



NATIONAL RURAL  
HEALTH  
ALLIANCE INC.

## **Position Paper**

# **Healthy regions, healthy people**

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*This Position Paper represents the agreed views of the National Rural Health Alliance, but not necessarily the full or particular views of all of its Member Bodies.*

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# Healthy regions, healthy people

## Executive summary

There is a mutual dependence and synergy between healthy individuals, regions and health services. People are likely to be more healthy in regions that provide jobs, facilities and services. Connections between individuals (part of ‘social capital’) are health-promoting as well as community-building. The challenge of responding to service needs in ways that suit rural and remote areas creates employment, income, and social connections. Healthy people are able to respond well to the physical, biological, mental and social challenges that come about during their lives.

In sum, then, economic development of regional areas is a health issue, and the provision of health services provides local jobs, satisfaction and connections.

However, many rural and remote regions are currently not providing the basis for their own health and that of their citizens. They do not have modernised high-quality infrastructure, skills and connections. The diverse communities of rural and remote Australia cannot be healthy and health-promoting places in which to live and work unless they are able to participate effectively in the modern world.

The transformation of natural capital through farming, fishing, forestry and mining is no longer sufficient to underpin the prosperity and sustainability of Australia’s rural communities. Recent years have added the necessity to adapt to the restructuring of the Australian and world economies, which has taken place more rapidly since the mid-1980s, and to the increasingly apparent environmental limits to some of the current land and water use practices. Communities can find it difficult to respond to emerging natural resource problems because the immediate objective of their economic and social survival conflicts with the longer term objective of maintaining the capacity of the natural system to provide its full range of benefits indefinitely.

The fate of regions is greatly influenced by the larger state, national and global economic, technological and social systems within which they function. Success in the new globalised economy comes from the development and utilisation of knowledge and the provision of services, together with an ability to respond quickly to market needs and opportunities. Success in this economy requires businesses to employ highly skilled personnel, to be able to identify fruitful opportunities, and to form alliances with other businesses to produce goods and services that satisfy the needs of their customers.

In the absence of an agreed and widely accepted theoretical framework for regional development, Australian governments have taken a pragmatic, incremental approach to policy development, basing their interventions on the policies that have been shown to achieve specific objectives.

While continuing the current overall neo-liberal macroeconomic approach would enable the national economy as a whole to continue to grow, not all regions would share in this growth. NRHA prefers a policy approach aimed at enabling every region to grow and more equitably share the resulting benefits through providing infrastructure and assistance to enable regions to mobilise their human, produced, natural and social capital so they can participate in the modern economy to maximum effect.

Effective regional development is based on collaboration and partnership across governments, businesses, higher education, and non-profit organisations and necessarily involves the broad community. Investing in opportunities to fully utilise local resources and capabilities should be preferred to subsidising specific activities. Co-ordinated development through bottom-up projects, which fully involve rural citizens in identifying problems and developing strategies and implementing programs and projects, is preferable to providing top-down incentives.

Enabling rural, regional and remote communities to be prosperous and attractive places for people to live in is a major goal of regional development policy. Enabling them to be as healthy as city dwellers and to be able to maintain that level of health is a major goal of Australian health policy. More positive linkages between both policies can help rural, regional and remote communities to become economically, socially and environmentally sustainable by attracting and retaining the infrastructure, workforce and amenities that enable those who live there to lead healthy lives.

The changing health needs of regional populations for health services give rise to opportunities for developing regional infrastructure and health-based businesses. All regions should recognise and develop the economic potential of health-related services. Further, the health sector is a major part of the modern, innovative, technology-based economy. Various parts of the health sector research, develop and use the knowledge-based high technology products of this economy. While much of the R&D and manufacturing activity is located in major metropolitan areas, if suitable infrastructure was available, regions with high amenity levels could also attract such activities.

## **Recommendations**

To ensure that regional development and health policies are mutually supportive and contribute to the viability of communities in rural, regional and remote Australia, the NRHA will promote the following positions.

1. The provision of modern transport infrastructure and high-quality broadband Internet connections throughout rural, regional and remote Australia is absolutely essential if all Australians are to be able to participate fully in a globalised information and service-based economy, and to receive high-quality health services. Further development of the transport and communications industries must ensure that industry investment patterns and regulation provide

rural and remote Australia with services equivalent to those in metropolitan areas.

2. There should be an active approach to the development of rural and remote regions that provides them with the staff, information, infrastructure, training, financial and other services that would enable them to identify and capitalise on their competitive advantages. This would enable rural and remote communities to:
  - fully utilise their human, produced, natural and social capitals to become economically and socially viable;
  - adapt to and compete in world markets; and
  - maximise the local and wider benefits provided by a multi-functional landscape.
3. National and State/Territory economic, social and environmental programs should be reviewed to ensure that they are being delivered in a co-ordinated fashion so that, together with local initiatives, they will enable each region to maximise the sustainable development of its human, produced, natural and social capital.
4. The remote zone tax rebate system should be revised to take account of economic developments and social expectations over the last decade and current definitions of rural and remote Australia.
5. Rural and regional universities and vocational education and training institutions play a key role in enabling regions to be competitive. Universities should be actively engaged in consortia with the business, non-profit and government sectors to identify and develop more innovative approaches to developing sustainable and competitive regional economies and communities.
6. Regional development agencies should recognise and seek to fully develop the potential for conventional and alternative health services to contribute to sustaining their local economies by:
  - working with health agencies to evaluate the current and projected health needs of their populations;
  - working with health service planners and providers and their communities to develop strategies for meeting these needs; and
  - encouraging investment in necessary facilities and resources.
7. Regional development agencies should collaborate with the health sector in work to provide health-related services and infrastructure to Aboriginal communities. Together the two sectors should lead a cross-sectoral approach to:
  - the provision of employment in the health sector and in health-related occupations;

- developing linkages between modern and traditional health practices to ensure that individual and community health practices are culturally appropriate and effective; and
  - the provision of health information in culturally appropriate forms.
8. Unless rural and regional primary and secondary schools can successfully prepare their pupils to take up careers in the health sector, current government policies for encouraging young people to become rural and regional health workers will be less effective than they could be. State and Commonwealth governments must ensure that all schools in regional, rural and remote Australia are educating children to a standard that will enable them to take up careers in the health sector and other sectors of the economy that require highly skilled workers.
9. A program to address the need for a greater number of dentists in rural and remote areas should be established immediately. The program should provide:
- undergraduate scholarships for students from rural and remote areas to study dentistry (and some additional places for hygienists and school dental therapists); and
  - an increase in the number of places at Australian dental schools.

Community programs to prevent oral and dental health problems among children and adults are also urgently required.

## Introduction

People who live in regions that are economically, socially and environmentally successful are more likely to live healthy lives than those in other regions. The obverse is also true: thriving economies depend on the supply of healthy and skilled workers.

The health sector contributes to economic success and can play a key role in regional development by providing infrastructure, employment and new business opportunities. Regions are most likely to develop successfully if their communities are able to fully utilise their natural, produced and social capital and if national, state and local programs are effectively co-ordinated at the regional level.

To make the most of the rapidly changing world they live in, the people of rural, regional and remote Australia<sup>1</sup> must be able to live healthy lives. Good health is more than freedom from disease; it is a positive state of well-being. Good health results from the combined effects of a person's physical, economic and social environment. People with good health can respond more effectively to life's physical, biological, mental and social challenges.

An adequate health system is just one part of what is necessary for people to achieve good health. Economic opportunity, social cohesion and environmental amenity are all conducive to good health. Other key requirements for health are high-quality and reliable nutrition, shelter, transport, education, communications and recreation services, with good supporting infrastructure. If rural and remote Australians live in communities that have these characteristics they are more likely to live healthy lives.

However the people and communities of rural, regional and remote Australia have always had to accommodate the effects of a variable climate and its extremes of fire, flood and drought, together with significant levels of economic uncertainty. They have had to manage continuous technological change and to overcome the communications and transport difficulties resulting from a geographically dispersed population.

Since the mid-1980s they have also had to adapt to the rapid restructuring of the Australian and world economies. Increasingly apparent environmental limits to current land and water use practices, changing social expectations and values in Australian society are imposing additional strains on rural individuals and their communities.

