting clubs, cultural organisations etc. See Amery (1998) Vol.2 appendices I1 to I9 (pp.276-302) for details.

Some Kurna people have been naming themselves, their children and their pets with Kurna names in recent years.

On 13 March 2000, the Adelaide City Council formally adopted the reinstatement of five Kurna names (*Karrawirraparri* for the Torrens River, *Karrawirra*, *Piltawodli*, *Tambawodli* and *Wirranendi*).

7.6 Number of approvals of geographic names, including map sheet names, using Indigenous place names [Indicator IL.6]

The Commonwealth Committee for Geographical Names formulated a policy (1992) '...to ensure that the Aboriginal and Torres Strait Islander place names are recognised by all Australians and need to be preserved'. They also recommended the use of dual naming where change to an Indigenous name is not 'possible or acceptable' (Clark 1994). Most states also have a policy of preferring Indigenous place names but this is not always followed in practice. Clark provides a brief survey of the situation in different states in 1994, at which time South Australia seemed to be implementing the policy most actively with the use of Adnyamathana names in the Flinders Ranges.

The advice we have received from Flavia Hodges (pers comm.) at the Australian National Placenames Survey is that the Northern Territory's is the only nomenclature authority to have a field 'ethnic origin' in its placenames database. Hodges also recommends that the best way to find this information is to have a researcher go to each of the nomenclature authorities and work through their files. This has not been possible for the present project.

We recommend that state Nomenclature authorities be requested to notate placenames indicating how they were selected, whether they are the local name for the local place or not, and what sort of consultative process there may have been with local Indigenous people resulting in the use of that name.

While there is a clear link between the general community's awareness of Indigenous languages and the use of Indigenous languages in placenames, we are unable to comment on the change in the number of approvals in the last five years. Clearly some of these issues have come to the forefront of public and media attention in the last decade in particular. A case in point is the issue of the renaming of the Grampians National Parks in Victoria as Gariwerd, along with other place names in the area, followed by controversy and the reversal of the name change following the election of a Liberal government in Victoria in 1992 (Clark 1994; Birch 1992). Despite the election of the Labor Government in 1999 there has not yet been a reversion to the name Gariwerd, although the Minister for Aboriginal Affairs has recently launched a book about the Aboriginal heritage of the Park called *The People of Gariwerd*.

As well as pursuing the question of use of Indigenous place names by accessing improved records in the appropriate government departments, it might be worth tracking media space (column inches/minutes on radio and TV) devoted to issues touching on Indigenous languages such as these. This would require use of a clipping and/or media monitoring unit and lies beyond the terms of reference and resources available for this paper.

7.7 Funding to support/research Indigenous languages [Indicator IL.7]

Amount (in \$) of funding provided for language programs through government departments and agencies, including ATSIC, DEETYA, ARC and AIATSIS; distinguishing allocations to:

- (a) research;
- (b) language maintenance;
- (c) education and training; and
- (d) information dissemination and public education (e.g. translation of notices of government programs).

There is no overall survey of funding to Indigenous languages that can be readily incorporated into this paper. The ABS Survey of Research (Australian Bureau of Statistics 1996b) does not give any break-up of funding to linguistics, preferring instead to list 'Social Sciences and Humanities' as a single item.

Making funds available for language work may result in a number of outcomes, not all of which support the ongoing use of the language. Some funds (typically those provided by the Australian Research Council (ARC)) are used for linguistic analysis, and also for recording languages that would otherwise remain unrecorded. Other funds (typically those provided by ATSIC) are specifically provided to language programs based in communities with an emphasis on access to information and support for Indigenous languages.

We approached funding agencies (ATSIC, AIATSIS, State Departments of Education and DEETYA) for details on projects funded by them and have received the following information.

7.7.a Aboriginal and Torres Strait Islander Commission (ATSIC) funding

ATSIC, in its official response to our enquiries provided figures on funds available for language work in this financial year. There are currently two major sources of funding for Indigenous language support, the Aboriginal and Torres Strait Islander Languages Initiatives Program (ATSILIP) and the Language Access Initiatives (LAI). LAI is an ATSIC program providing \$9 million over three years from the 1999/2000 financial year. In 1999-2000,

\$5.6 million of the LAI funds were already spent. ATSIC provided the following figures for 1999/2000 funding:

Table 20: ATSIC Indigenous language funding 1999/2000

Language Access Initiatives	\$2,997,988
ATSILIP National Funding	\$3,454,000
ATSILIP Multi-Regional Funding	\$243,000
ATSILIP Funding through savings	\$555,000
TOTAL	\$7,249,988

Source: ATSIC, 2000.

However, ATSIC's Language Access Initiative guidelines state that funding in 1999-2000 "resulted in a total of approximately \$5.6M being made available to organisations. This means that approximately \$3.4M is still available for projects that meet the criteria set out below and a second round of submissions is to be called." We are unable to resolve the contradiction between the two ATSIC sources.

From public documents (annual reports and so on) we can put together the following figures for funding from ATSIC (ATSILIP) over the past five years:

Table 21: Funding from ATSILIP 1995-2000

STATE	1995/96	1996/97	1997/98	1998/99	1999/2000
NSW	*	509,000	*	*	*
VIC	*	234,000	*	*	*
QLD	*	260,000	*	*	*
SA	*	204,000	*	*	*
WA	*	840,000	*	*	*
TAS	*	225,000	*	*	*
NT	*	1,010,000	*	*	*
National (FATSIL)	*	172,000	*	*	*
Total	4,745,000	3,454,000	4,510,000	*	7,249,988

Note that 1999/2000 figures include LAI funds.

* Data not available

It is also noted that funding needs to be made available in a timely manner. Several responses have pointed out the difficulties involved in gaps in funding. McKay's (1996) report included the following recommendation which we endorse: "That the Aboriginal and Torres Strait Islander Commission, in consultation with the Federation of Aboriginal and Torres Strait Islander Languages and Regional Aboriginal Language Centres, review its procedures for funding Indigenous language programs, in order to minimise delays in the disbursement of funding, particularly funding for ongoing programs." (McKay 1996:42)

7.7.b Australian Institute for Aboriginal and Torres Strait Islander Studies

(AIATSIS) funding

AIATSIS funds projects based on submissions from academics and from the general community. In the period 1985/86 – 1993/94, Henderson and Nash (1997) report an annual average of \$116, 677 allocated to language projects. In the period 1996 – 2000 the average is \$107, 479 (see Table 22), a decline worth noting especially in view of the lower value of the dollar in the latter period. As the percentage figures show, however, this is probably more attributable to less overall investment in AIATSIS research grants than a relative decline in the allocation to languages.

Table 22: AIATSIS funding to language projects

	1996	1997	1998	1999	2000	Total
Total linguistic grants	121,764.88	106,207.12	134,862.37	36,476.47	138,083.00	537,393.84
Total AIATSIS funds per year	967,119.84	503,168.00	682,000.79	335,978.25	677,282.00	3,165,548.88
Linguistic funds as a proportion of total	12.59%	21.11%	19.77%	10.86%	20.39%	16.98%

7.7.c Australian Research Council (ARC) Funding

The Australian Research Council funds academic research, some of which has direct practical outcomes for speakers of Indigenous languages (especially in documentation of Indigenous languages), but much of which does not. When approached for a summary of funds to projects working with Indigenous languages the ARC supplied a partial list that did not include some projects mentioned in their annual reports. This may be due to the lack of clear identification by the ARC of projects working with Indigenous languages. The list of funded projects for the period 1998 – 2000 totaled \$1,594,309.

