

**Data issues for regional planning in Aboriginal
communities**

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The Northern Territory government's recent release of a 'Stronger Regions Policy' (Northern Territory Government 2003) raises major questions of public policy and social scientific interest. At the heart of this policy is the gradual establishment of regional governance structures, broader in conception than the current 65 Northern Territory local government councils, both spatially and functionally. As an exercise in restructuring, the key feature is a series of partnership agreements negotiated between the Territory government and these new regional representative bodies. Currently, one such body exists, a number are close to formation, and supposedly they will ultimately extend across the Territory. The agreements associated with them will serve to identify mutually determined social, economic, and service delivery outcomes together with the means to achieve them. Significantly, in the context of the present paper, these will be codified in a series of negotiated regional development plans, and they will be subject to a regular process of evaluation and monitoring against measurable outcomes.

This initiative is significant. It represents a shift towards regional planning, as opposed to sectoral planning, as the functional basis of Northern Territory government administrative processes.

Viewed historically, it signals a conscious effort to move away from a silo model of planning and development focused on specific sectors such as Asian trade, growth of the Darwin urban area, pastoral management, the mining sector, and the separate servicing of Aboriginal communities, towards an approach which views Territory development as an integrated whole with the development strengths and weaknesses of one region impacting on all others. It is also an equity and efficiency-based model, with needs assessment, equalisation of resource allocation, and measured outcomes as the key drivers.

For reasons of spatial distribution and historical exclusion, the implications of this strategy are potentially greatest for the estimated 72% of Aboriginal residents of the Northern Territory who have residential ties to Aboriginal lands (Taylor 2003). It is they who now occupy most of the land area outside of the urban areas, and it is they who to date have been largely kept outside of formal Territory planning processes.

The task that the Territory government has set itself falls within the disciplinary parameters of regional planning. As an area of public policy and academic endeavour, this is a multi-faceted activity and significantly has its roots as a form of applied economics in the UK of the 1930s where preferential taxation rates and subsidy packages were made available for industries willing to establish themselves in newly proclaimed Special Areas in the more depressed areas of the north and west (McCrone 1969: 93-105). Subsequent regional planning has acquired a firm theoretical basis and assumed far more complex and integrated tasks, being a common tool of government policy (Balchin, Sykora and Bull 1999; Glasson 1983; Gore 1984; Stilwell 1992; Stohr and Fraser Taylor 1981). Its content ranges across the breadth of government functions including the management of environmental, social and economic development, to the point, in some cases, of full regional devolution. The essential point is that regional planning has a long history and has acquired, over the years, a defined literature outlining a set of conceptual frameworks and analytical techniques that are worth touching on briefly before proceeding to the main business of reviewing data issues associated with the new regional planning policy in the Northern Territory.

What is planning?

Planning can be defined as a sequence of actions designed to solve problems in the future (Glasson 1983: 19). Thus, while planning problems vary, in a public policy context they involve a sequential process conceptualised in a number of stages:

- Demarcation of regional boundaries
- Identification of regional goals
- Formulation of measurable objectives related to goals
- Projection of the future situation
- Generation of alternative courses of action to achieve stated goals and a the acceptance of a preferred plan(s)
- Evaluation of planned outcomes versus actual outcomes

Adapted from Glasson (1983: 19).

Within this schema, a broad distinction is often drawn between *physical* or *infrastructural* planning (land use, communications, utilities etc), and *economic* and *social* planning, although these are often inter-related and co-dependent - for example, in terms of the relationship that might exist between improved transport networks, business development, and the availability of a local skilled labour force.

A distinction is also drawn between *allocative* planning, and *innovative* or *development* planning. The first of these is concerned with efficiencies and coordination of the regional system. It deals with conflicts over resource allocation, and ensures that processes unfold literally according to plan. Development planning, on the other hand, seeks to change the regional system in ways that are presumed to be for the better. One obvious example would be the pursuit of new industry development in a region, although use of such an example provides an immediate example of the need to define precisely what is meant by 'development', an issue that is likely to loom large in the Northern Territory. In many regional contexts, development planning might well include the strengthening of customary economic activity as much as the enhancement of more mainstream activity.

Another vital distinction is drawn between *planning goals* and *planning objectives*. Goals are ideals and should be couched in general terms – for example, 'improvement of the living standards and well-being of the regional population', is one that is often stated, and no doubt will be repeatedly so. Objectives, on the other hand, while obviously related to goals, need to be more precisely specified and they should be capable of both attainment and measurement. Their purpose is explicit, rather than implicit – for example, to raise the regional employment rate to the Northern Territory average, to lower the level of overcrowding in housing to an accepted level, to increase school attendance rates, to reduce specific morbidity rates, and so on. While on the surface such objectives appear laudable, and, in theory at least, achievable, the extent to which they are measurable at the regional scale is the more important issue for regional planning. Before considering measurement issues, the other conceptual foundation of regional planning needs to be considered – namely, what is a region, how are they defined?

