

# The suburbanisation of coastal Australia

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## Executive summary

The 'sea change' phenomenon is driven by social processes and affects Australian communities, economies and the environment. It describes the depopulation of the bush and migration from many inland regional centres to coastal environs. While Australian capital cities continue to grow, the 'sea change' phenomenon is also fuelled to a lesser extent by the population migration from those capital cities to coastal regions.

Both anthropogenic pressures such as population migration and tourism (for example, through greater demands on existing infrastructure), and natural pressures such as coastal erosion and flooding are affecting 'sea change' communities. Furthermore, both the anthropogenic and natural pressures are on the increase. Despite these trends, there is little research on the actual state of 'sea change' environments.

While all tiers of government have acknowledged some of the problems associated with the phenomenon, infrastructure pressures over the last few decades, along with changing

community expectations, have forced local governments in particular to confront the 'sea change' challenge. It would be naïve to assume that one tier of government in isolation could respond to the 'sea change' phenomenon.

But perhaps the reasons that people move to the coast are not unique. The population shifts may well be driven by the same factors that drove people to the suburbs of Australia's capital cities, yet with the quality of life in Australia's city suburbs in decline, along with economic decline in other regional centres and the bush, where else does the dream of utopia lie?

## Introduction

The term 'sea change' has been used to describe the phenomenon of increasing settlement of the Australian coast, particularly those areas outside the primary urban metropolitan centres. What is occurring can more accurately be referred to as the suburbanisation of the Australian coast, where many coastal settlements are replicating low-density suburban forms. In this sense, it can be seen as a 'non-urban' urbanisation process—that is, the suburbanisation of coastal rural localities that in the past have been low-key holiday destinations, rather than a process of re-urbanisation of an existing metropolis. Another dimension of the 'sea-change' phenomenon is the population growth in high amenity, non-metropolitan, coastal environs; these might not represent suburban form, but nonetheless represent a transition towards smaller land parcels as urban 'lifestyle refugees' move to amenity acreages.

Australia's coastal regions continue to undergo transition as traditional land uses decline and new land uses evolve. Many regions have changed from quiet rural coastal communities with declining agricultural or industrial sectors into popular tourist localities and, in some cases, have grown into large urban or suburban settlements. Other regions have also changed because of easy commuting distances to major cities.

Coastal tourism and retirement to the coast are not new phenomena. Generations ago, a coastal holiday was a regular annual event for many families, and those who could afford to retired to the coast. It was common for many retirees from Sydney to move to the New South Wales Central Coast, or those from Canberra to move to Bateman's Bay. Increasing affluence, technology and infrastructure has led to even greater mobility (for example, both car and air travel have become the norm), and recreational expectations and dwelling expectations have also risen. In urban areas, this is seen in a trend of fewer people in each dwelling, while the size of dwellings is increasing. What applies in traditional urban areas also applies to those locations where people recreate and retire.

The suburbanisation of the coast is now widely recognised as an emerging, if not already emerged, feature of Australia. Population trends indicate that over the last 100 years, the majority of Australia's population shifted from the bush (rural inland Australia) to the suburbs of the capital cities, with a more recent shift towards the suburbanisation of the coast. What are the pressures that result from these trends? The state of the coast in response to these

pressures has not been adequately assessed, and is likely to be variable depending on a range of anthropogenic and natural factors. Are there any reasonable assumptions that can be made about the state of the coast in response to the pressures? Responses to the ‘sea change’ phenomenon are also varied, although all tiers of government have acknowledged some of the problems associated with the phenomenon. What have been the responses to the suburbanisation of the coast? Lastly, what are the implications for the future?

## **Pressures on coastal Australia**

Pressures on coastal Australia can be described in terms of population growth, tourism, climate change and variability, and governance arrangements.

