# Long-Term Settlement Scenarios for Australia: A Survey and Evaluation of Community Opinions

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# Long-Term Settlement Scenarios for Australia: A Survey and Evaluation of Community Opinions

Julian Bolleter , Nicole Edwards, Robert Freestone , David Nichols, Grace Oliver and Paula Hooper

**ABSTRACT**

The projected long-term growth of Australia's population to over 50 million people raises significant implications for infrastructure planning and liveability. Concomitantly, support for population growth through immigration is, according to some measures, waning. This paper presents findings from a national survey, Plan *My* Australia, measuring support for alternative national settlement patterns for accommodating population growth. The responses favour three possible settlement patterns – satellite cities orbiting the state capital cities, regional cities on rail links connect-ing the capital cities, and cities in inland regions. Policymakers should consider the findings in the context of a re-emerging national urban policy.

## 1. Introduction

Projections reveal that the amount of urbanised land on Earth by 2100 could reach 3.6 million $km^2$, approximately 5.9 times the total urban area in 2000 (Gao and O'Neill 2020). Such figures derive from the twin pressures of global population growth and urbanisation. Indeed, the United Nations predicts the global population could reach 13.2 billion by 2100 (United Nations 2017) and that, by 2050, 68% of the world's population will reside in cities (United Nations 2018). These projections stamp urbanisation as one of the twenty-first century's most "transformative trends" (United Nations General Assembly , 2016b, p. 3).

Australia is a microcosm of the global challenges confronting the pressures of population growth in cities. The Australian Bureau of Statistics' mid-range projection for 2101 (Series B) is for the Australian population to effectively double, reaching over 53 million (Australian Bureau of Statistics 2013), an increase mostly stemming from net overseas migration (Australian Bureau of Statistics 2017). Given the growth pressures Australia faces this century, the benefits from a national plan for cities and regions identifying areas with the highest urbanisation capacity are readily apparent, especially where these are informed and supported by citizen opinion.

This paper contributes to the debate by testing a range of macro settlement patterns against community sentiment through a national survey of over 1000 Australians conducted in mid-2020 (the Plan *My* Australia community survey). The central research question guiding our enquiry is: what hypothetical settlement patterns to accommodate substantial population growth would the Australian community support? The findings contribute to a future national vision of population distribution. Ahead of detailing our methodology, we first outline the broader concerns which animate this inquiry.

### 1.1. Policies and People: A Literature Framing

Global urbanisation pressures have seen a comparatively recent resurgence of advocacy for developing national urban policies to comprehensively direct urban and regional planning strategies (Beatley 2015, United Nations General Assembly, 2016a, United Nations Conference on Housing and Sustainable Urban Development 2017). National urban policies are regarded as a vital component of policy structures to deliver sustainability, productivity, and liveability. They are also instruments to implement global agendas, e.g. the United Nation's (UN) Sustainable Development Goals (United Nations Conference on Housing and Sustainable Urban Development 2017).

In contrast, Australia's planning is jurisdictionally fragmented and uncoordinated. As the Planning Institute of Australia correctly identifies, Australian states, territories, and local governments all have different views about our common future. The result is that "our collective coverage of plans looks like a patchwork quilt" (Planning Institute of Australia 2018, p. 6). Furthermore, planning frameworks are not well coordinated between the various scales of planning, e.g. from national to state, and state to city level planning. This situation is understandable because policymakers do not comprehensively review strategies at set intervals but rather according to different political and economic cycles within their jurisdictions. As a result, different policy documents are working to different timeframes and projections.

However, the Australian government does acknowledge the importance of the impacts of population growth and migration settings. The population-settlement-planning nexus was emphasised by a broad-ranging inquiry into the Commonwealth's role in city development (Australian Government 2018). It scoped a set of problems and related policy alternatives through public hearings and submissions to produce almost 40 recommendations. The most important of these was producing a national settlement plan to provide a "national vision for our cities and regions across the next fifty years". This plan would engage with population and employment growth and change, sustainable development, and regional connectivity. The Australian government recently accepted this recommendation "in principle" (Australian Government, 2020a). The Australian government also released a population strategy to achieve an "optimal settlement pattern" through coordinated investment in both urban and regional areas (Australian Government, 2019b, p. 7).

While a National Population and Planning Framework acts as a set of collaborative protocols to enhance national, state and local "understanding of populations, population change and its implications", this framework lacks a spatial dimension (Australian Government, 2020b). The interconnections between population and broad-scale settlement patterns are recognised, but a substantial research foundation (notwithstanding a new Centre for Population established by the Turnbull Government) has yet to inform a future national settlement strategy.

For political acceptance, if nothing else, the weight of community opinion needs to be explicitly factored into longer-term population and settlement decision-making. However, many Australians regard population growth, and principally immigration, as a problem, despite the considerable contributions migrants make to Australian society. Recent credible polling shows that 64% of Australians regard immigration levels over the last decade as too high (Murphy 2018). Other

surveys reveal that over two-thirds of respondents do not feel Australia needs more people (Biddle 2019). Such opinions partly flow from long-standing immigration patterns. Before the COVID-19 pandemic, the majority of new arrivals settled in Melbourne or Sydney. As a result, the populations of these cities were surging by over 100,000 people annually (Birrell and Healy 2018). As a result, residents perceived significant impacts in escalating housing costs, infrastructure deficits, and traffic congestion (Kelly and Donegan 2015, Benson and Brown 2018, Seamer 2019). However, it should be noted that such issues are also compounded by other drivers, such as negative gearing policies – spurring speculative property investment – and a lack of public transport investment.

Density increases, resulting in part from population growth, are also often regarded as a threat to the quintessential suburban life (Dovey and Woodcock 2014). Sarkissian tells us that "[a] huge battle has been waging for more than two decades about this matter in Australia" (Sarkissian 2013) – and that a public "sullenness" exists regarding urban infill in suburban neighbourhoods (Kelly and Donegan 2015, p. 129). For example, in 2011, 52% of suburban residents of Australia's capital cities said they "would not like" population increases in their neighbourhood; only 11% responded favourably to this idea (Productivity Commission 2011).

Some of this resistance can be explained by NIMBYism, a term describing active, strident, and networked residents who protest against new development proposals (particularly apartment development) in their neighbourhood, even while believing such developments would benefit their city at a broader scale (McNee and Pojani 2021). NIMBY sentiments typically revolve around preserving class status, excluding lower-income groups, reducing competition for parking, preserving views and green spaces, minimising development, resisting higher densities and protecting home values, amongst others (McNee and Pojani 2021). Rising NIMBYism often correlates with gentrification and increased socioeconomic advantage (Einstein *et al.* 2019). Most immediate inner areas of Australia's capital cities have already gentrified, and the greatest levels of gentrification are presently occurring in bands located between 5 and 15 km from the city centre (Pegler *et al.* 2020). This situation poses major issues as Australian government policies aim to reduce suburban expansion by encouraging urban densification in areas – where resistance is most strident (Pegler *et al.* 2020). In turn, this situation compounds housing affordability issues (McNee and Pojani 2021) and deepens socioeconomic divides within Australian cities.

Longer-term population and settlement decision-making is often not the product of extensive community engagement. While a notable feature of local planning is its "reliance on extensive public consultation processes" (Murphy 2012, p. 177) under the umbrella of collaborative planning theory (Hall 2014, p. 411), public consultation is rarely extended in a meaningful way to the metropolitan (Hopkins 2010, Murphy 2012), let alone the state or national, scale. Given the lack of power of federal, state and local governments to "direct" populations to cities or regions – outside of regional dispersion programmesfor immigration (Australian Government , 2019b) – planning for population growth will be unlikely to yield outcomes "on the ground" without broad alignment to – or at the very least a nuanced appreciation of – community preferences and sentiment. So at this point we return to the central research question guiding our enquiry : what hypothetical settlement patterns to accommodate substantial population growth would the Australian community support?

## 2. Methods

### 2.1. The Plan My Australia Community Survey

To identify and unpack community preferences for long term settlement scenarios, we developed the Plan *My* Australia community survey using the online tool Survey Monkey® (2021). The survey

was promoted nationally through multiple Australian Broadcasting Corporation (ABC) radio appearances, internet news articles,via distribution to state-based geographical societies, social networks of the University of Western Australia and the University of New South Wales, the University of Western Australia webpage, and relevant community Facebook and Reddit groups. Respondents utilised a Survey Monkey weblink. Recruitment via these methods achieved a total of 704 responses over four months between May and November 2020. Additional responses were purchased through Survey Monkey (n = 308) inviting participants and allowing filters to facilitate recruitment based on certain demographic characteristics such as age, gender and geographical area of residence (i.e. "urban", "regional"). We used this selection method to achieve a convenience sample (n = 1013) as close to representative characteristics as possible so that the results would be generalisable to the wider Australian community.