Graeme Davidson<sup>2</sup> points out that the rural crisis of the 1990s was the result of processes of change under way for a century or more.<sup>3</sup> But "what was new was the strength of the combined force with which [previously experienced forces for change] now acted, and the changed framework of expectations in which their impact was now interpreted."

The predicted consequences of climate change will add to these historically experienced forces.<sup>4</sup> Climate change will require Australians to adapt to the consequences of higher temperatures, higher sea levels and significant changes in the location and amounts of rainfall, together with more variable and intense droughts, floods and storms resulting from changes to weather systems.<sup>5</sup> As rapid climate change alters the limits of their physical environment over the coming decades rural and regional Australians will also be responding to economic and social changes impelled by the introduction of new biology-based technologies such as genetic engineering, the needs of global population growth and economic development, together with continuing changes in their personal expectations.

In summary, then, the diverse communities of rural and remote Australia cannot be healthy and health-promoting places in which to live and work unless they can effectively participate in the modern world. Giving Australians living in rural, regional and remote regions the best possible opportunity to live healthy lives requires the regions outside Australia's major conurbations to be successful, by fully utilising their human, produced, natural and social capital resources.

## **The new economy and changing regional policy**

The development of the modern globalised knowledge-based and service economy has profound implications for the opportunities available to Australia's non-metropolitan regions. The production and supply of basic commodities and their manufacture into material goods, which historically was the foundation of many regional economies in Australia, is playing a steadily less significant role in the economies of the most advanced nations.

Modern communications and transportation now allow regions to compete internationally in a globally interconnected economy. Economic success now comes from developing and using knowledge and providing services, together with an ability to identify market opportunities and to respond quickly to these emerging needs. Businesses succeed by employing highly skilled, quality personnel, identifying fruitful opportunities, and forming alliances with other businesses so they provide products that satisfy their customers' needs. These entrepreneurial and responsive business combinations occur at the regional rather than the national level.

Regional development policies are changing because of these global economic changes. Historically most of the developed countries of the Organisation for Economic Co-operation and Development (OECD) have sought to support rural communities through subsidising agricultural production. It is doubtful if this policy approach has effectively promoted rural and regional development.

In 2002 an OECD conference<sup>6</sup> recommended that future rural policy should recognise that rural and urban areas were interdependent. In rural regions, subsidising agricultural production should be replaced with the development of a wide range of economic activities. Policies should encourage making the most of local resources and human capabilities and fully involving rural citizens in

developing and implementing the resulting strategies and actions. Agriculture should move toward producing high-quality products that closely meet customers' requirements.

In contrast to most other OECD countries Australia has not made the direct subsidy of agriculture the centrepiece of its rural development policies, largely because most of the food and fibre produced by Australian agriculture is sold in international markets. Australian policy is that these products should compete in those markets by directly meeting their buyers' needs because of the inbuilt advantages of Australian agricultural production, rather than using international markets to dispose of surplus agricultural products resulting from subsidies diverted to agriculture from elsewhere in the economy.

Despite the difficulty of competing against overseas producers who receive subsidies and incentive payments, agriculture still makes a vital contribution to communities throughout rural Australia. Agriculture is the single largest employing industry in 276 of the 425 labour market regions into which the Bureau of Transport and Regional Economics (BTRE) has divided Australia.<sup>7</sup>

There was a key change in Australian regional policy in the mid-1980s.<sup>8</sup> From the 1920s to the 1970s the general policy approach was "import substitution by protecting and enlarging the home market base of secondary and tertiary industries largely through tariffs and other industry specific policies, and specific attempts at population decentralisation policies". Following the abandonment of protection in the mid-1980s government interventions have been "designed to address structural adjustment issues and adverse regional employment effects arising from Australian trade liberalisation and the open market economy, including sustainable development policies to address market failures such as natural resource degradation".<sup>9</sup>

The fate of regions is greatly influenced by the larger state, national and global economic, technological and social systems within which they function. Areas of broader government policy<sup>10</sup> identified as having major effects on regional economic development are:

- monetary policy set by the Reserve Bank;
- taxing and spending policies;
- changing levels of industry protection;
- the location of government functions and employees;
- the spatial distribution of capital works spending and infrastructure;
- National Competition Policy;
- the delivery of services;
- higher education funding; and
- the privatisation or corporatisation of government-owned utilities.

Regional development takes place within these broader frameworks, but the results of regional development interventions are uncertain enough to make Australian

governments cautious about the benefits of too active an involvement.<sup>10</sup> Various theories may provide explanations of aspects of growth in particular regions but there is no single comprehensive theory of regional development to guide government action across the board. Consequently Australian national and state governments have opted for relatively controllable small-scale interventions at the regional level<sup>10</sup> “aimed at more prosaic, but achievable, policy objectives, for example helping to create or retain regional jobs; assisting businesses to start up, grow or relocate in regional locations; or working in partnership with communities to develop strategic plans for economic development.”

This positioning of the government expenditure on regional policy within a very much larger overall framework of international and national policy and expenditure is shown in the Australian Government’s response to the Regional Australia Summit held in October 1999.<sup>11</sup> This response, *Stronger Regions, A Stronger Australia*<sup>12</sup> announced the establishment of a Stronger Regions Package that principally committed \$115 million over four years with the aim of “enabling local communities to develop local solutions to major economic, social or environmental change”. A further \$120 million of reduced charges for agricultural exporters brought the total package to an estimated cost of \$235 million over four years.<sup>13</sup> Background information released with the package indicated that between 1996 and 2001 the Australian Government had spent \$28.5 billion to support activities in 18 major policy areas in regional Australia.<sup>14</sup>

The 2005–06 Budget provided \$160 million to the Transport and Regional Services portfolio to directly enable the sustainable development of regional communities.<sup>15</sup> But expenditures in the areas of agriculture, arts, recreation and entertainment, broadcasting, defence, education and training, employment services, environment and heritage, family and community services and Centrelink, health and ageing, Indigenous partnerships, the legal system and services, migration, regional services, research and science, telecommunications, trade, business, tourism and investment, transport and veterans’ affairs were also identified as contributing to building stronger communities in rural, regional and remote Australia.

Maximising the benefits communities could receive from this whole-of-government approach demands all program deliverers and program users to co-operate closely to identify and achieve mutually compatible objectives. In the NRHA’s view these objectives must include ensuring that country towns have the government infrastructure and services they need to survive and provide their inhabitants with the opportunity to live meaningful, healthy and refreshing lives. Achieving such results requires skilled and sensitive program management and high levels of trust between all those involved.

The NRHA recognised the need for a better basis for incorporating regional policy into broader national policy goals when it suggested the formation of a Rural Development Commission in its 1998 discussion paper *A Blueprint for Rural Development*.<sup>16</sup> In the event the Australian Government has chosen to incorporate such analytical and advisory activities into the work of the Productivity Commission. The Productivity Commission has conducted a series of inquiries and

research work that have been directly relevant to aspects of regional development, albeit on a more limited basis than that suggested by the NRHA.

## The situation of Australia's regions

The BTRE has published four information papers that review the economic performance of Australia's regions in recent decades. These papers examined the relationships between regional economic performance and taxable income<sup>17</sup>, industry structure<sup>7</sup>, education, skills and qualifications<sup>18</sup> and social capital.<sup>19</sup>

### Incomes

The Australian economy grew by 1.8% per year in the 1980s and 2.2% per year during the 1990s.<sup>20</sup> Since 1998 annual GDP growth has averaged 3.4 per cent. Most parts of Australia shared in this growth, although coastal areas and the larger cities and towns grew faster than remote and inland regions outside the larger towns. Coastal areas and the outer fringes of the cities grew strongly because their populations increased rapidly. Agricultural regions with smaller population bases tended to decline economically.

