The Paradox of Paradise: Declining government responses to the increasing risks of climate change on the Gold Coast

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Abstract

The Gold Coast is the sixth largest city in Australia and one the fastest developing regions in this country. It is also, however, highly vulnerable to the impacts of climate change and recent extreme weather events have given an indication of the increasing risk to both people and the built environment. The seriousness of these issues has been detailed in a series of national and international assessments of risk and vulnerability. Over the last decade, the first tentative steps had been taken to build climate change adaptation into the relevant plans and policies at all three levels of government (local, state and national). However, since early 2012 all governments have been cutting back their investments in adaptation. This paper explores the paradox of a declining response in the face of an increasing risk. It considers how recent changes made by the Gold Coast City Council (GCCC), the Queensland government and the Australian government have manifested themselves in the fate of local, state and national policies. The paper concludes with some questions about why this paradox may have arisen.

Introduction

In a perfectly rational world, when an overwhelming majority of experts warned of a serious hazard political leaders would create policies and plans in proportion to the risk. Of course we do not live in a perfectly rational world, so both policymaking and planning processes are never straight-forward. Nowhere is this more evident than when it comes to climate change adaptation where, paradoxically, as the level of risk has increased and become better understood, responses appeared to have first expanded and then contracted. This paper looks at this paradox via a series of steps using the Gold Coast as an example. First, the environmental, social and economic features of the Gold Coast are outlined to give some background to the discussion. Second, the particular vulnerabilities of the region to the impacts of climate change are summarised to establish the seriousness of the risk. Third, an explanation of the development and structure of government on the Gold Coast are presented to give the political context. Fourth, the growth in climate change policies and plans is explained up to its peak in 2012. Finally, the demise of these responses is then outlined. Some possible reasons for this decline are canvassed in our concluding remarks.

A Snapshot of the Gold Coast

The Gold Coast has a number of features that make it an interesting place to study, live and work. Geographically, it covers an area of 1400 square kilometres that is bounded to the east by 57 km of coastline with a string of beaches interspersed with headlands and estuaries. To the west, the hinterland consists of a small mountain range rising up from the plains, covered with sclerophyll and rainforest that includes the World Heritage listed Lamington National Park. The southern boundary is at Coolangatta on the border between Queensland and New South Wales. To the north are the outer suburbs and satellite towns of Brisbane such as Beenleigh. Much of the high-rise urban development has occurred between the Nerang River and the beach at the north end of the city around Southport, Surfers Paradise and Broadbeach. Many of the inner suburbs are built on canal estates that were created from former wetlands and there are 260 km of navigable waterways. The climate is subtropical, with 300 sunny days per year, average daytime temperatures over 21C, and wet-humid summers (GCCC 2013a; DCC 2009).

On the social side, the Gold Coast is Australia's sixth largest city and although it is not a state or territory capital, it is larger than Canberra, Hobart and Darwin. It is also one of the most rapidly growing urban areas in the country, with the population rising from 88,000 in 1976 to more than 524,500 residents in 2011 (GCCC 2013b; DIT 2013; Spearitt 2009). If the population continues to

grow by 13,000-16,000 people per year as it has been doing over the last decade, it is expected to reach 730,000 by 2026 (GCCC 2013a). As a major retirement destination, the Gold Coast has a higher proportion of people over 60 (20.3% compared to 17.0% in Brisbane) and a lower proportion of children 17 years or under (22.4% compared to 24.2% in Brisbane) (GCCC 2013c). Due to both the higher proportion of retirement villages and popularity of beach-side apartments, 43% of dwellings are medium or high density compared to 22% in Brisbane (GCCC 2013d).

The Gold Coast economy also has some interesting attributes (DIT 2013, p. 133, 148). In 2011 there was a workforce of 231,634 employed people and the top six industries are listed in Table 1 (GCCC 2013e). This table confirms the image of the Gold Coast as an economy that is reliant on tourism and retirees, but it also shows that manufacturing remains significant and that education and training has become important, particularly with the establishment of three major university campuses since 1989 (Griffith, Bond and Southern Cross). In terms of wealth, there are proportionally fewer high income households earning \$2500 or more per week (13.9% compared to 17.9% in Brisbane) and more low income households earning less than \$600 per week (20.8% compared to 17.8% for Brisbane) (GCCC 2013f). This is a manifestation of the higher proportion of retirees and growing number of students who tend to have lower incomes. It has been estimated that in 2006 the beaches alone added \$106-\$319 million in value for the local economy (DCC 2009, p. 17).