### **Population growth**

Australia’s population has shifted and continues to shift. In terms of population movements to non-metropolitan high amenity environs—including ‘sea change’ areas—these shifts have been studied extensively over the past 30 years (see Burnley and Murphy (2004) for an overview of literature on Australia’s ‘population turnaround’). Salt (2001) suggests that there have been three Australian dominant demographic ‘cultures’ since European settlement: (i) the culture of the bush at the time of Federation; (ii) the culture of suburbia from Federation until the end of the twentieth century; and (iii) an emerging culture of the coast. While there are numerous reasons for the emerging population shift, including ‘push’ (such as reduced work opportunities) and ‘pull’ (such as lifestyle aspirations) factors (ABS 2004a; Stimson and Minnerly 1998), the dominant demographic cultures reflect mental models that each Australian has of this nation. These mental models have dominated various aspects of popular culture throughout Australia’s history, from the song ‘Waltzing Matilda’ to the ABC television sitcom ‘SeaChange’.

Long-term demographic trends support Salt’s demographic ‘cultures’, where at the time of Federation, 15 per cent of Australian’s lived in suburbia, compared to 58 per cent by 2001 (Salt 2003). Similarly, people living in non-metropolitan coastal regions increased from eight per cent to 20 per cent over the same period (Salt 2003; Salt 2005). If peri-urban coastal communities are also included in these assessments, of Australia’s recent total population count (about 20 million), 12.6 million resided in capital cities, and of the remaining 7.4 million, 75 per cent resided in coastal communities (Stokes 2005).

While recent population growth rates in coastal areas in actual numbers may not seem significant when compared to actual growth in the capital cities (for example, while the local government area of Casey in Melbourne increased by 32,600 people over the period 1996 to 2001, Victoria’s Surf Coast Shire increased by 3,000 people), the percentage growth rates experienced by coastal areas are significant when compared with their respective state and national averages (for example, the population of Surf Coast increased by 3.2 per cent per year between 1996 and 2001, while the national average increased by 1.2 per cent per year

over the same period) (ABS 2004a; ABS 2004b), particularly as many of those coastal areas are already under many natural pressures, and are less resilient to local economic boom and bust cycles.

Population projections by ABS (2001) to 2022 also show continued high growth in many current 'sea change' communities. For example, Douglas Shire in Far North Queensland is expected to have an overall population increase of 65 per cent (to 17 365 people) for 2002–22. Also in Queensland, Maroochy's population is expected to grow by 58 per cent (to 225 848 people). Similarly, in Victoria, Surf Coast's population is expected to grow by 71 per cent (to 30 572 people), and in Western Australia, Augusta-Margaret River is expected to grow by 64 per cent (to 16 513 people). The issues of coastal suburbanisation are not short-term.

Not all coastal municipalities are growing, and some areas are even experiencing a decline in population (for example, Port Pirie and Port Augusta in South Australia). Similarly, while there is a general trend of declining inland populations, there are some high-growth 'tree change' exceptions such as Bendigo and Dubbo. Furthermore, while many coastal regions are experiencing high rates of population growth, the relative share of population growth between coastal regions and other areas remains dominated by capital cities. For example, the estimated share of population growth in New South Wales between 2001 and 2031 will be dominated by Sydney (71.7 per cent of total growth), compared to 17.6 per cent of total growth occurring in coastal New South Wales (DIPNR 2004).

What makes some areas desirable is complex and again relates to many 'push' and 'pull' factors such as employment opportunities and quality of life issues. Building on previous classifications developed and documented by Burnley and Murphy (2004), a recent study by Gurran et al. (2005) identified five profiles of coastal communities that may help to understand some of the significant 'push' and 'pull' factors. These five profiles include:

1. coastal commuters—suburbanised peri-urban communities within easy daily commuting distance of a capital city (for example, Wollongong in New South Wales)
2. coastal getaways—within three hours drive of a capital city and easy weekend access to a holiday home (for example, Lorne in Victoria)
3. coastal cities—regional urban centres (for example, Albany in Western Australia)
4. coastal lifestyle destinations—tourism-dominated communities (for example, Byron Bay in New South Wales)
5. coastal hamlets—small and remote coastal communities (for example, Agnes Waters in Queensland).