The economies of regions closely tied to export industries (for example, regions dependent on agricultural or mineral commodities) are not as influenced by national growth patterns because international commodity market or environmental factors tend to outweigh the effects of national economic activity. For example, during the depression of 1989–91, poor prices on world markets for wheat and wool, rather than the national decline in economic activity, were the most important cause of falls in regional average incomes in wheat-sheep areas of WA. Increases in regional average incomes, which took place on South Australia's Eyre Peninsula during the late 1980s, despite low rainfall and poor international markets for wheat and wool, appear to be due to increased opportunities for off-farm employment when the Olympic Dam mine expanded.<sup>17</sup>

The significant differences in average regional incomes have been steadily increasing. Capital city income has grown faster, from a higher base, than incomes in the rest of Australia. Even within capital cities, incomes in more affluent areas have grown from a higher base and more quickly than those in poorer areas. Incomes in remote and very remote Australia are close to the national average income. Incomes in inner and outer regional Australia have always been significantly lower than incomes in other regions. Towards the end of the 1990s incomes outside the major cities had ceased to grow and the income inequality between the major cities and other regions was expected to increase.

## Industry structure

Industry structure is only one of the factors that can affect a region's economic growth. Other factors such as amenity, remoteness, investment, leadership and the region's resources and skill base can also play important roles.<sup>7</sup> A region's industry structure is also closely tied to its level of remoteness.<sup>21</sup>

The health sector has an important place in regional industries. It makes its largest contribution to the workforce in inner regional Australia (11.3 per cent in 2001) and its smallest contribution in remote and very remote Australia (7.3 per cent in 2001).<sup>22</sup> Appendix 1 provides more detailed information on employment in the health sector and the distribution of the health workforce.

The health sector both develops and applies knowledge and provides services. These are key characteristics for success in the modern economy. The sector is most visible in rural and remote Australia as a service industry providing communities with important social and economic resources and amenities they need in order to succeed or, at least, survive.

By and large the unmet needs of Australian communities for health services increase with increasing remoteness. It appears that the distribution of the professional health workforce is not well matched to the health needs of the regional and remote communities, although in some cases government has intervened to overcome shortages of particular workforce categories such as general practitioners.

Australia's well-developed network of regional universities, its high level of competence in health research and its geography and demography might provide opportunities for the establishment of globally competitive enterprises in at least some Australian regions. The current NHMRC strategic plan<sup>23</sup> places major emphasis on Aboriginal and Torres Strait Islander health and specifically notes rural health, among other topics, as an area where internationally competitive knowledge could be developed. But currently the health sector's role as a service industry in regional economies receives much more emphasis than its potential as a source of innovation for regional development.

## Education, skills and qualifications

There is a complex relationship between increasing levels of education, skills and qualifications, and economic productivity and growth levels.<sup>18,24</sup> Over the decade 1991 to 2001 there was a tendency for regions with higher 1991 shares of university educated residents to experience higher income growth. This was most marked in non-agricultural regions. Possessing high 1991 shares of managers, administrators and professionals—highly skilled (as distinct from university-educated) workers—did not necessarily mean regional incomes grew.<sup>18</sup> However, in agricultural regions, high 1991 shares of these workers (mostly as farm managers) were associated with income decline. This is probably another example of environmental (widespread drought) and overseas market conditions outweighing general national economic conditions in such regions.<sup>18</sup>

The proportion of health professionals in the working age population falls with increasing remoteness. Government responsibility for service delivery plays a role in determining workforce distribution. Health services are delivered through a mixture of private and public enterprise and the workforce is not as evenly spread across remoteness classes as is the case with teachers, where government must fulfil its responsibility to provide schooling to all children. Where professions primarily service the private sector, such as computing professionals and building engineers, the workforce is concentrated in the major cities (Appendix 1).

Health workers who have undertaken their undergraduate education and postgraduate training in rural and remote areas are more likely to work in these areas than those who have trained in urban settings.<sup>25</sup> Enabling this training to take place in regional and remote areas should increase the availability of health workers in regional and remote communities in the medium to longer term. The facilities and personnel required to provide such training would improve the economic opportunities and amenity available in the communities where training occurs and in those serviced by the enhanced workforce.

## Social capital

Social capital theory proposes that social networks and norms can influence the social and economic development of communities. In its study of Australian social capital indicators for 2001–02, BTRE<sup>19,26</sup> concluded that “there is reasonably convincing evidence that social capital is associated with improved health, education and life satisfaction outcomes and reduced crime and disadvantage at the regional level”. Although in the Australian context core elements of social capital, the nature of individuals’ general support networks and the extent of community involvement<sup>27</sup>, are not significantly correlated with a region’s recent economic growth rate.

The direct effects of increases in individual prosperity due to economic growth are insufficient to explain the association of social capital with greater individual life satisfaction and increased social harmony. An individual’s social capital resources may influence their health directly by affecting their exposure to physical or psychological circumstances leading to the occurrence of acute or chronic diseases. Although those with better levels of social connectedness and social support have better health, an individual’s health depends heavily on their own social capital resources. Collective effects may influence the health of groups through indirect means, for example, socially cohesive communities may be more successful in ensuring they are provided with better health services. But having capable local leadership, the community’s size and state and national policy settings can all affect the success of such collective efforts.

Australia seems to be relatively well endowed with social capital, experiencing high rates of volunteering and civic involvement; but the types of social capital displayed within and between regions can vary considerably. The size of the city, town or village where a person lives is the most significant determinant of the nature of social capital they experience. Community involvement indicators are significantly lower in the major cities. Individuals who live in rural areas and small

towns have very high levels of community involvement partly because the need to co-operate to provide community services such as ambulance and fire brigade encourages social networking.

While rural areas have high levels of community connections and participation, social contact can be relatively infrequent and the literature also suggests that Australia's rural communities may be lacking in bridging ties with outside networks and in their acceptance of diversity. In outer regional, remote and very remote Australia combined there seems to be high levels of trust, reciprocity and community involvement, offset to some degree by social isolation. But the limits of the available data mean more detailed analysis of each remoteness category, for example taking the characteristics of sparsely populated areas and remote Aboriginal communities into account, is not possible.<sup>19</sup>

Because social capital is not well understood and complex it will be difficult to devise large-scale policies to create it.<sup>19</sup> But on a smaller scale the concept of social capital can play an important role in the health-related aspects of community development.

## Directions of change

### *Population change*

The population is growing in some parts of Australia and declining in others. The areas of population growth are<sup>28</sup>:

- the areas surrounding metropolitan areas;
- along the well-watered east coast and south-west coast;
- some resort and retirement areas;
- some regional centres;
- along the Hume Highway linking Sydney and Melbourne; and
- some relatively remote areas, especially those with growing mining activities, tourism, and significant Indigenous populations.

Areas of population decline include:

- the dryland farming areas of the wheat-sheep belt, such as western Victoria, central-western New South Wales and Queensland, the south-east Eyre Peninsula and the mid-north of South Australia, and the wheat-sheep belt of Western Australia;
- many pastoral areas in central Australia;
- certain mining areas such as Broken Hill; and
- declining industrial cities, such as Whyalla in South Australia.

Since protectionist economic policies were abandoned in the mid-1980s:

there is a growing dichotomy emerging in Australia's non-metropolitan areas, with eastern and south eastern coastal zones and areas around the commuting sheds of each of the major cities growing at above the national level, while in the heartland dry land farming and pastoral areas of rural and remote Australia absolute population decline is common and there is a consequent diminution in both their economic and social potential.<sup>28</sup>

These overall population movements result from large-scale social and economic factors affecting Australia as a whole, such as the ageing of the population and the growth of the service economy. Along with other sectors of the economy the health system will have to respond to these changes.

### ***Social change***

Regional and remote Australia was historically dominated by agriculture and mining, with agriculture as the dominant land use. But, in common with other OECD countries, Australia is now moving away from seeing production agriculture as the most desirable form of land use and toward a multi-functional landscape where other factors such as forest protection, water supply, biodiversity and ecosystem protection, clean food production and landscape amenity are given more emphasis. Some of these changes are being demanded by city dwellers.<sup>29</sup> The resulting social and demographic changes taking place in Australian agriculture and the population movements described by Hugo will result in significant changes to land use and settlement patterns in rural Australia.<sup>29</sup>

The combination of: changes to the rural population's age structure as the baby boomer generation, including farmers, reaches retirement age; smaller farm families; the increased expectations of women for fulfilling careers and relationships; the greater attractions of urban life for the young; modernisation of statutory marketing arrangements; and the increased technological complexity of farming will all contribute to changing the distribution of the population.