Table 1: Employment by Industry

Industry	% Gold Coast workforce	% Brisbane workforce
Retail Trade	12.4	10.1
Construction	11.3	8.3
Health care and social assistance	11.1	12.4
Accommodation and food service	9.6	6.0
Manufacturing	7.6	9.3
Education and training	7.1	8.1

Source: GCCC (2013e).

Vulnerability to Climate Change

Although the science of climate change is complex, the underlying principle is relatively simple. The devil, of course, is in the detail. Since the industrial revolution human activity has released large quantities of greenhouse gasses (such as carbon dioxide) that have changed global climate patterns. The environmental consequences include: higher average temperatures; rising sea levels; the loss of snow and ice cover; shifting patterns of precipitation; the accelerated loss of habitats and biodiversity; increased land degradation; and, more frequent and/or intense extreme weather events (IPCC 2012; IPCC 2007; CSIRO & Bureau of Meteorology 2010; Blunden, et. al 2013; Australian Academy of Science 2010). These changes will, in turn, have significant social, economic and political consequences, including: disruptions to agricultural production; exacerbated freshwater scarcity; increased damage to built assets; higher insurance costs and defensive expenditures; the spread of vector-borne diseases into more populous zones; a rise in the heat-related deaths; a substantial increase in refugee numbers; and, disputes over access to water (Stern 2006; IPCC 2007; UNEP 2012; DCC 2009; Australian Academy of Science 2010).

The Gold Coast provides a highly sensitive case study due to its bio-physical vulnerability and limited socio-economic resilience (Dedekorkut-Howes, et al. 2010). The regional landscape is dominated by low-lying, flood-prone plains surrounded by an exposed coast-line and numerous waterways (GCCC 2009; DCC 2009; IPCC 2007). Added to this, development has taken place in vulnerable areas, with waterfront property being much sought after (DCC 2009). Rapid population growth puts pressure on existing infrastructure and encourages further development in low-lying coastal areas that will be particularly vulnerable to floods, storm surges and rising sea levels (GCCC 2009; Dedekorkut-Howes, et al. 2010; Climate Commission 2012). Higher than average proportions of both elderly residents and low income households reduces the socio-economic resilience of the Gold Coast community to the impacts of climate change (GCCC 2013c & 2013f).

This vulnerability has been documented in a number of studies. Working Group 2 of the Intergovernmental Panel on Climate Change (IPCC) noted in its *Fourth Assessment Report* that the Gold Coast would face an increased risk of flooding that would have particular impacts on its tourism industry (IPCC 2007b, pp. 517 & 523). A report by the Department of Climate Change (DCC), *Climate Change Risks to Australia's Coasts*, mentions the Gold Coast several times as one of the regions that is most at risk of coastal erosion and inundation, posing a threat to both homes and tourism (DCC 2009, pp. 75, 86-90). The IPCC's Special Report on *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* noted that past heatwaves in Queensland and other

parts of Australia have led to increased mortality rates that are expected to increase in future with an ageing population, in addition there was an increased risk of droughts, bushfires and floods (IPCC 2012, p. 260-261). The Gold Coast was one of the key case studies for the South East Queensland Climate Adaptation Research Initiative (SEQCARI) that identified the region as being vulnerable to extreme heat, extreme rainfall, flooding, king tides and storm surges in its report, *Adaptation Options for Human Settlements in South East Queensland* (Low Choy, et al. 2012, pp. 22-24). The Climate Commission (CC) echoed these findings and pointed out that the Gold Coast has 4750 residential homes at risk from coastal erosion (CC 2012, p. 9, 13). The most recent report on the *State of the Climate* by the National Oceanic and Atmospheric Administration (NOAA) mentioned Queensland several times with regards to flooding, changes to vegetation, storms, cyclones, increased rainfall, and temperature variations (Blunden, et al. 2013, pp. 25, 43, 97, 197 & 198). In addition, the current *State of Australian Cities* report noted the impacts of the heavier than normal rains on the Gold Coast (DIT 2013, p. 198, 201).

