

RURAL COMPLEXITY, REGIONAL DIVERSITY. SOME OBSERVATIONS FROM VICTORIA'S REGIONAL MATTERS ATLAS 2005

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ABSTRACT: In April 2006 the Victorian Government released *Regional Matters. An Atlas of Regional Victoria 2005*. This publication is the outcome of a whole of government approach to regional information collation and is being used by a range of policy makers and practitioners at all levels of government. The Atlas is an example of ways in which integrated understandings of regional issues can be developed through spatial analysis and visual representation. One theme which emerged from the Atlas is the way in which rural areas are undergoing significant social and economic change. Such change is not always visible in aggregate data or in traditional information sources. By examining issues such as peri-urban development and community characteristics with a wider set of inter-disciplinary information we can explore emerging issues in innovative ways.

1. INTRODUCTION

Regional Matters – An Atlas of Regional Victoria 2005 ('The Atlas') builds upon a previous edition released in 2002. Like its predecessor, the 2005 Atlas represents some of the key issues associated with the impact of regional change².

The Atlas is primarily aimed at decision-makers at all levels of government. However, the Atlas has also proven popular with a wider audience of community groups, teachers, peak bodies and private businesses. It has proven particularly useful for those dealing with cross-agency projects where a variety of disciplines and perspectives are represented.

The publication contains information based around eight themes: changing populations; community wellbeing; servicing communities; industry and skills; water in a dry land; land and people; coastal development, and energy choices. Each theme contains information of relevance to social, environmental and economic issues, so a triple-bottom line approach is discernable in the document's design.

The Regional Atlas was developed with the assistance of an inter-agency group, comprising representatives from each Victorian Government department. It therefore takes a whole-of-government approach and highlights the linkages

¹ The views expressed in this paper are those of the author and should not be regarded as representing the views of the Victorian Government nor the Department of Sustainability and Environment.

² Regional Victoria is defined in the Atlas as those parts of Victoria outside the Melbourne metropolitan area.

between regional trends such as population change, economic activity and service provision. It offers a good example of how inter-departmental co-operation can lead to a broader understanding of issues. For instance, agriculture is as much about economic restructuring, community cohesion and environmental sustainability as it is about crops and animal husbandry. Regional economic development is not just about industries and employment – it is also about communities, lifestyles and the services needed to attract skilled workers.

The Atlas does not categorise information under traditional government policy portfolio headings such as health, education, transport or environment. This is a deliberate approach, aiming to break down disciplinary and departmental ‘silos’ in order to creatively explore some of the challenges facing our community, environment and economy. A theme which emerged from the Atlas is the way in which rural areas are undergoing significant social and economic change. This paper highlights various aspects of this rural change including peri-urban development and the changing socio-economic characteristics of rural communities.

2. PERI-URBAN DEVELOPMENT

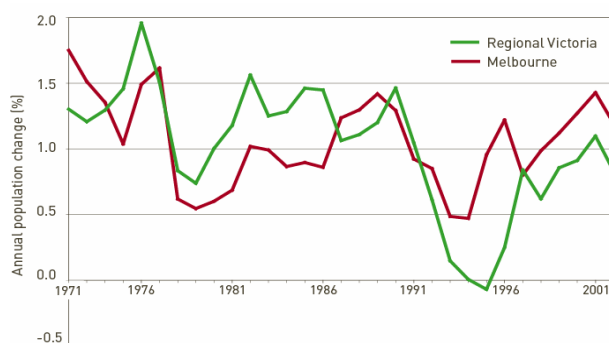
‘Peri-urban’ literally means the area around an urban settlement. It is distinctive in its diversity, having a mix of land uses and residents. It is rural in appearance but many residents will have jobs in the nearby urban area to which they commute. The settlement pattern of Victoria has created a large area of potential peri-urban development ringed by the regional centres of Geelong, Ballarat, Bendigo, Wodonga and Latrobe. Within this region are towns and rural areas that have become popular for those commuting to jobs in these regional centres or Melbourne.

A feature of peri-urban areas over the past 40 years has been strong population growth. The strongest period of growth for many of these regions was in the 1980s when rural living became a popular option. The 1990s saw greater growth rates in Melbourne and some of the high peri-urban growth rates plateaued (Figure 1). Nevertheless, the popularity of living in rural landscapes within driving access of a large urban centre has been maintained in the Geelong-Ballarat-Bendigo regions.

