

URBAN SYSTEMS TRANSFORMATION

SOUTH EAST QUEENSLAND



THE URBAN CHALLENGE

Future Earth Australia, hosted by the Australian Academy of Science, is leading a process to co-design a national strategy for Australian sustainable cities.

Australia is already one of the most urbanised countries in the world, with 89% of the population living in urban areas (UNDESA, 2014) and 67% living in the capital cities. Australia's estimated resident population of 24.6 million people (June 2017) is projected to increase to between 37.4 and 49.2 million people by 2066 (ABS, 2018). All capital cities are projected to grow at a greater pace than the rest of their respective state or territory (ABS, 2018). Some are seeking to constrain growth; others, including many regional centres, are looking for extra or renewed growth.

Our urban environments are an interrelated system comprising social, economic, ecological and technical spheres. Urban systems transformation is needed to ensure that people can move around efficiently, live in safe and healthy homes, receive adequate education and medical care and enjoy lives of social equity in a healthy and biodiverse environment.

The metropolitan plans for most Australian capital cities include consistent sustainability planning and design principles such as containing urban sprawl, reducing car dependency and providing greater housing choices. However, in practice, urban decision-making is subject to numerous complex drivers—social, environmental, economic, institutional, technological—with the potential to create barriers to sustainable development.

The challenge lies in ensuring effective and consistent urban policy and decision-making in the complex urban institutional environment (across spatial scales and decision-making levels, and across sectors), with genuine stakeholder and community engagement

that understands the many and varied underlying aspirations and values. In turn, this process needs to be guided by a shared vision of our urban futures, underpinned by approaches to co-produce, share and implement knowledge to inform decision-making. In this context all decision-makers and stakeholders are both providers and users of knowledge.

However, current urban development and decision-making is characterised by a lack of shared vision and excessive fragmentation in institutional arrangements and in relevant knowledge development, translation and use.

RESPONDING TO THE CHALLENGE

Future Earth Australia is working to improve the appreciation of the underlying barriers and enablers to sustainable urban development, and the supporting development, synthesis, translation, accessibility and application of relevant knowledge. Through a nationwide consultative process, it is co-developing a national strategy for the sustainable development of Australia's cities and communities over the coming decades.

Through a series of workshops in the capital cities, Future Earth Australia asked policymakers, practitioners, researchers, business and community stakeholders to contribute to the development of local and national strategies. Each workshop included a special focus on the specific city and the surrounding region, as well as implications for a national approach.

THE IMPORTANCE OF A NATIONAL STRATEGY

To be successful, transformational strategies will need to include shared urban visions of feasible and desirable futures, with a focus on:

- key systemic leverage opportunities
- collaborative and aligned urban governance integrated across systems, sectors and scales
- effective stakeholder and community engagement across multiple goals and diverse values
- co-produced knowledge development and use by policy and urban decision-makers.

These elements should all be supported by continuing learning and adaptive management. A national strategy will provide governments, practitioners, businesses, communities and researchers with recommendations for cost-effective and integrated urban systems transformation.

To help us achieve these goals, workshop participants are asked to consider:

- current issues and future visions for their city and region
- how to improve engagement outcomes with stakeholder and community groups by policy and decision-makers
- actions that if taken locally (at state/territory level) and nationally would increase the sustainable development of the city/region
- how such actions might contribute to a national strategy for urban systems transformation.

A national strategy will also help Australia meet our commitments under the United Nations' Sustainable Development Goals (SDGs). SDG 11 is to 'make cities and human settlements inclusive, safe, resilient and sustainable', but transformation is underpinned by integration of all 17 of the goals.

South East Queensland workshop

On 28 November 2018 Future Earth Australia held the third in a series of national workshops for its project 'Urban systems transformation: sustainable cities'. The South East Queensland (SEQ) workshop was co-hosted by Griffith University's Cities Research Institute and included 37 participants from state government, city councils, universities, local businesses, NGOs and research groups.