Continuing pressures for economic efficiency will force large-scale, production-oriented agriculture to move to inland areas of regional and remote Australia where land is cheaper. Agriculture will be the dominant industry in these areas. They will continue to lose population as machinery and other capital-intensive equipment replaces labour and large farms are formed from less economic smaller farms. These large-scale farming businesses no longer depend on services located in the smaller towns, although the limited number of larger regional centres that now provide them with services will continue to grow.

Demand for land within commuting distance of the major cities and towns or on the coast or in other attractive areas will raise land prices to levels where commercial farming will give way to other land uses. On these high amenity landscapes of inner regional Australia, "gentrified beef production, dormitory living and horticultural niche marketing will be much more successful at maintaining population. Small town futures can be secure because of landscape amenity or because of particular cultural associations that encourage cultural migration".<sup>29</sup>

Where landforms are unsuitable for extensive cropping, soils are poorer and rainfall lower, the existing farming systems, generally based on grazing, have become uneconomic and there are few agricultural alternatives. The resulting low land prices mean that although the existing farmers are ageing their farms cannot supply sufficient funds for them to retire. At the same time their inheritors find continuing with the inherited farm business unattractive. Here the existing farms and their dependent small towns face an uncertain future.

Land use in these landscapes can be changing. The cheap land can be attractive to those seeking an alternative lifestyle that, if successfully established, can in turn attract those seeking the newly apparent cultural experiences offered by the changed land uses. This has happened to the Victorian towns of Maldon, Daylesford, Castlemaine and Natimuk. “Each of these towns has been transformed by cultural migrations of musicians, gays, artists and rock climbers amongst others.”<sup>29</sup> Similarly, in Western Australia’s Margaret River alternative lifestyles and comfortable living have attracted thriving cottage and craft industries.

Town planning and land use regulations can make changes in land use such as changing from extensive to intensive agriculture impossible. Such restrictive regulation impedes any rural community’s capacity to adapt either economically or socially to the changes currently under way in regional and remote Australia. Such land use policies need to be re-examined so that communities will have an ability to mould their economic activities to suit the various views of the citizens and increase economic viability and social capital.

### *Climate change*

Global warming due to increased levels of greenhouse gases in the atmosphere is predicted to result in significant changes to current rainfall and temperature patterns, together with increases in the intensity of storms and cyclones.

Over the next 50 years average temperatures are expected to rise by 2°C, with the continent becoming dryer overall. Rainfall is predicted to increase in the north-west of the continent and decrease in the east and south-east and particularly in the south-west. Droughts are predicted to become more severe and frequent. Rainfall events are predicted to become more intense. Storms and cyclones are predicted to become more violent and increase in frequency, with the effects of storm surges in coastal areas amplified by increases in sea levels.

A report by the Allen Consulting Group<sup>5</sup> on adaptation to the risks resulting from climate change identified the regions most vulnerable to climate change throughout Australia. These are:

- low-lying coastal population and resort centres;
- tropical and sub-tropical population centres;
- alpine regions;
- centres with a high dependence on agricultural and/or eco-tourism activities;
- remote Indigenous communities (particularly in the far north of Australia); and

- areas of southern Australia facing acute water shortages and supply constraints.

They suggested three regions should be given particular priority in planning and implementing adaptation strategies, namely:

- Cairns, which is predicted to become more vulnerable to more frequent and intense cyclones, and the Great Barrier Reef, where it is predicted that biological systems will be stressed by increases in water temperature, droughts and floods;
- the Murray–Darling Basin, where a 20 per cent reduction in runoff is predicted by 2030; and
- south-west Western Australia, where rainfall is predicted to fall by a further 20 per cent.

The predicted increases in temperature would expose the aged and infirm to greater heat stress. Tropical diseases would move south as increasing temperatures make it possible for their vectors to live there. Increases in the severity of weather events (bushfires, heavy and sustained rainfall, high winds and in particular cyclones, and sustained heat-waves) will make increased demands on emergency services and disaster response arrangements.<sup>4,30</sup> Together with the effects of the more severe droughts also predicted, such events would increase the need to provide rural and remote communities with the health services which will enable them to undertake effective disaster management and recovery.<sup>31</sup>

## Regional development and rural health

### How health contributes

Australia gains significant economic benefits from ensuring that its population is as healthy as possible.<sup>32</sup> The people who live in Australia's major cities are, on average, more likely to be prosperous and to be healthier than those who live in rural, regional and remote Australia.<sup>33</sup> Enabling rural, regional and remote Australians to be as healthy as city dwellers and to be able to maintain that level of health is a major goal of Australian health policy.<sup>34</sup> Enabling rural, regional and remote communities to be prosperous and attractive places for people to live in is a major goal of regional development policy.<sup>12</sup> Both policies can contribute to enabling rural, regional and remote communities to become economically, socially and environmentally sustainable. Communities must be able to attract and retain the infrastructure, workforce and amenities that enable those who live there to have the skills and capacities to live healthy lives.

Unfortunately, to date there has been little formal recognition in Australia of the strong linkages between regional development and health, even though health and social services have been seen as one of the five foundations of a healthy rural

economy, the others being government, education and training, community infrastructure and the economy itself.<sup>35</sup>

Activities to maintain and improve the health of people living in regional communities and the sustainability of those communities are closely interrelated and mutually supportive. Along with housing, transport, communications, employment, education, aged care and leisure opportunities, the health sector contributes both to a region's social amenity and its economic sustainability. Supplying health services provides business opportunities and employment to the public and private enterprises of the region. The voluntary sector, an important contributor to social capital, also supplies health services. The basic necessities for good health (clean water and air) depend on the local natural and built environments being managed so they are maintained in good condition, which in turn helps maintain public health. Environmental variability and extreme natural events also engage the health system through their short and longer term effects on people's health.

## **Developing regional capital resources**

The capital resources of Australia's regions and hence their capacity for future development vary significantly. The major cities remain the preferred site of economic endeavour. They are particularly favoured by enterprises engaged in the knowledge and service economies. Sustaining the future development of regional communities against competition from the major cities requires the regions to mobilise their human, built, natural and social capital resources as effectively as possible (Appendix 2). This task requires vision and leadership.

Regional communities have to fully develop their own human resources and attract the other people with the skills and professional and social networks they need for their future development. Both local enterprise and external support have a part to play in attracting and retaining people with needed skills. Initiatives to attract or retain medical services provide examples. Lifestyle, career opportunities and salary level are key factors in professionals' decisions to relocate to regional areas.<sup>36,37</sup> Regional or community-based programs emphasising these aspects have succeeded in attracting medical practitioners to regional and remote areas.<sup>38,39</sup> But to overcome current and future health workforce shortages in rural areas the Australian Government has found it necessary to make the importation of skilled labour easier, and provide significant incentives in the form of scholarships and training infrastructure such as University Departments of Rural Health and Rural Clinical Schools<sup>40</sup> to encourage Australians to undertake health sector careers in rural and remote Australia.

Mobilising the resources of human, produced, natural and social capital to develop the unique competitive advantages they need to be prosperous will be easier for some communities than for others.<sup>41</sup> Those within commuting distance of a major centre, which are attractive because of their natural or built amenity or are able to develop their region's capacity to competitively supply distinctive, high-quality products or services, will be at an advantage. Areas producing less competitive products or in more remote locations will find survival more difficult.

To have the best chance of succeeding, regions will have to be able to make direct connections with the world economy, and national policy settings should recognise this. Every region must be provided with the most modern communications and transport infrastructure.<sup>42,43</sup> The provision of communications infrastructure to allow high-quality broadband Internet connections throughout regional and remote Australia would have significant economic benefits for the nation as a whole.<sup>43</sup> Such infrastructure would also support the delivery of modern, high-quality health services.

#### **Recommendation 1**

The provision of modern transport infrastructure and high-quality broadband Internet connections throughout rural, regional and remote Australia is absolutely essential if all Australians are to be able to participate fully in a globalised information and service-based economy, and to receive high-quality health services. Further development of the transport and communications industries must ensure that industry investment patterns and regulation provide rural, regional and remote Australia with services equivalent to those in metropolitan areas.