Developments in Government

The development of the Gold Coast has been reflected in changes to the institutions designed to govern the region. While indigenous people lived in the area for tens of thousands of years, European explorers only visited in the seventeenth and eighteenth centuries, with official colonial settlements starting in the early nineteenth century. Brisbane was founded first as a penal settlement in 1825 and was administered by New South Wales until the colony of Queensland was declared in 1859 (Queensland Government 2011). In 1879 six Divisional Boards were created in South East Queensland (Beenleigh, Coomera, Nerang, Tabragalba (that was later renamed Beaudesert), Tingalpa, and Waterford) to provide some basic local government to the growing population. Southport was split off from Nerang to form its own Divisional Board in 1883. In 1901 the six colonies (including Queensland) became states in the Australian federation with the newly formed Commonwealth providing a national level of government.

In 1903 the Divisional Boards became shires and the Town of Coolangatta Council was added in 1914 (GCCC 2011; Queensland Government 2011). The councils were amalgamated and reorganised in 1948 so the coastal strip from Southport to Coolangatta became the Town of the South Coast. This was renamed the Gold Coast Town Council in 1958 and was amalgamated with the Albert Shire Council (that abutted its eastern border) in 1995 to form the Gold Coast City Council (GCCC 2011). All local councils in Queensland underwent further round of amalgamations in 2007 and the Gold Coast City Council boundaries underwent some adjustments as part of this process (ABC News 2007). Today the Gold Coast is governed by an elected local council made up of a mayor and fourteen councillors (each representing a geographical division). The residents of the region elect ten members of the Queensland state parliament (which has a total 89 seats in a single chamber) and five members of the Commonwealth House of Representatives (out of a total of 148). This makes it a politically significant entity, particularly at the state level.

At the national level, the powers of the Commonwealth government are defined by the Australian Constitution (Australian Parliament House [1900] 2012). Anything not specified as a power of the Commonwealth is deemed to be a residual power and falls to the states (this includes powers relating to the environment, planning and climate change adaptation) (Brown 2006; Howes 2005; Toyne 1994). The Commonwealth has therefore adopted three intergovernmental strategies: 1) leaving some issues to the states; 2) cooperating with the states on other issues; or, 3) selectively intervening by creatively interpreting its powers (Howes & Dedekorkut-Howes 2011). Local councils are not mentioned in the constitution, so they exist entirely at the mercy of state governments. They are created, merged or abolished by acts of state parliament, as happened in Queensland in 2007 when the number of councils was reduced from 156 to 72 (ABC News 2007). Further, any council may be sacked by a state government and replaced by an administrator, as happened to the Tweed Shire Council in 2005 (Sydney Morning Herald 2005) and the Gold Coast City Council in 1978 (Queensland Government [1978] 2009). A referendum to amend the constitution so as to acknowledge local government was developed in 2013 but then postponed after the federal election was called earlier than expected.

This three tiered system has created ongoing power struggles between the different levels of government and this remains the underlying dynamic of intergovernmental relations (Ghazarian 2012; Rolfe, et al. 2009; Brown 2006). This impacts on many policy areas, but climate change adaptation has been particularly strongly affected (Howes & Dedekorkut-Howes 2011). In the absence of major structural changes, all levels of government have moved to find other methods for improving the system. One of the main strategies has been to establish organisations that encourage

intergovernmental cooperation (Howes, et al. 2013). The Council of Australian Governments (COAG), for example, was formed in 1992 and includes the leaders of the Commonwealth, state and territory governments, as well as the president of the Australian Local Government Association. It has played a key role as a forum for negotiating agreements to tackle issues such as the environment, transport, health care and education (COAG 2011). Other joint ministerial councils have established to deal with particular issues, such as the National Environment Protection Council, which was later absorbed into the Environment Protection and Heritage Council, then the COAG Standing Council on Environment and Water (CSCEW 2013; Howes & Dedekorkut-Howes 2011). In addition, local councils are networked nationally through the Australian Local Government Association (ALGA 2011) and its state branches. There are also regional groups such as the Council of Mayors: South East Queensland (2011) and international networks such as Local Governments for Sustainability (ICLEI 2011). The Gold Coast City Council is linked into all of these organisations.