The Australian Research Council Commissioned Report No.59 has as its topic “Research of interest to Aboriginal and Torres Strait Islander peoples” (Australian Research Council 1999). This report selected 40 projects for analysis and focussed on 16 of those 40. Four of these relate to Indigenous languages. No further information relevant to Indigenous languages is available as the report then deals with general issues about all 16 grants.

The report also recommends that, “The Australian Research Council should review its selection process with the aim of increasing the proportion of research funds available in the area of Indigenous studies.” (Australian Research Council 1999:85)

Of the projects for which we have information we can classify them as follows:

- passing reference to Australian Indigenous languages \$411,000
- academic research on languages resulting in grammatical descriptions \$266,586
- multimedia tools for one named Indigenous language \$168,000
- academic study of Indigenous languages \$465,000
- database for language maintenance \$151,223
- dictionaries for Indigenous languages \$141,500

7.7.d Conclusion on funding

Public funds are being spent in the name of supporting Endangered languages, and in particular on Australian Indigenous languages. When we attempted to obtain results from several of the better-funded projects we were informed that there were no results available. It is clearly a matter of some concern that projects that have received public funds are unable to produce results when requested. In particular we note that the ATSIC ATSILIP program has been funding language programs without an explicit policy despite recommendations that there be a policy (e.g. Baldauf ed. 1995: recommendations A.7, A.8). This is despite their funding a large-scale 'Language Needs survey' that was to have provided the basis for a policy, and for evaluating how the funds for Indigenous languages are distributed. We were fortunate to have received some of the responses that language centres provided to ATSIC for this survey. Some effort has been put into these responses and it is a shame that ATSIC has not been able to collate and make public the results of all of this work.

We note also that academic research may be the only means by which some Indigenous languages are documented and that there is a responsibility on the part of publicly funded academics to make their research available in both a timely and accessible manner. In particular we note that a large amount of funding has been consumed over more than fifteen years by a comparative Australian languages project. When we approached this project for data for the current work we were informed that there were no results available yet.

7.8 Number of projects which document knowledge of traditional languages, by type of project [Indicator IL.8]

The 'number of projects' aimed towards documentation of Indigenous languages is not necessarily a reliable guide either to levels of activity or outcomes, which are probably more the key factors here. One project with a single name may be a hundred times larger than another one yet both would be counted as one. Since 'projects' often mix documentation with other activity, it might really be necessary to decide what percentage of a project is devoted to documentation, rather than adding whole project units, but the calculation of such percentages would be difficult.

As well as indicator IL.4 which measures level of documentation to date, it might be possible to use the kinds of product counted there (Dictionaries, Texts etc) as a kind of yardstick for measuring progress in outcomes in the current 5-year period. For example a language which had only a short wordlist in 1995 (1 point) might now have a larger dictionary (3 points) so in this regard there would have been a two-point increase over the period. Of course some languages which are no longer spoken are limited in how much of such additional work can be done, so it would not be appropriate to use this as a kind of 'performance indicator' for all documentation projects in the same way.

Documentation of Indigenous languages is undertaken in a number of institutions. We address these below together with estimates of the funding available over the past five years.

Language Centres, mainly funded by the ATSILIP program in ATSIC, operate around the country and each do variable amounts of documentation. This may be because the focus of some of the centres is not on documenting extant languages, but rather is on retrieving documents and making them available for speakers today. This is the case, for instance, for work with the Kurna language described in section 7.5.d. Language centres and other funded activities may also be under-resourced, or simply not have the necessary skills to engage in

language documentation. As ATSIC funds are expended annually without evaluation, it is difficult to know how that money actually translates into language outcomes.

7.8.a The ATSIC Needs Survey

In 1996 ATSIC conducted a 'Needs Survey' which was to provide "...performance indicators which reflect the uses Aboriginal and Torres Strait Islander people have for their linguistic and cultural heritage" (ATSIC 1995/96 Annual Report 1996:113). The 1996/97 ATSIC Annual Report says (p.100) that the survey results have been incorporated into a comprehensive database. A report based on this survey was to be produced by 'MC Media and Associates' which would result in "a comprehensive analysis of the status of Australian Indigenous languages. The report also highlights the extent and rapid rate of language loss. This information will inform the development of an Indigenous Languages Policy and strategic implementation plan that is required to ensure the efficiency and effectiveness of ATSILIP." (ATSIC 1997/98 Annual Report:78-79). The survey was expensive and required some effort on the part of the respondents, many of whom were dependent on ATSIC for funding.

In their current Language Access Initiative guidelines, available on the Internet, ATSIC says the following:

(2) Feasibility Studies and Strategic Planning - The Needs Survey of Community Languages indicated that with the support of ATSILI and the volunteer work of many Indigenous people work is being undertaken on an estimated 90 languages. It also recognised that there are other languages/dialects where little is known of their status. In this context, defining language status means understanding the needs of each language group through a consideration of the number of speakers, intergenerational transmission, existing research completed on the language and broader factors such as the support available for language use and maintenance in the community (classes in the local school or local broadcasts). Feasibility studies covering either (a) a region or (b) a particular language may attract financial support through this Language Access Initiative. (ATSIC Language Access Initiative guidelines)

Had this Needs Survey been carried out and made available in the manner described in these documents, the current paper would have had a wealth of information on which to base its indicators. However this was not the case.

Despite quoting the survey in several annual reports and in the current guidelines for a funding program, and citing it as a document to be taken into consideration in the review of ATSILIP recently announced, it has not been released by ATSIC. We are trying to find out if further surveys or evaluation of language programs may take place and yield data which could be used in future state of the environment reporting. At a State level, ATSIC has felt the need for conducting needs surveys: one was carried out for New South Wales in 1999-2000 and one is planned for South Australia in 2001.

7.8.b Documentation

Until recently documentation of Indigenous languages has mainly been an activity based in universities. A higher degree in linguistics can be awarded for a piece of work that includes fieldwork and recording of an Indigenous language. It follows that one indicator of the number of projects documenting Indigenous languages is the number of post-graduate students involved in recording Indigenous languages. There is a discernable move away from fieldwork (labelled as 'primary' below) with spoken languages to working on archival/recorded documents. If we limit our scope only to postgraduate students conducting fieldwork with speakers of Indigenous languages we find 18 currently enrolled (see Table 23). If we extend the definition to those

working on historical material or doing grammatical analysis on existing material we get 23. There are 14 staff in tertiary institutions working with Indigenous Australian languages.

Table 23: University research on Indigenous languages, 2000

	Students		Staff	
	Primary research	Secondary research	Primary research	Secondary research
University of Adelaide	3	4	1	1
LaTrobe University		1		1
University of Melbourne	6		2 (maybe 4)	
Monash University			1	
University of Newcastle	1		1	
Sydney University	3		2	
University of New England	5		3	
University of Queensland			1	
University of Western Australia			3	
Total	18	5	14	2

Another indicator is the amount of information produced in published or unpublished form. Published material is reported in Carrington and Triffitt (1999) (see below). Unpublished material can be summarised with reference to deposits in archives, for example AIATSIS. However, we must be aware that there is no requirement for researchers to deposit material, unless they are funded by AIATSIS.