What is a region?

Regions are a classificatory concept designed to represent physical, cultural, social and economic characteristics for given portions of the earth's surface. The touchstone of regional analysis is diversity – if none were evident, there would be no regions. That regions exist, then, is almost axiomatic. However, there are diverging views as to what they represent and how they should be defined.

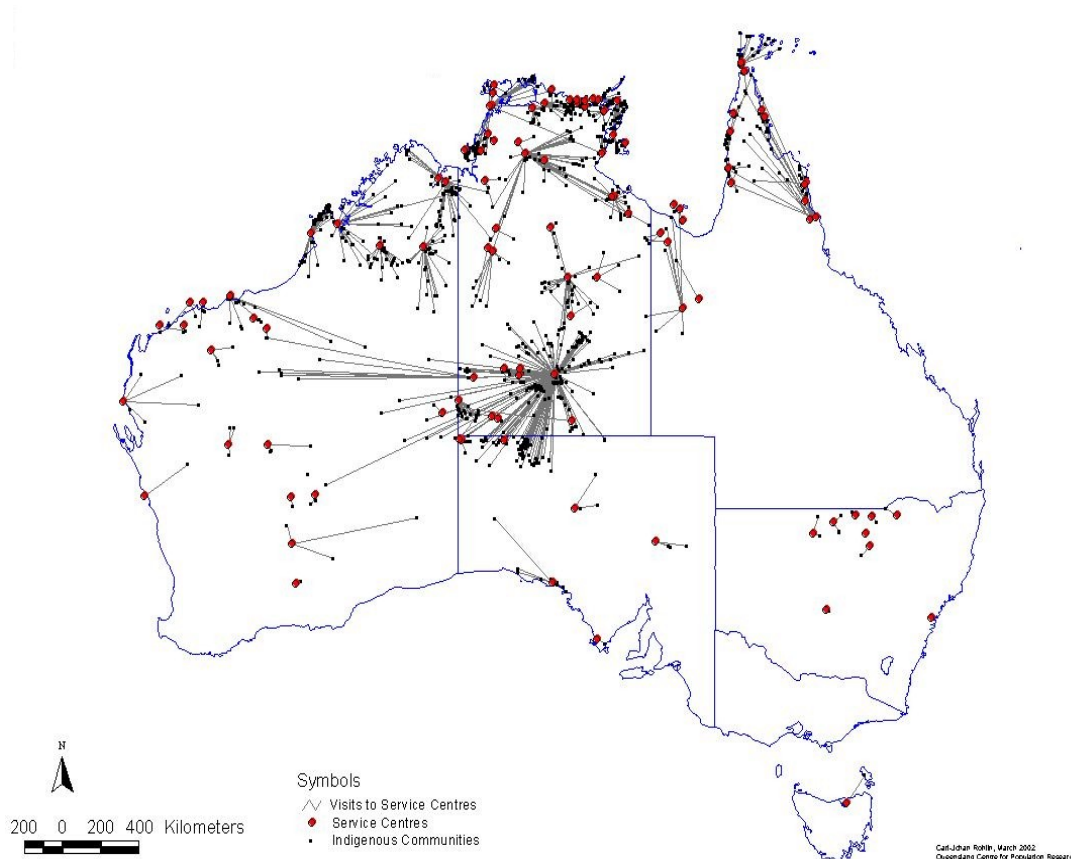
The first view of regions considers them to be natural phenomena, as organic entities, representing the spatial manifestation on the earth's surface of long-standing relationships between particular populations and the lands they occupy. In this scheme, the key defining features of regions are uniformity, coherence, common identity and homogeneity. Such a view provided the basis of much regional analysis – so called regional geography - up to the 1950s where the aim was to identify and map out formal regions based on the spatial coincidence of internal consistencies and the mutuality of geographic contrasts and distinctions (Freeman 1961; Hartshorne 1939). The intellectual roots for this enterprise stemmed from 19th century geographic determinism with the physical environment seen as underpinning the human environment. While now superseded and peripheral given the complexities of space in the urban-industrial and globalising world, it may be salutary to reflect on these methodologies when contemplating the design of regional boundaries in the Northern Territory given the continuing importance of the land base as an organising feature of Aboriginal social and economic life.