This document summarises discussions grouped under the following workshop themes: urban visioning initiatives and pathways; collaborative governance and decision-making; stakeholder and community engagement; and co-produced knowledge development, usage and learning.



SPEAKERS

Professor Paul Burton, Director, Cities Research Institute, Griffith University

After paying respects to the traditional owners, Professor Burton asked everyone present to consider how to incorporate Indigenous thinking into land management, planning and regulation. There should be recognition of the vast amount of time that traditional owners have managed the land successfully prior to European settlement.

The Cities Research Institute is pleased to be working with Future Earth Australia to co-create good quality evidence and reasoned argument in debate about cities. The Institute has multi-disciplinary researchers from many disciplinary backgrounds and encourages cross-disciplinary research.

The challenges for planning in SEQ are multifaceted, as it is one of fastest growing regions in the country and covers a diversity of economic and natural environments. Brisbane City Council is the largest local government area (LGA) by population in Australia, servicing a population of 1.2 million. This can be positive for planning, as the administrative landscape is less fragmented than in other capital cities with many LGAs.



Jennifer Hutcheon, Acting Director, Cities Transformation Ms Taskforce, Queensland Treasury

As a senior member of the Cities Transformation Taskforce, Ms Hutcheon was able to give an inside account of South East Queensland's proposal for a City Deal. City Deals are partnerships between local, state and federal governments and the community to work

towards 'a shared vision for productive and liveable cities'¹. They comprise 15-year leveraging initiatives based on collective plans for growth. The deals aim to strengthen institutions and governance. SEQ has a good case to form a deal as it has rapid population growth and strong sectors in advanced manufacturing, trades, education, tourism and transport.

From the outset, the Queensland Treasury sought stakeholder engagement in its consideration of applying for a City Deal. Fourteen workshops were held and attended by 102 participants, including senior researchers from all university campuses in SEQ and 60 representatives from peak bodies and industry. The outcomes of the workshops were submitted to both the state and federal governments and were used by the Queensland Government and Council of Mayors (SEQ) to help formulate a City Deal proposition (Queensland Treasury, 2019).

It is a pivotal time for SEQ. Infrastructure development is booming but there are risks associated with growth if it occurs without meaningful collaboration. There is an opportunity to ensure that growth is inclusive and to develop a 30-minute city and a 45-minute region. In recognition of this, SEQ has a department in charge of its application.

Adjunct Professor Jeff Humphreys, School of Earth and Environmental Sciences, University of Queensland

The issues that require more examination in the SEQ region include regional water management, social equity, cultural heritage, waste management and the future location of employment in metropolitan regions.

Future Earth Australia and others should consider how the geography of jobs in Australia is going to change. Population growth is happening in the suburbs, not in city centres, but suburban-based jobs are—on the whole—poorly paid. Knowledge-intensive jobs are clustered in the city centre, with 57% in the inner 5 km of Brisbane. This skewed distribution of higher-paid and knowledge-intensive jobs is also true of Melbourne.

1. <https://infrastructure.gov.au/cities/city-deals/index.aspx>

INITIATIVES AND PATHWAYS

Participants were asked to consider the specific knowledge that would be needed to achieve their vision for a sustainable SEQ.

1. ENCOURAGING AND IMPLEMENTING CHANGE

Efforts must be made to open doors to those who are normally excluded from conversations about the region's future and also to include social services agencies and environmental groups in discussions. We need to learn to utilise stories and experts of the lived experience, engaging social groups and sports. To encourage and implement change for sustainable cities and regions, researchers could address the following information gaps:

- How does peri-urban growth relate to general trends in urban growth?
- How might the inclusion of master planned communities on the outskirts of cities be linked to regional planning?
- What are the needs and hopes of residents and citizens and how do they feel about their city and local area?
- How do we give a voice to everyone who wants to speak?
- How do we get people to engage in decision-making processes?
- How can we increase Indigenous knowledge in urban planning?