Prior to preferential judgements being asked, the survey displayed national-scale mapping to provide a base level of knowledge in four areas. Under the "climate" theme, mapping of the projected (2090) average annual maximum temperature and annual rainfall was presented (Australian Government 2017) (Figure 1). The meteorological data were derived from the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathway 8.5 climate projection (Intergovernmental Panel on Climate Change 2014) and the ACCESS1.0 model developed through collaboration between the Bureau of Meteorology and CSIRO (Australian Government 2017). Additionally, areas showing cyclone incidence were shown (Bureau of Meteorology 2020). Mapping of other categories was more straightforward. Maps of existing regional railways and

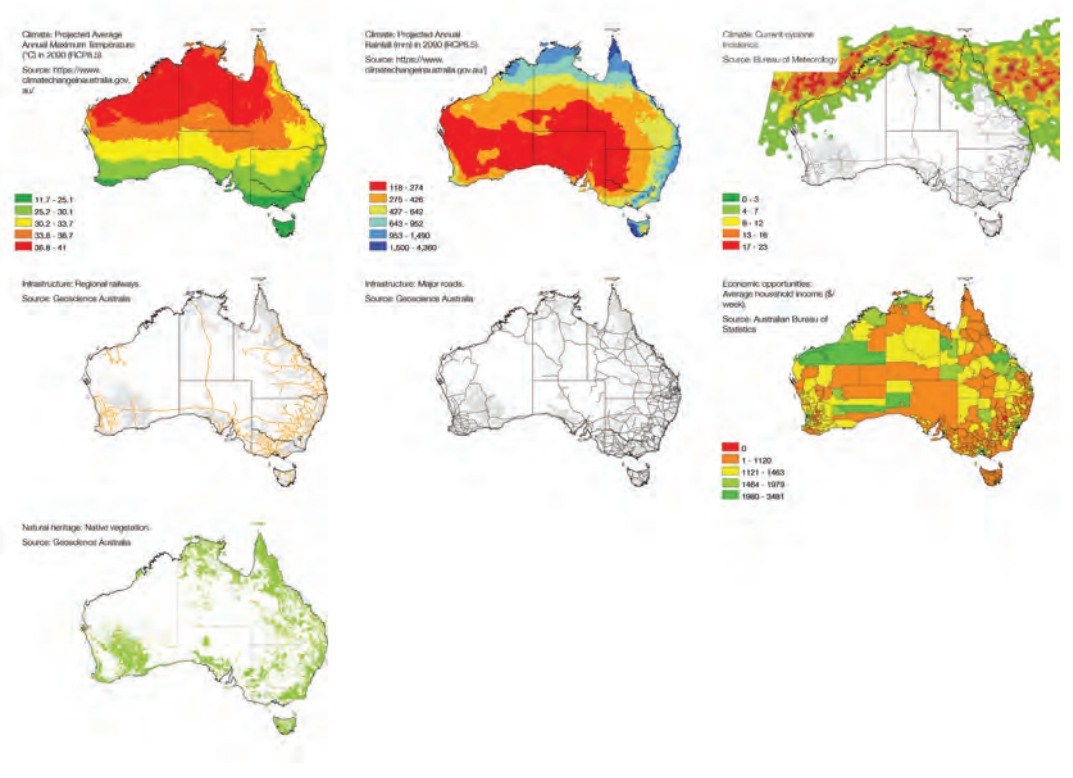


Figure 1. The survey displayed a series of national-scale maps to provide a consistent, base level of knowledge in four categories; climate, infrastructure, economic opportunities and natural heritage.

major roads were presented under the second 'infrastructure' theme. Third, a map showing average household income (Australian Bureau of Statistics 2016) was presented under the' economic opportunities' theme. Finally, under the "natural heritage" theme, a map of native vegetation was presented (Geoscience Australia 2018).

The national population forecast for 2101 employed in the survey was the Australian Bureau of Statistics' mid-range (Series B) projection of 53 million (Australian Bureau of Statistics 2013). This projection reflects a 28 million person increase on the current national population. An assumption was made that half of this increase would disperse across existing Australian cities and towns. As such, the important question was where respondents would support another 14 million Australians residing (Figure 2).

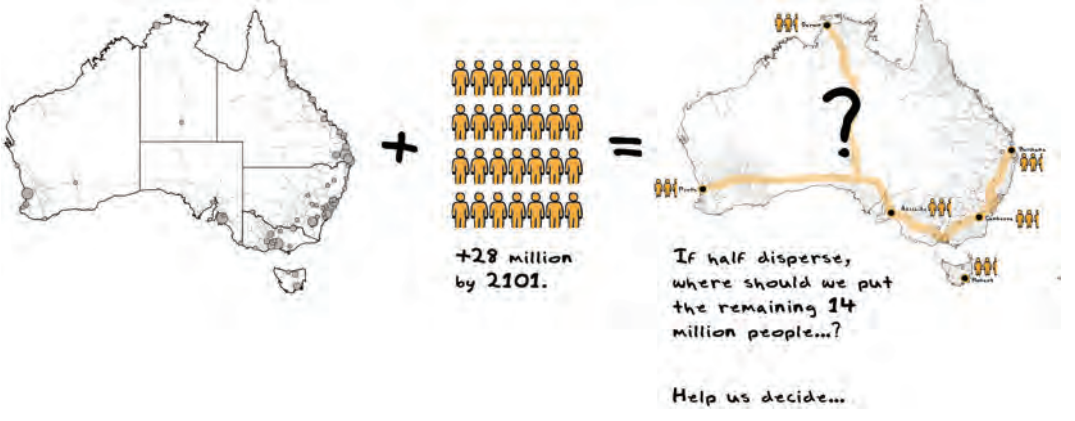


Figure 2. An introductory figure from the Plan My Australia community survey.

### 2.1.1. Settlement Pattern Scenarios

The survey presented settlement pattern scenarios spatially located in areas identified as opportune locations to accommodate projected population growth. These were derived from and are representative of the various kinds of future possibilities tabled in academic (Bolleter and Weller 2013, Bolleter 2019) and policy literature (Australian Government 2015, 2019a, SGS Economics and Planning 2020). These settlement pattern scenarios were developed for a preceding and more narrowly targeted survey of planners and cognate professionals, the Plan *My* Australia: Experts Survey (n = 284), which assessed these scenarios against expert opinion.

Given the scenarios' need for distinctly different spatial outcomes to clarify assessment, and their geographic breadth, the scenarios presented were typically one-dimensional. The intent of such simplified propositional scenarios was to elucidate respondents' preferred settlement patterns, how those preferences might differ between individuals, and the basis of those differences (Logg-Scarvell *et al.* 2015). We clarified this in the survey introduction by stating, "Please be aware, while some scenarios are not currently plausible, they will still stimulate responses of value. We are looking for insights rather than a vote favouring a single scenario". Indeed, any plan for future implementation would need to be a hybrid of multiple scenarios.

The eight scenarios were: Boosted Secondary Capital Cities; Satellite Cities; Rail Cities; Sea Change Cities; Inland Cities; Northern Cities; Mega Cities; and Western Cities. Below we briefly describe each of these scenarios in turn.

### 2.1.2. Boosted Secondary Capital Cities

Population growth in Melbourne and Sydney, Australia's two largest state capitals, has, in part, caused them to become congested and expensive. This scenario responded to this situation by distributing population growth to the remaining six state and territory capitals, projecting popula-

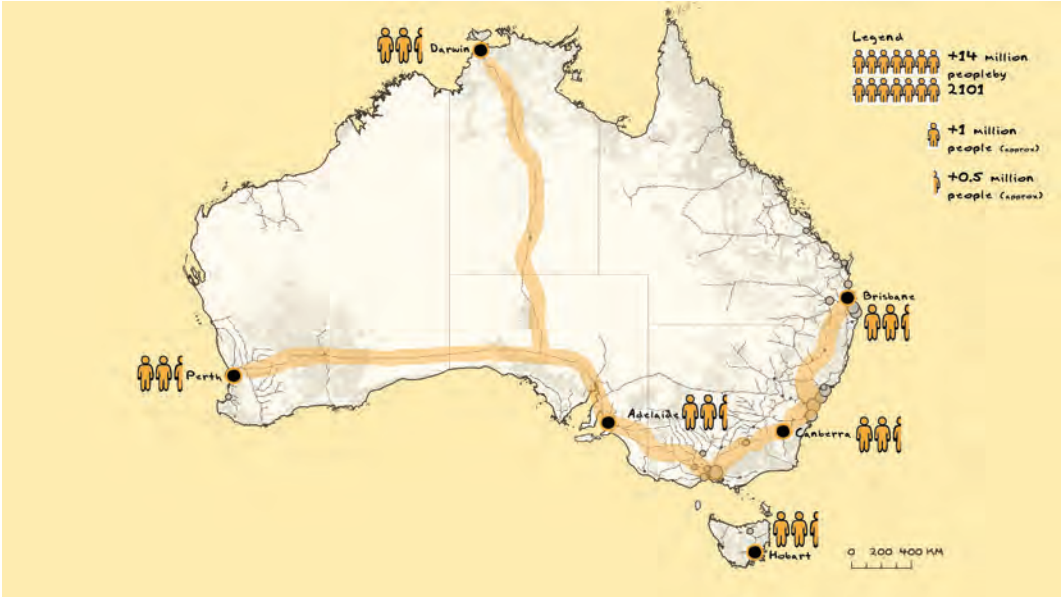


Figure 3. Boosted Secondary Capital Cities scenario locations.

tion increases by over 2 million people in each by 2101 (Figure 3). In addition, this scenario was informed by the Federal Government's current direction to ease population growth pressures in the largest state capitals (Australian Government, 2019b).

