

Regional Victoria in 2021: changes and implications for the emergency management sector

Dr Holly Foster (Fire Services Commissioner's Office Victoria), Dr Joshua Whittaker, Professor John Handmer, Adriana Keating (RMIT University) and Tom Lowe (Ipsos Social Research Institute) consider the key economic and population changes that are taking place in regional Victoria and consider the implications for the emergency management sector.

ABSTRACT

The Victorian Fire Services Commissioner (FSC) has embarked on a program of research exploring anticipated changes across Victoria over the coming decade. Titled '2021', this research aims to build the evidence of change in Victorian communities, identify the drivers of change, and describe the likely impacts on the emergency management sector. This paper outlines some of the key economic and population changes that are taking place in regional Victoria and considers their implications for the emergency management sector (State-level policy and strategy) and emergency services organisations (service delivery, programs and local needs). ^R

is not intended to provide an exhaustive list of perceived changes or implications. A detailed report, which will include implications for emergency services organisations as well as for emergency management, will be available from the Victorian Fire Services Commissioner's website after June 2012.

Economic change

Economic vitality contributes to overall resilience in communities. The ability of social systems to withstand shocks and maintain functionally under stress is linked to the continuity of employment, spending, investment and overall community economic vibrancy (Foster and Hoy, 2012; Handmer and Hillman, 2004).

Agriculture is key to the prosperity of most of regional Victoria and it continues to be an important contributor to the state economy, although its relative share has been declining for some time.

Since the 1970s, the Australian agricultural sector has undergone significant transformation. Trade liberalisation has exposed the sector to competition in volatile international markets, often with subsidised producers. Prices for inputs have increased while prices for outputs have declined, creating a cost-price squeeze for the sector (Taylor, *et al.*, 2006). These economic pressures have significant impacts on farm business management, continuity (in particularly dry or wet years) and anticipated yields.

While the productivity of Australian agriculture has increased steadily since the 1960s, employment in the sector has declined (Productivity Commission 2005). These changes are largely due to advancements in technology and innovation within the sector. Increasing mechanisation and corporatisation have contributed to an increase in the average size of farms, but a reduction in their total number. This has been the trend in all farming industries except poultry farming and grape growing. The monetary size of farms is following the

Introduction

Populations and settlements in regional areas of Australia have changed dramatically. How and where people live, work and recreate has changed, as has the expectation of governments to invest in, provide, and maintain public infrastructure. Macro-level forces are driving change in communities, influencing populations, economies and lifestyles. In Victoria, the growing population has resulted in significant shifts in community dynamics. These changes place continued pressure on governments to meet community needs, expectations and sustain regional populations into the future.

The Victorian Fire Services Commissioner's 2021 research program explores how anticipated changes in the community will influence the provision of emergency management and impact the operations of emergency services organisations in the near future (to the year 2021). This paper provides an overview of trends in economics and population and some implications of these trends for emergency management. The paper

same pattern with fewer farms valued at less than \$200 000 and more valued over \$200 000 (Taylor, *et al.*, 2006). It is important to note that while large farms now contribute more value to the industry, they are still substantially outnumbered by smaller, family farms (Productivity Commission 2005; Taylor, *et al.*, 2006).

These changes, coupled with periods of severe drought, have placed considerable pressure on many rural households and communities. For example, the 2002/03 drought in Victoria led to a 25 per cent decline in the State's agricultural output and exports and was coupled with a 15 per cent fall in agriculture-related employment (Productivity Commission 2005). Increased economic pressure has forced many farming households to seek off-farm income (Schwarz, *et al.*, 2012).

These trends have influenced farm management and ownership. Trends including fewer family-run businesses, fewer people required to manage farm businesses, and greater variation in farm type (crops) change the on-site needs of farms. Fewer people on farms results in greater use of off-site contractors and less call for locally-based equipment and people.

Victorian Agriculture, Forestry and Fisheries fast facts

- Contributed \$7.9 billion, or 2.7 per cent, to Victoria's gross state product in 2011-12 (ABS 2012a).
- Has grown at an average rate of 4 per cent per annum since 2003 (ABS 2012a).
- Employs 78 500 people, 2.7 per cent of all employed Victorians (ABS 2012b) and approximately 10 per cent of Victorians in regional areas (ABS 2010).
- Is Australia's largest exporter of food and fibre (\$9 billion) (DPI 2012).