A more precise picture of peri-urban growth can be seen by focusing on non-urban regional areas. These can be measured by using ABS Urban Centres and Locality data which contains a geographical category called “Rural Balance”. The rural balance population of each Local Government Area is a count of those people who reside outside of settlements. Such settlements include regional cities and towns with a population of 200 persons or more. The spatial pattern of population growth in such rural balance areas shows the peri-urban growth phenomenon around Melbourne and major regional centres like Geelong, Ballarat, Bendigo, Wodonga, Bairnsdale and Latrobe (Figure 2).

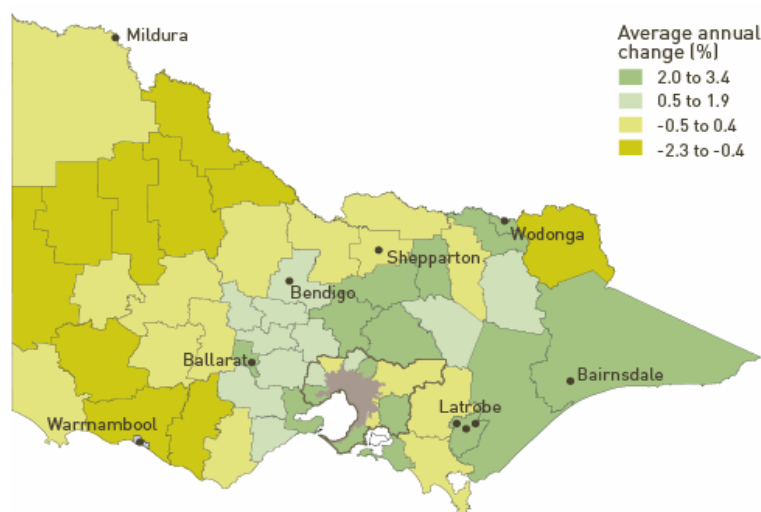
Population growth in rural areas has tended to be of residents whose job is in nearby centres and this is reflected in commuting pattern (Figure 3). Such commuting can also occur among rural farming families where a member of a farming enterprise has a town-based job (a farmer’s spouse for example may

earn off-farm income in town). Once again, the commuting patterns in regional Victoria reflect the peri-urban nature of much of central Victoria with high proportions of working populations around the major regional centres commuting out of their rural Statistical Local Area to the regional centre for work.



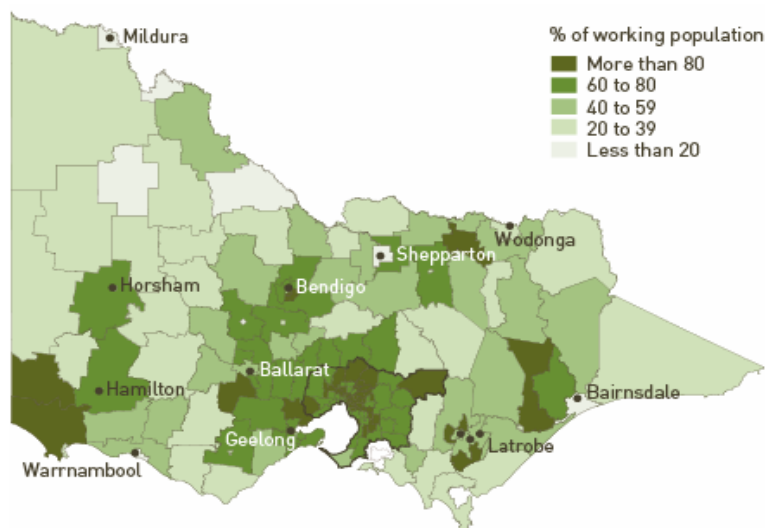
Source: Victorian Government 2006, *Regional Matters* based on ABS Estimated Residential Population

Figure 1. Regional and metropolitan growth rates (annual population growth rate (%) 1971-72 to 2001-02)



Source: Victorian Government 2006, *Regional Matters* based on DSE 2004, *Towns in Time*

Figure 2. Population change in rural areas Local Government Areas, 1981 to 2001



Source: Victorian Government 2006, *Regional Matters* based on ABS Census 2001

Figure 3. Commuting population (Proportion of working population travelling outside their Statistical Local Areas for work 2001)