Documentation can be in various media, including film, video, audio and computer-based media. We recommend that researchers be required to deposit material with AIATSIS, and that AIATSIS and similar agencies (e.g. ScreenSound Australia) build into their accessioning process an indication of the Indigenous language content of material deposited.

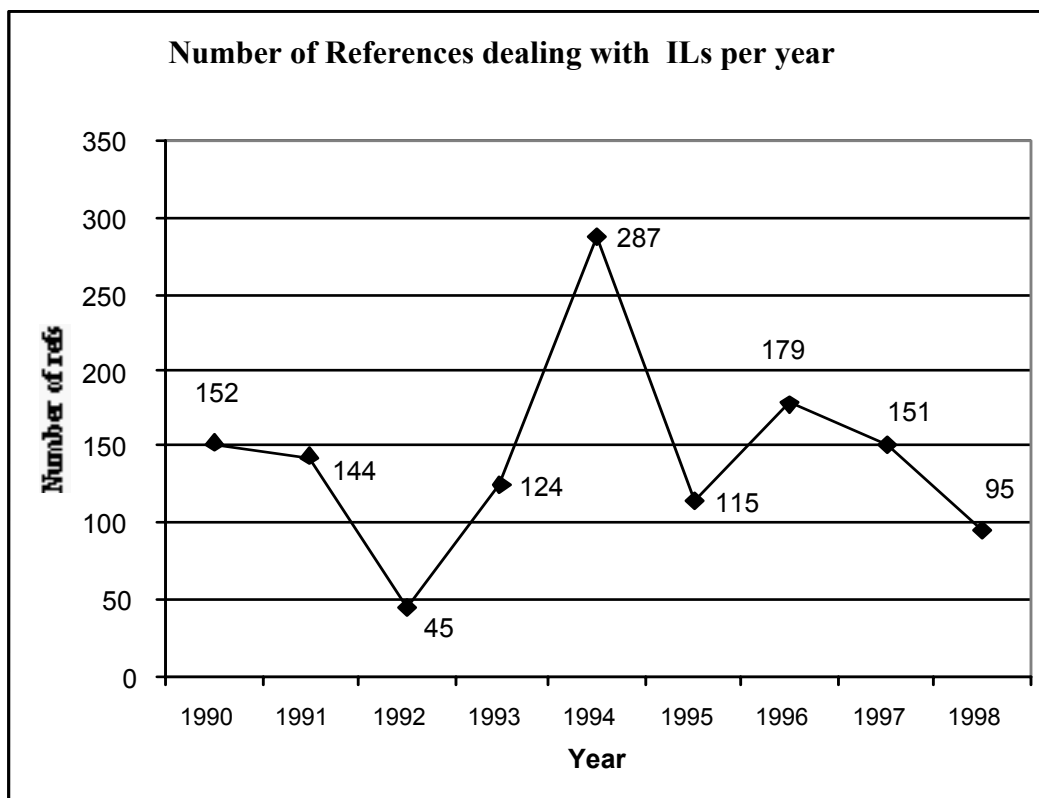
In addition, we recommend that the same process currently in place for depositing books in the National Library (Cataloguing-in-Publication data) be extended to all other forms of media to ensure that there is a copy deposited with the relevant state or national library together with good documentation about what is otherwise ephemeral and unavailable.

As we know of no data that summarises the number of projects we have included a field in our database in which this information can be entered, for each language. This will then provide a basis for comparison in the next state of the environment report.

Carrington and Triffitt (1999) provide a fairly comprehensive bibliography of work relevant to Australian Indigenous languages conducted up to 1999 (see also Triffitt 2000 on the OZBIB project). We have counted the number of publications per year and provided the results in Chart 12. The average number of publications per year during this time period is 144.

As this list will be updated over time it will provide comparable data for future state of Indigenous languages projects. We have taken the word-processing files for OZBIB and produced them in a bibliographic database to facilitate updating and comparison in the next state of the environment report (this is not generally released for copyright reasons).

Chart 12: Number of References dealing with Indigenous languages per year 1990-1998



Data extracted from Carrington and Triffitt (1999) OZBIB.

7.9 Number and type of Indigenous language programs undertaken in language centres, schools and other institutions [Indicator IL.9]

ATSIC Annual reports indicate the following number of projects resulting from ATSILIP funds:

Table 24: Number of ATSILIP projects (ATSIC)

1995/96	1996/97	1997/98	1998/99	1999/2000
90	>90	>90	*	*

The ATSIC Needs Survey should have provided detailed information about programs for Indigenous languages. As noted elsewhere in this paper that survey is the only national piece of work to evaluate the programs operating at a local level, but it is unavailable. As an example of the data included we have obtained a copy of the Maningrida response to the Needs Survey which outlines the following activities conducted in the mid-1990s. Other similar local and regional studies of reasonable quality contributing to the Needs Survey detailing the situation at 1996 could be available from this source but at the time of writing both ATSIC and FATSIL are opposed to the release of this material on the grounds that the study was poorly conceived

and executed. However there is some contradiction here as the ATSIC draft tender for a review of ATSLIP in 2000 includes the Needs Survey as one of the documents to be taken into consideration in the review.

Case Study: Maningrida language activities

- Literature production in local languages.
- Extensive comparative databases of plant and animal names for a wide range of Top End languages, especially Ndjébbana, Kunbarlang, Kuninjku, Rembarrnga, Burarra, Gun-nartpa, Maung, Djinang, Wurlaki.
- Batchelor College runs annual Aboriginal Languages Fortnights (mainly) for students from Batchelor College. Workshop activities include: book making, posters with pictures and short texts, flashcards. Further activities focussed on spelling systems and dictionary construction.
- Translations and interpretation of art and craft documentations for artwork by speakers of many different languages. This is carried out by Maningrida Arts and Culture.
- Music recordings and transcription (non-professional). Maningrida Arts and Culture has made recordings of a number of local traditional song styles such as Bongolinbongolin, Wurrurrumi and sections of the Marayarr Murrkundja ceremony. These tapes are made available for sale through the Arts and Culture Centre and have proven extremely popular.
- Professional Music Recordings. Local Maningrida bands such as Sunrize and Letterstick have recorded CDs and tapes which are marketed nationally and internationally. Many songs are recorded in local languages.
- Land and Learning. Funded under the Commonwealth Government's Disadvantaged Schools Program the Land and Learning project involved the documentation of flora and fauna, including the collection of plant and animal names in a number of local languages.
- Dictionaries of Burarra, Djinang
- Weaving process documentation and lexicography project. This on-going project has a strong linguistic bent and is documenting Burarra names for weaving materials, plants used, the names of woven items and the words that people use to talk about the processes and styles involved in producing weavings.
- Djinang dictionary desktop published by Bruce Waters.
- Grammar of Djinang and Djinba published by Bruce Waters.
- Language workshop in 1994 at Gamerdi outstation school (Homeland Centre teacher and NT Education Department linguist Carolyn Coleman). Wordlists and 3 texts were produced.
- Support for independent schools' language programs: e.g. Gochan Jiny-jirra independent school.
- Support for University linguistics students and researchers working on Gun-nartpa, Gurrngoni, Kunbarlang, Kuninjku, Kunwinjku, Kune, Gun-djeihmi, Mayali, Dalabon, Dangbon, Kundedjnjenghmi, Rembarrnga and Nakkára

- Eastern Kuninjku rock art sites recording including recording and translation of oral culture related to rock art sites and extensive recording, transcription and translation of Eastern Kunwinjku texts.
- Talking Ndjébbana books on Hypercard

Recording of some Ndjébbana place names in the Maningrida region was carried out in 1996 and was used for the new displays in Maningrida's recently renovated Djómi Museum. The Ndjébbana-English bilingual education program is run by the Maningrida Community Education Centre.