Population change

While farms and parts of regional Victoria are experiencing a decline in population, the State's overall population is predicted to grow from 5.6 million in 2011 to 8.7 million in 2051 (DPCD 2012a). Most of this growth is expected to occur in Melbourne and its suburbs (from 4.1 million to 6.5 million). Nevertheless, the population of regional Victoria is expected to grow from 1.5 million to 2.3 million (DPCD, 2012a). A modest increase is expected by 2021, with regional Victoria's population projected to grow to 1.7 million (DPCD, 2012b). The growth in Melbourne will impact regional areas through substantially increased numbers of visitors primarily for recreation.

While overseas migration and natural population increase are expected to be the main drivers of population growth in Victoria, growth in regional Victoria will be driven primarily by migration of people from Melbourne (DPCD, 2012a) bringing their metropolitan expectations with them.

Despite an overall increase in population, growth will not be evenly distributed across regional Victoria. The past three decades have seen a general trend toward population growth in and around major regional centres, and population loss in small towns and settlements, particularly those in inland, agriculture-dependent areas (McGuirk and Argent, 2011).

Some parts of Victoria are already experiencing growth as people move away from metropolitan areas for the amenity and lifestyle of coastal and rural settings (Burnley and Murphy, 2004; Costello, 2007). Reduced housing affordability within inner Melbourne (Wood, *et al.*, 2008; Yates, 2008) is also encouraging growth in some rural towns and regions. These tend to be areas where goods and services are easily accessible and/or are within commuting distance of Melbourne or other major regional centres. In contrast, towns and regions that do not have easy access to goods and services and provide limited opportunities for education and employment, have tended to experience population loss (McGuirk and Argent, 2011). These trends are expected to continue, with population growth in and around regional centres such as Geelong, Bendigo and Ballarat. Little or no growth is expected in less accessible, agriculture-dependent regions such as northeast and western Victoria (DPCD, 2012a; refer to Figure 2).

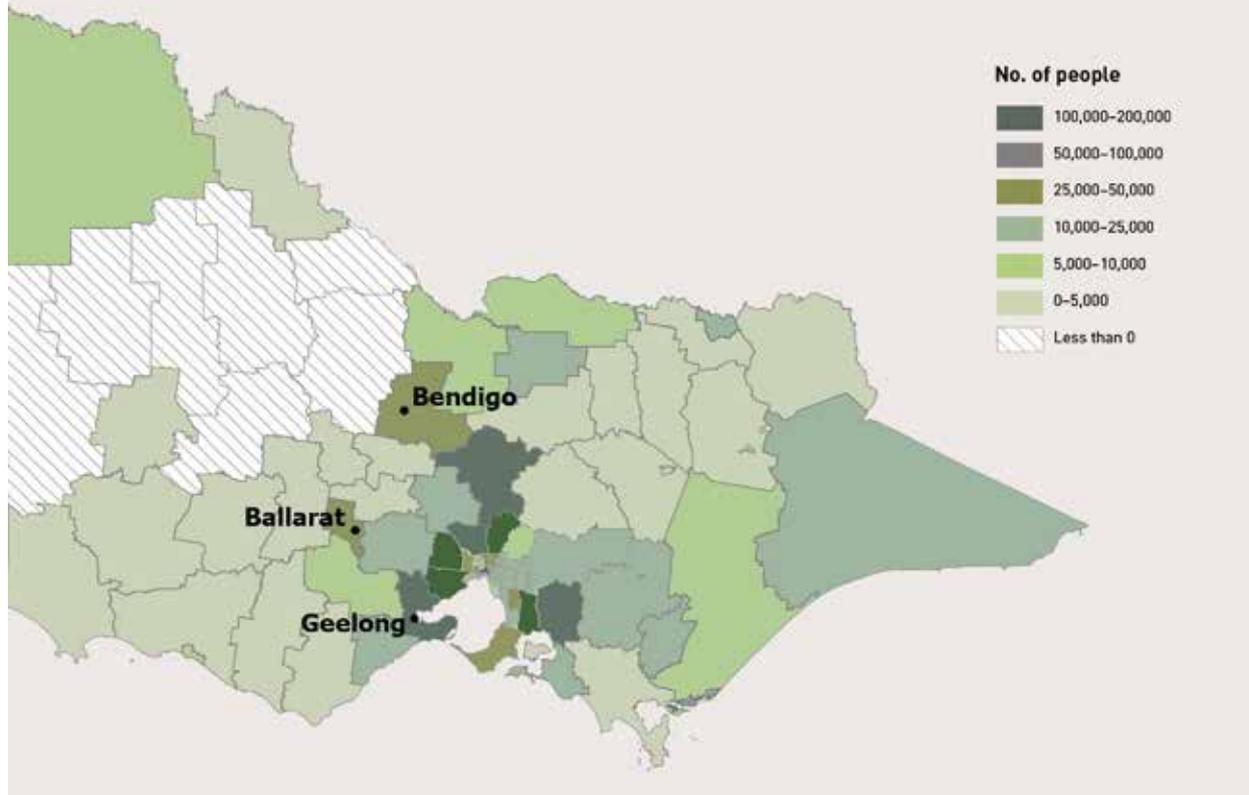
While Victoria's population is growing, it is also ageing. There are a number of factors contributing to the changing age structure of the population, including:

- the large number of people born between 1945 and 1971
- the current decline in birth rates, and
- the increasing life expectancy of Australians, particularly women (DPCD, 2012a).

Melbourne's age profile is expected to remain younger than in regional Victoria as it attracts young migrants from other countries, interstate and regional areas. Regional Victoria's older age profile is likely to be accentuated by the outmigration of young people, particularly those aged 20-29 years (DPCD, 2012a). Projections for regional Victoria suggest a slightly older population in 2021 than in 2011, with an increase in the number and proportion of people aged over 60 years (from 341 426 to 467 681; 23 per cent to 28 per cent) and over 70 (from 173 267 to 250 692; 12 per cent to 15 per cent) (DPCD, 2012d).

In addition to population growth, Victoria will face challenges associated with a rapid increase in the number of households. Projections for 2036 suggest a 56 per cent rise in the number of Victorian households based on 2006 levels (DPCD, 2009). In regional Victoria, an

FIGURE 2. Population change by local government area, 2011-2031 (DPDC, 2012a)¹.



additional 103 500 occupied private dwellings are expected by 2021 (DPCD, 2011c).

Contributing to the projected increase of dwellings are noted demographic and social changes including:

- an ageing population
- longer life expectancy
- increases in separation and divorce, and
- the delay of marriage (ABS, 2010; DPCD, 2012a).

These factors are contributing to a gradual decline in average household size across Australia which is predicted to decrease from 2.6 people per household in 2006 to 2.3 people per household in 2026 (ABS, 2010). In regional Victoria, only a slight decrease in the number of people per household is expected by 2021, from 2.48 people per household in 2011 to 2.40 people in 2021 (DPCD, 2011c). The number of one-person households is also predicted to rise in regional Victoria, from 162 302 (27.7 per cent) in 2011 to 203 311 (29.5 per cent) in 2021 (DPCD, 2011d).

With an ageing population, it is expected that elderly people, predominantly women, will remain living at home later into life. In response to the Productivity Commission’s (2011) inquiry into aged care, the Australian Government announced a range of measures to reduce the strain on health and aged care services and infrastructure, including a plan for home health care to keep elderly people in their homes for as long

as possible. Technological change is expected to facilitate this policy direction, with sensor networks such as fall detection monitors to be used in homes to assist in maintaining health and wellbeing (Ruthven, 2012). In some areas, an increasing proportion of the community will consist of households with people who have limited physical capacity.

Implications for emergency management

Emergency management will be confronted with larger populations and an increased number of assets will be at risk. Population growth and an increase in the number of households in regional Victoria are likely to lead to increased exposure of people and assets in high risk areas. In particular, rapid growth in the number of households (by more than 100 000 in regional Victoria by 2021) may encourage further residential development and infrastructure in areas at risk from bushfires and floods.

In addition, trends in agriculture such as increasing farm size, greater mechanisation, enhanced productivity and a declining workforce suggests an increase in large, asset-laden farms with few people to protect them in an emergency. There is evidence that financial pressures associated with increased costs of production, reduced income and drought prevent many primary

1. Note that use of the local government area scale obscures some intra-regional differences. Most of East Gippsland’s population growth, for example, is likely to occur in the large, regional centres of Sale and Bairnsdale.

producers from taking out adequate insurance (Whittaker, *et al.*, 2012). Those without insurance or who are under-insured are particularly financially vulnerable. The lack of insurance may increase household and business reliance on Government services, as well as the support provided through family, social networks and community organisations.

If regional economies become increasingly dependent on recreation activities by Melbourne-based people, there may be tension between the needs of local economies and those of community safety. For example, on high fire risk days, precautionary evacuations and closure/suspension of some government services may occur. This has the potential to reduce outside spending in the region relied on by local businesses.