2. PLACE-BASED PROJECTS AND PROCESSES

How do you change the way that people view a problem? First, it is important to recognise if and what assumptions are being made. Second, ensure that examples are inclusive of real-world experience that people can relate to—place-based projects can help with this. Third, explain the advantages of being informed about the issue and, finally, build on existing engagement and consultation mechanisms.

Community-led design and policy should be educational and have practical outputs. These should inform statutory planning, thereby empowering the community. It can be difficult to involve people who are disinterested. Empty engagement that doesn't lead to change is all too frequent. It is important to define who a shift in power

will advantage and what a planning success will look like. A barrier may be trying to change the mindset of politicians unaccustomed to shared decision-making.

3. EMERGENCY TOOLKIT AND RECIPE BOOK

To help with building sustainable futures, an 'emergency toolkit and recipe book' could be developed that prioritises reconnection to landscape, building and people. This would need to be a bottom-up approach. It could be an educational process, for example, asking people to consider where their food comes from and the resources consumed along the way, or asking people to redesign their street and city. A toolkit would be developed from existing knowledge and encourage social change.

The toolkit would promote a circular economy and help the community to co-design and co-lead a transition to sustainable living. It could trial urbanism principles and provide guidance on how to engage a cross-section of sectors and organisations. The toolkit could contain case studies and examples of how mindset change can produce excellent solutions to old problems.

This might challenge the current growth-based economic paradigm and ingrained values and cultural norms that resist change. There is also a fear of policy failure. Practically, there would be a need to establish leader/s for a change initiative and identify the toolkit's target audience.

4. CONNECTING PRACTITIONERS WITH RESEARCH

There is a bottleneck in the translation of knowledge into action, with little dialogue between research and policy. Policymakers tend to hire consultants who tell them what they want to know. So how do we convince practitioners to use academic research? How do we connect practitioners, academics and industry in a timely manner? A survey of planners showed that practitioners tend to not consider academic research, but maybe they are not aware that academics are cheaper than consultants.

The goal would be to create a city deal with a unified vision that builds enduring relationships defined by regular contact and open mindedness. Working together, practitioners and researchers could test

and pilot phases of demonstration projects before implementation on a broad scale. However, care would be needed to avoid creating more knowledge silos. Practical issues include the different time frames that researchers and practitioners operate on, and that research agendas are not linked to implementation processes.

A great example of how this can work is the Transport Academic Partnership between the Queensland Department of Transport and Main Roads, University of Queensland, Griffith University and QUT. It is a collaborative, cooperative agreement to undertake strategic transport research of mutual benefit. The collaboration builds transport research capability within the university sector, the supporting agencies and industry.

5. GENERATING A SHARED SENSE OF URGENCY

A paradigm shift is needed to create a sense of shared urgency. SEQ residents should understand their region's carrying capacity in terms of consumption (food, resources and amenities such as housing), and this should be made personal so that people engage. So, who do we need to talk to? What are the key messages we need to provide? Where else are people doing this type of work and can we incorporate their messaging? The goal would be to create a paradigm shift toward sustainable food, housing, transport, behaviours and consumption. A project based on strategic communication could encourage people to adjust their priorities and accompanying metrics. Environmental impacts should be given a personal slant. Good examples and case studies of local environmentally sustainable practice (in food, transport and work behaviours) should be showcased.

Potential opportunities include the production of a green infrastructure strategy, creating new and different ways to raise awareness, enhancement of the quality of life for those involved and better health, leading to a lower health budget. A 'doughnut economics' model could be created with metrics framed around responsible business.



6. METRO STRUCTURE COMPARISON AND EVALUATION

This group was interested in how to help SEQ residents make the transition from being reliant on their cars to using public and active transport mechanisms. They considered the sustainable movement of freight from inland areas to ports. With a population of seven million, SEQ should be able to afford the right sort of public transport system.