While the reports do not elaborate on these projects, nor on their linguistic outcomes (see the discussion under indicator IL.7), we do know that many language programs rely on ATSILIP funds (although it should be noted that the Maningrida work is not funded under ATSILIP).

Language programs operate at various levels. There are projects aimed primarily at recording Indigenous languages and traditional knowledge in Indigenous languages. This sort of work is often the result of funding from AIATSIS and the ARC (see under indicator IL.7 above). In practice such documentation work may be, and many would argue, should be, closely tied to training and language maintenance activities for local Indigenous communities through language centres and schools. However documentation research, education and materials or media production usually have quite distinct funding sources. Similarly Regional Language Centres and schools are quite distinct in funding and control, but under favourable circumstances work closely together at a local and regional level on Indigenous language programs.

Overall figures for number of programs are given in Table 25 below, divided by state. These are based on rough figures for reasons discussed below and include estimates rather than numbers counted where data is not fully available. No great reliance should be placed on these figures nor is the 'number of programs' in itself a particularly useful indicator. After the database of programs and better measures have been implemented, investigators should be in a better position to provide valid figures in 2006.

Table 25: Numbers of Indigenous language programs (total), by state

	NSW/ACT	NT	QLD	SA	TAS	VIC	WA
Number of programs	26	65	25	71	1	4	64

For the purposes of this section we divide the information we have gathered into that related to Indigenous language work carried out through language centres and similar bodies; programs in post-school education; and programs in schools. Prior to this there is a brief evaluation of the data-collection method and its shortcomings.

7.9.a Obtaining data on Indigenous language programs

A mail-out was carried out enquiring about numbers and types of language programs. A number of responses have been received from education departments, Regional Aboriginal Language Centres and programs, and to a lesser extent ATSIC regional offices to the letter from Environment Australia soliciting information. Many centres and departments did not respond and we have not the time or resources to follow up all of them.

McConvell also attended the FATSIL conference held in Adelaide 27-28 August 2000 at which reports of language programs were presented. These did not cover the whole country, as a number of language centres in the north of Western Australia and the Northern Territory did not attend or send in a report (some of these had broken away from FATSIL in 1999 and no longer regard it as the peak body). FATSIL has created a database of language organisations and programs and indicated to McConvell that in principle information from this database would be available to this state of Indigenous languages study, which FATSIL supports. However in practice when information was sought from the database, McConvell was told that it is incomplete and could not be given out yet, and that he would have to obtain the information from local and regional bodies. Of necessity then we have had to begin compiling our own database of programs which will link to the Indigenous language database under construction.

The information listed in the Indigenous language programs database summarises information from responses to the mailout combined with reports presented at the FATSIL meeting and some limited references in publications. It is incomplete at this stage. Figures for numbers of programs only are presented some with only a rough guide to the content. The database of programs with more details is being prepared but is not available at this stage. A useful source outlining language programs to 2000 is Laughren (2000).

We wish to emphasise strongly the advantages, not just for state of the environment reporting but for the Indigenous community, of having a generally available record of Indigenous language programs, their funding, human resource base, their methods, their needs, their successes and even their failures. This kind of information record is not built up because governments or researchers want to pry into local affairs or prioritise programs for funding purposes. As we well know, local programs on Indigenous languages are usually under-funded and not well supported by the mainstream education system. Hence it is very important for local groups not to waste resources and become frustrated by reinventing the wheel. What is needed is much clearer information on the range of programs being run and their outcomes so that people in other places can learn from that experience when they are developing their own programs.

7.9.b Language programs run through language centres and similar bodies

Regional Aboriginal Language Centres (RALCs) began to be set up mainly in Western Australia and the Northern Territory in the 1980s as Indigenous-controlled bodies. They were charged with assisting in the running of local community language programs in their regions, including language documentation, education and training, materials and multimedia production, and interpreting/translation. They have been funded mainly through ATSIC programs but also receive other grants and portions of mining royalties in some cases. Generally they have continued to deliver language services successfully through the 1990s in areas where they have been established.

In other states regional language centres were not established, or only patchily, and based on different models e.g. covering a whole state like Yaitya Warra Wadli in South Australia or catering for a single community or small area as in parts of New South Wales and Queensland. In some quarters other bodies such as 'language committees' came into being as channels for ATSIC funding. The national peak body, FATSIL, also did not adopt the structure of a federation of language centres but an association of individual Indigenous people.

The activities of the Kimberley Language Resource Centre (drawn from their Newsletter 2000) give some insight into the range of programs undertaken.

Case Study: The Kimberley Language Resource Centre

The KLRC Newsletter 2000 includes a timeline from the pilot study (Hudson and McConvell 1984), the founding of the centre in 1985 and its move from Broome to Halls Creek in 1986. Other major events included are the setting up of the Fitzroy Crossing annexe in 1990 and the election of the present chairperson, Bonnie Deegan in 1992.

1999 was a 'busy year with lots of activity' including the publication of

- *Ardiyooloon Bardi Ngaanka: One Arm Point Bardi Dictionary;*
- *Guide to writing languages of the Kimberley;*
- *Jaru Learning Kit.*

In her Chairperson's report, Bonnie Deegan reports 2000 as another busy year with

- Bunuba CD-ROM
- Nyikina Writing Workshop
- Kija phrase book
- Wangkajunga word book
- Kwini draft word book
- Collection of Arawarri language from one of the last speakers, at the request of the people of Wyndham
- 3 story books and a dictionary for Worrorra
- Launch of the Bardi dictionary
- Mona Chuguna wrote her own story herself in Walmajarri
- Alec Forrest told his life story in Walmajarri and had it written down
- *Minya Manpangu Marnu Yapajangka* Walamajarri Story Book

Also mentioned in the newsletter are the following activities:

- High school language lessons in Kija
- Bunuba Art Workshop
- Sorry day and NAIDOC day with language activities
- Gooniyandi dictionary development on field trips (including environment words and placenames)
- Kija and Bunuba Language Nests (for young children)
- Meetings at schools about teaching Indigenous languages
- Running training sessions for Health staff

Bonnie Deegan also writes 'The year I turned five years old I was taken away from my mother, a full-blood Aboriginal woman and my father, a white man...by Native Welfare. I spoke in language (Jaru) and Kriol. ...Nobody ever spoke their language in school. That's how I lost my language. It was one of my dreams to learn to speak my language again... I love the Language

Centre. I am proud to have been the chairperson for this many years. I am happy to see lots of dictionaries and books produced by the language centre in different languages. The idea of the language centre is to preserve and revive all languages. We are proud to help all surrounding communities with language projects... Old people should be talking to the young ones in Language all the time. We shouldn't be ashamed but be proud to speak our Language.'

Table 26 below provides figures for Indigenous language programs run outside schools were assembled from sparse responses to our mail-out, some follow-up enquiries and attendance at a FATSIL meeting. They are therefore problematic and unreliable. Figures that clearly do not reflect the entire picture are given in brackets and explained beneath the table.