### 2.1.3. Satellite Cities

In response to congestion and affordability challenges in the state capital cities (Kelly and Donegan 2015), this scenario conformed to an enduring planning model of metropolitan population redistribution (Freestone 1982), suggesting the distribution of population growth to 14 satellite cities (with some illustrative locations only suggested). Within commuting distance of state capital cities, these satellites increase by over 1 million people by 2101 (Figure 4). This scenario broadly aligns


Figure 4. Satellite Cities scenario locations.

with Federal Government planning for "population, migration and better cities", which designated several satellite centres for growth (Australian Government, 2019b) and relates to a scenario recently proposed by the Regional Australia Institute (Vij *et al.* 2019).

### 2.1.4. Rail Cities

This scenario distributed population growth to 18 regional cities connected to the state capitals by major rail links (with some illustrative locations only suggested). Accordingly, these regional cities' populations were boosted by over 750,000 people each (Figure 5). This scenario derived from a previously developed analysis in 2013 (Bolleter and Weller) and a former Federal Government proposal for High-Speed Rail (AECOM 2011).

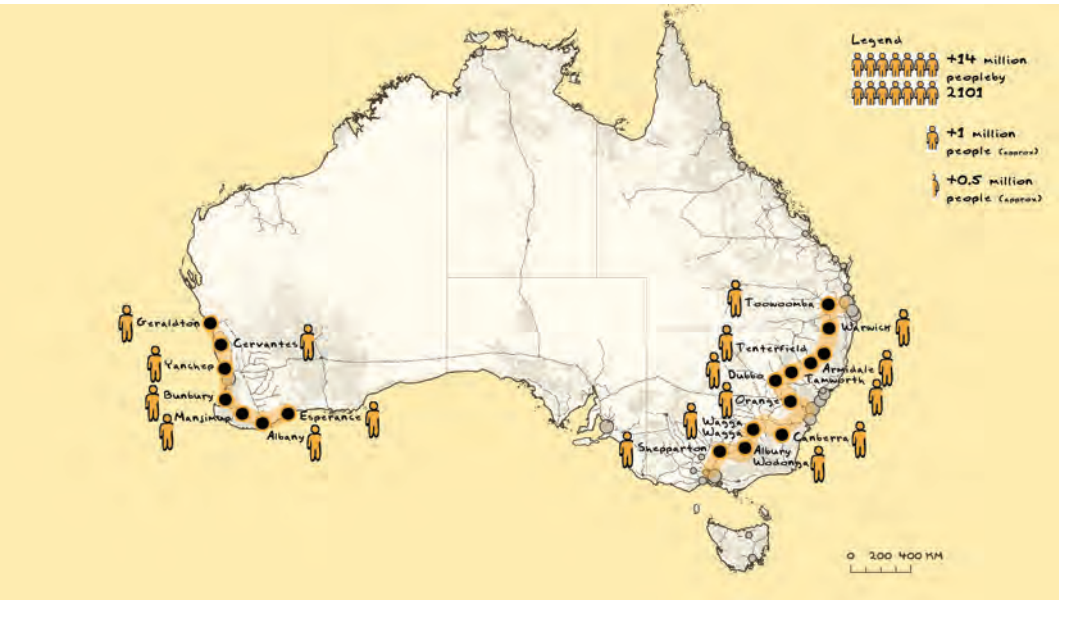


Figure 5. Rail Cities scenario locations.

### 2.1.5. Sea Change Cities

Australians prize proximity to coastal amenity (Burnley and Murphy 2004). As a result, coastal housing in Australia's state capital cities is unaffordable to many. This scenario distributed population growth to 25 alternative sea-change cities and, in doing so, increased population in these cities by over 500,000 people each (Figure 6).

### 2.1.6. Inland Cities

Australia has an array of inland centres with at least hypothetical growth capacity (Department of Regional Development 2011). This scenario distributes population growth to inland centres boosted by over 500,000 people each by 2101 (Figure 7). It was inspired by the late-19th to mid-20th century period in which Australians endeavoured to create a "rural civilisation" despite the harsh realities of the interior's environment (Murphy 2009, p. 119).

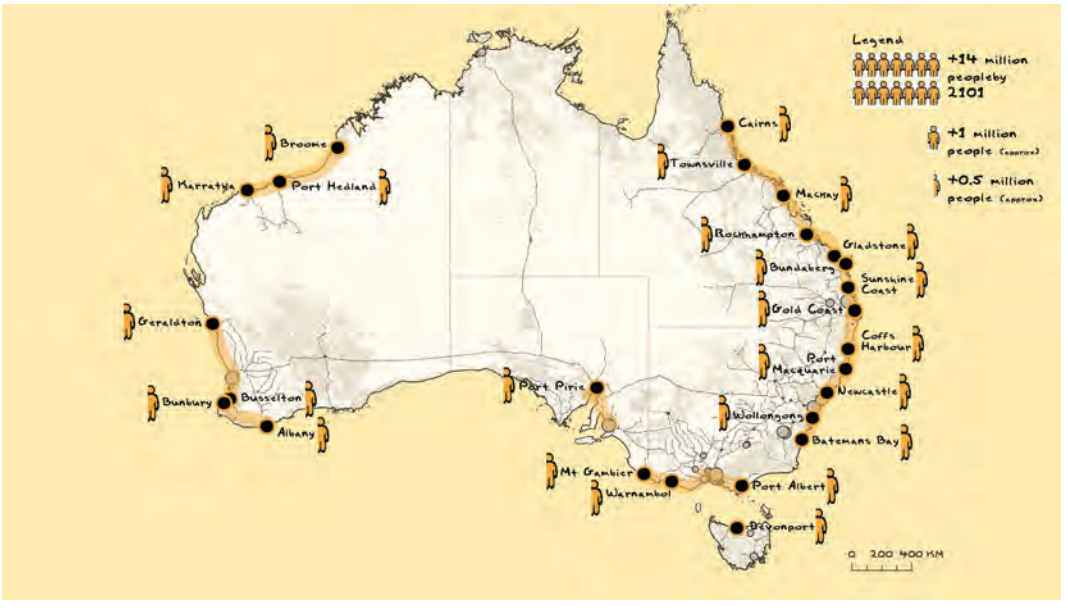


Figure 6. Sea Change Cities scenario locations.

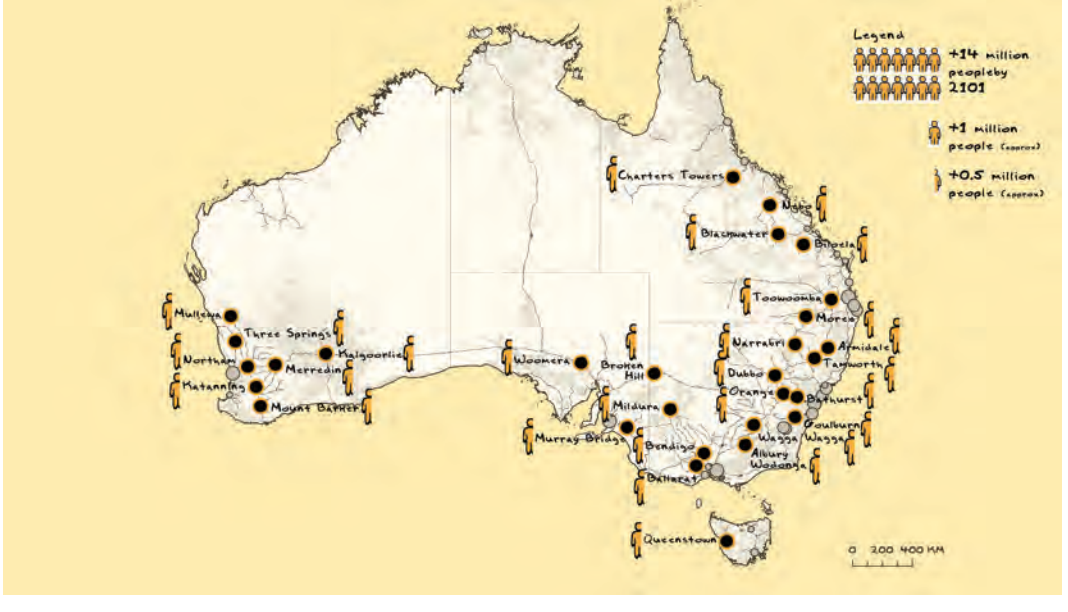


Figure 7. Inland Cities scenario locations.