Of course, some areas fulfil multiple functions as they either evolve through different waves of immigration and use, or because of the particular circumstances of their geographical location. For example, the Central Coast of New South Wales was once a holiday getaway location; but through improved transport links the region is now 'closer' to Sydney and could be classified as now having a coastal commuter profile.

Contrary to popular belief, the population migration is not dominated by retirees. During the year prior to the 2001 census, 79 per cent of people who moved to 'sea change' areas were younger than 50 years of age (ABS 2004a). However, the spending patterns of retirees moving to the coast, combined with tourism spending, determines many of the job and business opportunities that attract workforce age migration (Burnley and Murphy 2004). This is particularly significant as the demographic and social diversity of 'sea change' communities (for example, age and occupation) is a critical consideration as to the long-term viability of those communities. For example, the ability to withstand external impacts on a local economy, or to maintain and build social capital, requires a resilient community mix that is adaptive and sustaining.

Also contrary to popular belief, the majority of new coastal residents moved from either a regional population centre (42 per cent) or from a country area (27 per cent), rather than from a capital city, although the contribution from non-metropolitan areas increases with distance from a metropolis (Burnley and Murphy 2002). In addition, the vast majority (78 per cent) of new residents moved from within the same state or territory (ABS 2004a). Even so, forty-four per cent of recent retirees did move from capital cities, potentially showing signs of future city to coastal migration as the baby-boomer generation enters retirement. Some of the city to coastal community migration may also have been partly driven by urban-Australian economic prosperity during the last few decades, where coastal homes in some regions are considerably less expensive than in some capital cities, although this has been recently re-aligning. The real estate booms of the capital cities have allowed some people to 'cash-in' and relocate or use their newfound equity to purchase a second home or investment property.

## **Tourism**

There is a common perception that 'sea change' communities are inundated by tourists at particular times of the year. This is true for some regions (for example, more than twice the number of visitors to south west Australia—roughly from Bunbury to Albany—come during the month of January, compared to May) (Tourism Western Australia 2004). In contrast, tourism is more regular for many other 'sea change' areas (such as the Sunshine Coast) (Tourism Research Australia 2004). Tourist numbers are higher during weekends, and school and public holidays, and seasonal variation seems to be less pronounced the closer the region is to a capital city. In terms of small and remote 'sea change' communities, seasonality can represent significant changes to population composition. This creates onerous infrastructure demands for one or two months of the year, as well as the need to maintain under-utilised infrastructure during off-peak periods.

International tourism is more affected by seasonal variability (for example, during the period 1999 to 2003, the month of December accounted for 11.1 per cent of all arrivals, and May accounted for 6.5 per cent of arrivals) (Tourism Australia 2004). However, international tourism only accounts for about six per cent of total tourist numbers for Australia and, since the 1997–98 Asian financial crisis, has been more volatile and lower than global tourism

growth (Department of Industry and Tourism Resources 2004). In south-west Australia for instance, international tourism only accounted for around five per cent of total visitors during 2002 and 2003 (Tourism Western Australia 2004).

Although sand mining along the eastern Australian coast was a major source of conflict between conservation and mining groups from the mid-1960s through to the mid-1990s, the main pressure on coastal locations in the twenty-first century is arising from both residential development, tourism pressure, and the synergistic interaction between these two pressures. Although there are many and varied levels of tourist pressure from simple self-organised trips to national parks to package tours including resort accommodation, it is the 'discovery' of a destination through tourism that may ultimately lead to pressures for greater development in the longer term. Ironically, tourists or individuals fleeing 'overdevelopment' can in fact lead to the next 'discovery' and initiate the next phase of development. The creation of national parks along the coastline has occurred through the influence of local groups and government. These reserves are often the battlegrounds between different user groups such as bushwalkers and four-wheel-drivers, or canoeists and jet-ski riders. Conflict over recreational uses of public national spaces is particularly prevalent in prominent tourist destinations and in national parks that are surrounded by urban or suburban areas. Urban or suburban encroachment also leads to greater prevalence of weeds that encroach on natural areas.