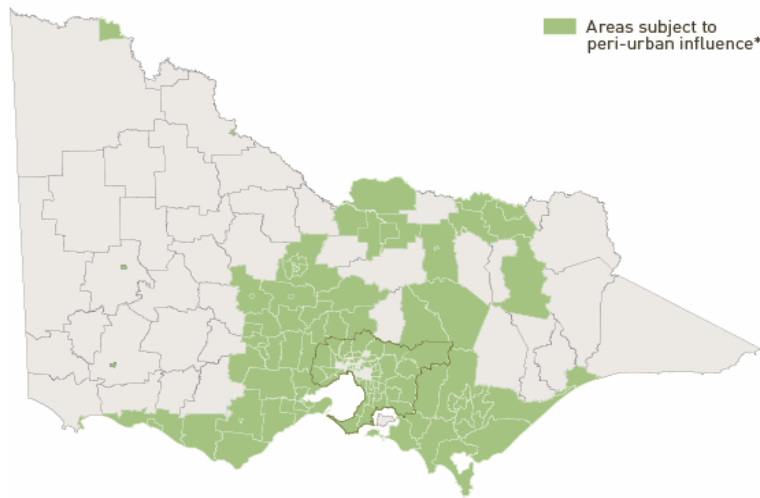
Houston (2004) defines the peri-urban areas of Victoria on the basis of population density, employment in non-agricultural industries and population mobility. In summary, the areas have been calculated for Statistical Local Areas (SLAs) where non-urban land has relatively high density (more than 1.6 persons per hectare of private land) and a high proportion (>60 percent) employed in non-agricultural industries. On the basis of this calculation, Victoria's peri-urban region accounts for around one quarter of the State's land area but half of the agricultural production value (Figure 4).

Barr (2005) defines a similar region in terms of "rural amenity landscapes" by analysing the relationship between rural land value and agricultural production value (Figures 5 and 6). The monetary value of land can reflect its productive value for agricultural production. However, where there is demand for land by other higher value uses (such as residential development) it becomes more difficult for agriculture to remain unless it becomes more intensive. Locations close to centres of employment and urban expansion are likely to experience land use change because of these changing land use economics. Highly valued landscapes (such as coasts and peri-urban regions) will also be affected by residential demand and rising land prices.

3. THE CHANGING CHARACTER OF RURAL COMMUNITIES

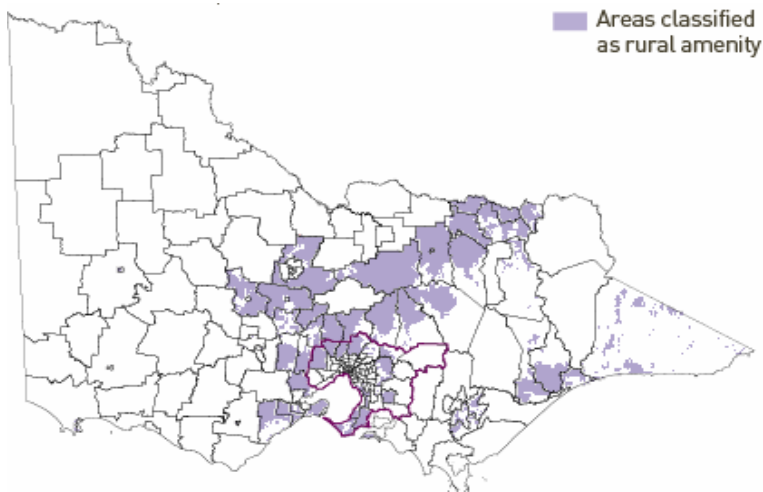
Population numbers do not always reveal the internal character of a population nor its change over time. As well as change in size and age structure, there may be changes in education, income or employment characteristics.

These changes have demographic, economic and social dimensions, so it can be difficult to ascertain why and how a population is changing. Importantly, a population may show little numerical change while still undergoing important structural and compositional change. Dunkeld in western Victoria is a good example of this, having experienced almost no numerical change in the past 20 years but undergoing substantial demographic and economic change (Figure 7).