The second, more recent view, sees regions simply as a method of classification – a descriptive tool defined according to particular criteria, with as many regions as there are criteria to define them. In this scheme, a particular approach is to identify regions according to their function - thus distinguishing functional regions from the formal regions mentioned above. A functional region is one that displays a certain functional coherence – an interdependence of parts - when defined against certain criteria. They are often described as nodal regions composed of heterogeneous units and populations – typically a network of towns and dependent smaller communities – often identified or circumscribed spatially by the pattern of flows of goods, services and people. The term hinterland captures this notion well.

In the Northern Territory, for example, the physical separation of people from services generates substantial population mobility. The fact is, despite the predominance of usual residence in small, widely dispersed communities, urban centres loom large in the lives of remote Aboriginal populations. According to one calculation from census data, as much as 10 per cent of Indigenous populations present in regional centres such as Darwin and Alice Springs at any one time, are temporary residents from smaller rural communities (Taylor 1998).

The effect of this mobility to service centres is to create a pool, or catchment of population, around each service town. Some sense of the size of these population catchments, and their spatial extent, was provided for the first time using data from the 1999 CHINS which asked key informants to indicate the nearest town that members of each community usually go to for banking and major shopping services. In answering this, a total of 35 service centres across the Northern Territory were identified. These ranged in size from large centres, such as Darwin and Alice Springs, to small localities such as Timber Creek and Borroloola. An indication of the spatial pattern of these catchment areas, and therefore of functional regions, is provided in Figure 1.

Figure 1. Journey to service centres: discrete communities in remote Australia, 1999



Source: Taylor 2002

While subjectivity applies to these data due to the nature of the survey methodology based on key informants, the map clearly illustrates a major functional region centred on Alice Springs and extending across the Western Australian and South Australian borders. In all, 259 communities nominated Alice Springs as their primary source of higher order services, and this encompassed a population of some 15,000. Moving north, other functional regions are evident around Darwin and Katherine, while some parts of the Territory are functionally tied to cross-border towns.

Somewhat intermediary between formal and functional regions, is the notion of programming, or administrative regions (Stilwell 1992: 46). This provides a more pragmatic view of regions recognizing the fact that institutional structures within an economy and society tend to operate within administrative boundaries. These represent the boundaries of governance, and for better or worse, invariably provide the framework within which planning decisions are made and services delivered. Within the Australian federal system, State and Territory governments have tended to represent the key intermediary planning level. Perhaps as a consequence of this, planning at the truly regional level has rarely been achieved, with local government and metropolitan jurisdictions acquiring most regional-type functions, although exceptions do exist, of course, such as in the case of the Kimberley Development Commission, and the Murray-Darling Basin Authority with the latter straddling State boundaries. In the Northern Territory to date, the five government administrative regions

have been set according to an urban centre and hinterland model reflecting (or creating?) functional regions not unlike those identified above.

When it comes to deciding on regional boundaries for the new Northern Territory regional bodies, it is likely, if not advisable, that some combination of these regional definitions will be brought to bear, with a possible trade-off between formal cultural regions and the need for economies of scale and recognition of existing service delivery frameworks. This much seems implicit in the Northern Territory Government's definition of a region:

“an area that the people in it see as a region and that the government agrees should be treated as such; where a reasonable community of interest exists; where there is capacity to achieve economies of scale in the achievement of outcomes; and where there is demonstrated capacity or need for whole of community action to cooperate in the achievement of shared objectives” (Northern Territory Government 2003).

Aside from the Thamarrurr Region, which is already in place, the sorts of regions identified for consideration in this way by the ‘Stronger Regions’ policy include the Tiwi Islands, Greater Darwin, Kakadu/Coburg, East Arnhem, Groote Eylandt, Maningrida and surrounds, Pine Creek/Coomalie/Douglas-Daly, Katherine, Katherine East (Nyirranggulong), Katherine West, Roper River, Gulf region, Anmatjere, West MacDonnells, Alice Springs, Warlpiri communities and the Tanami, Southern Arrente, Southern Central (Imanpa, Mutitjulu, Kaltukatjara), and Barkly.

While such groupings might appear intuitively sound, complexities are almost certain to arise in seeking to establish boundaries for the purposes of representing regional ‘communities of interest’ with ‘shared objectives’. Some insights into the nature of such complexities for regional planning purposes are available from Sutton's (1995) critique of Davis and Prescott's (1992) work on Aboriginal boundaries, and Morphy's (1999: 36) critique of the Reeves proposals for reform of the Aboriginal Land Rights (Northern Territory) Act.

With reference to the latter, it is pointed out that populations that are now centred around former government settlements and mission stations might appear to provide some basis for regional groupings, but they are unlikely to define traditional levels of regional organization, which in any case are often indeterminate being blurred at the edges. Even in Eastern Arnhem Land, where a case can be made for a degree of regional coherence based on the kinship system and relatedness of Yolngu languages, people in the western part of the Yolngu region interact with non-Yolngu groups centred in the Maningrida region, while southerly Yolngu groups such as the Ritharrngu have close links with people in Ngukurr and Numbulwar. In both cases, these links are probably closer than the links to the Yolgnu communities at Yirrkala and Galiwinku. According to Morphy, regional differences that seem so clear at a distance often dissolve at the boundaries between regions due to inter-marriage and shared ceremonial and economic activity.