### 2.1.7. Northern Cities

Northern Australia has a small population despite its substantial economic output and proximity to Asia. In response, this scenario boosted nine northern cities by over 1.5 million people (Figure 8), per current planning for substantial population growth in northern Australia (Australian Government 2015).

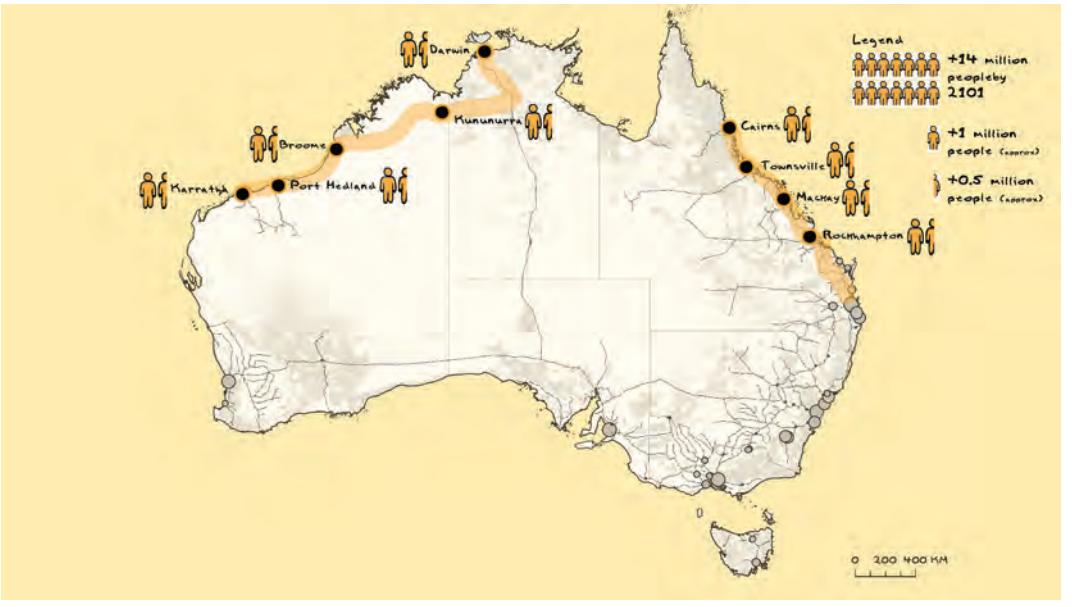


Figure 8. Northern Cities scenario locations.

### 2.1.8. Megacities

Melbourne and Sydney, Australia's two biggest cities, generate a substantial portion of Australia's gross domestic product and historically have attracted most migrants (Kelly and Donegan 2015). This "status quo" scenario extrapolated this situation and hypothesised that by 2101, Melbourne and Sydney increase by almost 7 million people each (Figure 9).


Figure 9. Megacities scenario locations.

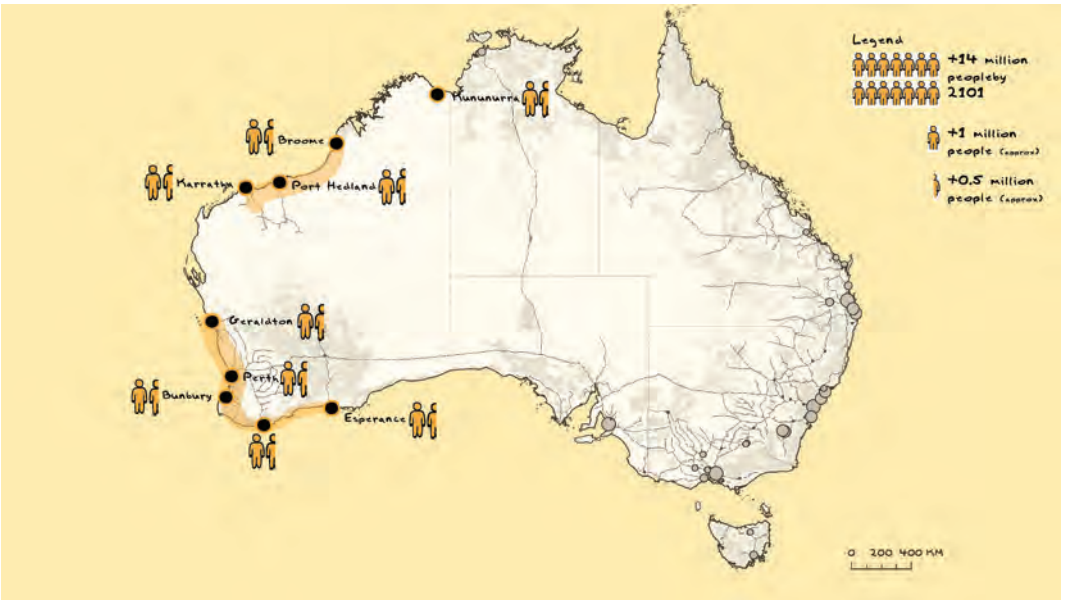


Figure 10. Western Cities scenario locations.

### 2.1.9. Western Cities

Western Australia comprises one-third of the Australia continent but houses only 11% of its population. In response, this scenario boosted cities and towns along the west coast by over 1.5 million people (Figure 10). It builds upon the current Western Australian Royalties for Regions programme (Western Australian Planning Commission 2014) and planning for the state's capital city, Perth (Department of Planning Lands and Heritage 2018).

## 2.2. Analysis

Participants were asked to indicate their level of support for each scenario (in response to the question: "Do you support population growth in these centres?") using a five-point Likert scale (Strongly oppose, oppose, neither support nor oppose/undecided, support, strongly support). All scenario distribution questions also provided an opportunity for written comment ("Please provide any comments you have on this plan").

Data were exported for analysis from Survey Monkey to statistical software package SPSS Statistics, version 26. Likert scale responses were converted to numerical values to allow for a "scenario score" to be calculated, i.e. strongly oppose (−2), oppose (−1), neither support nor oppose/undecided (0), support (1) and strongly support (2). Scores for each scenario were then summed to create a total "scenario score". Possible scores for each scenario could range from −2026 to 2026.

Respondents' residential postcode data were exported to ArcGIS (ESRI, v10.6) to determine the geographic location of respondents. Responses were categorised into one of five categories (i.e. major cities of Australia, inner regional, outer regional, remote, and very remote), based on the Australian Statistical Geography Standard for remoteness (ASGS) (Australian Bureau of Statistics 2018). During analyses, remote and very remote categories were combined. In addition, demographic data (such as gender, age, occupation, residence, and birthplace) were also collected.

All comments and responses to the open-ended questions on each scenario were exported to NVivo, a qualitative data analysis software package designed for research involving very rich text-based information. In NVivo, comments were broadly categorised into positive and negative

Table 1. Demographic characteristics of survey respondents.

| | Total responses (n) | No (%) |
|---|---|---|
| **Gender*** | | |
| Male | 443 | 43.7 |
| Female | 472 | 46.6 |
| **Age by Generation*** | | |
| Silent Generation (born 1928-1945) | 36 | 3.6 |
| Baby Boomer (born 1945-1965) | 223 | 22.0 |
| Gen X (born 1965-1979) | 212 | 20.9 |
| Gen Y / Millennials (born 1980-1994) | 275 | 27.1 |
| Gen Z (born 1995-2015) | 189 | 18.7 |
| **Birthplace*** | | |
| Australia | 724 | 71.5 |
| Malaysia/Philippines/Vietnam | 13 | 0.13 |
| China | 6 | 0.6 |
| Germany | 13 | 1.3 |
| India | 13 | 1.3 |
| New Zealand | 14 | 1.4 |
| South Africa | 11 | 1.1 |
| United Kingdom | 69 | 6.8 |
| Other | 74 | 7.3 |
| **Level of Education*** | | |
| Less than High School | 14 | 1.4 |
| High School | 198 | 19.5 |
| TAFE | 159 | 15.7 |
| University | 346 | 34.2 |
| Post-University | 221 | 21.8 |
| **Length of Australian residency*** | | |
| 0-9 years | 68 | 6.7 |
| 10-19 years | 144 | 14.2 |
| 20+ years | 720 | 71.1 |
| **Current state of residence*** | | |
| Australian Capital Territory/New South Wales | 136 | 13.3 |
| Northern Territory | 3 | 0.3 |
| Queensland | 209 | 20.5 |
| South Australia | 28 | 2.7 |
| Victoria | 135 | 13.2 |
| Western Australia | 364 | 35.7 |
| **Geographic Region*** | | |
| Major Cities | 505 | 49.9 |
| Inner regional | 226 | 22.3 |
| Outer regional | 115 | 11.4 |
| Remote and Very Remote | 26 | 2.6 |

*Missing data not reported.

sentiments. Where respondents presented both positive and negative comments, responses were split and categorised accordingly. Subsequently, the comments (edited minimally for grammar and clarity) were coded against key themes.