At this stage four figures are provided for each state/territory:

1. **Languages:** the number of languages for which non-education Indigenous language programs exist (excluding post-school education programs – TAFE and University courses).
2. **Programs:** A program is a named set of activities which are run together in a coordinated way by the same managing group for the same target or client group. The number would normally be the same as the number of languages where there is a single program for each language group. However there can be variation where a program takes in more than one language in a region, or two distinct programs are run for one language. There may be distinct projects within one program (e.g. in the KLRC Case Study above, the Bunuba CD-ROM, the Bunuba Art Workshop, and the Bunuba Language Nest are distinct projects with a Bunuba program).
3. **Sites:** the number of sites (locations) at which non-education programs operate. A single language program for instance may be run at a main centre and in an annex or outstation, for instance. As long as activities are carried out in more than one place regularly, these count as multi-site programs.
4. **Centres:** the number of language centres in the state, according to FATSIL (1999), bearing in mind what was said earlier about the variable nature of language centres.

Programs are not counted if they are not currently active or ongoing. However since there is no way to check on all programs on the ground, reports of activity are taken at face value even though in some cases the outcomes are unclear, and/or there appears to be little Indigenous language content in the program. In the table below, programs are counted as 'non-education' if they are not run through schools, colleges or universities primarily (although they may meet in such premises). This does not imply that they do not have educational content – they often do, but are not integrally part of the education system.

Table 26: Numbers of non-educational institution Indigenous language programs and centers, by state

	NSW/ACT	NT	QLD	SA	TAS	VIC	WA
Languages	(?8)	(15)*	(?19)	6	(?)1	(?3)	(14)**
Programs	8	(15)*	19	6	1	3	(14)**
Sites	8	(18)*	18	15	1	6	(7)**
Centres	6	4	7	1	1	1	6

* Information from only 3 language centres: probably around 25 languages/programs in total.

** Information from only 4 language centres: probably around 20 languages/programs in total.

7.9.c Indigenous language programs in post-school education

This sub-indicator counts the number of post-school education programs dealing in a major way with Indigenous languages and having mostly or entirely Indigenous students (TAFE and University). This is an important benchmark since it indicates how serious tertiary education institutions and funding agencies are taking the question of Indigenous language's and the training of Indigenous people to work as professionals and para-professionals in this field.

A key development along with the beginning of Bilingual Education in the Northern Territory was the establishment of the School of Australian Linguistics initially as part of the Darwin Community College, later Darwin Institute of Technology. Although intended as a national centre, it was subject to pressures to confine its interest mainly to the NT, and was also downgraded and had its student numbers reduced in the 1980s (Black and Breen 2001). In response to that and a need for other Indigenous language training centres, Pundulmurra College in WA started, and more recently Cairns College of TAFE have been running courses in Indigenous language work for Indigenous people. When DIT was amalgamated into the Northern Territory University in 1989, SAL was removed and incorporated into Batchelor College, a tertiary institution for Indigenous students, under the name Centre for Australian Languages and Linguistics. It now has several annexes including a fairly large operation in Alice Springs.

Table 27: Indigenous language programs in post-school education

	NSW/ACT	NT	QLD	SA	TAS	VIC	WA
Post-school programs	5	3	1*	3	0	0	(?4)

* Indigenous language courses at James Cook University appear to have been discontinued; no response to enquiries.

7.9.d Language programs in schools

Table 28 gives rough figures for school programs based on patchy information obtained.

Table 28: Numbers of school Indigenous language programs by state

	NSW/ACT	NT	QLD	SA	TAS	VIC	WA
Languages	(?)13	(17*)	(?5**)	9	0	?1	(?20)
Programs	13	(37*)	(?5**)	62	0	1	(?40)***
Sites	16	35	(?**)	51	0	1	(?40)***

Notes:

- * 31 school programs in government sector receive IESIP funding for Indigenous language programs (may be total). The 'Two-way Learning' program (formerly Bilingual Education) operates 14 programs at 12 sites (probably included in the 31 above. No full information from the Catholic and independent system but at least 6 more programs in that sector
- ** It is uncertain if there are any official Indigenous language programs in state schools; this is just a rough guess based on very little information
- *** WA Education Department could not provide figures. Wangka Maya estimates there are 15 schools in the Pilbara with some kind of language program, and on this basis a state-wide estimate has been made including also estimates for Catholic and independent schools.

There is some general discussion of educational programs involving Indigenous languages with reference to these three categories below. There is a great imbalance in the ease with which

information can be obtained with regard to school programs. The South Australian system is very well documented and facts and figures readily available: we hold this up as an example of 'best practice' in the field. In other cases it is difficult to discover any information short of travelling to the area, which we were not able to do. In many other cases we were told that school programs involving Indigenous languages in some fashion did exist in various regions of other states but did not have time or resources to find out more (see Laughren 2000 for an overview summary).

7.9.d.i Bilingual education in the Northern Territory

A report submitted by the Aboriginal and Torres Strait Islander Commission to the United Nations Committee on Economic, Social and Cultural Rights (ATSIC 2000: 30-31) states that the decision by the Northern Territory Government, made in 1998 with minimal consultation, to remove support for bilingual education programs, will impact adversely on Indigenous peoples (see also Section 6 above). It continues:

The bilingual model in the Northern Territory provides a basis for Aboriginal students whose first language is an Aboriginal language to first gain literacy skills and competency in their own language, while at the same time fostering proficiency in English literacy and numeracy. Bilingual education provides enhanced community control, as well as management and involvement in education through the professional development and employment of qualified Aboriginal teachers, literacy workers, teacher linguists and cultural specialists. The program allows the incorporation and recognition of the importance of Aboriginal knowledge, traditions and languages in the education of Aboriginal students which can help provide Indigenous students with the necessary skills, self-esteem and confidence to be able to participate in both societies.

The Parliamentary Committee has recommended that:

Support for bilingual programs be maintained in those areas where they are seen as appropriate and necessary by Indigenous communities. (Senate Employment, Workplace Relations, Small Business and Education Committee p.98).

Other education department sources (e.g. the Northern Territory) have produced school population figures but warned that not all students participate in the Indigenous language or 'Two-way Learning' programs, so little can be done with such figures for our purposes. The situation in the Northern Territory is in flux following the decision to close down Bilingual Education. Some of those previously bilingual schools are becoming 'Two-way Learning' schools but what the nature of these programs will be, at what level they are funded, and whether any other schools can participate in the scheme is not clear at this point.

Robert Hoogenraad has been collecting some statistics on enrolments in Indigenous language school programs in Central Australia, presented below in Table 29. It would be useful if departments could keep such records over time and be prepared to provide them for such purposes as state of the environment reporting. The 'two-way' and ex-bilingual schools make up only 19% of the schools and 42% of enrolments although the percentage of the school population speaking Indigenous language's is considerably higher. The table shows the uneven distribution of Indigenous language programs with a high percentage of Warlpiri schools (88%) having some kind of program, but much less in the Western Desert and Arandic (south-eastern and south-central) areas and none in the Barkly region where there are numerous Indigenous language speakers. The figures also reveal a correlation between the presence of Bilingual Education programs and the numbers of Trained Aboriginal Teachers in the schools.