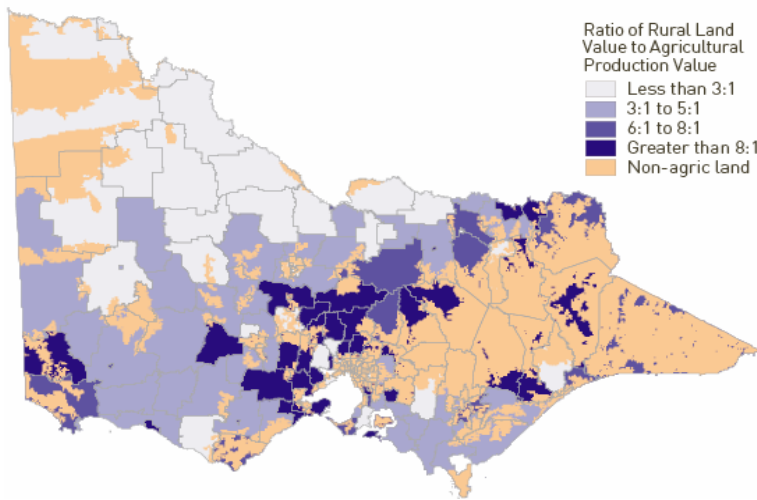
Source: Victorian Government 2006, *Regional Matters based on Houston 2004*

Figure 4. Peri-urban regions as defined by Houston 2004



Source: Victorian Government 2006, *Regional Matters, based on Barr et. al. 2005.*

Figure 5. Rural amenity landscapes as defined by Barr 2005



Source: Victorian Government 2006, *Regional Matters*, based on Barr et. al. 2005.

Figure 6. Relative value of land for agriculture (Ratio of Rural Land Value to Agriculture Production Value per hectare, 1998-2001)

DUNKELD - Population Numbers		
	1981	2001
	402 persons	403 persons
DUNKELD - Population Composition		
	1981	2001
No. aged 25-34	54	24
No. aged 75+	13	24
No. in agriculture, forestry, fishing	22	22
No. in manufacturing	11	6
No. in tourism-related services*	6	36

* Tourism Services includes the categories of: accommodation, cafes, restaurants, cultural, recreational, personal and other services

Source: Victorian Government 2006, *Regional Matters*, based on DSE 2004, *Towns in Time*.

Figure 7. Dunkeld population change 1981 to 2001

Data on employment by industry sector indicate that rural areas have experienced an increase in residents working in service industries and manufacturing, the majority of which are located in urban areas. At the same time large towns have shown an increase in residents employed in agriculture (Figure 8). Such changes suggest that the rural-urban distinctions of the past may no longer hold as strongly. Many urban residents have moved to rural areas for lifestyle reasons. In some cases these people may be living in a rural area while commuting to nearby towns or cities. In other cases people may have a hobby farm or weekend residence which is occupied for part of the year. At the same time, many farmers have changed their location or their employment characteristics. Off-farm income has become more important and some farmers have moved into towns where they and their families can access services and additional income sources more easily. In effect, they have become commuters – living in a town or regional city but travelling to their properties.



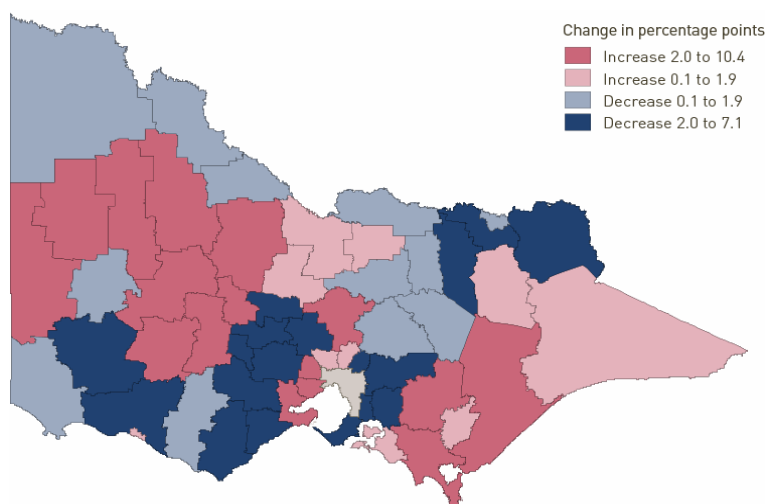
Numerical change, employment by sector and settlement type, 1981 to 2001