Two potential metro structures were suggested to be included in a comparison evaluation study. The first had a linear city emphasis, with a central core and a concentration of jobs anchored within the Gold Coast and Sunshine Coast, both connected by public transport and with local cores of jobs and services along the corridor. Urban growth along the corridor would be encouraged, but not in a way that slowed transit. This would create an optimised connected region capable of mass transit.

The second metro structure had a polycentric emphasis and a dispersed employment model, with more and bigger centres built away from the central business area. This model would be more aligned with the 30-minute city. Both models include separating freight.

COLLABORATIVE GOVERNANCE AND DECISION-MAKING

Participants agreed that collaborative governance and decision-making is difficult as it is challenging to influence politicians and power elites. Most technicians and scientists are not trained in lobbying and struggle if required to counter professional lobbyists. The feeling is that politicians prefer solutions to do with the market, not to do with the environment. And in SEQ, enacting changes is complicated by the number of marginal

seats. No one wants to risk upsetting their constituents, so little gets done. For example, every poll shows that SEQ wants daylight saving time, yet it never happens.

Election and budget cycles are disrupting the delivery of large infrastructure projects. Some of the sustainability issues discussed have 20-year time frames, but it is hard to get that sort of long-term commitment from government or industry.

STAKEHOLDER AND COMMUNITY ENGAGEMENT

Community building is in the fundamental interest of planners, providing developments with legitimacy. It is a powerful thing when people get together. However, care must be taken that it not used for greenwashing or as an empty marketing tool.

In SEQ the extent and management of growth is contentious, and subtleties may be missed during stakeholder engagement. As was seen in the vision exercise, the issue can be very polarising. Residents need to be better informed about plans for the region, but there is a challenge in that so much information is released in a format not understandable to many stakeholders or suitable for use in decision-making.

People are enticed by success and better understand processes when examples are used, however, many models cited by academics in Australia are from Europe or the US. It would be good to see local models of biophysical or social processes.

CO-PRODUCED KNOWLEDGE DEVELOPMENT, USAGE AND LEARNING

Planners are often proactive and try to build sustainability into local and regional plans, however these principles are not adopted. Developers can propose schemes that are not consistent with agreed plans, and sometimes these are approved.

For public transport and active travel infrastructure to be prioritised, the push must come from more than once source (currently green groups). NGOs such as the Heart Foundation are interested in active transport and could be powerful advocates.

WHAT ARE THEY KEY PRIORITIES FOR A NATIONAL STRATEGY?

Infrastructure Australia should be empowered to prioritise transport and active transit projects over urban road projects. The focus seems to be returning to cars after a period of interest in more sustainable alternatives. There should less focus on urban road projects and driverless vehicles. Consideration should be given to how government will fund public transport, as they must subsidise rail and buses. To address the equity issues, as generally the poorest people are in their cars in traffic, it should be ensured that new suburbs are well connected to public transport.

Rather than focusing on current and individual needs, a focus on meeting more of the sustainability goals will ensure community and intergenerational needs are met. There should be political recognition of the importance of climate change in our urban futures, as a focus on climate change adaptation contributes to multiple areas and provides much value to cities.

Green infrastructure plans should include green corridors and buildings and blue corridor projects that provide community benefits and encourage active transport. Green infrastructure is more than the built environment and human-created structures. Creeks and biodiverse urban landscapes should be identified as part of the green infrastructure.

Can we create a cultural incentive that influences people to want to live more sustainably? The Danes live in smaller apartments and consume less. What would help achieve this? What motivates people to live sustainably and can we create designs that help them to experience the possibilities? People are not likely to become more involved or be active citizens unless they see real benefits.

THE SOUTH EAST QUEENSLAND REGION

South East Queensland extends from the Sunshine Coast in the north to the Gold Coast in the south and Toowoomba in the east. The regional centres are interspersed with agricultural land and valuable environmental space (KPMG, 2016).

SEQ is Australia's third largest urban region by population and home to around 3.5 million people, which is one in seven Australians and 71% of Queensland's population (Queensland Government, 2016b). The population is predicted to grow to 4.9 million by 2036. SEQ covers 22 900 km² and contains 12 LGAs (Figure 1).