Table 29: School enrolments in Aboriginal schools in Central Australia, showing Indigenous language programs

	Warlpiri	WD	Arandic	"Barkly"	TOTAL	Two-Way + ex Bilingual
Aboriginal Schools* (including Home Land Centre Schools)	4.72	14.13	30.09	10.06	59	
Two-Way* + ex Bilingual (exBiling) (% of Schools)	4.17 (88%)	5.13 (36%)	1.70 (6%)	0	11	11 (19%)
One-Teacher Schools (% of Schools)	0	4 (28%)	18 (60%)	6 (60%)	28	0
Home Land Centre (HLC)/Visiting-Teacher Schools (% of Schools)	0	1 (7%)	12 (40%)	3 (30%)	16	0
School Enrolments* (% of Total Enrolments)	650 (20%)	774 (24%)	1,364 (43%)	384 (12%)	3,172	1,318 (42%)
Average school Enrolment	138	55	45	38	54	119
Trained Aboriginal Teachers (TAT) (% of Total TAT)	10 (42%)	5 (21%)	7(29%)	2 (8%)	24	18 (75%)
Teacher/Linguist (TL) + Mentoring Support(M) positions	3 + 2.25	2 + 2.4	.5 + 1	0 + 0	5.5 + 5.65	5.5 + 4.65
Total Extra Support positions (TL + M) (% of Total)	5.25 (47%)	4.4 (39%)	1.5 (13%)	0	11.15	10.15 (91%)
Trained Aboriginal Teachers to Extra Support positions	1.9	1.1	8.5	° !!	2.2	
Students to Trained Aboriginal Teachers	65	154	194	192	132	67

Note: Including Ltyentye Apurte (Catholic Education) & Yipirinya (Independent). Not included are Yirara College (enrolment 232) with students from all 4 Language Areas, and Tennant Creek Primary & High Schools which have a substantial proportion of students from remote communities in the "Barkly" and Northern Arandic Areas.

Source: Hoogenraad 2001.

7.9.d.ii South Australian schools

Greg Wilson's input from the South Australian Department of Education and Training is an excellent model for data collection in future. Unfortunately we have no data from a number of departments and none that compare in quality with this, but we recommend that this type of record keeping be recognised as best practice. He has produced comprehensive and accurate statistics of the Indigenous language programs in government schools including numbers of languages, programs and numbers of students in each program (and numbers of Aboriginal and non-Aboriginal), the type of program followed (in accord with the division in McKay 1996 adopted by Henderson and Nash 1997 and annual funding breakdowns.

Case Study: South Australian Indigenous language programs

ABORIGINAL LANGUAGES IN THE LANGUAGES AREA OF LEARNING by Greg Wilson, South Australia

1. Total numbers of Aboriginal children and students in South Australia

<i>Birth to Age 5</i>	<i>Reception to Year 7</i>	<i>Year 8 to Year 12</i>
1597⁴	4194	1543

Embedded issue:

Aboriginal languages programs are departmentally accountable from Birth–Year 12. The two Birth–Age 5 phases fall under the purview of *The plan for Aboriginal education in early childhood and schooling 1999 to 2003* (outcome statements 2.1 and 2.2), but not the *LOTE plan 1998–2008* or the *SACSA framework*.

2. Aboriginal children and students participating in Aboriginal languages programs

<i>Birth to Age 5</i>	<i>Reception to Year 7</i>	<i>Year 8 to Year 12</i>
326	965	92
20.4%	23%	6%

Embedded issues:

- it is not possible to deliver Aboriginal languages programs to all Aboriginal learners, due to geographical spread.
- non-Aboriginal students also participate in Aboriginal language programs. (See Appendix for more detail.)

⁴ From the 1996 Census.

3. Sites offering Aboriginal languages programs to Aboriginal and non-Aboriginal learners

	<i>Birth to Age 5⁵</i>	<i>Reception to Year 7</i>	<i>Year 8 to Year 12</i>	<i>Reception to Year 12</i>
Country	15	15	3	7
Metro	7	7	4	1

Embedded issue:

First language learning is not officially accountable in Anangu education sites on the Pitjantjatjara Yankunytjatjara lands⁵

4. Distribution of the 9 languages across sites

<i>Adnyamathanha</i>	9	<i>Kurna</i>	6	<i>Pitjantjatjara</i>	24
<i>Antikirinya</i>	2	<i>Narunga</i>	2	<i>Wirangu</i>	4
<i>Arabana</i>	2	<i>Ngarrindjeri</i>	12	<i>Yankunytjatjara⁶</i>	6

Embedded issue:

Languages are location-specific except where there have been significant demographic shifts⁷.

5. Program types⁸ and the 9 languages

<i>First language maintenance</i>	<i>Second language learning</i>	<i>Language awareness</i>
Pitjantjatjara	Pitjantjatjara	Narunga
Yankunytjatjara	Yankunytjatjara	Wirangu
<i>Language revitalisation</i>	<i>Language renewal</i>	<i>Language reclamation</i>
Adnyamathanha	Ngarrindjeri	Kurna
Antikirinya		Narunga
Arabana		Wirangu

⁵ Includes all types of Aboriginal culture and language exposure; sites offering regular programs probably number closer to 8 country and 3 metro.

⁶ In these sites Yankunytjatjara is taught combined with Pitjantjatjara.

⁷ For example, Pitjantjatjara and Yankunytjatjara, and Ngarrindjeri. Historical shifts have taken place which 'legitimise' people's associations with, or claim to, altered land-language associations. Adelaide itself represents one language-land unit, and other target languages operate on the Adelaide Plains by virtue of these shifts; and the entire South Australian portion of the River Murray today has Ngarrindjeri associations.

⁸ Language Revitalisation, Revitalisation, and Reclamation are known collectively as Language Revival.

Embedded issue:

Program types are not mutually exclusive and the same language may be taught in differing program types from site to site, e.g. Pitjantjatjara is normally an L1 or L2 but could be taught as a revitalisation language in some situations; Narungga and Wirangu could be taught as both Language Awareness and Language Reclamation, depending on resources.

Wilson also provides in-depth discussion of the background and trends in this area of education. He (Wilson 2000) predicts that the demand for Indigenous language classes will increase over the next 10-20 years, for a number of reasons, and argues for departments to prepare for this. The state of the environment reporting process for 2006 would be in a position to examine the extent to which these predictions are borne out, given the high quality of the data presently available as a baseline for South Australia.

7.9.d.iii Western Australian schools

There was a school Indigenous language program at Warburton Ranges state school in the 1970s which later closed down. Other than that there were no Indigenous language programs in the state education system and this led to the foundation of the independent Aboriginal school at Strelley in the Pilbara with a bilingual education program in 1977 followed by others. In the 1980s the Catholic education system also began Indigenous language programs in a number of schools in the Kimberleys.

In 1992 an Aboriginal Languages Framework was produced by Joyce Hudson for the Western Australia education department (1994). This included program guidelines for a number of different types of language situations. It began to be piloted in some state schools from 1994. This framework was also the forerunner of the Australian Indigenous Languages Framework produced in South Australia in 1996.

We have made enquiries but were unable to find much useful information on the overall Western Australian Indigenous languages programs. We know that they are extensive from other regional reports from language centres and others in WA of the number of programs in operation in the government sector, although many of these might be at a relatively low level. This lack of systematic information contrasts with that available in South Australia, discussed above. There are also still higher-level Indigenous language programs in independent schools of longstanding and a number in the Catholic school system.

7.9.e Additional recommended components of the programs for indicator IL.9

A component missing, or not easily accessible from the material provided by South Australia, is the number of hours of classes. A few other sources do give such figures either as total hours of a program of instruction or as hours per week. For instance Hosking et al. (2000) cite 100 hours of Yandhruwandha at year 8 in Bourke, and the Muda Language Centre reports 4 classes a week at different levels for Yandhruwandha.