SECTOR OF EMPLOYMENT	RESIDENTIAL LOCATION		
	Rural Areas settlements with less than 200 persons	Small Towns population between 200 and 5,000 persons	Large Towns population over 5,000 (excluding Melbourne)
Primary Production	-23,885	428	1,746
Secondary Production	17,219	10,682	4,930
Consumer Services	20,295	14,840	37,744
Producer Services	9,761	5,000	16,057
Community Services	13,502	8,732	20,862

Figure 8. Changing characteristics of rural and urban communities (Average annual % change, employment by sector and settlement type, 1981 to 2001)

Income characteristics are also changing in rural areas of regional Victoria. Peri-urban residents may be higher income workers seeking a rural lifestyle, yet they may also be lower income earners who move to country areas seeking cheaper housing. In terms of spatial patterns, concentrations of higher income earners may develop in regions of high natural beauty or heritage value. History may also play a part with areas traditionally favoured as high quality resort or retirement locations (eg. Lorne, Mount Macedon) retaining status and higher housing prices while other areas traditionally favoured by working class retirees, with poorer access to services or perceived amenity issues continue to attract lower income residents.

Rural and regional communities may not easily fall into either of these categories and may display, instead, a more polarised pattern of high and low income characteristics. Figures 9 and 10 show changes in highest and lowest income quartiles³ in rural areas between 1981 and 2001.



* population aged 15 years and over

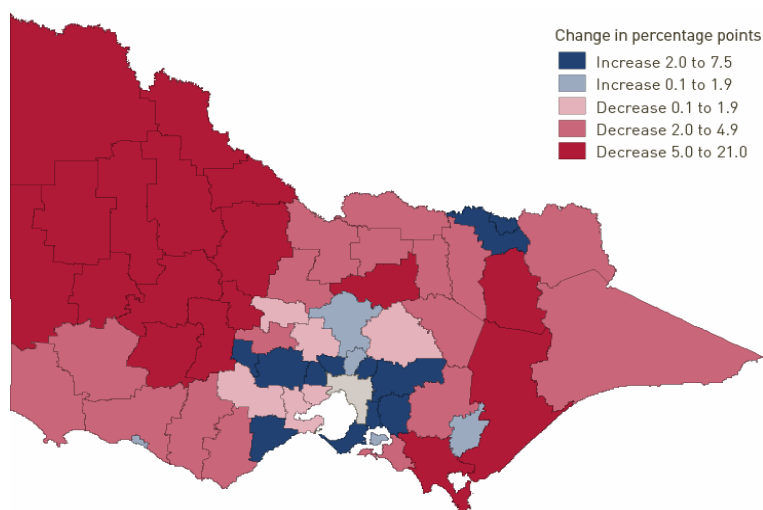
Source: DSE 2004 *Towns in Time*

Figure 9. Change in proportion of population in lowest income quartile 1981-2001, rural areas of Victorian LGAs (excludes all settlements with populations >200 persons)

The nature of these income changes is summarised in Figure 11 in terms of whether incomes are showing trends of polarisation, convergence, upward or downward movement.

³ Income quartiles are determined by dividing the distribution of income into 4 equal parts. By dividing a large area (like Victoria) into equal quarters, this 'average' distribution can be compared to distributions at smaller areas such as local municipalities to determine how much an area's income patterns differ from the Statewide pattern.

Downward movement in incomes is evident across the Wimmera and North central dryland farming regions of Victoria as well as in Gippsland. It should be noted that the ageing of the population can have an impact on income levels as movement from paid work to pension income will lower income levels.