## **Climate change and variability**

Climate change and variability may also create additional pressures on these dynamic coastal ecosystems, potentially having numerous impacts on many sectors, with the potential for major problems over the next few decades and beyond. For example, climate change might impact on coastal communities by affecting: (i) water resources, through less supply and greater demand; (ii) health, through more heat-related illness; (iii) fisheries, as warmer oceans could affect coastal biodiversity; (iv) industry, through more energy demand (greater demands during summer for air conditioning as temperatures increase), tourism (affected by changes to the natural environment), and insurance (greater liability with extreme events); and (v) infrastructure, through greater exposure to severe storm events and associated impacts such as flooding and coastal erosion. Increasing coastal populations also exacerbate many of these problems (for example, through the creation of more impervious surfaces, which can exacerbate flooding).

## **Governance arrangements**

Governance arrangements also create pressures on the way in which the 'sea change' phenomenon is managed. Until recently, any local coastal area in New South Wales might have been subject simultaneously to a coastal management plan, estuary management plan, floodplain management plan, and catchment management plan (Smith et al. 2001). In addition, it is possible for a range of statutory and non-statutory instruments relating to landuse and environmental planning to be administered independently by any of the three

tiers of government. Adding to this complexity is the nature of many planning instruments that are specific to an issue or sector, thus creating conflicting goals within and between institutions.

Similarly, with the emergence of regional governance in Australia, there has been the creation of more institutional complexity and disconnects in some coastal areas. For example, the transition to the Natural Heritage Trust (phase 2) has seen the emergence of more formal regional governance for natural resource management in all states and territories (which in some areas has built upon previous catchment management initiatives). However, the evolution of regional governance has largely been disconnected from regional growth-management frameworks, and similarly disconnected from regional local government collectives—although the relationships between regional natural resource management and local government has recently improved in some jurisdictions (McDonald et al. 2005; Wild River 2006). Similarly, disconnects can also exist between coastal planning and broader regional natural resource management planning. These disconnects can lead to information duplication and conflicting priorities for natural resource management.

Other added pressures are the change in community expectations of the roles of local government in ‘sea change’ communities, combined with devolution of governance responsibilities. While local governments in some jurisdictions have increasing responsibilities for controlling and enforcing the environmental impacts of development and industry, local councils once had a clear community mandate to focus on roads, rates and rubbish. Similarly, the expectations of some ‘sea-change’ communities have evolved and now expect local councils to assume a *de facto* responsibility for a range of environmental and social services for which they have no statutory responsibility (Smith et al. 2001). In some areas, this has led to the raising of environmental levies and the like to allow more local government interventions. At the 2005 National Sea Change Summit, held in Coolumb, some local councils expressed the desire to shift the planning paradigm to better meet community aspirations, whilst maintaining asset services.

As the suburbs of our capital cities change (for example, higher housing density, increasing rates of family breakdown, greater resident mobility, increased pollution, under or over employment, and greater fear of crime), perhaps the factors that motivated people to seek life in the suburb of a capital city are more difficult to find. Is the mindset that inspired migration to the suburbs 50 years ago the same mindset that is inspiring the ‘sea change’ phenomenon? If Australia’s modern experience of city living changed to reflect a better quality of life would the ‘sea change’ phenomenon be less pronounced, or will Australians always be a wandering nation searching for a temporary dream?

## **State of coastal Australia**

To succinctly describe the state of coastal Australia affected by the ‘sea change’ phenomenon is a difficult task. In terms of natural processes, coastal ecosystems are inherently dynamic. In

the case of the east Australian coast, the constant northward migration of sand is the key to understanding coastal processes, including the formation of the dune systems in Myall Lakes National Park in New South Wales and the formation of Fraser Island in Queensland. The northward migration of sand is also important to understanding beach accretion and erosion processes, and the interaction of recent human modification of coastal landscapes with these short, medium and long-term dynamic processes.