## 3. Results

A total of 1013 respondents completed the survey. Demographic data and environmental characteristics of respondents are presented in Table 1. Whilst gender was evenly represented, age generations were not. The younger and older generations were underrepresented, particularly those born before 1945, where representation is low at three per cent. The majority of participants were born in Australia (71.5%), had lived in Australia for 20+ years (71.1%) and were residing in major cities (49.9%). Most had been educated past high school and lived in a major city in Australia. Respondents were predominantly distributed among the states of Western Australia, Queensland, New South Wales and Victoria.

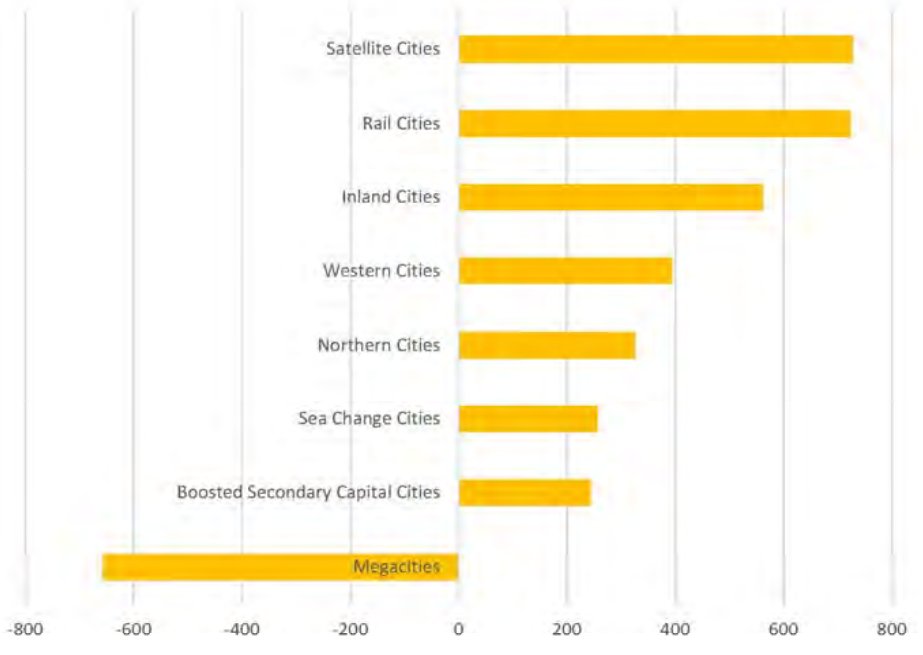


Figure 11. Population distribution scenario scores in rank order. Attainable scenario scores ranged from −2026 to +2026).

## 4. Scenario Preferences and Commentaries

Figure 11 presents the "scenario scores" for the preferred settlement pattern scenarios in rank order. Satellite Cities (score = 728) and Rail Cities (score = 723) were most popular, followed by Inland Cities (score = 562). The least preferred scenario was the Megacities scenario (score = −656).

A total of 2643 written responses was provided across the eight scenarios. Qualitative data obtained from respondents identified a range of factors associated with each scenario's pros and cons. An interpretive summary of the comments received is presented below in rank order of preferred scenarios, with selective quotation of representative comments. If a particular commentary theme received fewer than ten comments, we have not included them in the summary.

### *4.1. Satellite Cities*

Satellite Cities were one of the two most preferred scenarios and received 264 comments. The positive commentaries' dominant theme was that this scenario would relieve growth pressures on the capital cities (60 comments). As one respondent commented, "satellite cities are a sensible and practical approach to spreading population". Another explained the scenario would "distribute the population to areas where there is more room to establish growth, start manufacturing and businesses, and become liveable and prosperous in the long term". Another consideration was that the scenario would allow for "effective use of existing infrastructure and act as a catalyst for infrastructure investment" (12 comments). Respondents believed the Satellite Cities scenario would effectively catalyse the surrounding region's economic growth (10 comments).

The dominant theme in the negative commentary was that the Satellite Cities scenario "will just result in sprawl and degradation of the natural environment and agricultural hinterland" as new settlements "become sprawling extensions of the capital cities" (44 comments). As one respondent remarked, the scenario is "still technically centralisation, if you consider that these satellite cities are close to major cities" and the scenario "does not go far enough toward decentralisation". Respondents also worried that the satellite cities would not receive the investment that they needed for rail and road infrastructure, health services, and education (33 comments). One respondent cautioned that:

> History is littered with failed satellite experiments; those which made it off the drawing board were characterised by poor urban design and unrealised expectations of growth resulting from the reality that people would rather live and work in thriving, established metropolitan regions.

Other respondents were anxious that with sustained population growth, the satellite cities' liveability would come under threat (23 comments). As one explained: "an important aspect of liveability is getting to nature and getting around. Difficulty increases exponentially with size/congestion/people". Said another: "by stuffing an extra million people into these cities, you will transform them beyond recognition and destroy their character". Other themes in the negative comments were that the scenario overlooked alternative regional centres (19 comments), favoured coastal-centricity over inland development (15 comments), and failed to recognise that "satellite cities cannot compete with the economics of capital cities" (13 comments).

### *4.2. Rail Cities*

The second-highest ranked scenario, Rail Cities, elicited 321 comments. Dominant themes in the positive commentary regarding this scenario were that rail would make regional areas more attractive and "close the gap" between capital cities and regions (36 comments):

> Yes! The perfect model. Every state needs high-speed rail to link all its cities. It encourages the redistribution of people, wealth, and energy across more land areas instead of most of the state's resources being directed to one city. This scenario will increase the dynamics of the entire region.

Others enthused, "high-speed regional rail offers an incredible opportunity to reimagine Australia's pattern of settlement and deliver new forms of urbanisation and ways of living through the founding of compact, sustainable rail-connected city developments".

Another positive theme was that the scenario would stimulate the social, cultural, and economic revitalisation of regional centres and surrounding regions (28 comments) and relieve growth pressures in the capital cities (15 comments). Finally, respondents saw this scenario leading to safer, more convenient travel options within regions (12 comments).

The negative comments focussed on the need for costly infrastructure investment (water, high-speed rail, broadband internet, education, medical and essential services) in the selected regional centres (87 comments); for example: "the wider the distribution, the greater cost increases as better transport links, health facilities and lifestyle would need massive support". Moreover, the "thousands of kilometres of track laid between cities" will be "prohibitively expensive and impractical – they will never happen". Others worried about supplying water to inland rail cities:

> What pray tell, will these people drink? There is an ongoing and worsening drought in regional Australia. What happens if you add millions of more people? Where is the water going to come from?

Other respondents worried that the development of regional cities would lead to the destruction of "important, irreplaceable farmland and wilderness areas" (22 comments).

Several respondents believed the scheme discriminated against further options for population distribution (22 comments)and, in particular, ignored the Northern Territory, Tasmania, and South Australia (10 comments).

Other respondents were anxious that population pressures would erode regional centres' liveability (16 comments), as one proclaimed "it will destroy those regional areas and make them wannabe capital cities". Another respondent echoed this sentiment, "being a country girl, there is much charm about relaxed regional areas that the locals love, they may be scared their serenity will be affected, and prices will go up". Other questioning commentaries were that the scenario would merely result in urban sprawl (12 comments), not deliver employment opportunities (11 comments), and settle unattractive lands (11 comments); as one respondent stated: "the inland is dry and boring".

### 4.3. Inland Cities

The third highest ranked scenario, Inland Cities, attracted 305 comments. Dominant themes in the positive commentary were that inland towns "have the capacity for growth", and as such, the scenario was potentially feasible and sustainable (27 comments). Others reinforced this sentiment, "this would be my choice as far as redistributing population. Life is not all about cities and the beach". Further respondents felt that "population growth could catalyse development and infrastructure investment in inland towns and cities". Other themes were that this scenario could "save regional communities" and "lead to social, cultural and economic revitalisation" (21 comments). As another warned, "regional towns need growth and jobs; otherwise, they will stagnate and be ravaged by unemployment, poverty, drugs and crime". A positive theme was that Inland Cities could take pressure off capital cities (17 comments): "we have huge areas of uninhabited land and populating some of these areas would solve the problem of having the coastal areas overpopulated ... Australia's regional towns are sorely neglected and crying out for residents, while the cities are jam-packed".

Water scarcity was a dominant theme in the negative comments (37 comments), and respondents perceived it would limit the supportable population. Moreover, they considered this issue would compound over time. Others cited the cost of providing major desalination and water pipeline infrastructure to make the scenario feasible. As such, "the feasibility of opening up inland Australia seems dependent on advances in energy technology that make desalination or water recycling cheaper". Another prevalent theme was the prohibitive requirement for major infrastructure investment (transport, community services, facilities and telecommunications) needed to overcome "isolation issues" and sustain the long-term growth of inland cities (32 comments). In particular, respondents noted the importance of broadband internet connectivity "so that jobs that are not dependent on a specific location (e.g. creative jobs) can be free to move to these inland cities while still being connected to colleagues and clients elsewhere". Nonetheless, respondents were sceptical that "city centric" policies would deliver the infrastructure required for "rural communities to survive and grow".