### **Scenarios for regional development**

Within Australia all three levels of government, the private sector and civil society all contribute to the institutional framework, infrastructure and resources used for regional development. But the direction that regional development should take is a matter of debate.<sup>10,44,45</sup> Three possible scenarios have been suggested for regional development in Australia.

Under the first scenario, the most important national goal is the development of a globally competitive economy.<sup>46</sup> Regions would compete within an institutional framework that gives primacy to allocating resources to their most efficient use. Those regions best endowed with the resources required for the modern economy—good communications, a highly skilled workforce, networks of innovative and responsive businesses closely linked to global markets and high levels of amenity—will find it easy to grow. Regions where such resources are in short supply would be more likely to decline.

The second scenario proposes enabling all Australians to benefit from a globally competitive economy and requires every region to be actively assisted to become as competitive as possible. This will require supplementing the regions' inherent resources with external government and non-government resources.<sup>47</sup> In this scenario regional development activity would go beyond low-cost facilitation and pay more attention to the impact of geography and the environment on the Australian economy. It would actively enable regional actors to identify opportunities for growth and to form mutually supportive networks of businesses, including with market interests in cities or export markets and institutions to exploit opportunities, and to overcome environmental impediments to growth.<sup>48</sup> Resources would be provided to help form new enterprises, to help small firms to grow larger, to enable the workforce to acquire new skills and to encourage local

businesses to become more competitive on world markets.<sup>47</sup> The resulting adaptable and positive relationships within and outside the community would provide a foundation for improvements in health and social capital. Facilitating development in this environment is a complex activity that requires highly skilled people with access to current and relevant economic, social and environmental information who can closely link with their business clients and the community, together with favourable institutional settings.

In the third scenario the social and ecological costs of growth based on global competition are considered to be too high and regional development should enable communities to become more socially equitable and socially cohesive and inherently ecologically sustainable.<sup>49,50</sup> This approach posits that communities are more likely to be sustainable if they pay less attention to economic growth based on production and give more attention to using their social and natural capitals for economic and social benefit. In this scenario an institutional framework of responsible regional government would enable those living in regional and remote communities to give more priority to improving community rather than individual well-being and to utilising natural capital to provide a range of products and services, including ecosystem services, to society as whole.<sup>51</sup> This approach of decentralisation and communitarianism is at odds with the centralist tendencies of State governments and federal government policies that give primacy to the individual.<sup>52,53</sup> Despite this conflict both rural communities and governments endorse the goal of maintaining viable communities and a multi-functional landscape in regional, rural and remote Australia.<sup>12,54</sup>

In these circumstances it seems that the way forward is the economic development approach outlined in the second scenario together with specific recognition of the role of the improved utilisation of social and natural capitals in maintaining community viability. The main use for natural capital must go beyond production to deliberately seek the wider range of benefits available from a multi-functional landscape.

### **Recommendation 2**

There should be an active approach to the development of rural and remote regions that provides them with the staff, information, infrastructure, training, financial and other services that would enable them to identify and capitalise on their competitive advantages. This would enable rural and remote communities to:

- fully utilise their human, produced, natural and social capitals to become economically and socially viable;
- adapt to and compete in world markets; and
- maximise the local and wider benefits provided by a multi-functional landscape.

To be successful this more active approach must create effective relationships between economic, social and environmental programs at state, regional and local levels and not simply add another requirement for consultation. There are many

programs run by the Australian and State governments that could provide resources for the more active approach but they have tended to be delivered from a top-down perspective in an attempt to obtain the results the particular government is seeking in a specific policy area. There has often been limited contact between different policy streams.<sup>55</sup> Currently it is not so much that there are no regional co-ordination mechanisms, rather, at present each Commonwealth or State policy area has its own means of regional co-ordination that does not necessarily involve local government.<sup>42</sup>

As a result regional development activity has suffered long-term instability and duplication. Regional development organisations have not had the resources and powers they need to be fully effective. The people with the greatest interest in integrating the effective use of the resources from the various national and state programs for the holistic development of their region are those who live there<sup>55</sup> and local government is the level of government most closely concerned with ensuring the viability of the community it serves. As long as regions have the resources for the necessary co-ordination and integration, effectively linking local government with the increasing emphasis on regionalism in program delivery could provide a basis for developing more effective regional institutional arrangements.<sup>56</sup>

At the same time local government itself is strongly arguing that its current financial and institutional subjugation to the other levels of government prevent it from taking a leadership or even an effective role in regional institutions.<sup>56</sup> Increasing recognition of these structural impediments to effective regional governance is behind recent proposals for the review of Australia's three-tiered structure of government.<sup>57</sup> Although the Alliance generally supports the establishment of such a review, out of an interest in improving the institutional arrangements for enabling rural Australians to live healthy lives, action to improve the health of rural, regional and remote Australians cannot be delayed.

The totality of national, state and local programs would be much more likely to maximise their total contribution to regional development if they could be brought together in a region with the aim of effectively contributing to its holistic development.

### **Recommendation 3**

National and State/Territory economic, social and environmental programs should be reviewed to ensure that they are being delivered in a co-ordinated fashion so that, together with local initiatives, they will enable each region to maximise the sustainable development of its human, produced, natural and social capital.

A further incentive for operating market competitive businesses in remote Australia is the 'isolated areas' tax zone rebate, which recognises the expense and disadvantages of living there. It has not been reviewed since 1993–94.<sup>58</sup>

#### Recommendation 4

The remote zone tax rebate system should be revised to take account of economic developments and social expectations over the last decade and current definitions of regional and remote Australia.<sup>59</sup>

The State of the Regions report for 2005–06<sup>43</sup> identifies fifteen key factors that should underpin the globally competitive development of Australia's regions (Appendix 3). The technology and business services sectors received little attention outside the metropolitan and surrounding areas even though these are the engine of growth of the modern economy.<sup>43</sup> Local governments in rural and regional Australia are taking a conservative approach to their preferred directions for economic development. They favour industries that add value to agricultural and other primary production and tourism, while giving technology and business services less attention.

Rural areas are likely to find establishing modern, interlinked, co-operative business structures difficult.<sup>60,41</sup> The emphasis on manufacturing and tourism as the most likely direction for development builds on readily identifiable local bases for economic development. It also reflects both inherent limitations on regional economic development and the fact that Australian regional development and industry adjustment assistance has previously paid little attention to providing the long-term strategic and information rich environment in which modern business enterprises and societies function.<sup>48</sup> The NRHA believes regional development programs must be supported by the provision of the human, institutional and technological resources that regional businesses and communities need for creativity and to function in an information rich environment.

The intellectual and physical resources of regional universities combined with other sectors and resources can be important sources of the problem analysis<sup>61</sup> and innovation needed for regional economies to become competitive and adapt to changing economic and social circumstances.<sup>35</sup> Post-secondary vocational education and training institutions are needed to provide the training that practically applies these innovations. The health sector is a major part of the modern, innovative, technology-based economy. Various parts of the health sector research, develop and use the knowledge based, high technology products of this economy. While much of the sector's R&D and manufacturing activity is located in major metropolitan areas, if suitable supporting infrastructure was available, regions with high amenity levels could also attract such activities. Regional universities can also provide support and services that enable non-profit organisations delivering human services in rural and regional Australia to continue to operate and meet the higher levels of corporate governance and accountability now demanded by government funding agencies.<sup>62</sup>

### **Recommendation 5**

Rural and regional universities and vocational education and training institutions play a key role in enabling regions to be competitive. Universities should be actively engaged in consortia with the business, non-profit and government sectors to identify and develop more innovative approaches to developing sustainable and competitive regional economies and communities.

## **The health sector's role**

Of itself the health sector plays a significant role in ensuring the economic and social viability of a region (Appendix 4). The health sector provides essential services to communities in every region of Australia. The availability of health services plays an important role in attracting and retaining a region's population, including its skilled population. Providing health services makes the sector one of the major employers in regional economies.<sup>7,18</sup>

The changing health needs of regional populations for health services are emerging opportunities for providing regional infrastructure and business opportunities. For example the migration of baby boomers and older Australians to the high amenity 'sea change' and 'tree change' areas will increase demand from both the public and private sectors for health and fitness services and aged care services. Built and social infrastructures will be needed to support the delivery of those services and to manage their impact on the environment.<sup>63</sup> The State of the Regions Report 2005–06 reports relatively little interest in the health sector as providing opportunities for economic development.<sup>43</sup> At the same time the report identifies significant dissatisfaction with the current provision of health infrastructure combined with a strong desire for locally provided and controlled health services.