Declining and ageing populations in isolated towns and regional areas present challenges across the State. Difficulty recruiting and retaining volunteers suggests the need for greater interoperability between agencies – as well as communities, towns and regions – to facilitate sharing of resources and expertise. Increasing the jurisdiction of adequately resourced volunteer groups may fill gaps where local volunteer capacity is limited. However, longer response and call-out times can act as disincentives to potential volunteers (Birch, 2011), suggesting a possible need for deployment of paid emergency response teams in some areas.

Population changes also present opportunities. Some regional areas will benefit greatly from population growth, providing a strong basis for community participation in preparedness and response activities. Increasing numbers of retirees in regional Victoria with the time and skills to volunteer represent a valuable resource for emergency management (Salt, 2012). However, following an initial spike in volunteer activity in the next few years, it is likely that the ageing ‘baby boomers’ will be able to devote less time and energy to physical response activities. These limitations could be compensated for by greater volunteer involvement in prevention and preparation activities.

Implications for emergency services organisations

The trends identified in this paper will also have implications for emergency services organisations. The migration of residents from urban to regional areas represents a significant challenge, as most will have limited awareness and experience of the risks they face. It is also likely that these residents, with experience of urban service delivery, will have higher expectations of emergency services. Agencies will need to find ways to engage new residents in activities to increase risk awareness, preparedness and safe response, as well as to manage their expectations.

The growth of Melbourne’s population is also likely to impact on regional Victoria and local economies through increased recreation and holiday home

purchases – resulting in increasing numbers of properties that are unoccupied for much of the time. Increased use of public land, particularly national parks, could lead to greater demand for ambulance, search and rescue and other emergency responses, as well as warnings and emergency-related information targeted at tourists and other visitors to regional Victoria.

Providing support during emergencies to the elderly and others who may have limited capacities represents a significant challenge in isolated towns and regions, as well as in rural and coastal areas that have experienced rapid growth. Community engagement, profiling and mapping will enable agencies to monitor changing community dynamics and tailor meaningful services and engagement programs to local needs. Greater information transfer and collaboration between emergency services organisations will enable a more holistic and integrated approach to local service delivery.

An aging population in regional areas may also require emergency services organisations to integrate specific training, equipment and supplies into their operations in order to mobilise elderly residents during emergencies.

It may be necessary for emergency services to develop new business models to adapt to declining local capacity in some regional areas. Greater interoperability between agencies would increase the capacity of emergency services, as would different approaches to community involvement. New approaches to volunteer recruitment and deployment could capitalise on population growth and allow services to be extended to towns and regions with limited local capacity.

Conclusion

This paper has explored some of the economic and population changes that are taking place in regional Victoria and their implications for emergency management and emergency services organisations. While comparatively minor changes are expected by 2021, trends suggest there is a need for the sector and its agencies to begin planning for and adapting to these changes now. Many of these changes call for greater agency interoperability and new modes of recruiting and volunteer deployment.

References

Australian Bureau of Statistics, 2010. *State and Regional Indicators, Victoria, Dec 2010*. At www.abs.gov.au/ausstats/abs@.nsf/mf/1367.2, accessed 13 March 2013.

Australian Bureau of Statistics, 2012a. *Australian National Accounts: State Accounts 2011-12*. At www.abs.gov.au/AusStats/ABS@.nsf/MF/5220.0, accessed 12 March 2013.

Australian Bureau of Statistics, 2012b. *Labour Force, Australia, Detailed, Quarterly*.

Birch, A., 2011. *Recruiting and retaining volunteer firefighters in Australasia: an integrative summary of research*. Bushfire Cooperative Research Centre, East Melbourne.

Burnley, I. and Murphy, P., 2004. *Sea change: movement from metropolitan to Arcadian Australia*. UNSW Press, Sydney.

Costello, L., 2007. *Going bush: the implications of urban-rural migration*. *Geographical Research* 45, pp85-94.

Department of Planning and Community Development, 2009. *Victoria in future 2008: Victorian State Government population and household projections 2006-2036*. At www.dpcd.vic.gov.au/__data/assets/pdf_file/0008/32201/DPC056_VIF08_Bro_Rev_FA2.pdf, accessed 22 February 2013.

Department of Planning and Community Development, 2012a. *Victoria in future 2012: population and housing projections 2011-2031 for Victoria and its regions*. At www.dpcd.vic.gov.au/__data/assets/pdf_file/0012/100416/370-VIF-2012-brochure-updated-graphs-WEB.pdf, accessed 22 February 2013.