There were further expressions of concern. A recurring one was a "lack of incentives for people to move inland" with such relocation not being "consistent with consumer preferences and appears unfeasible" (30 comments). A related commentary thread was that inland Australia lacked job opportunities (20 comments) and "inland cities and regional areas cannot compete with the pull of capital cities and coastal locations" (23 comments). As a respondent remarked, "if these towns were capable of growth, their young people would not leave them for 'better opportunities', and they would not be struggling". Some respondents were concerned that the scenario overlooked other centres and regions (13 comments).

Predictably there was also concern that substantial population growth would threaten the liveability of regional centres (17 comments). In particular, it was believed there is a "need to preserve the heritage and unique qualities of regional centres" which would be "impossible to manage" given such a "huge quantum of change". "Climate change impacts in the interior (rising temperatures and drought)" were also seen as a threat making "inland cities uninhabitable" (25 comments).

### 4.4. Western Cities

The fourth highest-ranked scenario, Western Cities, attracted 300 comments. The dominant theme in the positive commentary was that Western Australia – particularly the southwestern region – retains untapped potential (e.g. underutilised resources, underdeveloped land) and could support a much-increased population (35 comments), "WA is the economic powerhouse of Australia, it makes sense to increase its population".

Some respondents saw population growth as a driver for economic diversification (18 comments), away from mining to "increase its output and economic growth". Others opined that support of "manufacturing and processing facilities" could generate "jobs growth". Finally, some respondents believed the "shift of population to the west would take pressure off the east coast", particularly Melbourne and Sydney (10 comments).

One of the dominant themes in the negative commentary was that substantial population growth in Western Australia would need major infrastructure investment and planning (33 comments) to address water security issues (17). As one respondent articulated, "There is a reason why the population is low in Western Australia! Lack of infrastructure, harsh environment, distance from other capital cities in Australia and overseas, lack of water, all make it difficult to think this is a viable option".

Other respondents worried that major population growth "would see the liveability of Australia's Western cities and towns under threat", resulting in the "loss of unique character" (31 comments). Further respondents echoed these sentiments, "nope, nope, nope. We like being remote and forgotten about – leave us alone" and "I moved back to Western Australia from the east coast after seeing how the population over there has ruined the quality of life".

A substantial number of respondents were also concerned about climate change impacts (extreme weather events, rising temperatures) in the state's north (33 comments). As one implored, "I do not mind the southern half, but the northern half is a tough sell, particularly the Pilbara cities; cyclones, heat, huge tides, deadly animals on land and sea, drought, floods".

Other respondents fretted that population growth would lead to degradation of the west's fragile coastal environment and biodiversity (25 comments); "there are many concerns around vegetation clearing and coastal impacts on native species. The Western Australian government has a terrible habit of clearing high-quality bushland and leaving areas that are really degraded or already cleared".

A substantial number of respondents cited a "lack of incentives to move [to] or live in Western Cities", and as such, "this growth trajectory is unlikely" (35 comments). Others reinforced this sentiment, proclaiming, "how do you attract people to move so far from home to the end of the earth?" Reflecting this, one respondent noted that the scenario reflected "frontier mentality thinking, not good urban planning". Finally, some respondents worried the western-centric growth scenario would "lead to unequal population distribution and economic investment detrimental to capital cities in other states" (12 comments).

### 4.5. Northern Cities

The fifth highest ranked scenario, Northern Cities, attracted 321 responses, most of which were negative. Nonetheless, a significant theme was that northern Australia provides abundant space to grow, natural resources and arable land and, as such, presented a feasible and sustainable growth option (29 comments). As respondents explained, "there are lots of water and resources here to be exploited" and "Yes, I like this. Bold new growth corridors with their own identities". Others regarded population growth as leading "to the social, cultural and economic revitalisation of northern Australian cities" (19 comments). Finally, some respondents believed substantial population growth in the north of Australia would encourage sustainable, resilient, environmentally responsive city-building and design (10 comments):

> We would need to consider a new approach to tropical design that would create different cities from those based on European settlement. It would be an opportunity to create a new resilient 'Australian' type of city that works in our challenging environments.

The dominant theme in the negative commentary was that potential climate change impacts could see northern cities uninhabitable by 2100 (52 comments) and highly exposed to extreme weather events (42 comments). As one respondent commented, "there are sensible reasons why northern Australia has been left comparatively undeveloped. It is a hostile country, heat, drought, humidity, monsoon, cyclones and 10-metre tides".

Other respondents identified adverse impacts of substantial population growth on northern Indigenous communities and heritage sites (20 comments). Related commentary worried that this scenario would "lead to degradation of pristine, biodiversity-rich and largely untouched areas" (23 comments); "these are the areas of greatest cultural heritage and biodiversity, leave them alone".

Several respondents worried about the lack of employment opportunities with dependency on unsustainable industries and finite resources (18 comments). In addition, several respondents identified northern cities' isolation from southern state capitals and existing infrastructure (17 comments) and the related need for major infrastructure investment (20 comments), particularly transport.

Some respondents also identified that population growth, on the scale proposed, would place the "liveability of existing northern cities under threat" (13 comments). Moreover, others reasoned that this growth trajectory is unlikely given the absence of "incentives to move to northern cities" (19 comments). Moreover, "after a century and a half of trying, I think that we are better off stopping fantasies of northern colonisation and letting it remain essentially wild".

### 4.6. Sea Change Cities

The sixth-highest ranked scenario, Sea Change Cities, attracted 221 comments, of which the vast majority were negative. The dominant theme in the positive commentary was that the Coastal Cities scenario enshrines the Australian preference for coastal living lifestyle and, as such, is broadly feasible (25 comments): "These cities are already attractive and are becoming more populated anyway. The coast is a wonderful place to live and should be promoted as such". Respondents also regarded population growth in regional coastal cities as bringing "much needed economic benefits" catalysing "infrastructure investment and greater regional connectivity" (14 comments).

The dominant theme in the negative commentary was that coastal cities' growth would "degrade fragile coastal ecosystems" (55 comments). One respondent exhorted: "I sympathise with anyone who wants to live near the coast but am appalled at the prospect of one endless Gold Coast development, which will destroy what we most value about our coastline". Others worried the scenario would place the "liveability of coastal cities under threat", resulting in the loss of the "Australian coastal lifestyle" (47 comments): "How much of this nation's unique character will you destroy in this mad, endless quest for false growth?" Other respondents fretted that the scenario does not consider climate change impacts on coastal cities (e.g. sea-level rise, storm surges and coastal erosion) and, as such, "is not a long-term solution" (37 comments).

Other commentaries were that the scenario is too "coastal centric" (33 comments), shuns inland areas (20 comments), and requires "costly" infrastructure investment to support population increases (26 comments). As a respondent reasoned, "parts of the coast are already straining under the weight of a lack of infrastructure and large populations, e.g. Sunshine Coast". Respondents also worried about climate change impacts on northern Sea Change Cities, including extreme weather events and rising temperatures (15 comments). Finally, respondents were concerned about the lack of employment opportunities in regional coastal towns – as work is mostly seasonal and relies heavily on tourism (10 comments).

### 4.7. Boosted Secondary Capital Cities

The second-lowest ranked scenario, Boosted Secondary Capital Cities, received 385 comments – mostly negative. The positive commentary reflected the thinking that an "even population distribu-

tion among capital cities is a generally good idea" (20 comments) and that "Brisbane, Perth and Darwin can benefit from expansion". Another theme in the commentary was that increasing the population of secondary capital cities would provide an "economic boost" because "larger cities increase productivity and economic diversity, producing greater economic growth" (12 comments).

The negative commentary focussed primarily on perceptions that further growth would erode these cities' liveability (65 comments), as one respondent implored:

> Why repeat the mistakes of Melbourne and Sydney? Overpopulation leads to congestion, an unaffordable housing market, loss of community, unique character, resource scarcity and crime.

Respondents also believed it unlikely that the scenario was deliverable or that some of the cities could even accommodate this level of growth generally (60 comments). As one respondent explained: "The even distribution growth scenario is unlikely, and smaller cities of Hobart, Darwin, and Canberra will struggle with an extra 2-million people". As another responded, Hobart is "trapped inside a hilly landscape, and it would be difficult to increase Hobart's population tenfold". Others believed Darwin also lacked capacity, "Darwin does not have the space to accommodate a further 2 million people (it would struggle to accommodate 200,000) without essentially building a new inland city to the south well beyond current urban boundaries".