### **Recommendation 6**

Regional development agencies should recognise and seek to fully develop the potential for conventional and alternative health services to contribute to sustaining their local economies by:

- working with health agencies to evaluate the current and projected health needs of their populations;
- working with health service planners and providers and their communities to develop strategies for meeting these needs; and
- encouraging investment in necessary facilities and resources.

Action to improve the health of Aboriginal and Torres Strait Islander Australians is a priority area for national regional, rural and remote health policy. Aboriginal and Torres Strait Islander people suffer greater ill health, and are more likely to experience disability and reduced quality of life and to die at younger ages, than other Australians. The conditions most responsible for ill health among Indigenous

Australians include circulatory diseases, diabetes, respiratory diseases, musculoskeletal conditions, kidney disease, eye and ear problems and behavioural disorders. Indigenous Australians experience an earlier onset of most chronic diseases, have more GP consultations for the management of some diseases and are more likely to be hospitalised than other Australians.<sup>64</sup> At the same time they tend to use medical services less than other Australians. It has been clear for some time that the provision of health services alone has been insufficient to improve the health status of remote Aboriginal communities.<sup>65,66</sup> Improving Aboriginal health requires approaches that recognise that achieving good health takes place within the wider social and environmental contexts of individuals' lives and communities.<sup>67,68,69,70</sup>

#### **Recommendation 7**

Regional development agencies should collaborate with the health sector in work to provide health-related services and infrastructure to Aboriginal communities. Together the two sectors should lead a cross-sectoral approach to:

- the provision of employment in the health sector and in health-related occupations;
- developing linkages between modern and traditional health practices to ensure that individual and community health practices are culturally appropriate and effective; and
- the provision of health information in culturally appropriate forms.

While the health sector is not alone in requiring highly skilled labour, the need for skilled labour is an important factor in the provision of primary, secondary and tertiary education and training at facilities in rural and regional areas. Some of the current arrangements for encouraging the training of health professionals for a career in rural and regional Australia are directed toward people who have grown up in a rural area and had rural experience during their training, because they are more likely to practise in rural and regional areas after their training.<sup>71,72,73</sup> The success of this approach requires the primary and secondary schools in rural and regional areas to educate their pupils to a standard that will prepare them for tertiary training for the health sector.<sup>37</sup>

#### **Recommendation 8**

Unless rural and regional primary and secondary schools can successfully prepare their pupils to take up careers in the health sector, current government policies for encouraging young people to become rural and regional health workers will be less effective than they could be. State and Commonwealth governments must ensure that all schools in regional, rural and remote Australia are educating children to a standard that will enable them to take up careers in the health sector and other sectors of the economy that require highly skilled workers

The health sector devotes considerable resources to workforce planning and must work with education and training providers to bring these plans to fruition. Consequently training health sector workers is an important and continuing function of most regional universities and vocational education and training providers. Although the Commonwealth is maintaining a commitment to training rural health professionals this commitment has developed in an ad hoc way and various professional groups have been included in training and scholarship programs one after the other. Thus not all shortfalls in the training of health professionals are attended to.

There are severe shortages of dentists in rural and remote Australia and current training levels are insufficient to meet predicted shortfalls. There is clear evidence of the link between dental disease and other chronic diseases. Oral and dental health problems are largely preventable. Those with the worst problems are public patients, many of who live in rural and remote areas. Indigenous children have more than twice as many caries as non-Indigenous children.

#### **Recommendation 9**

A program to address the need for a greater number of dentists in rural and remote areas should be established immediately. The program should provide:

- undergraduate scholarships for students from rural and remote areas to study dentistry (and some additional places for hygienists and school dental therapists); and
- an increase in the number of places at Australian dental schools.

Community programs to prevent oral and dental health problems among children and adults are also urgently required.

## Appendix 1 Health Sector Employment

The health sector is a major employer in all states. It accounts for 7.2 % of Queensland employment, 7.3% of employment in NSW, Victoria and Western Australia, and 8.9% of employment in South Australia and Tasmania. In the NT 6.3% and in the ACT 5.6% of the workforce is employed in the health sector.

The sector makes its maximum contribution to the workforce in inner regional Australia. Its contribution to total employment declines slightly with increasing remoteness. In 2001 the health sector's share of employment across the ASGC remoteness classes was: major cities, 10.2 per cent; inner regional Australia, 11.3 per cent; outer regional Australia, 8.8 per cent; and remote and very remote Australia, 7.3 per cent.<sup>74</sup> These figures are based on census respondents' self-identification of their workplace sector and include all non-professional and support staff working in the health sector.

**Table 1 Health labour force by remoteness class, 2001 (BTRE<sup>75</sup>)**

Share of health professionals (%)(a)	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
General medical practitioners	10.8	7.9	8.3	9.0	9.4	10.0
Medical practitioners in training	1.1	0.5	0.4	0.8	0.8	0.9
Specialist medical practitioners	6.4	3.4	2.7	1.8	0.6	5.4
Registered nurses	46.1	54.0	57.2	59.3	66.1	48.8
Registered midwives	3.7	4.4	5.3	6.1	6.5	4.0
Retail pharmacists	4.4	3.5	3.9	3.3	2.8	4.1
Other health (b)	27.6	26.2	22.2	19.6	13.8	26.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
All health professionals						
Share of total employed persons (%)	3.7%	3.6%	2.8%	2.1%	1.8%	3.5%
Per 100 000 population (c)	1 587	1 389	1 136	910	655	1 497

a. The number of health professionals as a percentage of all health professionals in a region.

b. Includes dentists, optometrists, chiropractors, naturopaths and veterinarians.

c. Estimates by BTRE.

The professional health workforce is concentrated in the major cities and inner regional areas (Table 1). Both the contribution of health professionals to the overall workforce and the overall availability of health professionals to the population at large decline markedly with increasing remoteness. The exceptions to the general trend are the increasing participation of nurses and midwives with increasing remoteness, and the roughly constant proportion of general practitioners across remoteness classes.

Factors such as the historic patterns of development and location of infrastructure, and the workforce's perceptions of the relativities between the lifestyles and amenities available in various regions, probably play a significant role in the current pattern of distribution of the health workforce.

**Table 2 Selected professionals' shares and growth rates—ABS remoteness classes, 1991 to 2001 (BTRE<sup>76</sup>)**

Remoteness class	Selected professionals Proportion of working age population %				Selected Professionals Growth rate %			
	Health	Teaching	Computing	Building engineers	Health	Teaching	Computing	Building engineers
Major cities	2.1	2.1	1.2	0.7	26.5	17.4	111.7	12.0
Inner regional	1.9	2.3	0.3	0.4	28.9	19.2	122.8	8.6
Outer regional	1.6	2.1	0.1	0.3	23.0	11.4	82.1	0/8
Remote	1.3	2.3	0.1	0.3	17.6	9.8	20.1	-17.5
Very remote	0.9	2.0	0.1	0/3	6.3	0.9	25.9	-8.9
Australia	2.0	2.2	0.9	0.6	26.5	16.9	111.3	10.4

As Table 2 shows, the proportion of health professionals in the working age population falls with increasing remoteness. In contrast, teachers are evenly distributed through regional workforces. Computing professionals and building engineers are concentrated in the major cities. The more even spread of the teaching workforce is the result of government's responsibility for the employment of teachers and the delivery of school education. Employment opportunities for computing professionals and building engineers are concentrated in the major cities, the favoured location of the modern technology-based service industries. Health services are delivered through a mixture of private and public enterprise and their distribution falls between that of teaching and the other professions.

The shares of teaching, health and computing professionals increased at or above national employment and population growth rates. The most technologically based professions, health and computing, have grown fastest.

## Appendix 2 Mobilising community capitals

Communities in regional and remote Australia must compete to attract the four types of capital that form the basis of community success. There can be significant impediments to regional and remote communities attracting or utilising these capitals.

