Pathways to a sustainable future: The role of local governments

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Griffith Asia Institute

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Pacific challenges: Toward a sustainable future

https://www.griffith.edu.au/asia-institute
Griffith Centre for Sustainable Enterprise

We promote the development of sustainable enterprise through innovative research, teaching and engagement. We take a global perspective while focusing on the Asia Pacific region.

My recent books

2013

The Asian Century, Sustainable Growth and Climate Change

2015

The Political Economy of Sustainable Development

2017

Pathways to a Sustainable Economy
Agenda

- Most important problems facing Australia
- Finding pathways to a sustainable future
- The role of local governments
Agenda

• Achieving our targets – what are the key challenges?

• Hard choices are needed: synergies, trade-offs and policy options

• Summary and conclusions

• Q&A
Most important problems facing Australia

**Most Important Problem Facing Australia**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Issues</td>
<td>32.3%</td>
</tr>
<tr>
<td>Religion/Human Rights</td>
<td>14.2%</td>
</tr>
<tr>
<td>Government/Politics</td>
<td>13.9%</td>
</tr>
<tr>
<td>Social Issues</td>
<td>13.4%</td>
</tr>
<tr>
<td>Environmental Issues</td>
<td>11.0%</td>
</tr>
<tr>
<td>Energy/Fuel/Power</td>
<td>4.6%</td>
</tr>
<tr>
<td>Terrorism/Wars</td>
<td>3.0%</td>
</tr>
<tr>
<td>Health Issues</td>
<td>3.0%</td>
</tr>
</tbody>
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**Most Important Problem Facing the World**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Issues</td>
<td>24.8%</td>
</tr>
<tr>
<td>Environmental Issues</td>
<td>21.6%</td>
</tr>
<tr>
<td>Terrorism/Wars</td>
<td>18.5%</td>
</tr>
<tr>
<td>Social Issues</td>
<td>9.5%</td>
</tr>
<tr>
<td>Government/Politics</td>
<td>8.5%</td>
</tr>
<tr>
<td>Religion/Human Rights</td>
<td>8.5%</td>
</tr>
<tr>
<td>Health Issues</td>
<td>2.3%</td>
</tr>
<tr>
<td>Energy/Fuel/Power</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

*Source: Roy Morgan interviewed a representative cross-section of 650 Australians in February 2018.*
Local governments for sustainability

Sustainability Definitions and KPIs

I.C.L.E.I
Local Governments for Sustainability

Councils who have a definition for sustainability at a policy level
Sustainability Definitions and KPIs

Terms used to describe sustainability

- Low carbon
- Social
- Jobs
- Economic Growth
- Equity
- Education
- Health
- Built and/or Natural Environment
- Miscellaneous

Sustainability KPIs

- Carbon Emissions
- Energy Use
- Water Use
- Waste
- Community Engagement
- Weeds
- Sustainable Transport
- Water Quality
- Biodiversity
- Environmental Scorecard
- Financial
- Others
- No indicators
What is Australia for?

Some Provocations

Securing tomorrow's Australia today

by Tapan Sarker

IS AUSTRALIA REALLY the ‘lucky country’? Not according to most Australians, who will tell you about the rising cost of living, the strain the new carbon tax will put on their household budgets, and the need to ‘Stop the Boats’. Not according to industry, who frequently complain to the media that such-and-such a new law will drive them into bankruptcy if the government doesn’t heed their demands. And certainly not according to our politicians, who instead focus their energy on short-term political manoeuvring calculated to gain a few Newspoll points against their opposition.
Where do Australians live?

- Can we force migrants to regional areas to relieve city congestion?
- Isn’t it also against our freedom of choice?
- The solution is to provide better quality of life (QoL) in the regional /or low population areas?
Australia’s population pressure

Population pressure: How many kids should you have?

ABC Science
By Anna Salih
Updated 26 Mar 2018, 10:09am

With Australia’s population heading towards 40 million people by the middle of the century, and global figures growing by 80 million every year, some people may find themselves wondering whether they should have children.

The impact our growing population has on the environment — from polluted city air and dying rivers to cleared forests and disappearing species — is something that can keep you awake at night.

So how many children should you have if you care about the planet?

We sought out five perspectives on this thorny question.

Tapan Sarker, political economist

As many as you can afford – probably two

Dr Sarker views having children as an essential service: you’re providing the tax-paying workforce needed to keep the economy going.

“We need more economic growth and to have that we need population growth,” he says.

The challenge, he says, is to work out how best to do this given the constraints a country like Australia faces, such as limited water resources.

Building the business case for climate change adaptation

Lessons from Coastal Australia

Final Report

Dr Rob Hales, Dr Zsuzsa Banhalmi-Zakar, Dr Tapan Sarker, Dr Alex Lo, Dr Andreas Chai, Dr Emma Whittlesea, Associate Professor Chris Fleming, Katrina Kelly, Green Cross Australia, Mara Bun

April 29, 2016

CoastAdapt
A changing climate in coastal Australia: Build knowledge, take action

What is climate change?
Assess risks and impacts
Understand adaptation
Undertake adaptation
Connect with the adaptation community

Getting started
Sea-level rise and you
Shoreline Explorer
Coastal Climate Adaptation Decision Support

Infographics
Case studies
Information manuals
Impact sheets

A factbook to a thousand words
Learning by looking: case studies of adaptation in Australia and beyond
Tell in-depth stories of key adaptation topics of concern to coastal managers
Sector-wide studies of climate change impacts in coastal Australia
Recent changes in sea level