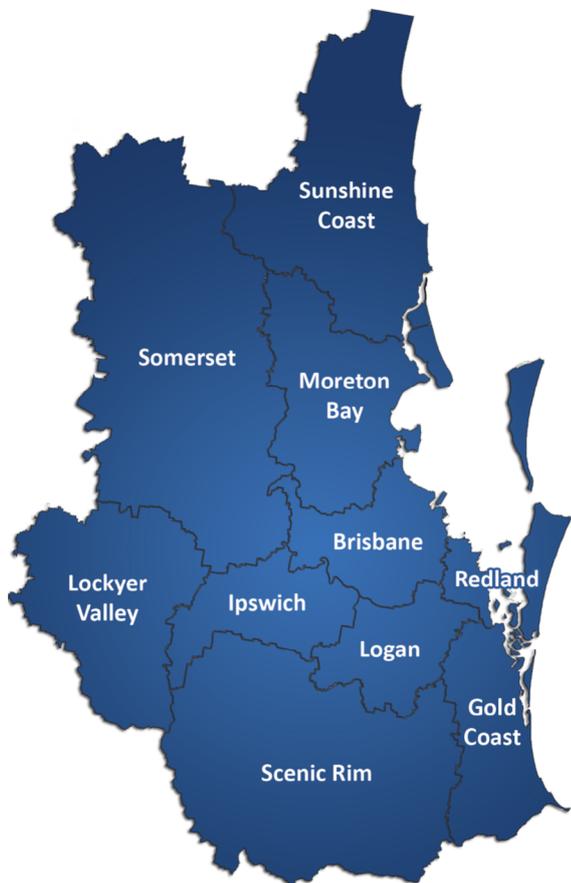


Figure 1: South East Queensland LGAs

SEQ is home to 40% of Queensland's Aboriginal and Torres Strait Islander population. It is the location of one in eight Australian jobs, with a tourism industry worth \$14 billion per annum and food production industry generating \$1.16 billion per annum (Queensland Government, 2016b). The region is biodiverse, with an estimated 6000 flora and 2400 native fauna species (Queensland Government, 2016b). The focus of regional planning in SEQ has changed over the years. It has continuously sought to strike a balance between outward expansion and urban consolidation to support more efficient use of existing infrastructure, better access to employment services and a wider range of lifestyles, and reducing impacts on natural systems and assets (Queensland Government, 2016b, Burton, 2018).

SEQ has close relationships across regional boundaries with the surrounding areas of the Darling Downs, Wide Bay Burnett, the Tweed Coast and northern New South Wales (Figure 3). Maintaining and enhancing infrastructure networks that connect these regions will support mutual social and economic benefits (Queensland Government, 2016b).

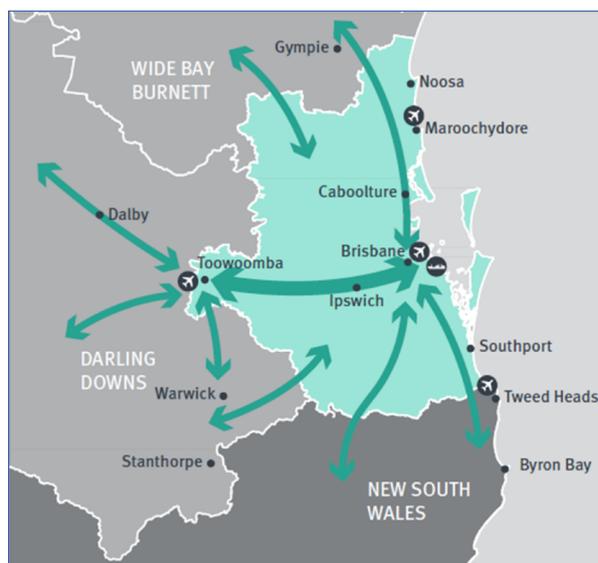


Figure 2: Inter-regional relationships (from the ShapingSEQ report (Queensland Government, 2016b))

BRISBANE

Greater Brisbane is the third most populous city in Australia, with a population of 2 270 800 people as of 2016 (ABS). The CBD stands in a peninsula on the Brisbane River, located 15 km from its mouth at Moreton Bay. The City of Brisbane is by far the largest LGA (in terms of population and budget) in Australia, serving more than 40% of the population. It was formed by the merger of twenty smaller LGAs in 1925, covers an area of 1367 km² and now aspires to be recognised as a 'new world city'.