*Human* capital is the personal capacities of *individuals*, including their knowledge, skills and general abilities (including their health).<sup>777</sup> As the economy's requirement for skills increases, rural places will have to continue to attract people with economically valuable skills and knowledge. While young people may have to leave their rural communities for education and early career opportunities their return at a later stage of their career could be an important source of skills for these communities. But the expectation that couples with highly developed skills, for example a doctor and his or her partner, should have rewarding work may make it difficult for smaller communities to attract such skilled returnees.

*Produced or built* capital refers to anything that has been made by humans, including the physical assets of businesses and households and public physical infrastructure.<sup>77</sup> Trends in investment in produced capital tend to favour metropolitan and regional centres. Farm capital is relatively immobile and its returns are typically low and variable. Metropolitan and larger regional centres have a greater range of business opportunities to attract non-farm business capital than do smaller rural centres. The deregulation of financial markets in the mid-1980s has made it more difficult to argue that market failure inhibits the flow of capital into worthwhile projects in rural regions.<sup>77</sup> Government investment in public infrastructure is now scrutinised against criteria that resemble those applying to the private sector, so while public interest and equity criteria may be considered, in general the trend has favoured the larger centres over the smaller ones.<sup>77</sup>

*Natural* capital is “the renewable and non-renewable natural resources entering the production process and satisfying consumption needs, as well as the environmental assets that have amenity and productive use and are essential for the life support system”.<sup>77</sup> The relationship between changes to the condition of stocks of natural capital and the economic condition of the rural communities that depend on them may be obscure and indirect or long delayed. Communities can find it difficult to respond to emerging natural resource problems because the immediate objective of the economic and social survival of the local community conflicts with the longer term objective of maintaining the capacity of the natural system to provide its full range of benefits indefinitely to both the local and the wider community.

*Social* capital refers to the networks, shared norms, values and understanding that facilitate co-operation within and between groups. *Bonding* capital refers to the trust and social cohesion among people who interact relatively frequently, often because they share a place and its common local concerns and norms. *Bridging* capital refers to the co-operation that results from networks of relatively dissimilar people in different places, occupations or levels of power.<sup>77</sup> As the number of

residents of smaller rural communities fall and their social networks become more geographically dispersed, the strong local linkages that traditionally provided for social bonding capital may be weakening. Social bridging capital is becoming more important as a means of enabling a single community to link positively with the other communities in its region and beyond. Communities that can attract already well-connected people can give their residents access to such networks of communities and enable them to utilise the wider range of resources and opportunities they make available.

A long-term process of substituting externally sourced produced capital for locally sourced labour, together with improved transport, communications and technology, has enabled the farming, mining, fishing and forestry businesses based on exploiting or transforming local natural resources to adopt economies of scale.<sup>77</sup> At the same time, these changes made these businesses less dependent on the smaller communities in rural and regional Australia which historically had provided them with human services and social support.

Similar economic and technological processes have enabled the service providers operating in rural and regional Australia to take advantage of economies of scale and relocate their enterprises from the small service-based communities to larger regional or metropolitan centres. Processors and marketers of primary products have shown a similar pattern of the consolidation of smaller local enterprises into larger enterprises located in regional or urban centres. These relocations have also encouraged knowledge intensive and service industries such as retailing, medical services, education and recreation to concentrate in larger rural towns.

Stayner<sup>77</sup> concludes that:

inland Australia would appear to have few rural centres with a high inherent potential for population growth. The key brute economic facts of inland rural Australia are its relatively low densities of population and production, and its disadvantage compared with the capacity of the cities to offer access to dense networks of knowledge rich resources that are increasingly important to new economic activity.

The transformation of natural capital through farming, fishing, forestry and mining is no longer sufficient to underpin the sustainability of Australia's rural communities. Communities must successfully utilise all the forms of capital they have at their disposal. Communities will need to attract and retain people with the skills they need for their future economic development and who can maintain the community's social bonds and its links with social and economic networks in the wider society. People with the necessary skills will prefer communities that can provide attractive levels of environmental and cultural amenity. Successful communities will require leaders who can make good decisions about using their community's limited resources and effectively prioritise community needs.<sup>77</sup>

## **Appendix 3 Factors influencing regional development from the 2005–06 State of the Regions Report**

There have been seven State of the Regions reports. The 2005–06 report<sup>78</sup> listed 15 propositions that describe key influences on regional development identified as a result of the preparation of these reports. These ‘stylised facts’ are briefly summarised below.

### **Stylised fact one**

The capacity for realised sustained innovation is, for most high-income economies without a unique and extensive natural resource base, now the core longer term driver of economic growth.

### **Stylised fact two**

The innovation/knowledge capacity of an economy is now largely determined at the regional level. That is, given stylised fact one, those high-income economies that maintain sustained growth will tend to be economies that establish a number of successful knowledge-based regions.

### **Stylised fact three**

For much of the 19th and 20th centuries the economic performance of nations and regions tended to converge. Since the rise of the importance of knowledge-based regional economies it has become possible for the economic performances of different regions to diverge for long periods.

### **Stylised fact four**

The rise of the knowledge-based regional economy has meant that the classical mechanism for forcing regional convergence in economic performance, namely real wage adjustment, has become much less effective.

Under the neoclassical model, if a region’s economic performance was poor unemployment would increase and real wages would fall. Investment and production would be transferred from a region with high real wages until convergence in living standards was achieved by real wage declines in previously high-wage regions.

## **Stylised fact five**

To be a successful knowledge-based region, regions need to have a high concentration of high skilled (scientists, engineers, etc.) designer global knowledge workers. These workers tend to migrate to regions with scale and diversity of social and community infrastructure and cultural and lifestyle choices.

## **Stylised fact six**

For similar industries productivity differentials between regions tend to be eliminated relatively quickly.

## **Stylised fact seven**

The market forces for convergence in living standards between regions tend to take the form of the elimination of productivity differentials and the outflow of population. That is, the incomes in per capita terms are increased towards the levels of the high-income regions.

The 2004–05 State of the Regions Report<sup>79</sup> documents the improved economic performance of the rural regional group over the last few years. That is, per capita real incomes have improved significantly relative to some other regions. This has been driven by:

- productivity growth rates increasing the real incomes of those who remain in employment
- high gross out-migration of the unemployed and younger workers
- concentration of population and industry clusters around major provincial centres

The improved economic performance of the rural group [of regions defined as rural in the State of the Regions reports] is now producing increased net migration flows into the [rural] region as a whole.

## **Stylised fact eight**

Those regional centres that have successfully helped improve the economic performance of the rural region have been ones with high employment growth relative to population growth that, in turn, has occurred in provincial cities that:

- maintain a population growth rate in excess of 0.3 per cent per annum
- develop diversified lifestyle and cultural choices for residents
- develop scale in a small number of non-mining and non-agricultural industries
- develop inter-regional export capacity in business and/or education services

### **Stylised fact nine**

By itself too high a concentration of population aged 55 and over will reduce regional productivity and increase unemployment while a high share of the working age range of 25 to 54 will increase regional productivity and will reduce unemployment. Migration inflows in the younger age ranges tend to reduce unemployment. Migration inflows in the older age ranges tend to increase unemployment.

The inference of this stylised fact is that a balance in the net migration impacts across all age groups is desirable to maximise regional productivity.

### **Stylised fact ten**

Because of the weakening of the market forces in driving convergence in economic performance, a high level of government intervention in driving regional economic development is now justified, at least to the same extent as was the case in the past.

### **Stylised fact eleven**

Regions are successful because they are the location of successful enterprises. To assist enterprises to grow, policy must explicitly focus on developing and strengthening the emerging flexible entrepreneurial supply lines of industry clusters on which knowledge-based economies are constructed.

### **Stylised fact twelve**

Infrastructure in general, and transport infrastructure in particular, together with the urban design factors, is a key instrument to implement the policy implications of stylised facts ten and eleven. Infrastructure makes social networks more efficient, minimises production costs, increases the scale and efficiency of labour markets and promotes sustainable growth. For maximum efficiency in infrastructure implementation there should be a degree of local government involvement in the funding and implementations of infrastructure projects.