While this is no doubt the case, at the end of the day, boundaries for regional planning will need to be established – as, indeed, they already have been for a wide range of service delivery activities including health spending, policing, housing, CDEP, local government distributions, and so on. However, if the new regional authorities are to assume an innate sense of regional representation, common purpose, and joint planning, as specified in the

Strong Regions Policy, it is essential that considerable effort be applied to the careful design of regional boundaries.

One important aspect of this is related to the monitoring and evaluation phase of regional planning. At the very least, consideration should be given to matching regional boundaries with the ABS' Australian Standard Geographic Classification (ASGC), as this is the basis upon which official population counts and estimates are developed, for which census data are available, and against which many agencies seek concordance.

However, this is not to preclude the possibility that ABS and agency service delivery boundaries might themselves have to change in order to match new Regional Planning boundaries. This is not as radical as it might sound. Since 1991, the ABS has successively redesigned Northern Territory Collection District (CD) boundaries to more closely align with socio-spatial groupings on the ground (Taylor 1992), although just how accurate these are in some instances is a matter for debate. It seems highly likely that such realignments might occur again if new regional boundaries suggest the need. In this event, some form of coordination will be essential between relevant Territory government departments, the ABS, and any other relevant agencies such as the Commonwealth Department of Health and Aged Care, and Land Councils. However, as long as the respective boundaries are spatially nested, most of the difficulties presented by any mismatch can be overcome.

If we take the Thamarrurr Region as an example, the regional boundary is now gazetted according to instructions obtained via regional workshops held over an extensive period of consultation with the 20 clans of the region regarding the purposes and intentions of the Strong Regions policy. Table 1. shows the nature of concordance between this boundary and others designed for service delivery purposes. The lack of complete match with ABS CDs (one Thamarrurr outstation falls into a non-Thamarrurr CD) is unfortunate but can be easily rectified with a simple CD redesign. As for official population estimates, because Thamarrurr is nested in the larger Daly SLA, these can be apportioned to Thamarrurr by ratio allocation to split CDs, although with further reduction in reliability. This nested concept applies to all other boundaries listed, and it is interesting to note that this includes the PHCAP Zone boundary as this was also developed following some degree of local consultation and consideration of language and cultural relationships, but with added consideration given to the logistics of existing health service delivery and associated economies of scale (Bartlett et al 1997: 51).

Table 1. Thamarrurr Region: Summary of Boundary Concordances

Data type	Boundary match
Census counts and characteristics	Almost complete CD match
ABS population estimates	Nested in Daly SLA
PHCAP Health Expenditure Zones	Nested in Top End West Zone
ATSIC CDEP and HIPP/NAHS	Nested in Jabiru Regional Council
NT Education	Nested in Darwin Administrative Zone
NTG Administrative Regions	Nested in Daly sub-Region
Police and emergency services	Complete match

The tendency it seems is that regional boundaries based largely on locally-defined cultural criteria (such as Thamarrurr) will produce more, smaller, tightly defined areas, than regional

boundaries based on administrative criteria. This was certainly the experience with the evolution of ATSIC regional council boundaries which were originally created on the basis of cultural diversity producing 60 regions, and later reduced to 36 regions due to a declared need for administrative streamlining (Smith 1996).

Baseline data for monitoring and evaluation

As we have seen, an essential component of community capacity building for regional planning is an ability to benchmark and monitor change in social and economic conditions, and a pre-requisite for this is the construction of a baseline profile of the regional population. Without such a baseline, it is difficult to determine the effectiveness or otherwise of regional planning. The experience of the Kakadu Region Social Impact Study (KRSIS) in seeking to determine (in the mid-1990s) the social impact on Aboriginal communities of 20 years of development in the Kakadu region is instructive here.

Despite previous Social Impact Assessment in the Kakadu region, when faced with the task of profiling the employment, income, education, housing, and health status of the Aboriginal population in the mid-1990s, and acquiring some sense of how these might have changed over the previous twenty years, the KRSIS had no database for guidance. Despite initial intentions, no baseline data were systematically gathered in the early years of mining in Kakadu and no monitoring of subsequent change in circumstances took place. Even if it had, the initial studies were focused very much on Oenpelli, whereas the KRSIS exercise was concerned solely with Kakadu, even though the Gagadju membership is more widespread than both extending to Darwin, West Arnhem, and down to Pine Creek/Katherine.