Rate of SLR larger since 1993 compared to previous decades.
If the rate of change continues at this pace, global mean sea levels will rise 61 cm between now and 2100.
Changes will not be uniform

CSIRO and Bureau of Meteorology 2015
Change in extremes

• Hot extremes, heatwaves, and heavy precipitation events are likely to continue to become more frequent
• Tropical cyclones likely to become more intense, with larger peak wind speeds and more heavy precipitation (reduce in number with possibility to move southward)

Source: IPCC AR5, CSIRO and BOM (Climate Change in Australia)
Physical impacts on assets and operation

- Erosion
- Heatwaves
- Inundation
- Extreme rainfall
- Bushfire
Climate change risks to coastal region of Australia

Figure 1: The combined estimated replacement value ($ billion) for residential, commercial and transport infrastructure for a 1.1 metre sea level rise.

When, where and how to respond?
Some non-climatic drivers of coastal adaptation

• State government policies
  • QCoast2100 (http://www.qcoast2100.com.au), NSW coastal reform, etc.

• Legal opinion: Noel Huntley et al.
  • The Centre for Policy Development and the Future Business Council released an influential legal opinion on company directors’ legal obligations to consider the impacts of climate change.

• APRA (Australian Prudential Regulation Authority)
  • Climate change could threaten the stability of the entire financial system, as APRA prepares to apply climate change "stress tests" to the nation's financial institutions.
Process of climate change adaptation

- Risk management
- ISO31000
- AS 5334
- C-CADS in CoastAdapt
3 phase risk assessment process of CoastAdapt
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Strategy</th>
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<tbody>
<tr>
<td>1. Melbourne City Council</td>
<td>Urban Tree Strategy</td>
</tr>
<tr>
<td>2. Parramatta City Council</td>
<td>Range of Planning Initiatives: Parramatta Ways; Bring back swimming to the Parramatta River; Cool Parramatta</td>
</tr>
<tr>
<td>3. Douglas Shire Council</td>
<td>Range of initiatives: Flood monitoring; Water and transport infrastructure upgrades; Coastal management</td>
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<tr>
<td>4. Lendlease</td>
<td>Barangaroo South sought to build the ‘greenest global residential, shopping and business centre in the world’.</td>
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<tr>
<td>5. Suncorp</td>
<td>Protecting the North promotes mitigation activities among homeowners to reduce risk of cyclone damage</td>
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<tr>
<td>6. Cairns Aquarium</td>
<td>New aquarium construction has a clear overall strategy to minimise impacts and protect natural assets</td>
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<tr>
<td>7. AustralianSuper</td>
<td>Assessment of investments for climate resilience</td>
</tr>
<tr>
<td>8. Stockland</td>
<td>Commercial retrofit or modification for adaptation</td>
</tr>
<tr>
<td>9. Sydney Opera House</td>
<td>Adaptation through the building renewal scheme, events planning and retail operations</td>
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<tr>
<td>10. Bedarra Island Resort</td>
<td>Sustainable approach to rebuilding a small-scale luxury resort</td>
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<tr>
<td>Aims to reduce identifiable (economic) impacts</td>
<td>•</td>
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<tr>
<td>Identification of adaptation pathways (options)</td>
<td>•</td>
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<tr>
<td>Integration into overall business decision-frameworks</td>
<td>•</td>
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<tr>
<td>Use of collaborative approaches</td>
<td>•</td>
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<tr>
<td>Planned monitoring of adaptation outcomes</td>
<td>•</td>
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<tr>
<td>Developed shared value with stakeholders including the wider community</td>
<td>•</td>
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<tr>
<td>Planning for infrastructure for the short- and long-term</td>
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Mounting a business case for climate change was primarily motivated by risks (and associated economic costs) that have been identified in the present governance systems of the organisation.

- The Urban Forest Strategy has been developed to address this through green infrastructure and water efficiency initiatives.
4. Fitzroy Gardens, showing existing conditions (left) and conditions if elms were lost (right)

Source: MCC Urban Forest Strategy.
Case: Parramatta City Council: Integration into business frameworks

Integration of the business case for climate change adaptation into overall business decision-frameworks was an important element in mounting a business case.

Swimming in Lake Parramatta in the 1930s and since reopening in 2015.
Case: Parramatta City Council: Integration into business frameworks

‘Parramatta Ways’ is an urban walkability strategy that extends to approximately 390 km of road networks connected to the Sydney Green Grid. This $300 million project aims at preserving and enhancing the network of green and open natural spaces.

Catchment management and improving quality of water
Case: Parramatta City Council: External stakeholder engagement

Use of collaborative approaches, often with external experts and organisations to formulate tools that can assist with obtaining organisational buy-in for the business case.

Advocacy to bringing back swimming to the Parramatta River, pictured former Mayor of Parramatta, Councillor Scott Lloyd
Case: Douglas Shire Council
Staged responses as part of business case

Identification and consideration of adaptation pathways
Low lying coastal location
Potable water storage during dry season

….where future options for action to respond the climate risks are identified and met through in manageable stages triggered by a change in environmental and social conditions
Climate resilient pathways are instrumental in the pursuit to a sustainable economy.

There is increasing responsibility on local governments to prepare and adapt to global climate change through climate adaptation planning.

In Australia, climate change adaptation within local government sector has started to emerge.

Our study finds that local governments can play a greater role in effectively planning for climate impacts.

In doing so, local governments should enhance their capacity to develop geographically specific action plans that can be adjusted to suit different local and regional needs and context.