The remainder of the metropolitan area falls into the LGAs of Logan City to the south, Moreton Bay Region in the northern suburbs, the City of Ipswich to the south-west, and Redland City to the south-east on the bayside, with a small strip to the far west in the Scenic Rim Region.

GOLD COAST

The Gold Coast is approximately 66 km south-southeast of Brisbane and immediately north of the border with New South Wales. The Gold Coast is the sixth largest city in Australia with 555 721 people as of 2016 (ABS), making it Australia's largest non-capital city and Queensland's

second largest city. The suburbs of Southport and Surfers Paradise form the Gold Coast's main commercial centre. Much of the land between the coastal strip and the hinterland was once wetlands but now forms the suburban heartland of the city. The Gold Coast is now attempting to refocus its economy on more knowledge intensive industries.

SUNSHINE COAST

The Sunshine Coast is the third most populated area in Queensland with 346 522 people as of 2016 (ABS). Located 100 km north of Brisbane, its urban area spans approximately 60 km of coastline and hinterland. It is a centre for tourism, attracting more than 3.2 million visitors a year, and has more national parks than any other region in Queensland. The natural biodiversity of the area has been protected by five separate parks in both coastal and inland regions.

TOOWOOMBA

Toowoomba is a regional city in the Darling Downs region, 130 km west of Brisbane by road. The estimated urban population of Toowoomba as of 2016 was 160 779 (ABS). Toowoomba is the second most populous inland city in the country after Canberra.

REGIONAL CHALLENGES

Population growth

SEQ's population is expected to grow to roughly 5.3 million over the next 25 years, requiring more than 30 000 new dwellings each year, as well as more transport, jobs and services (Queensland Government, 2016b). *ShapingSEQ* (Queensland Government, 2016b) discusses the need to provide adequate land supply for the projected population/employment growth and the importance of identifying where and how to provide housing.

Climate

Queensland has long experienced the impacts of extreme weather, including tropical cyclones, floods, heatwaves and bushfires (Queensland Government, 2016a), and climate change is expected to amplify the frequency and severity of these events. SEQ will be increasingly affected by changes in temperature, rainfall, sea level and extreme weather conditions (Queensland Government, 2016a).

Brisbane has 38 major creek catchments and 630 kilometres of waterways (Brisbane City, 2016). The city is built on a low-lying floodplain and many suburban creeks crisscross the city until they eventually flow into Moreton Bay, increasing the risk of flooding (Brisbane City, 2016). The combined catchment area of the creeks and rivers flowing into Moreton Bay is 21 220 km².

Land and water quality

The condition of some estuaries declined in 2018 due to the low to average rainfall experienced across SEQ. The lack of rain meant most of the mud and nutrient runoff came from urban landscapes adjacent to estuaries. Catchments that have been heavily cleared continue to fluctuate in condition more than those that have intact vegetation. That means that in higher rainfall years, more pollutants flow into waterways and estuaries from poorly vegetated catchments than from heavily forested catchments.

Biodiversity loss

Biodiversity within SEQ is highly threatened due to unsustainable land management practices and native vegetation clearing (EHP, 2016). The south-eastern bioregion is among the most heavily fragmented in Queensland. The highest densities of terrestrial threatened fauna and flora species habitat is found in the south-east. Of the remnant vegetation of the SEQ bioregion, 97% is considered of either state or regional significance.