Other themes in the commentaries were a preference for growth in regional centres over secondary cities (45 comments), reservations about the necessary infrastructure investment not occurring (29 comments), worries about propagating sprawl (20 comments), concerns about climate change impacts (15 comments), the destruction of wildlife habitat, biodiversity hotspots and encroachment onto valuable agricultural lands (14 comments), concerns about water supplies (11 comments) and limited employment (10 comments).

### 4.8. Megacities

The lowest-ranked scenario, Megacities, prompted 318 responses. While respondents reacted predominately negatively to the Megacities scenario, some favourable comments indicated that major cities are attractive places to live (24 comments) and that further major expansion was feasible with careful strategic planning and infrastructure investment (16 comments). Moreover, some respondents believed that developed appropriately, the Megacities scenario could result in "sustainable, compact, high-density cities and effective use of existing infrastructure" (14 comments) and could lead to "world-class megacities with cultural diversity, infrastructure investment, commercial and economic growth" (12 comments).

The dominant theme in the negative commentary was that megacity growth would cause a deterioration of Melbourne and Sydney's liveability due to congestion, social conflicts, crime, poverty, resource shortages, pressure on community services, and erosion of community character (126 comments). As one respondent exhorted:

> Yuk. Overcrowding, expensive property, people living in high rises, outlier ghetto suburbs, increasing crime, long commute times. Honestly, though, this is probably what will happen (but without any mindful planning) because the government seems incapable of planning ahead of its election cycle.

In a similar vein, others noted, "Sydney is such a painful place to live – commute times are terrible, costs are astronomical. Another few million people would make it impossible to live there". Moreover, others registered their concern that Sydney and Melbourne "will turn into dirty, concrete jungles like megacities in Asia". Many respondents correlated liveability with population size, stating, "the most liveable cities in the world have single-digit million populations and generally less than 5 million" and "Australian cities are among the most liveable due to their size, keep them that way!" One respondent perceived that compounding immigration in Melbourne and Sydney could lead to a "cultural divide between the cities (mainly 'new settlers') and the outer suburbs and near regional towns ('Australians and past generation migrant settlers who were more integrated to the Australian norms')".

For this scenario, to avoid eroding liveability and ensure integration, respondents perceived unprecedented government planning was required, accompanied by infrastructure and service investment to keep up with extreme population pressures (26 comments). One respondent stated, "I do not think the people in charge of planning are capable of making the right decisions for this to be successful". Several respondents proposed that migrants be directed to "inland towns and regional cities where they are needed most" (26 comments), reflecting perceived issues around cultural integration. Furthermore, respondents noted, "there is plenty of anecdotal evidence to suggest that migrants and refugees survive and adapt very well in smaller regional communities, with less risk of developing ghettoes".

Another significant theme was that the Megacities scenario would lead to "uneven economic investment and growth, uneven distribution of political power, and would be detrimental to Australia's remaining capital cities and regions" (23 comments). In addition, some respondents worried that the Megacities scenario could enable a "mega-sprawl", leading to pressure on the natural environment, biodiversity loss and encroachment on food-producing lands (14 comments). As one exhorted, "the destruction of the surrounding environment would be unavoidable and devastating" and would be a "recipe for social and environmental disaster".

Community-wise, other respondents believed "high-density living is at odds with Australians preference for lower density" and would result in "slums and ghettos" (13 comments). As one proclaimed, "Megacities with a population of 7 million would be un-Australian and against all that Australia represents". Respondents worried that "lessons learnt from COVID-19, that high density equals disease" were being ignored and that "megacity economy and prosperity is vulnerable in the event of a citywide lockdown".

## 5. Discussion

The Plan *My* Australia community survey provides insights into community preferences for longer-term settlement scenarios, but these are not definitive, and we acknowledge its limitations. Given the large-scale application encompassing the breadth of Australia, the survey focused on generalised scenarios where urban development should or should not occur rather than specific urban development types (e.g. green, grey or brownfield), which are undoubtably important considerations (Kelly *et al.* 2011).

We also stop short of assessing the actual feasibility of scenarios. For example, the challenges faced by those aiming to boost regional centres into major cities include the creation of economic drivers substantial enough to kick start the local economy, incentivising the decentralisation of industry and jobs from competing cities and towns, and providing the crucial enabling infrastructure of ports, airports and rail lines (Bolleter 2018). Moreover, over time some of the centres nominated for growth in scenarios such as "Northern Cities" are likely to become less liveable due to climate change and associated heat stress-related health issues. This situation would affect the desirability of such areas (Pal and Eltahir 2016, p. 197, Coffel *et al.* 2017).

Also, the survey's timing through the major pandemic months in Australia in 2020 may have elevated the seeming support for regional city living. However, it does underscore evidence from elsewhere that the pandemic has prompted many Australians to rethink their urban living options, especially on the cost of living in the big cities (Guaralda *et al.* 2020, Bolleter *et al.* 2021).

The survey findings indicate substantial support for population decentralisation away from large (capital) cities, Melbourne and Sydney in particular – as proposed in the Satellite Cities and Rail Cities scenarios. Conversely, compounding population growth in the capitals was deeply unpopular. Indeed, the two scenarios which adopted this approach – Megacities and Boosted Secondary Capital Cities – were ranked last and second-last, respectively. There could be a national scale NIMBYism also at work concerning both the latter scenarios. Globally, Angel identifies that for many of their more established residents, cities are already disturbingly large. Allowing them to expand further is "nonsensical and unacceptable" for such residents and is resisted (Angel 2012,

p. 4). Therefore, newcomers, be they immigrants from overseas or migrants from other parts of the country – are not welcome and are seen as "nuisances rather than as assets" (Angel 2012, p. 4). This mindset could partly explain the unpopularity of models compounding population growth in already large capital cities, and conversely, the popularity of schemes that dispersed population growth to regional areas. Nonetheless, over 36% of our respondents were from regional and remote areas, and many of these respondents supported population growth in regional areas.

The study findings also have implications for contemporary State and Federal Government urban and regional planning in Australia. The most popular scenario, Satellite Cities, resembles (to some degree) the Federal Government's proposed transport-driven decentralisation program for "fast rail projects" to improve regional connectivity to the state capital cities (particularly Melbourne and Sydney). A National Faster Rail Agency was established in mid-2019 to provide advice and business cases for fast rail initiatives (Australian Government , 2019b). While this planning generally conforms with our respondents" preference for satellite city development orbiting Sydney, Melbourne or Brisbane, capital cities outside the eastern seaboard are excluded. Moreover, how many business cases might feasibly develop is unclear.

The second most popular scenario, Rail Cities, is somewhat similar to the 2010 Federal (Rudd) Government solicited plan for high-speed rail along the eastern seaboard connecting Melbourne, Canberra, Sydney and Brisbane (AECOM 2011). However, this plan did not propose decentralising the population along the proposed route. Moreover, public investment in high-speed rail is looking increasingly uncertain given mounting federal and state government debt resulting from the pandemic (Mizen and O'Mallon 2021).

The Northern Cities scenario, which ranked a lowly fifth, reflects Federal Government planning to populate northern Australia, which remains on the national settlement agenda to some degree (Australian Government 2015). However, if our respondents' judgment is correct, the Federal Government's ambitions to deliver substantial population growth in northern Australia are likely to stall.

The Megacities scenario ranked eighth, a concerning outcome given its close relationship to existing policy. Indeed, the Victorian and New South Wales state governments have produced plans for Melbourne (Victorian State Government 2017) and Sydney (Greater Sydney Commission 2018) accommodating major population surges to almost 8 million – in each city – by mid-century. However, our survey results indicate that this approach to accommodating population growth is almost universally reviled and likely entrenches the public sullenness around further urban densification and expansion.

## 6. Conclusion

This study is, we believe, the first of its kind in collating community opinion to assess settlement planning at the national scale. The paper provides an unprecedented range of opinions from a representative sample of Australian residents that policymakers should consider in the context of a re-emerging national urban policy. Opportunities and directions for further research are evident.

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## References


AECOM, 2011 High Speed Rail Study. (Sydney: AECOM)

Angel, S., 2012. *Planet of cities*. Cambridge: Lincoln Institute of Land Policy.

Australian Bureau of Statistics, 2013. *Population projections, Australia, 2012 to 2101*. Australian Bureau of Statistics. Available from: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/3222.0main+features52012%20(base)%20to%202101 [Accessed 3 January].

Australian Bureau of Statistics. 2016. *Census*. Retrived from: http://www.abs.gov.au/websitedbs/D3310114.nsf/Home/*Census*?OpenDocument&ref=topBar [accessed 2021].

Australian Bureau of Statistics, 2017. *3222.0 - population projections, Australia, 2017 (base) – 2066*. Australian Bureau of Statistics. Available from: https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3222.0Main+Features12017%20(base)%20-%202066?OpenDocument [Accessed 23 August].

Australian Bureau of Statistics, 2018. *Australian Statistical Geography Standard (ASGS): volume 5 - remoteness structure*. Australian Bureau of Statistics. Available from: https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1270.0.55.005Main%20Features15July%202016?opendocument&tabname=Summary&prodno=1270.0.55.005&issue=July%202016&num=&view= [Accessed 15 April].