* population aged 15 years and over

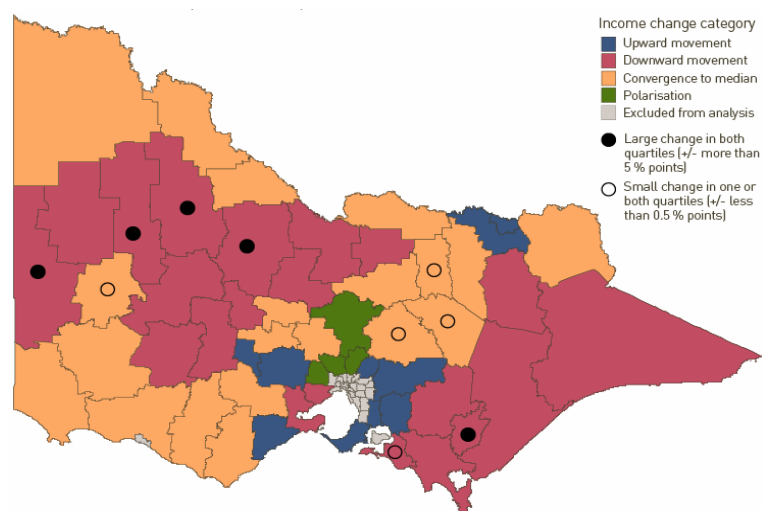
Source: DSE 2004 *Towns in Time*

Figure 10. Change in proportion of population* in highest income quartile 1981-2001 (Rural areas of Victorian LGAs (excludes all settlements with populations >200 persons))

The areas of upward income movement in rural Victoria are closely related to proximity to the largest urban centres of Melbourne, Geelong and Albury-Wodonga.

Despite concerns about polarisation in coastal settlements, the rural areas along the coast do not show this at the aggregate level of LGAs. In fact the patterns of rural income polarisation are evident in only 4 LGAs, all to the northwest of Melbourne. As Figure 12 shows, the patterns are by no means consistent with rural areas in Hume showing strongest gains in high income earners and Mitchell showing highest gains in low income earners. Further analysis of the cycle of income change in peri-urban areas near rapidly growing metropolitan suburbs would need to be undertaken to better understand the dynamics of these features of change.

The issue of income polarisation is often discussed in relation to rapidly growing communities where newcomers are wealthier than longer-term residents. Pressure on house prices and costs of living can be great in such situations as can differences in the values, culture and ambitions of newcomers and older residents. Rapidly growing coastal areas are often prone to such changes.



Explanation of income change categories:

Upward movement:	Decreased % in lowest income quartile / Increased % in highest income quartile 1981-2001
Downward movement:	Increased % in lowest income quartile / Decreased % in highest income quartile 1981-2001
Convergence to median:	Decreased % in lowest income quartile / Decreased % in highest income quartile 1981-2001
Polarisation:	Increased % in lowest income quartile / Increased % in highest income quartile 1981-2001

Source: DSE 2004 *Towns in Time*

Figure 11. Categories of income change in rural areas of Victoria 1981-2001 (Rural areas of Victorian LGAs (excludes all settlements with populations >200 persons))

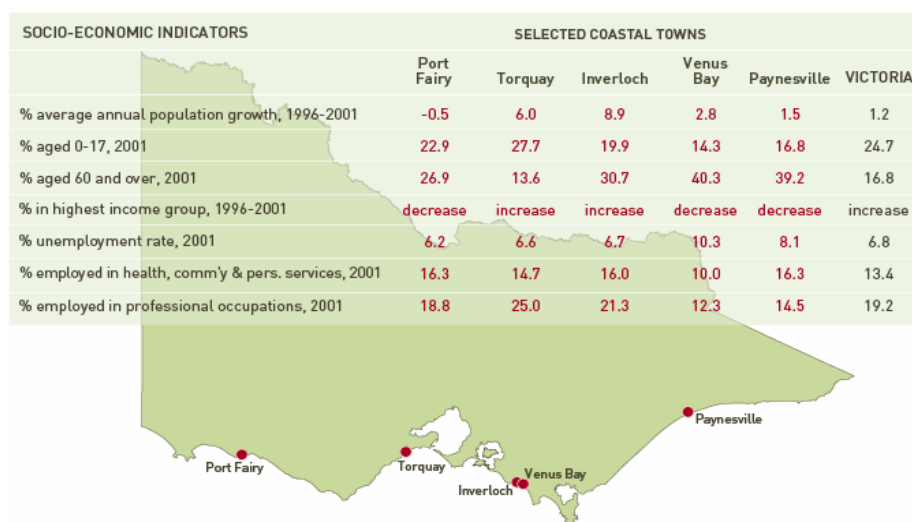
LGA Rural Area	% in lowest income quartile			% in highest income quartile		
	1981	2001	Change in % points	1981	2001	Change in % points
Hume	11.7	13.7	2.0	34.7	41.6	6.9
Whittlesea	15.8	17.0	1.2	32.0	33.0	1.0
Melton	16.9	19.4	2.5	29.5	32.0	2.4
Mitchell	14.4	18.7	4.3	25.5	26.9	1.4

Source: DSE 2004 *Towns in Time*

Figure 12. Rural areas categorised as having income polarisation between 1981 and 2001

Once again, however, it is important to recognise the diversity of coastal townships and their surrounding hinterlands. Much attention has been given to the movement of working age people seeking coastal lifestyle and amenity (the so-called 'Seachange' phenomenon) however this is only one aspect of

community change in coastal areas. Some centres have grown rapidly on the basis of a strong and diverse economic base. Others have grown through retirement migration. Figure 13 highlights this diversity through a comparison of selected ABS Census indicators.