KEY CURRENT PLANNING DOCUMENTS

The Queensland *Planning Act 2016* is the first planning legislation in Australia to explicitly acknowledge the importance of valuing, protecting and promoting Aboriginal and Torres Strait Islander knowledge, culture and tradition.

TransformingSEQ: The SEQ City Deal Proposition

TransformingSEQ (2019) is a joint production of the Queensland Government and the Council of Mayors (SEQ) that outlines the case for an SEQ City Deal. A successful deal has the potential to greatly increase the region's productivity and competitiveness. KPMG modelling indicates that the SEQ regional economy could grow by up to \$58 billion as a result of a successful deal (assuming a 0.25% increase in annual multi-factor productivity growth over 25 years, based on 2017 dollars).

A close-up photograph of a sloth's foot gripping a tree branch. The sloth's foot is covered in grey, shaggy fur and has three dark, sharp claws. The tree branch is thick and has a reddish-brown, textured bark. The background is a soft, out-of-focus green and yellow, suggesting a natural, outdoor setting.

The proposition document focuses on six domains containing 35 opportunities. The domains are: connecting infrastructure; jobs and skills; liveability and sustainability; housing and planning; digital and governance; and leadership. In addition, the Queensland Government, SEQ LGAs and key industry leaders identified six transformational opportunities: a 45-minute region; trade and enterprise spine; innovation precincts; liveability fund; regional coordination board; and smart digital region.

The proposition is predicated on strong collaboration and focus between all tiers of government and the private sector, and in March all three parties agreed to proceed to a deal in one year's time.

South East Queensland Regional Plan 2017

The *South East Queensland Regional Plan 2017* (ShapingSEQ) is the statutory regional plan for the SEQ and replaces the *South East Queensland Regional Plan 2009–2031*. It is region's pre-eminent strategic land use plan made under the *Sustainable Planning Act 2009* and given effect by the *Planning Act 2016*. *ShapingSEQ* proves a framework to manage growth, change, land use and development. The plan sits below the State Planning Policy in Queensland's planning framework. A primary aim is to sustainably accommodate a growing population that could reach over five million in the next 25 years. The plan promotes the liveability, economy and attractiveness of the region.



REFERENCES

- ABS 2016. 2016 Census QuickStats. *Australian Bureau of Statistics*.
- ABS. 2018. *Population Projections, Australia, 2017 (base) - 2066* [Online]. Australian Bureau of Statistics,. Available: [www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3222.02017%20\(base\)%20-%202066?OpenDocument](http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3222.02017%20(base)%20-%202066?OpenDocument) [Accessed 07/03/2019].
- BRISBANE CITY 2016. Brisbane's FloodSmart Future – Catchment floodplain management planning. www.brisbane.qld.gov.au/sites/default/files/20161110-brisbanes-floodsmart-future-update.pdf.
- BURTON, P. 2018. South East Queensland: change and continuity in planning. In: FREESTONE, S. H. A. R. (ed.) *Planning Metropolitan Australia*. New York: NY: Routledge.
- EHP 2016. A Biodiversity Planning Assessment Southeast Queensland Bioregion v4.1. Summary Report. In: DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION, Q. G. (ed.).
- KPMG 2016. SEQ City Deal: Gateway 1 Report. *Inquiry into the Australian Government's role in the development of cities*.
- QUEENSLAND GOVERNMENT 2016a. Climate Change in the South East Queensland region (draft). In: DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION (ed.). www.qld.gov.au/_data/assets/pdf_file/0023/67631/seq-climate-change-impact-summary.pdf.
- QUEENSLAND GOVERNMENT 2016b. ShapingSEQ. South East Queensland Regional Plan 2017. Brisbane: Department of Infrastructure, Local Government and Planning.
- QUEENSLAND TREASURY 2019. Transforming SEQ - The SEQ City Deal Proposition. Brisbane: Queensland Government.
- UNDESA 2014. World urbanization prospects: The 2014 revision—highlights. Report by Department of Economic and Social Affairs, Population Division, United Nations, New York.