Coastal systems include aspects important to biodiversity (for example, habitat and nutrient cycling) and also provide recreational opportunities for residents and visitors. The environmental impacts of intensive coastal settlement occur across a wide spectrum—from water pollution through to air pollution and the destruction of prime habitat including mangroves, saltmarshes and freshwater swamp communities. Many national parks have been established around the Australian coast including the World Heritage areas of the Great Barrier Reef, Fraser Island and Shark Bay. These represent only a small sample of coastal ecosystems and do not in and of themselves protect all values found along the coast. Indeed, given the dynamic nature of coastal ecosystems, it would be naïve to ignore the interconnectedness of the national parks with their rural and urban surroundings.

While research exists that examines the state of various aspects of coastal systems within an urban setting (for example, research undertaken by the Centre for Research on Ecological Impacts of Coastal Cities, University of Sydney), the research is not unique to ‘sea change’ communities *per se*. In fact, both existing urban areas (re-urbanising) and suburbanising coastal environments are affected by similar impacts, such as resource extraction (for example, fishing), tourism, and development. It is the rate of change, the intensity or concentration of activity or input, the transformation processes, and the sensitivity of the receiving environment or impacted species that are the critical variables. Because many coastal communities have not anticipated the surges in both migration and tourism, the state of hard infrastructure (such as roads and bridges) and soft infrastructure (such as infrastructure for research, training, innovation and technology) is under enormous pressure.

Similarly, the economic state of ‘sea change’ communities is also variable—temporally and spatially (within and between coastal communities). Many coastal communities experience boom and bust cycles, due to the influence of external forces, such as demand for investment properties, tourism, and the viability of primary industries. Furthermore, many of the smaller ‘sea change’ communities once perceived little need for integrated strategic planning relating to issues such as land use and development (Shepherd 2005). Consequently, the current state of hard and soft infrastructure and the capacity to control provisions for development is often lacking.

From a social perspective, Burnley and Murphy (2004) raise a number of potential problems arising from the population changes in coastal regions. Low-skill employment seekers move into ‘sea change’ communities where a job shortage may already exist and become competition to ‘local’ job seekers. One reported impact of this issue is the manifestation of

conflict between the school-aged children of those competing for work. In addition, Burnley and Murphy highlight a number of other social problems, including: the disconnection from family and friends of retirees who move to 'sea change' areas and require greater community service support as they lose their independence over time; and social and economic inequities resulting from the gentrification of traditionally lower-income communities. Similarly, as real estate values increase rapidly in many coastal communities, local first home-buyers can be priced out of the market and may also need to relocate.

## **Responses to 'sea change'**

Responses to the suburbanisation of the coast have varied from localised reactions to specific pressures, to attempts to coordinate and focus effort at proactive planning, research and management across broader regions. In early 2004, 'sea change' councils from around Australia banded together to form the National Sea Change Taskforce. Their membership currently includes 62 local councils, representing over four million people (National Sea Change Taskforce 2005). Although some local governments express desires to shift the planning paradigm towards meeting the aspirations of its constituents—while improving social, economic and environmental services—the reality of many councils is the struggle to provide for (and maintain) adequate hard and soft infrastructure. A few local councils, such as Noosa in Queensland and Surf Coast Shire in Victoria, have attempted to limit future population growth because infrastructure such as water supply cannot keep pace with the growth, and the cumulative adverse impacts on the natural environment cannot be adequately managed. On the other hand, there are some other local councils that seem prepared to put up with the adverse environmental, economic, and social consequences of the 'sea change' phenomena and have actively supported surges in migration and tourism, because more people equates to more rates, more spending, more jobs, and a potentially stronger local economy.

The commitment of other tiers of government to tackle 'sea change' issues has recently been evident in coastal management planning activities in some of the states (for example, the New South Wales Inquiry in Coastal Infrastructure Provision and the Victorian Coastal Spaces Initiative). Furthermore, the sign on (of the majority of the states) to the national coastal framework, developed by the Intergovernmental Coastal Advisory Group, and facilitated by the Australian Government, is also evidence of a coordinated attempt to manage the impacts on Australia's coastal areas.