Our recommendation for the future would be to combine the kinds of information provided by the SA Department of Education with such figures. In addition to the number of programs and their type, and the number of sites or locations, the number of students involved could be multiplied by hours of classes per year to give a more robust indicator of the amount of activity and the commitment of the educational authorities to this subject area. In some cases Indigenous languages are combined with other topics in 'Aboriginal studies' or 'culture'

programs. In such cases an estimate of proportion of language-related activity could be used to add such figures to totals of Indigenous language student/hours per year.

A further component of any educational or language maintenance program is evaluation and measurement of outcomes - in this case, increased use and ability in the target Indigenous languages. We do not know of any body or project which is carrying this out or intending to, although it is perfectly feasible (McConvell 1994). To start with the existence of evaluation /proficiency assessment procedures in programs could be added as a sub-indicator. Later, if and when they are implemented, the actual results might be used as an indicator.

8. Methods of data collection

Following discussions with the reference group and with others familiar with particular indicators we determined that we would focus on data that would be readily available in the time frame permitted. Hence our data collection methodology is one that we would not recommend being replicated in the next state of the environment reporting process. We describe the methods used for this paper; recommendations for a better methodology that we hope can be followed in future are to be found in section 2 at the beginning of the paper

We researched sources of data that we could use directly, and located agencies who could supply data from their own records. A number of the indicators require specific research to be undertaken as they are not generally dealt with in other reporting processes. These include:

1. number of people who identify as knowing an Indigenous language. While Census data gives us a broad picture, it is based on self-reporting and only asks about language use in the home. Regional surveys of language use, like Hoogenraad (1994), provide metrics against which to correlate Census data.
2. the use of Indigenous languages in media; and
3. the use of Indigenous languages in placenames.

We were unable to conduct the research necessary to address these indicators.

We wrote to organisations and linguists working with Indigenous languages and received some very useful replies which have been incorporated into this paper.

Many however either did not respond or complained of the lack of time allowed for gathering data. Many expressed sentiments similar to the following:

“I believe it would be of great value to the organizations providing the data if the indicators you want monitored were sent to us closer to the beginning of the next five year period so we could monitor and record our program data accordingly. This would lead to more accurate and timely reporting for your project.” Mark Nizette (Senior Manager, Policy and Communication, ScreenSound Australia)

Data such as population figures from existing sources related to individual languages has been entered into the database constructed for this project.

9. Results and interpretations

The main findings of the project can be found in section 2 at the beginning of the paper, divided into findings about the state of Indigenous languages and findings related to the data gathering methods used. This is followed by a list of recommendations about issues in general and more specifically about indicators.

Overall the trend remains towards a decline and eventual loss of perhaps all Indigenous languages, a tragic result for Indigenous people and the heritage of Australia. However there are some bright spots where the efforts of Indigenous people to turn the situation around seem to be paying off in mitigating the downward trend. The building of strong Indigenous-controlled language centres and programs backed by Commonwealth funding schemes and, more recently still, strong support for Indigenous languages in education in some states is assisting in this rescue operation. But this support remains uncertain and in some places (notably the Northern Territory) is faltering ominously. It is essential for schemes and programs to be continued for a generation to have effect, not supported in fits and starts – a situation which is often more demoralising than complete lack of funding.

The 1996 Census represented a significant improvement in coverage of Indigenous languages in that it recorded individual names of languages spoken rather than just ‘Aboriginal language’ generically. Obtaining Census data has been expensive and not without problems, and no doubt with more time and resources more useful correlations could be mined from that source, and followed up with other more specific studies of issues and regions. However Australia is still a long way behind other countries which have similar profiles of Indigenous languages, especially Canada. It is to be hoped that we can move to align the two censuses of Australia and Canada more closely in the Indigenous languages area by 2006.

Some problems experienced by this reporting process are certainly due to the late implementation of the project and lack of resources, and we have recommended an earlier start and more systematic approach to the exercise in the next round. However the process has also uncovered problems in the data management and record keeping of relevant bodies and government departments. Some of these relate to lack of system or lack of concern with Indigenous language issues, and may be significantly improved by pointing out models of ‘best practice’ that our survey has also discovered. In other cases, unfortunately, departments and individual researchers, heavily publicly funded, have decided for reasons best known to themselves not to make data available.

Further research can be done on correlations, which can improve our understanding of the dynamics of Indigenous language change. A preliminary look at gender did not seem to yield much of significance but more detailed analysis or better data collection could yield more fruitful results. The reported longer maintenance of languages by females (e.g. Gurindji, Kayardild) contrasts with the hypothesis that females are more open to linguistic innovation.

Once again with income, education and location, opposing positions have been expressed in the literature about their correlations with language maintenance and this can be clarified. The number of languages in the community and the level of English in the community are also issues where the relationship of this factor with Indigenous language maintenance needs to be examined.

Cross-correlation between the various indicators also throws up important issues: does higher public and media use of a language or its use in schools favour its maintenance? Very different answers have been given to this question, and a lot depends on the type of programs and the

appropriate investment of funding, for which the present study can also begin to provide some guidance.

Indicator IL.9 in particular can be used as a first pass at the effectiveness of programs in language maintenance over time but further, more detailed research in areas selected using the basic data would then need to be done. Selected case studies are needed to provide more detailed profiles of:

1. The functions of language in the language ecology of a community
2. Language proficiency in different age groups
3. By means of benchmarking, assessment of effect of any language programs in the community for language maintenance.

While there remain gaping holes in both the data and analysis assembled here, the beginnings of an overall picture of the state of health of Indigenous languages and their support mechanisms is beginning to emerge from this study. Judicious use of these results will improve both the monitoring of the state of Indigenous languages in future, and our ability to invest in the best ways of maintaining this key part of the Australian heritage.

10 Acronyms and Glossary

ABC	Australian Broadcasting Commission
ABS	Australian Bureau of Statistics
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
ATSIC	Aboriginal and Torres Strait Islander Commission (Commonwealth Government Commission)
ATSILIP	Aboriginal and Torres Strait Islander Languages Initiatives Program (an ATSIC funding program)
BRACS	Broadcasting for Remote Aboriginal Communities Scheme
CAAMA	Central Australian Aboriginal Media Association
DEETYA	Department of Employment, Education and Youth Affairs (Commonwealth Government) – now DEST with transfer of some functions to other departments
EA	Environment Australia (Commonwealth Government)
FATSIL	Federation of Aboriginal and Torres Strait Islander Languages (an ATSIC funded body)
HL	Home Language
LAI	Language Access Initiatives
MT	Mother Tongue (a person's first language)
nec	'not elsewhere classified' - a category used by the ABS Census to refer to languages named on Census responses that were not part of the ABS (1998) <i>Australian Standard Classification of Language</i>

nfd	'not further defined', - a category used by the ABS Census to refer to Census responses that do not specify a language
OZBIB	Carrington and Triffitt 1999. <i>OZBIB: a linguistic bibliography of Aboriginal Australia and the Torres Strait Islands</i>
RLS	Reversing Language Shift: a term used in Fishman 1991 for language maintenance intervention.
SBS	Special Broadcasting Service (a national broadcast service)
Attrition	Reduction in use of a language by an individual through life
Bilingualism	When people speak two languages (also used loosely for speaking two or more languages)
Language death	When the last speakers of a language die; also used of the process (usually of language shift) leading towards this end
Language maintenance	When a language stays alive and strong; also used of intervention strategies to keep languages in this condition
Language shift	When a group moves from speaking their old language to speaking a new language
Multilingualism	When people are able to speak more than one or two languages.
Needs Survey	A survey of Indigenous language programs conducted by ATSIC in 1996-1997
Semi speaker	Someone who speaks some of a language, but who doesn't speak it fluently
Transmission	The passing on of a language from the older generation to the younger in a language group; 'disruption' or 'failure' of transmission is when this does not happen properly or at all.
X-ish	The language spoken by a group x ('x-men'); term used by Fishman.