Source: DSE 2004 Towns in Time

Figure 13. Socio-economic diversity between selected Victorian coastal towns

The fastest regional population growth rates in Victoria in recent years have been in coastal areas close to Melbourne – the coastal parts of the City of Greater Geelong and the Shires of Surf Coast and Bass Coast. Much of this is related to the growth of Melbourne and Geelong and the subsequent expansion of the commuter belt. More distant coastal areas have generally had lower population growth rates with the exception of the Gippsland Lakes region which remains a popular retirement destination. Population growth is projected to continue in these areas, extending beyond Surf Coast into Colac-Otway to the west of Melbourne and beyond Bass Coast into South Gippsland to the east. Regional centres like Warrnambool and Bairnsdale are also expected to grow.

Most coastal towns in Victoria have a higher than average proportion of older age residents. Where the town has a diverse economy there are opportunities for a wide range of services to be provided. However towns which are facing economic challenges may have a vulnerable economic base and a shrinking working age population. This can make the provision of services such as health and transport more difficult.

It is interesting to note how towns in very close proximity can vary greatly in characteristics. Inverloch and Venus Bay are 19 kilometres apart on the Victorian coast east of Melbourne. The town of Inverloch has become increasingly popular for retirees and holiday home owners. In contrast, the

population of Venus Bay has a profile of older low income residents, relatively high unemployment rate and a continued out-migration of young adult age groups. Inverloch is more accessible by road than Venus Bay and is closer to Melbourne. Median house prices increased by almost the same rate in each town between 1994 and 2004 (13 percent per annum), yet house prices in Venus Bay remain around 65 percent the price of those in nearby Inverloch (Figure 14).

	Median House Price 1994	Median House Price 2004	Average Annual Change 1994-2004
Inverloch	\$83,000	\$290,000	13.3%
Venus Bay	\$55,000	\$190,000	13.2%

Source: Office of the Valuer-General Victoria 2005

Figure 14. House prices indicators, Inverloch and Venus Bay 1994 to 2004

The changing character of communities can be masked by the way in which data are aggregated and used. For example, in the East Gippsland region of Victoria many social and economic indicators show a degree of disadvantage when compared to other parts of the State, for example, lower levels of income and education and high levels of out-migration of young people.

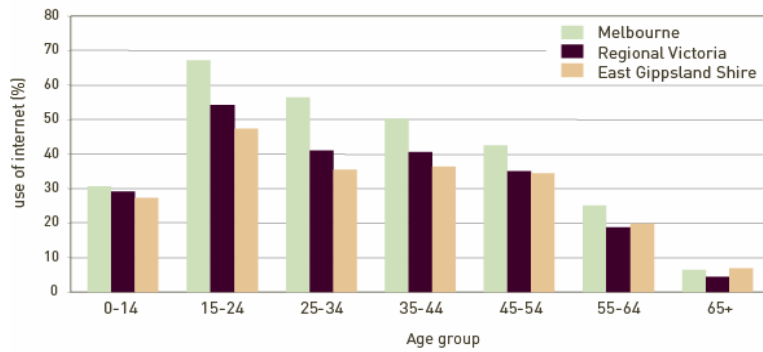
However the region has had a significant gain of retirees over recent decades and many of these people are bringing with them a different set of characteristics and skills. An indicator of this is internet use which is a useful indicator of technological skills as well as connectedness with wider networks.

If the working age population of East Gippsland is examined, computer and internet use is lower than the average for regional Victoria overall. However, if the population aged 65 years and over is examined, the levels are higher than average (Figures 15 to 17).

This example also highlights the problems associated with choosing aggregate data to make assumptions about the whole community. It may be that the older populations of East Gippsland present an opportunity for building community capacity and harnessing inter-generational skills exchange within the region.