Thus, when the time came to assess the course of regional development it was difficult to establish truly longitudinal effects, and this led to a degree of ambiguity in the interpretation of cross-sectional analyses. For example, a key finding of the KRSIS was that the overall social and economic profile of the Aboriginal population in Kakadu in 1996 was very similar to that of surrounding populations in other parts of the Top End (Taylor 1999). This was offered by those arguing for a cessation of mining in Kakadu as proof that mining had provided no benefit, while those in support of mining pointed to the same lack of regional differentiation as evidence that mining had no negative effect. Nothing short of a baseline profile and subsequent monitoring of profile change for a consistent region, and a consistently defined population could have resolved this impasse. The matter of consistently defined populations raises another important matter.

Establishing regional demography

The shift in public policy towards evidence-based, outcome-oriented, equity-driven planning has highlighted the need for accurate demographic data at small area levels. While this has long been the case in the context of CGC processes (as the Territory is now acutely aware), the provision of population estimates at ever-smaller levels (such as at the level of Thamarrurr, for example), introduces a new dynamic into the planning equation. Whatever the detail of regional development plans, it will be crucial that these are based on reliable estimates of the population that they are intended for. Globally, this requires reliable totals. Program-wise, it requires reliable breakdown into infants, mothers, youth, school-age children, young adults, middle-aged, and older people. There may also be a need for data on families, households, and even clan groups. How well can current demographic data respond to such requirements?

The ABS produces official population estimates for SLAs in Australia. If, regions match SLAs, then these will be available. If not, but regions form part of an SLA (as in the case of Thamarrurr), then ERPs can be apportioned pro rata on a split CD basis, but with corresponding reduction in reliability. However, ABS ERPs are not the only population estimates that can be derived for regions. A number of service delivery agencies gather continuous client-based usual residence data and these can be utilized to construct alternate estimates of regional population. An example, from Thamarrurr, is provided in Table 2.

Table 2. Indigenous Population Counts and Estimates for Thamarrurr, 2001-02

Census count 2001	ERP (pro rated from Daly SLA) 2001	Thamarrurr Housing Office 2002	CIAS ^a 2002
1,382	1,560	c. 2,000	2,452

a. Community Information Access System managed by the NT Department of Community Development, Sport and Cultural Affairs

Why the discrepancies? Ultimately, this is not known, and may be unknowable. However, a series of explanations can be advanced. Aside from the earlier date, the census count and post-censal ERP are derived in quite different ways from the two higher estimates. The census count is a tally of usual residents of the Thamarrurr region as at census night 2001 based on interviews at all dwellings in the Northern Territory; the ERP is derived from this count adjusted for an estimate of those overlooked by the enumeration, as well an adjustment for non response to the census question on Indigenous people. While benchmarking such head counts is difficult, there is some (though limited) case study evidence to suggest that the manner of ABS enumeration in remote Aboriginal communities can serve to undercount the population, and that the adjustment factor applied to compensate for this may be inadequate (Martin and Taylor 1996; Taylor and Bell 2002). In the case of Wadeye and outstations, it may be significant that the Indigenous Estimated Resident Population (pro rated from the Daly SLA ERP) increased by only 82 persons (barely 1 per cent per annum) between 1996 and 2001. Given the very high rate of natural increase in Thamarrurr, a considerably higher growth rate of usual residents than this might well have been expected suggesting that either the 1996 estimate was too high, that the 2001 estimate was too low, or that both were correct in which case there must have been large scale out-migration of Thamarrurr usual residents. Clearly further investigation of this matter is required.

As for the higher population figures, the estimate from the housing office is preliminary only and is currently under development. It is based on an amalgam of community-based administrative population lists of usual residents from the clinic, church, school, housing program, and CDEP scheme grafted to a household census of usual residents conducted in 2002. It does not include individuals known to have been away from the community for some time to take up residence elsewhere in places such as Darwin, Timber Creek and Kununurra, though it does some people who may spend periods of time in such places. In essence, it represents a current assessment by Thamarrurr Aboriginal leaders and community-based service providers of the population that they consider to be usual residents of Thamarrurr. The CIAS estimate is also compiled from an amalgam of administrative data sources, including the rolling three year average estimate of the resident total population (Indigenous

and non-Indigenous) utilised by the Northern Territory Local Government Grants Commission.

Thus, the ABS' ERP is but one population estimate available at the regional level with the main distinction being that it claims to include each Territory usual resident once only. The other estimates may well involve individuals being included as usual residents of more than one region since there is no means of checking whether this occurs or not, nor indeed is there any real concern as to whether it does given the context of high inter-regional population mobility. In effect, community-based estimates are drawn from lists of individuals who are known to service providers as regular users of community-based services. From the perspective of such providers, this is all they want to know. Whether these methods of population estimation are appropriate or not goes to the heart of deciding what the ABS refers to as estimates that are 'fit for purpose'.