Department of Planning and Community Development, 2012b. *Victoria in future 2012 data tables: Table 1, Population totals and components of population change*. At www.dpcd.vic.gov.au/__data/assets/excel_doc/0011/100226/VIF2012_Projected_Population_Totals_and_Components_Vic_MSD_RVic_2011_2051_v2.xlsx, accessed 22 February 2013.

Department of Planning and Community Development, 2012c. *Victoria in future 2012 data tables: Table 5, Dwelling totals, household totals, average household size*. At www.dpcd.vic.gov.au/__data/assets/excel_doc/0015/100248/VIF2012_Projected_Pop_Hholds_Dwellings_Vic_MSD_RVic_2011_2051.xlsx, accessed 22 February 2013.

Department of Planning and Community Development, 2012d. *Victoria in future 2012 data tables: Table 4, Population by five year age and sex*. At www.dpcd.vic.gov.au/__data/assets/excel_doc/0013/100246/VIF2012_Projected_Population_5yr_Age_Groups_SLA_LGA_SSD_SD_2011_2031_v2.xlsx, accessed 22 February 2013.

Department of Primary Industries, 2012. *Agriculture in Victoria*. At www.dpi.vic.gov.au/agriculture, accessed 12 March 2013.

Foster, H. and Hoy, J., 2012. *Community engagement in the emergency management sector: developing resilience to climate change in Victoria*. Office of the Emergency Services Commissioner, Melbourne.

Handmer, J. and Hillman, M., 2004. *Economic and financial recovery from disaster*. *The Australian Journal of Emergency Management* 19(4), pp44-50.

McGuirk, P. and Argent, N., 2011. *Population growth and change*. *Geographical Research* 49(3), pp317-335.

Productivity Commission, 2005. *Trends in Australian agriculture*. Commonwealth of Australia, Melbourne. Productivity Commission 2011. *Caring for older Australians: Productivity Commission Inquiry Report, Overview*. At www.pc.gov.au/__data/assets/pdf_file/0016/110932/aged-care-overview-booklet.pdf, accessed 22 February 2013.

Ruthven, P., 2012. *A snapshot of Australia's digital future to 2050*. IBIS World, Melbourne.

Salt, B., 2012. *The volunteering decade: how retiring baby boomers will want to make a contribution to the fire and emergency services sector*. Paper read at the 2012 Australasian Fire and Emergency Services Authorities Council (AFAC) and Bushfire CRC Conference. Perth, August 28-31.

Schwarz, I., Graymore, M., Brownell, B., Lehmann, L., 2012. *The Victorian farmer survey on climate change 2011*. Department of Primary Industries and University of Ballarat, Horsham.

Taylor, M., Ha, A., Fisher, B., 2006. *Trends in Victorian Agriculture*. At www.dpi.vic.gov.au/about-us/publications/economics-and-policy-research/2006-publications/trends-in-victorian-agriculture, accessed 12 March 2013.

Whittaker, J., Handmer, J. Mercer, D., 2012. *Vulnerability to bushfires in rural Australia: a case study from East Gippsland, Victoria*. *Journal of Rural Studies* 28, pp161-173.

Wood, G., Berry, M., Taylor, E., Nygaard, C., 2008. *Community mix, affordable housing and metropolitan planning strategy in Melbourne*. *Build Environment* 34, pp273-290.

Yates, J., 2008. *Australia's housing affordability crisis*. *The Australian Economic Review* 41, pp200-214.

About the authors

Dr Holly Foster is the Senior Researcher at the Fire Services Commissioner of Victoria and the primary researcher on the 2021 research program. Holly is a social researcher with an extensive research background in climate change, water pricing and regional economics.

Dr Joshua Whittaker is a Research Fellow at the Centre for Risk and Community Safety at RMIT University. His research focuses on community vulnerability and resilience to disasters.

Professor John Handmer leads RMIT's Centre for Risk and Community Safety and the University's Human Security Program. He is the Principal Scientific Advisor for the Bushfire CRC and Convenor of the NCCARF network for emergency management.

Tom Lowe has worked with the Ipsos Social Research Institute since 2011, where he has also established the Ipsos TV channel. Before that he worked as a Senior Social Research Officer in DSE, and with the Bushfire CRC's community safety research program.

Adriana Keating is Senior Research Economist with the Centre for Risk and Community Safety at RMIT. She specialises in the economics of disasters and climate change adaptation.