The Australian Government's recent focus on 'sea change' areas has also been evident in parliamentary debates, such as Senator the Honourable Santoro's (2005) speech 'Coming to Grips with the Sea Change Challenge', and the Commonwealth Environment Minister Ian Campbell's recent (2005) announcement, in response to past ad hoc coastal development decisions, of the need for a cooperative approach between Federal, State and local governments to develop a 30-year plan for Australia's coastal zone. This proposal would break the coast into regional segments that would be managed cooperatively between all three

tiers of government, with planning, development, population shifts and the environment being managed in an integrated way.

## Implications and consequences

The suburbanisation in coastal areas creates two forms of pressure on the natural environment.

The first pressure is described as direct pressure or where there is an initial impact on the environment as areas are developed and settled. Direct pressures include:

- displacement (for example, land clearing) of resident coastal terrestrial, aquatic and marine ecosystems for infrastructure (for example, buildings, roads, bridges, parks, promenades and piers, marinas, swimming areas, canals, dams and water supply infrastructure, electricity and phone lines, storm drains and guttering, sewerage works, rubbish tips)
- destruction of natural, cultural and Indigenous heritage in coastal areas and coastal waters
- destruction of highly fertile coastal landscapes—both in relation to biodiversity and in relation to agriculture
- the development of coastal areas and exposure of acid sulphate soils

The second pressure is ongoing pressure, which involves managing the impact of human settlements. For example, ongoing pressures in coastal settlements may result from an increase in impervious surface cover (for example, roads) leading to greater and more intense runoff, which then has the potential to transport increased volumes of nutrients, pollutants and refuse into waterways. Clearly, the sheer volume of waste to be absorbed or otherwise disposed of also increases markedly with population density and the problems facing existing coastal urban areas (such as Sydney or the Gold Coast) are being replicated to varying degrees along Australia's coast. Coastal settlement adjacent to estuaries (for example, intermittently closed and open lagoons) may also affect nutrient cycling and other biogeochemical processes that are important to those ecosystems, due to increased pollutant loads (that may also release into aquatic food chains). Indirect pressures or impacts of suburbanisation of coastal areas can also result from:

- sewage disposal
- other solid waste disposal
- air pollution from increased concentrations of vehicles
- point and diffuse source pollution of coastal freshwater surface and groundwater bodies
- increased concentrations of recreational fishing and boating impacting on aquatic ecosystems

- impacts on wildlife from increased collisions with vehicles, and sound and visual pollution
- increased pollution from industries servicing increased populations.

Because the suburbanisation of coastal landscapes is an ongoing process (ABS 2001), it can be argued that the continued clearing of coastal and hinterland areas for new residential developments is the greatest continuing threat to habitats. Harvey and Caton (2003) discuss in greater detail many of these management issues that are facing coastal Australia and the underlying ecosystem processes that influence management.

Fundamentally, the issues that we grapple with in striving to make Australia's major cities and towns more sustainable are the same ones that we grapple with in managing the broader coastline. The greater the density of people per hectare in settled areas, the greater the challenge of absorbing the impacts created by those people *in situ*. On the other hand, diffuse settlements have a more widespread impact, particularly considering that Australians have one of the highest per capita ecological footprints in the world. Should people be concentrated into existing settlements? Is it a case of density *versus* sprawl? These classic urban planning dilemmas are of equal importance to the management of Australia's coastal settlements as the demand to live on the coast steadily grows.