Aside from funding issues that might be tied to population size, this question of which estimate is most 'fit for purpose' also has significance for the calculation of rates when assessing changes in the prevalence of certain population characteristics. A classic example of some of the difficulties here is reported in the Collins review of Territory education (1999: 159).

To calculate the enrolment rate of Aboriginal children at Jabiru school, enrolment data for children from within Kakadu National Park were obtained for use as the numerator and then expressed as a percentage of the region's school-age population. While the numerator was sound enough, difficulty arose when selecting the latter. The Northern Territory government used census counts as its source for the population of school-age. Applying this as the denominator produced an enrolment rate of 120% (sic.). Using an alternate source of age data for usual residents of the region based on Gagadju Health clinic records, a much lower enrolment rate of 53% was produced. Which rate is correct?

In theory, several population levels can be identified for any given region, or community, and data related to three such levels have been acquired using household survey methods in the Northern Territory (Taylor 1990, 1998). Conceptually, the following might be said to exist:

- A base population comprised of usual residents (including absentees) and visitors counted as present in a region at any given time
- A potential population defined as the largest number of persons present in a region at any given time
- A service population defined as the average population likely to be resident in a region at any given time

(Taylor 1998)

Table 3, shows the different populations derived for each of these categories in the Bagot community in Darwin in 1986. Clearly, the average population through the year (estimated using data on size and frequency of household visitors through the year) is markedly higher

than the population encountered in Bagot on any random day, whilst there are times of the year (Darwin Show week?), when the population is potentially 75% higher than the base. From a policy perspective, the impact of these three levels is shown in the average persons per dwelling which may appear to be 7.5, is more likely 10.7, and on occasion might be as high as 13.1. Obviously, choosing one estimate over another makes a substantial difference in assessments of need.

Table 3. Population Estimates for the Bagot Community, Darwin: 1986

	Base population	Service population	Potential population
Estimate	303	428	532
Difference from base estimate	N/A	+125 (41%)	+229 (75%)
Average persons per dwelling	7.5	10.7	13.1

Source: Taylor 1998

Social indicator issues

Social indicators, such as the school enrolment rate above, are aggregated summary statistics that reflect aspects of the social condition or quality of life of a population. They are typically employed in evaluation research and reflect more a research purpose than a research method. That purpose being to evaluate the impact of policy interventions, for which purpose they need to be replicable over time.

Statistical coverage

Previous attempts to construct a range of social indicators for specific regions of the Northern Territory (Taylor 1999, Taylor, Bern and Senior 2000, Taylor and Westbury 2000) reveal myriad data sources including from the ABS, and Commonwealth, Territory, and Aboriginal service delivery agencies. These relate to demographic structure and residence patterns, labour force status, education and training, income, welfare, cost of living, housing, infrastructure, and health status. A selection of data sources for different types of data is provided in Table 4, while an assessment of the quality and utility of some of these is provided by Zhao et. al. (2003). Part of the task of regional planning, and something that is underway via the COAG trial at Thamarrurr, is to coordinate access to these data and create mechanisms for systematic and on-going data retrieval.

Table 4. Select Sources of Data for Regional Information Systems by Type of Data

Demography	Population Characteristics	Infrastructure
Census	Census	CHINS
DHCS	Clinic	Councils
CHINS	Hospital	CIAS
ABS	Schools	ATSIC

Councils	Councils	IHANT
CIAS (NTGC)	ATSIC	Line Agencies
Centrelink	Employers	Census
Medicare	Centrelink	
Perinatal collection	Job Network	
Schools	VET/Tertiary	
	Correctional services/police	
	Store	
	Trainers	

It should be noted, however, that the geographic units for which data are available often vary between different agencies, as well as according to the nature of information required. For example, Centrelink data on welfare payments can be obtained at the regional, and even community-level, while housing data, because of their site-specific nature, can be acquired for individual outstations. We have already seen that ABS population estimates are only available at SLA level, so too are births and deaths data. High School and TAFE enrolment data is obviously place-specific, but often fail to indicate the source of students according to their usual place of residence.

Cultural relevance

Whatever the availability of data may or may not be, it should be recognised that social indicators may have drawbacks in terms of providing a meaningful representation of the social and economic status of Aboriginal people. With census data, for example, there are concerns about the cultural relevance of information obtained from an instrument that is principally designed to establish the characteristics of mainstream Australian life. Thus, having observed the 2001 Census count first hand at a Northern Territory outstation, Frances Morphy (2002) has described the process of enumeration as a 'collision of systems'. Along with others engaged in the same exercise in Alice Springs (Sanders 2000) and Aurukun (Martin 2000), she concludes that census questions lack cross-cultural fit and produce answers that are often close to nonsensical.