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Appendix 1: Indigenous language indicators

Recommended by Pearson et al. (1998).

Issue 1: Condition of Indigenous languages

IL.1. Number of people who identify as knowing each Indigenous language.

IL.2 Number of people in age group who identify as knowing each Indigenous language; proportion of total identifying as Indigenous.

IL.3 Number of traditional languages at each recognised stage of inter-generational dislocation.

Issue 2: State of documentation of languages

IL.4 The number of Indigenous languages for which (a) documentation is

- (i) good
- (ii) adequate
- (iii) inadequate

(b) documentation is close to complete (given the state of the language).

Issue 3: Wider use of Indigenous languages

IL.5 The number of/proportion of traditional language used in :

- (i) broadcast media: radio, TV, published books, magazines, cinema, WWW, distinguishing:
 - (a) programs aimed at speakers;
 - (b) programs aimed at a general audience;
- (ii) signage in public places (streets, parks), advertisements

IL.6 Number of approvals of geographic names, including map sheet names, using Indigenous place names.

Issue 4: Funding, research and education

IL.7 Amount (in \$) of funding provided for language programs through government departments and agencies, including ATSIC, DEETYA, ARC and AIATSIS distinguishing allocations to:

- (a) research;
- (b) language maintenance;
- (c) education and training; and
- (d) information dissemination and public education (e.g. translation of notices of government programs)

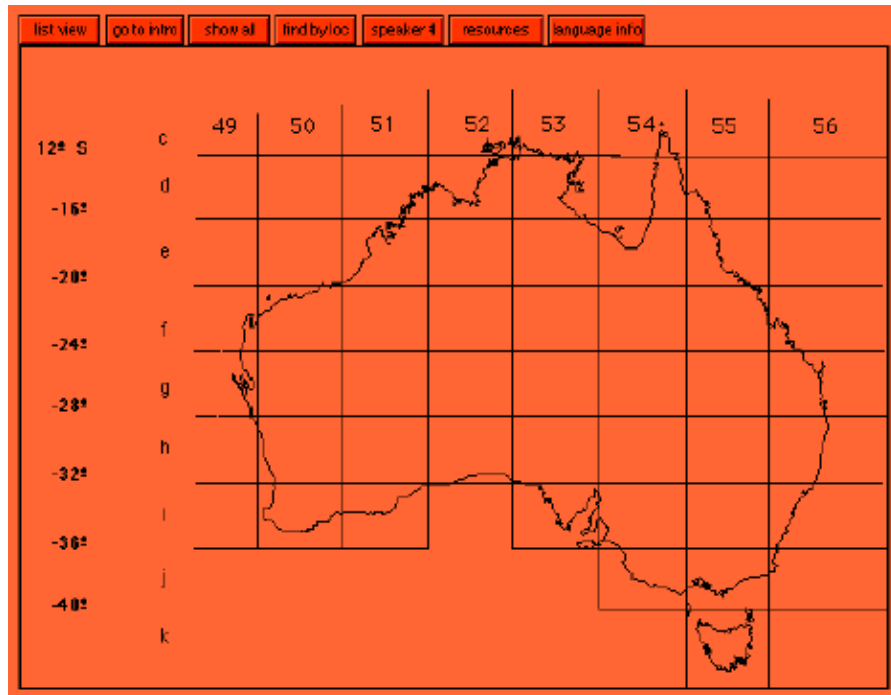
IL.8 The number of projects which document knowledge of traditional languages, by type of project

IL.9 The number and type of Indigenous language programs undertaken in language centres, schools and other institutions.

Appendix 2: Indigenous languages database

The Filemaker Pro 5 database constructed by AIATSIS contains 764 entries, each of which has information about a named Australian Indigenous language. Information is presented over several screen views, and includes a list of alternative names, number of speakers, types of resources available, and so on. Example screen shots of the database are included below.

A clickable map retrieves names of languages by a 1:250,000 map grid.



Each language has the following information [Screen 1 - identification]

AIATSIS Australian Indigenous Language list

Pitjantjatjara **C.006**
Map G5211

[list view](#) [go to intro](#) [show all](#) [find by loc](#) [speaker #](#) [resources](#) [language info](#)

Alternatives	Horton name
Bidjandja	Pitjantjatjara
Bidjandjadjara	Standard Pitjantjatjara
Bidjandjara	Donohue
Bidjuwongga	Tindale Pitjantjatjara
Bidyandyadyara	
Bindjandjadjara	
Gunggawara	
Ituame	Groupname Western Desert
Jabu	Group South-West
Kalgonei	Subgroup
Mamoo	State SA, NT
Mamu	

Notes

Find global

Each language has the following information [Screen 2 – language resources]

AIATSIS Australian Indigenous Language list - Resources

Pitjantjatjara **C.006**
Map G5211

list view go to intro show all find by loc speaker # resources language info

Documentation (0-17) as of 9/2/2001 = 15 No documentation known

Detailed dictionary (eg Arremte, Kayardild)
 Medium dictionary (eg)
 Small dictionary/ wordlist (eg Wamman)
 Simple wordlist (eg Bates, Cum) 3

Extensive text collection
 Several texts (< 10)
 Elicited/example sentences 3

Detailed grammar (eg Gooniyandi, Kayardild)
 Middle-sized grammar (eg Handbook)
 Grammar sketch or many technical articles
 Few technical articles only 4

Substantial ethnolinguistic work (eg thesis)
 Ethnolinguistic description
 Some ethnolinguistic information 2

More than several hours of audio
 Less than several hours of audio
 Less than an hour of audio 3

linguist Goddard, Cliff

lg progs

Each language has the following information [Screen 3 – speaker numbers]

AIATSIS Australian Indigenous Language list - Speaker numbers

To search, click in the field you want and type what you want to search for.
 Alternatively, you can click in the field and type applekey-I to see an index of everything in that field

list view go to intro show all find by loc speaker # resources language info

AIATSIS Standard Pitjantjatjara

Tindale Pitjantjatjara

AIATSIS Code C.006 **Find populations**

Speakers 2000

Source WA Handbook **Speakers 1980 and before**

hoog full **hoog part** **sp#1980 source**

Yallop incl w/- Western Desert= 3000 **sp#1990** 2000

Schmidt 1990 3000+ **sp#1990 source** WA Handbbok

Senate 1984 1000 **sp#2000**

Census 1996 2107 **sp#2000 source**

census 1996 age

0-9	380
10-19	445
20-29	451
30-39	340
40-49	232

Appendix 3: Indigenous language programs database

The same Filemaker Pro 5 database constructed by AIATSIS contains information on language programs, as follows:

AIATSIS Australian Indigenous Language list - Language programmes

program name	Fitzroy Crossing School	language(s)	Gooniyandi / Gunian
contact name			
address			
town/city			
phone			
email			
source of info	KimberleyHbook		
date	1982, 1985		
program type	teaching (primary)	aiatsis code	K.006
Go back			