### **Stylised fact thirteen**

Given stylised facts one and two, Internet-based communications infrastructure is becoming an increasingly important driver of economic growth. This is because sustained export success in non-resource based industries relies on reaching a high level of sophistication in using the Internet to integrate production, marketing and innovation efforts into domestic and world supply chains. This in turn requires access to quality Internet communications infrastructure.

### **Stylised fact fourteen**

The provision of quality communications infrastructure is a particularly important driver for rural and provincial regions, to offset the implications of stylised fact three. These are the regions that are often most neglected in the provision of quality communications infrastructure.

### **Stylised fact fifteen**

The provision of quality infrastructure is one thing. Equally important is to ensure that the regulatory regime, and/or the market conduct of service providers, results in it being used effectively and efficiently.

## Appendix 4 Health issues relevant to regional development

The NRHA's interest in rural and regional development arises from the role of health in the overall viability and sustainability of rural and remote communities. Some possible linkages are now listed.

- Regional development builds communities' capacity to improve lifestyle practices and to attract and retain health practitioners.
- Rural and remote people have limited access to private health care.
- Rural and remote people have poorer access to Medicare-funded services.
- Major issues for Indigenous health include petrol sniffing, foetal alcohol spectrum disorder, injuries and ill health following violence, the effect of economic trends on health status.
- Access to complementary and alternative therapies.
- Lifestyle factors that are higher in rural and remote areas than in cities and are contributing negatively to the community's health include smoking, obesity, drugs and alcohol, teenage pregnancies, unemployment and boredom, motor vehicle accidents and injuries.
- Infrastructure inequities such as poor quality roads and public transport, poor telecommunications, high cost of petrol and freight.
- Public health considerations such as clean water, waste treatment and environmental health hardware.
- Emergency evacuations, air ambulance, models of best practice.
- Farm-based occupational health and safety—the highest number of accidents in any workplace in the country.
- Structural reform in rural communities, including workplace changes, decreasing populations, withdrawal of services—such as banks and hospitals.
- How to care for small numbers of high-need patients in rural and remote communities, eg children with multiple disabilities, mental health co-morbidities, brain injuries, rehabilitation and palliative care.
- Biosecurity role of rural communities in managing impacts of human, animal and plant disease.

## Notes

- 1 The NRHA works to improve the health of Australians living in rural, regional and remote areas which are defined as all of Australia outside the eight capital cities (Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, Hobart, Darwin), Newcastle, Wollongong, Geelong and Townsville and major conurbations of the New South Wales central coast and the south east Queensland Gold Coast
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- 3 Davidson observes: 'Almost none of the forces that produced [the rural crisis]—technological change, environmental stress, collapsing international markets, rising debt—was entirely new, and most of its effects—rural depopulation, economic hardship, loss of community morale—had been experienced in previous times.'
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- 5 Allen Consulting Group, 2005. *Climate change risk and vulnerability: report to the Australian Greenhouse Office, Department of the Environment and Heritage*. Australian Greenhouse Office, Department of the Environment and Heritage, Canberra.
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- 7 Bureau of Transport and Regional Economics, 2004. *Focus on regions No. 1: industry structure*. Information Paper 49, Bureau of Transport and Regional Economics, Canberra.
- 8 Bureau of Transport and Regional Economics, 2003. *Government interventions in pursuit of regional development: learning from experience*. Working Paper 55, Bureau of Transport and Regional Economics, Canberra.
- 9 Markets fail to result in the best use of natural resources when the individual actions of resource users seeking to maximise their own benefits impose costs on other users or the wider community that society as a whole finds unacceptable. For example, landholders may maximise their production by clearing their land and replacing the vegetation that had previously covered it with a crop or a planted pasture. But these actions degrade the water that runs off their properties. Downstream users who had previously been able to use clean water now have to meet the costs of cleaning it. But the landholders whose actions originally degraded the water bear none of these costs. In such circumstances governments can intervene to establish institutional arrangements that result in resources being allocated in ways and maintained at standards that maximise the benefits of their use to society as a whole.

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- 13 Anderson, John, 2001. 'Stronger regions, a stronger Australia', Speech to the National Press Club, Canberra, 29 August 2001, <[www.ministers.dotars.gov.au/ja/speeches/2001/as11\\_2001.htm](http://www.ministers.dotars.gov.au/ja/speeches/2001/as11_2001.htm)>.
- 14 Commonwealth of Australia, 2001. 'Foundations for future growth', Regional Statement fact sheet 3, <[www.dotars.gov.au/regional/statement/fact\\_sheet3.aspx](http://www.dotars.gov.au/regional/statement/fact_sheet3.aspx)>.
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- 16 National Rural Health Alliance, 1998. *A blueprint for rural development—discussion paper*. Rural Health Information Paper 5, National Rural Health Alliance, Deakin West, ACT.
- 17 Bureau of Transport and Regional Economics 2004c, *Focus on regions No.3: taxable income*, Information Paper 54, Bureau of Transport and Regional Economics, Canberra.
- 18 Bureau of Transport and Regional Economics, 2004b. *Focus on regions No. 2: education, skills and qualifications*. Information Paper 51, Bureau of Transport and Regional Economics, Canberra.
- 19 Bureau of Transport and Regional Economics, 2005. *Focus on regions No. 4: social capital*. Information Paper 55, Bureau of Transport and Regional Economics, Canberra.
- 20 Using data for the period 1980–81 to 2000–01, BTRE described the major features of Australian regional economies in the remoteness areas established in the Australian Bureau of Statistics (ABS) Australian Standard Geographical Classification (ASGC) namely:
- Very Remote Australia
  - Remote Australia
  - Outer Regional Australia
  - Inner Regional Australia
  - Major Cities of Australia
- 21 BTRE observes: "For example, the relative importance of employment in Agriculture, Mining and Accommodation, cafes and restaurants rises with increasing remoteness. The relative importance of employment in technology and knowledge-intensive industries tends to decline with increasing remoteness, while a similar pattern is also evident for Manufacturing, Property and business

services, Communication services, Wholesale trade, Finance and insurance and Cultural and recreational services.

For service industries such as Retail trade, Health services and Education, employment is distributed across regions roughly in line with the distribution of total employment. This reflects the fact that these industries predominantly cater to local demand. In contrast, employment in primary industries (particularly Mining) tends to be highly localised.”

- 22 Bureau of Transport and Regional Economics, 2005. *About Australia's regions, August 2005*. Bureau of Transport and Regional Economics, Canberra.
- 23 National Health and Medical Research Council Strategic Plan 2003–2006, <[www7.health.gov.au/nhmrc/publications/\\_files/nh46.pdf](http://www7.health.gov.au/nhmrc/publications/_files/nh46.pdf)>.
- 24 BTRE observes: “much regional science literature argues higher skill and qualification levels to be a central contributor to maintaining economic competitiveness, and a key to building an equitable and inclusive society ... In practice, the links between education, labour quality and productivity are more complex. While many commentators link increasing knowledge levels in society in general with economic growth, other analyses suggest that economic and productivity rates of return on education expenditure begin to diminish beyond upper secondary school. However, the private and social returns from higher education are unambiguous—individuals investing in university qualifications tend to be employed in higher paid, nonhazardous and secure occupations. Better educated populations are associated with healthier people, heightened civic participation and volunteering, and lower crime rates.”
- 25 Productivity Commission, 2005. *Australia's health workforce*. Australian Government Productivity Commission Position Paper, Canberra.
- 26 BTRE adopts the OECD and ABS definition of social capital: “networks, together with shared norms, values and understandings that facilitate co-operation within or among groups.”
- 27 BTRE developed two key indicators of social capital. The ‘general support’ indicator provides a measure of a person’s ability to obtain financial and emotional support together with indicators of social isolation and health barriers to social participation. The ‘community involvement’ indicator brings together aspects of community involvement, including volunteering, active membership, help from neighbours, integration into the community and proficiency with the English language.
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- 51 Gray, I. and Lawrence, G. (2001) *A future for regional Australia: escaping global misfortune*. Cambridge University Press, Cambridge. Quoted in Cocklin, Chris and Jacqui Dibden, 2004. *Regional dimensions in national development*, Inaugural National Regional Research Colloquium 2004, Bureau of Transport and Regional Economics, Canberra.
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