Due caution is thus required when inferring outcomes from such data. Take, for example, economic status. This is generally established in mainstream society by such indicators as cash income and levels and ownership of assets. However, such status may be measured in quite different ways in many Aboriginal communities. For example, it can be determined by access to ritual or religious knowledge rather than to material resources, or it can be accrued by controlling the distribution of material resources rather than being an accumulator (or owner) of resources Altman (2000: 3-4).

This should remind us that standard social indicators only report observable population characteristics. They reveal nothing about more behavioural population attributes such as individual and community priorities and aspirations for enhancing quality of life, or attitudes to education, health and employment. Nor do they adequately capture the complexity of social arrangements between individuals, families and households. For example, census data identify discrete dwellings as households, but the basic economic and social units of consumption in remote Aboriginal communities are often comprised of linked households rather than single ones (Smith 2000).

Data ownership

The issue of rightful ownership of ‘public’ information is one of increasing relevance in the construction of social indicators. If an Indigenous organisation, such as an Aboriginal Medical Service or a Housing Association, is approached for information it is quite clear who owns the data – they do, and consent to gain access is an essential requirement. In the case of Commonwealth, State and Territory departments, however, the lines of authority have been less clear in the past, but it is increasingly the case that they will not release community-level information without formal consent from relevant community representatives.

If household or client-level data are sought then clearance procedures go much further. For example, a key part of the establishment of computerised health information systems in the Katherine West and Tiwi Coordinated Care Trials was an initial education campaign conducted at both individual and community levels. The aim was to explain the purpose of data collection and its role in achieving improved health outcomes, and the campaign was conducted as part of a process of seeking individual written consent for the retention and analysis of patient records (Taylor and Westbury 2000: 55-7).

The basic lesson here is that the confidentiality, ethics, and access issues need to be dealt with up-front as a key element of partnership discussions regarding the formation of information systems for regional planning.

Population projection

While mechanisms can be established to assess the quantum of needs for regional planning, all too often rapid shifts in population numbers and composition, combined with a reliance on secondary data that is either dated or deficient, creates a sense of uncertainty and constant catch-up. In particular, policy is typically reactive to needs some time after they have been revealed (for example, in terms of post facto responses to housing shortages), as opposed to being proactive in seeking to anticipate and plan for expected requirements. Being proactive requires a calculation of future requirements for works, services, and development initiatives - something that is only rarely achieved at the level of Aboriginal communities.

This is not the case generally in the rest of Australia, where the approach to regional planning is much more prospective. For example, State and local government planning authorities routinely develop future scenarios and often seek budgetary allocations on the basis of anticipated needs. A key element in this process is the production of small area population projections or forecasts. While the ABS provides official projections of State and Territory populations, the individual States and Territories, in turn, produce regional and local area projections, often down to the Local Government Area level.

While concerns over data quality and perceptions of a lack of an appropriate methodology are real given the scale at which the proposed NT regions are likely to be constituted, standard cohort-component methods can be applied at supra-regional scales, for an amalgam of SLAs, and then apportioned on a ratio allocation basis to sub-regions against select assumptions about the distribution of future sub-regional population shares. Such an exercise has been successfully carried out for Mutitjulu for example (Taylor 2001).

The important issue here is that this provides some sense of the likely future growth in social policy target groups, such as infants, school-age children, young adults, populations of working-age, and the aged. From a formal planning perspective, it is these sorts of future estimates that ideally should form the framework for the identification of regional planning

objectives, as demonstrated by a recent assessment of future Indigenous employment needs at the overall Territory level (Taylor 2003: 14-15).