Despite the best efforts on networking and partnership-building, the Australian system of government still has difficulty in addressing major policy issues (Berwick 2006). There remains considerable rivalry between the different levels of government that manifests itself in administrative duplication, resource wastage and disputes that undermine collaborative organisations (Ghazarian 2012). In addition, the jurisdictional turf wars between departments and agencies persist (Howes, et al. 2013; Rolfe, et al. 2009). These structural problems can impede efforts to find effective, efficient and appropriate responses to complex issues that cut across borders and portfolios. Wicked problems, such as climate change, exacerbate the situation further because they are also difficult to understand, there is a lack of agreement on an appropriate response, they require a whole of government approach, and need the cooperation of business and the community on a large scale (Howes, et. al. 2013; Howes & Dedekorkut-Howes 2011; Australian Public Service Commission 2007). The Gold Coast is on the frontline of such issues, being highly vulnerable to the impacts of climate change and suffering from a range of social, economic and environmental challenges associated with its extraordinarily rapid development over the last half a century.

Adaptation Responses up to 2012

By early 2012 a plethora of policies and plans had emerged that influence how the Gold Coast would respond to climate change. These emerged at the national, state, regional and local levels – the key ones are presented in Table 2.

The National Climate Change Adaptation Framework (COAG 2007) was the main agreement that guided work between the different levels of government. It had 'building understanding and adaptive capacity' and 'reducing vulnerability of key sectors and regions' as two key areas for action and coastal regions were named as one of the priority areas (COAG 2007, 6). The National Climate Change Adaptation Research Facility (NCCARF) was established to inform policymaking and planning at all levels by networking researchers across the country and funding strategically targeted projects in areas such as settlements and infrastructure, emergency management and human health (NCCARF 2013).

At the state level, of particular importance to climate change adaptation for the Gold Coast were ClimateQ, the SEQ Regional Plan 2009-2031 and the draft SEQ Climate Change Management Plan. These all promoted further research into the vulnerability and the provision of better information to the community. ClimateQ focused particularly on the areas of disaster management, water use and biodiversity protection. The regional management plans both advocated a review of existing planning instruments in order to take into account the impacts of climate change on South East Queensland. The Queensland Office of Climate Change was established in 2007 to coordinate the state's response, review existing polices and plans, and provide policy advice to government.

At the local level, in 2008 the Gold Coast City Council won a grant from the Commonwealth Department of Climate Change (DCC 2013) which it used to develop its own *Climate Change Strategy 2009-2014* (GCCC 2009). This summarised the problem, acknowledged the vulnerability of the Gold Coast, promoted further research into resilience building, called for coordinated action across all levels of government, audited the operations of council and called for further funding.

Although many of these initiatives were quite modest when compared to the size and urgency of the risk to the Gold Coast, they represented important first steps that could be built on in later years. Many of the policies did not get the opportunity to be fully implemented, however, before the state and local council elections of 2012.

Table 2: Key climate change polices and plans affecting the Gold Coast

Level	Policy or Plan
-	National Climate Change Adaptation Framework. April 2007. Council of Australian
	Governments.
National	2. Adapting to Climate Change in Australia: An Australian Government Position Paper.
	2010. Department of Climate Change.
	3. National Climate Change Adaptation Research Plan: Settlements and Infrastructure.
	December 2009. National Climate Change Adaptation Research Facility.
	4. Toward Q2: Tomorrow's Queensland. 2008. Department of the Premier and Cabinet.
	5. Queensland Coastal Plan. 2012. Department of Environment and Resource
State:	Management (now Department of Environment and Heritage Protection).
Queensland	6. ClimateQ: Toward a Greener Queensland. 2009. Department of Environment and
	Resource Management (now Department of Environment and Heritage Protection).
	7. ClimateSmart2050. 2007. (including ClimateSmart Adaptation 2007-12) Environment
	Protection Agency (now Department of Environment and Heritage Protection).
	8. South East Queensland Regional Plan 2009-2031. 2009. Department of Infrastructure
	and Planning (now Department of State Development, Infrastructure and Planning).
	9. South East Queensland Infrastructure Plan and Program 2010-2031. July 2010.
	Department of Infrastructure and Planning (now Department of State Development,
	Infrastructure and Planning).
	10. South East Queensland Natural Resource Management Plan 2009-2031. 2009.
	Department of Environment and Resource Management (now Department of
Regional:	Environment and Heritage Protection). 11. Rural Futures Strategy for South East Queensland 2009. 2009. Department of
South-East	Infrastructure and Planning (now Department of State Development, Infrastructure and
Queensland	Planning).
Queensianu	12. Connecting SEQ 2031: An Integrated Regional Transport Plan for South East
	Queensland. 2011. Department of Transport and Main Roads.
	13. South East Queensland Water Strategy. 2010. Queensland Water Commission.
	14. The South East Queensland Healthy Waterways Strategy 2007-2012. SEQ Healthy
	Waterways Partnership.
	15. Draft SEQ Climate Change Management Plan. 2009. Queensland Department of
	Infrastructure and Planning (now Department of State Development, Infrastructure and
	Planning).
Local:	16. Gold Coast Climate Change Strategy 2009-2014. 2009. Gold Coast City Council.
Gold Coast	10. Gold Coast Climate Change Strategy 2009-2014. 2009. Gold Coast City Council.