Australian Government, 2015. Our North, Our Future: White Paper on Developing Northern Australia. Canberra: Australian Government.

Australian Government, 2017. *Climate change in Australia*. Australian Government. Available from: http://ccia2007.climatechangeinaustralia.gov.au/ [Accessed 11 May].

Australian Government, 2018. Building Up & Moving Out: Inquiry into the Australian Government's role in the development of cities. Canberra: House of Representatives Standing Committee on Infrastructure, Transport and Cities.

Australian Government, 2019a. *Our plan for population, migration and better cities*. Liberal Party. Available from: https://www.pm.gov.au/media/plan-australias-future-population [Accessed 15 January].

Australian Government, 2019b Planning for Australia's future population. Canberra: Australian Government.

Australian Government, 2020a. Australian Government response to the House of representatives standing committee on infrastructure, transport and cities report: building up and moving out. . Canberra: Australian Government.

Australian Government, 2020b. National planning and development framework. Canberra.

Beatley, T., 2015. The vision of green urbanism. *In*: R. LeGates and F. Stout, eds. *The city reader*. London: Routledge, 399–408.

Benson, S. and Brown, G., 2018. *Cities fix: PM's plan to send migrants to regions for five years*. The Australian. Available from: https://www.theaustralian.com.au/national-affairs/cities-fix-pms-plan-to-. . .2 [Accessed 11 November].

Biddle, N., 2019. *Big Australia, small Australia, diverse Australia: Australia's views on population* (Canberra: Australian National University). .

Birrell, B., and Healy, E., 2018. *Immigration and the housing affordability crisis in Sydney and Melbourne*. . (Melbourne: The Australian Population Research Institute)

Bolleter, J., 2018. *The ghost cities of Australia: a survey of new city proposals and their lessons for Australia's 21st century development*. London: Springer.

Bolleter, J., 2019. The consequences of three urbanisation scenarios for northern Australia. *Australian planner*, 1–23. doi:10.1080/07293682.2019.1620302.

Bolleter, J., *et al*., 2021. Implications of the Covid-19 pandemic: canvassing opinion from planning professionals. *Planning practice & research*. doi:10.1080/02697459.2021.1905991.

Bolleter, J. and Weller, R., 2013. *Made in Australia: the future of Australian cities*. Perth: University of Western Australia Publishing.

Bureau of Meteorology, 2020. *Maps and gridded spatial data*. Australian Government. Available from: http://www.bom.gov.au/climate/data-services/maps.shtml [Accessed 22 January].

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

Coffel, E., Horton, R.M., and De Sherbinin, A.M., 2017. Temperature and humidity based projections of a rapid rise in global heat stress exposure during the 21st century. *Environmental research*, 13 (014001), 3–9. doi:10.1088/1748-9326/aaa00e.

Department of Planning Lands and Heritage, 2018 Perth and Peel @3.5 million (Perth: Government of Western Australia).

Department of Regional Development, 2011. *Western Australia's SuperTowns* (Perth: Government of Western Australia).

Dovey, K., and Woodcock, I., 2014. *Intensifying Melbourne: transit-orientated urban design for resilient urban futures* (Melbourne: Melbourne School of Design, The University of Melbourne).

Einstein, K.L., Palmer, M., and Glick, D.M., 2019. Who participates in local government? Evidence from meeting minutes. *Perspectives on politics*, 17 (1), 28–46. doi:10.1017/S153759271800213X.

Freestone, R., 1982. The garden city idea in Australia. *Geographical research*, 20 (1), 24–48.

Gao, J. and O'Neill, B.C., 2020. Mapping global urban land for the 21st century with data-driven simulations and Shared Socioeconomic Pathways. *Nature communications*, 11 (1), 1–12. doi:10.1038/s41467-020-15788-7.
Geoscience Australia, 2018. *Geodata Topo 250K Series 3 - (Personal Geodatabase format)*. Australian Government. Available from: https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search?node=srv#/metadata/63999 [Accessed 21 February].
Greater Sydney Commission, 2018 Greater Sydney region plan: a metropolis of three cities . . Sydney: Greater Sydney Commission.
Guaralda, M., *et al*., 2020. Towards Australian regional turnaround: insights into sustainably accommodating post-pandemic urban growth in regional towns and cities. *Sustainability*, 12 (24), 10492. doi:10.3390/su122410492.
Hall, P., 2014. *Cities of tomorrow: an intellectual history of urban planning and design since 1880*. 4th ed. Oxford: Blackwell.
Hopkins, D., 2010. Planning metropolitan Perth through 'dialogue': participatory democracy or manufactured consent? *In*: I. Alexander, S. Greive, and D. Hedgcock, eds. *Planning perspectives from Western Australia: a reader in theory and practice*. Perth: Fremantle Press, 190–204.
Intergovernmental Panel on Climate Change, 2014. Climate Change 2014: synthesis Report. *In*: R. Pachauri and L. Meyer, eds. *Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC.
Kelly, J.-F. and Donegan, P., 2015. *City limits: why Australian cities are broken and how we can fix them*. Melbourne: Melbourne University Press.
Kelly, J.-F., Weldmann, B., and Walsh, M., 2011. The housing we'd choose (Melbourne: Grattan Institute). .
Logg-Scarvell, J., Navis, R., and Patrick, K., 2015. Scenarios for Australia in 2050: a synthesis and proposed survey. *Journal of futures studies*, 19 (3), 49–76.
McNee, G. and Pojani, D., 2021. NIMBYism as a barrier to housing and social mix in San Francisco. *Journal of housing and the built environment*, 1–21. doi:10.1007/s10901-021-09857-6.
Mizen, R. and O'Mallon, F., 2021. *Total Australian state and federal government debt to double to $2trn*. Financial Review. Available from: https://www.afr.com/policy/economy/total-australian-state-and-federal-government-debt-to-double-to-2trn-20210623-p583fz [Accessed 2021].
Murphy, K., 2009. 'The modern idea is to bring the country into the city': Australian urban reformers and the ideal of rurality, 1900–1918. *Rural history*, 20 (1), 119–136. doi:10.1017/S0956793308002616.
Murphy, K., 2018. *Australians growing more concerned over immigration – guardian Essential poll*. The Guardian. Available from: https://www.theguardian.com/Australia-news/2018/apr/24/australians-growing-more-concerned-over-immigration-guardian-essential-poll [Accessed 11 November].
Murphy, P., 2012. The metropolis. *In*: P. Maginn and S. Thompson, eds. *Planning Australia: an overview of urban and regional planning*. Melbourne: Cambridge University Press, 155–179.
Pal, J.S. and Eltahir, E.A.B., 2016. Future temperature in southwest Asia projected to exceed a threshold for human adaptability. *Nature climate change*, 6 (2), 197–200. doi:10.1038/nclimate2833.
Pegler, C., Li, H., and Pojani, D., 2020. Gentrification in Australia's largest cities: a bird's-eye view. *Australian planner*, 56 (3), 191–205. doi:10.1080/07293682.2020.1775666.
Planning Institute of Australia, 2018 Through the lens: the tipping point. Canberra: Planning Institute of Australia.
Productivity Commission, 2011 Performance benchmarking of Australian business regulation: planning, zoning and development assessments . . Canberra: Productivity Commission.
Sarkissian, W., 2013. *Wendy Sarkissian on NIMBYism, community resistance and housing density*. The Fifth Estate. Available from: http://www.thefifthestate.com.au/spinifex/nimbyism-community-resistance-and-housing-density/45397 [Accessed 17 December].
Seamer, P., 2019. *Breaking point: the future of Australian Cities*. Melbourne: Nero.
SGS Economics and Planning, 2020 Reimagining Australia's South-East . (SGS and Committee for Melbourne).
SurveyMonkey, 2021. *SurveyMonkey*. SurveyMonkey. Available from: www.surveymonkey.com [Accessed 15 April].
United Nations Conference on Housing and Sustainable Urban Development, 2017. Habitat III policy papers: policy paper 3 national urban policies (New York: United Nations).
United Nations General Assembly, 2016a. Draft outcome document of the United Nations Conference on housing and sustainable urban development (Habitat III) (New York: United Nations).
United Nations General Assembly, 2016b. Draft outcome document of the United Nations Conference on housing and sustainable urban development (Habitat III) (New York: United Nations).
United Nations, 2017. *World population prospects* (New York: United Nations).
United Nations, 2018. World urbanization prospects: the 2018 revision. New York: Department of Economic and Social Affairs, Population Division.
Victorian State Government, 2017 Plan Melbourne 2017-2050 . . Melbourne: Victoria State Government.
Vij, A., Afoakwah, C., and Baddeley, M., 2019 Future urban and regional settlement patterns: scenario analysis. Canberra: Regional Australia Institute.
Western Australian Planning Commission, 2014. State planning strategy 2050: planning for sustained prosperity (Perth: Government of Western Australia).