Like most ecological issues, the uniqueness of the local environment will dictate the likely impacts of continued coastal urbanisation and ways to manage or mitigate those impacts. The evolution of local tenure, planning and zoning has largely been based on landuse history and settlement patterns, which in turn reflect local resource opportunities and constraints. In the past, coastal national parks were commonly created from Crown land. These areas of Crown tenure were generally unsuitable for agriculture and other forms of economic production and hence many of these areas, while rich in biodiversity and of immense conservation value, are biased toward the less fertile parts of the landscape. The majority of fertile and productive coastal landscapes are in freehold title and, while many of these areas have been cleared in the past for agriculture, many important natural areas (such as habitats) remain in freehold title. These areas are highly valuable habitat for many declining or threatened native marsupials such as koalas, bandicoots and gliders, as they prosper and persist best in fertile landscapes. It is in these areas that increasing pressure for coastal development exists, and many are the basis of local controversies and court cases (for example, the koalas in the Port Stephens area in New South Wales and the Mahogany Glider in South East Queensland). Similarly, suburbanisation has spread to some of our most highly productive agricultural lands, taking them out of productive use and there is also the continued pressure for development on the remaining agriculturally productive coastal areas. On the eastern coast of northern Australia, this has potential implications for water quality entering the Great Barrier Reef. Furthermore, not only does the shift in landuse from agricultural production to suburbanisation alter the landscape and local economies, but also the social structures of those regions.

In other areas, coastal development is encroaching into fire-prone areas of coastal heath, forest and shrubland, as for example in the Margaret River region in Western Australia. As well as destroying primary habitats, these types of coastal settlement have increased vulnerability to wildfire. In response, more bushland is cleared as a firebreak around the new settlements, which leads to increased pressure on surrounding national parks authorities to burn more frequently. Alternatively, there is no response until a fire occurs, resulting in a public 'blame game'. Pressure to develop freehold land can lead to inappropriate planning decisions and the cumulative impact of decisions made on a case-by-case basis can result in significant and permanent changes to coastal landscapes. The suburbanisation process is not only confined to coastal locations, it is also a pattern manifesting in the hinterland regions of Australian capital cities, and also in 'tree change' areas.

Many of Australia's government institutions (at all levels) have been set up to address one group of issues or sector (for example, health). Due to the complexity of natural processes in the coastal zone, combined with the interdependencies of the 'sea change' phenomenon with other social processes (for example, the decline of quality of life in the city suburbs), a systems approach to addressing the coastal population growth is a way forward. While potentially difficult within the current bureaucratic structures, this approach provides a mechanism to identify and manage direct and indirect consequences of a particular issue as well as the direct and indirect drivers of that issue; as a result, a systems approach allows targeted interventions for maximum impact.

## Conclusions

The suburbanisation of the Australian coast is a social process, being driven by migration, not only from our capital cities, but also from non-coastal regional centres and the bush. Pressures on Australia's coastal communities also exist in the form of tourism and numerous natural pressures such as coastal erosion and flooding. While the state of the natural environment of 'sea change' communities is highly variable, there are a number of social impacts that have been recently highlighted such as competition for employment, and retiree disconnection from family support networks. All levels of government have acknowledged some of the problems facing coastal Australia, with many local councils joining together to form the National Sea Change Taskforce. However, 'sea change' is not an isolated phenomenon, it reflects the declining quality of life in Australia's city suburbs and the economic decline of many non-coastal regional centres and the bush. If the magnitude and speed of the 'sea change' phenomenon destroys the very lifestyle that is driving Australians to the coast, where next will they turn and what legacy will be left behind?

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## Glossary

Hard infrastructure – physical infrastructure such as roads, bridges, and hospitals

Peri-urban – an area on the periphery of an urban centre that is in a process of transition to a suburban form from another pre-existing landuse

Social capital – the networks and connections between people that contribute to social cohesion

Soft infrastructure – service infrastructure such as access to preventative medicine and social networks

Suburbanisation – the migration of people from city centres or other areas to outer suburbs but, in the case of coastal localities, the juxtaposition of much higher settlement densities and suburban housing forms in or adjacent to more traditional coastal towns or hamlets.

Sea change – (a) acting upon a desire to pursue a lifestyle that focuses on improved quality of life; (b) the phenomenon of increasing migration to, and suburbanisation of, the Australian coast, particularly those areas outside the primary urban metropolitan centres

Systems approach – understanding of the connections and interactions between components of a system (for example, social, economic and environmental)

Tree change – the phenomenon of increasing migration to, suburbanisation of, inland Australian towns, particularly those areas outside the primary urban metropolitan centres