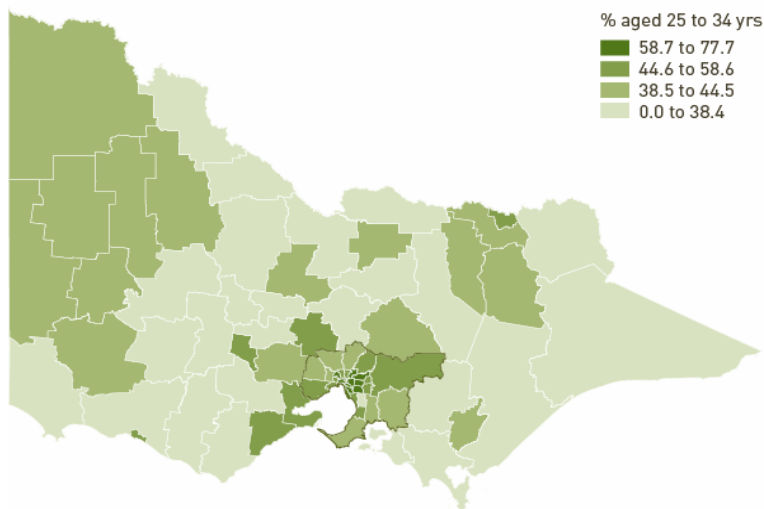
4. CONCLUSION

In analysing regional change, it is relatively easy to use broad indicators such as population change. Yet it is the less visible changes occurring in regional areas that are having a profound effect on the relationship between urban and rural communities; travel and work patterns; and the internal dynamics of regional communities.



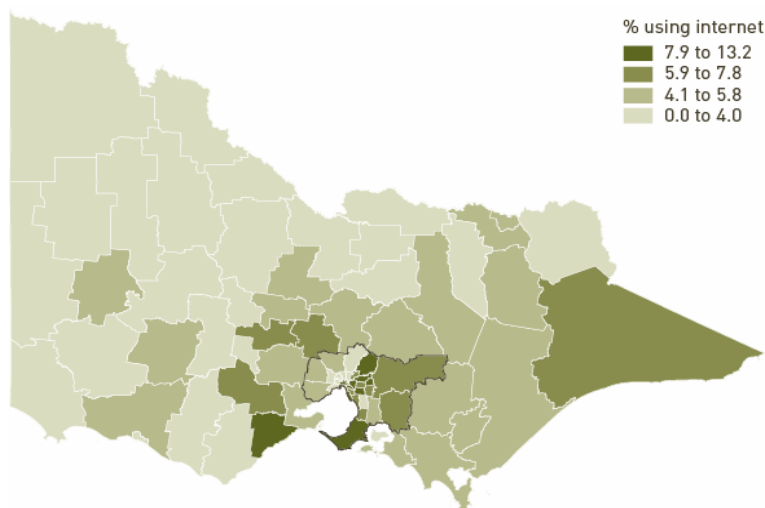
Source: ABS Census 2001 custom data request

Figure 15. Internet use by age, Melbourne, regional Victoria and East Gippsland, 2001



Source: Victorian Government 2006, *Regional Matters*, based on ABS Census 2001 custom data request

Figure 16. People aged 25 to 34 years who used the internet in the week prior to the 2001 ABS Census, Local Government Areas



Source: Victorian Government 2006, *Regional Matters*, based on ABS Census 2001 custom data request

Figure 17. People aged 65 years and over who used the internet in the week prior to the 2001 ABS Census, Local Government Areas

Changes in age structure, for example, are recognised as having implications for service delivery and infrastructure provision, yet there has been less recognition about what changing age structures can mean for community dynamics in terms of participation levels, capacities for innovation and levels of social capital. The phenomenon of peri-urban development is another trend that has been observed over several decades, yet a broader understanding of changing work and residence patterns of rural as well as urban residents shows a two-way movement: urban workers living in rural areas, and rural workers moving into larger centres.

The ways in which the Regional Atlas presents information can suggest new ways of looking at regional change. The product does not aim to present comprehensive analyses, but it does aim to explore information in innovative ways in order to suggest new ways of looking at spatial trends and to set the agenda for emerging issues and challenges. Much of the data we collect and use is answering yesterday's questions. Using data in creative ways and drawing together the linkages and meanings behind the numbers provides us a way of seeing emerging issues which can then direct us to research and understanding of tomorrow's challenges.

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