References

- Altman, J.C. 2000. 'The economic status of Indigenous Australians', *CAEPR Discussion Paper No. 193*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Balchin, R.N., Sykora, L., and Bull, G. 1999. *Regional Policy and Planning In Europe*, Routledge, London.
- Bartlett, B., Duncan, P., Alexander, D., and Hardwick, J. 1997. *Central Australian Health Planning Study: Final Report*, Plan Health Pty Ltd, Coledale, NSW.
- Davis, S. and Prescott, J.R.W. 1992. *Aboriginal Frontiers and Boundaries In Australia*, Melbourne University Press, Melbourne
- Freeman, T.W. 1961. *A Hundred Years of Geography*, Gerald Duckworth, London.
- Hartshorne, R. 1939. *The Nature of Geography*, Association of American Geographers, Lancaster, Pennsylvania.
- Glasson, J. 1983. *An Introduction to Regional Planning*, Hutchinson, London.
- Gore, C. 1984. *Regions In Question: Space, Development Theory and Regional Policy*, Methuen, London and New York.
- Martin, D. 2002. 'Counting the Wik: the 2001 Census in Aurukun, western Cape York Peninsula', in D. Martin, F. Morphy, W. Sanders, J. Taylor, *Making Sense of Census Data: Observation of the 2001 Enumeration in Remote Indigenous Australia*, Research Monograph No. 22, Centre for Aboriginal Economic Policy Research, Australian National University, Canberra
- Martin, D. and Taylor, J. 1996. 'Ethnographic perspectives on the enumeration of Aboriginal people in remote Australia', *Journal of the Australian Population Association*, 13 (1): 17-33.
- Morphy, H. 1999. 'The Reeves Report and the Idea of the 'region'', In J.C. Altman, F. Morphy, and T. Rowse (eds), *Land Rights at Risk? Evaluations of the Reeves Report*, Research Monograph No. 14, Centre for Aboriginal Economic Policy Research, Australian National University, Canberra
- McCrone, G. 1969. *Regional Policy in Britain*, George Allen and Unwin, London.
- Morphy, F. 2002. 'When systems collide: the 2001 census at a Northern Territory outstation', in D. Martin, F. Morphy, W. Sanders, J. Taylor, *Making Sense of Census Data: Observation of the 2001 Enumeration in Remote Indigenous Australia*, Research Monograph No. 22, Centre for Aboriginal Economic Policy Research, Australian National University, Canberra
- Northern Territory Department of Education 1999. *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Government Printing Office of the Northern Territory, Darwin.

- Northern Territory Government 2003. *Building Stronger Regions Stronger Futures*, Department of Community Development, Sport and Cultural Affairs.
- Sutton, P. 1995. Country: *Aboriginal Boundaries and Land Ownership In Australia*, Aboriginal History Monograph No. 3, Aboriginal History Inc., Canberra.
- Sanders, W. 2002. 'Adapting to circumstance: the 2001 census in the Alice Springs town camps', in D. Martin, F. Morphy, W. Sanders, J. Taylor, *Making Sense of Census Data: Observation of the 2001 Enumeration in Remote Indigenous Australia*, Research Monograph No. 22, Centre for Aboriginal Economic Policy Research, Australian National University, Canberra
- Smith, D.E. 1996. 'From cultural diversity to regionalism: the political culture of difference in ATSIC', in P. Sullivan (ed) *Shooting The Banker: Essays on ATSIC and Self-Determination*, Northern Australia Research Unit, The Australian National University, Darwin.
- Smith, D.E. 2000. *Indigenous Families and the Welfare System: Two Community Case Studies*, Research Monograph No. 17, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Stilwell, F. 1992. *Understanding Cities and Regions : Spatial Political Economy*, Pluto Press, Leichardt, NSW.
- Stohr, W.B., and D.R. Fraser Taylor, *Development from Above or Below? The Dialectics of Regional Planning In Developing Countries*, John Wiley and Sons, Chichester.
- Taylor, J. 1990. 'The estimation of small town Aboriginal population change', *Journal of the Australian Population Association*, 7 (1): 40-56.
- Taylor, J. 1998. 'Measuring short-term population mobility among indigenous Australians: options and implications', *Australian Geographer*, 29 (1): 125-137.
- Taylor, J. 1999. 'Aboriginal people in the Kakadu region: social indicators for impact assessment', *CAEPR Working Paper No. 4*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Taylor, J. 2001. 'Anangu population dynamics and future growth in Uluru-Kata Tjuta National Park', *CAEPR Discussion Paper No. 211*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Taylor, J. 2002. *The Spatial Context of Indigenous Service Delivery*, CAEPR Working Paper No. 16, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Taylor, J. 2003. 'Indigenous economic futures in the Northern Territory: the demographic and socioeconomic background', *CAEPR Discussion Paper No. 246*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Taylor, J. and Bell, M. 2003. 'Options for benchmarking ABS population estimates for Queensland Aboriginal and Torres Strait Islander communities', *CAEPR Discussion Paper No. 243*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.

- Taylor, J., Bern, J. and Senior, K.A. 2000. *Ngukurr at the Millennium: A Baseline Profile for Social Impact Planning in South-East Arnhem Land*, Research Monograph No. 18, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Taylor, J. and Westbury, N. 2000. *Aboriginal Nutrition and the Nyirranggulung Health Strategy In Jawoyn Country*, Research Monograph No. 19, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Zhao, Y., Paice, J., Murtagh, D., Lee, H., and Guthridge, S. 2003. *Population Estimates for Indigenous Health Zones In the Northern Territory*, Northern Territory Government, Department of Health and Community Services, Darwin.