Sources: Howes & Dedekorkut-Howes (2011); Dedekorkut-Howes & Howes (forthcoming).

The Decline of Responses Post-2012

While the Gillard and Rudd governments continued to back the implementation of the *Clean Energy Future* policy to reduce greenhouse gas emissions, actions on climate change adaptation have been pursued less vigorously and less persistently. The National Climate Change Adaptation Research Facility was only funded until June 30, 2013 and had begun to winding up its operations until the Coalition committed itself to funding the facility at a third of the rate for a further three years (Hunt 2013). The Local Adaptation Pathways funding program (used by the GCCC) only ran for two rounds from 2008. The key position paper on climate change clearly indicates that the Commonwealth believed that most of the heavy lifting with regards to adaptation should be done by the other levels of government (DCC 2010). After the 2013 federal election the new Abbott government moved quickly to abolish the Climate Commission, reduce climate change from departmental status to a unit within the Department of Environment, and draft legislation to repeal the *Clean Energy Future* policy (Metcalf 2013; DoE 2013). Both the Prime Minister and the new Minister of Environment were quick to deny any connection between the NSW bushfires and climate change (Grant 2013; Howes 2013).

At the state level, the Queensland election in March 2012 ended fourteen years of Labor government and brought to power the Liberal National Party (LNP) with Campbell Newman as the new Premier. The victory was overwhelming with the LNP winning 78 of the 89 seats in the single chamber parliament (QEC 2012). The party went to the election with an *Action Plan* to 'Grow a Four Pillar Economy through focusing on tourism, agriculture, resources and construction and by cutting red tape and regulation' (LNP 2012a). The 'Property and Construction Strategy' that formed one of these four pillars included an undertaking to have 'long term planning to accommodate Queensland's future population growth, and do so in an environmentally sustainable way' (LNP 2012b). The party's policy on 'Protecting the Scenic Rim' was critical of the *South East Queensland Regional Plan* and a review was promised within three years of taking government (LNP 2012c). Nine specific environment policies were listed, eight referred to protecting wildlife and one discussed improving environmental quality (LNP 2012a). None of these policies mentioned climate change or adaptation.

State Treasurer Tim Nicholls brought down his first budget in September 2012 and made direct reference to the four pillar policy. His budget speech cited an external audit of the state's finances (led by former Commonwealth Treasurer Peter Costello) as the reason why public expenditure had to be cut in order to reduce debt with this resulting in the loss of 14,000 public service jobs (Nicholls 2012). There was no mention of climate change or adaptation in this budget speech.

Implementation of cuts in some policy areas had already started by April 2012, with the *ClimateSmart* home service no longer taking bookings and the Office of Climate Change (OCC) was shut down in May (Queensland Government 2012; Ironside 2012). The *Climate Change: Adaptation for Queensland Issues Paper* (OCC 2011) remained on the Department of Environment and Heritage Protection (DEHP) website but it is not clear what will happen to it and all the submissions made prior to the election. The summaries of regional climate change impacts from the *ClimateQ* policy also remain, including one on South East Queensland, but again there is no indication of how these might be used in future planning (Queensland Government 2009). Under the former Bligh government, all cabinet submissions had to include a climate change impact statement but this practice has been discontinued by the Newman government (Department of the Premier and Cabinet 2012: Section 5.4).

In August 2012 the *Temporary State Planning Policy 2/12 Planning for Prosperity* was released that again made reference to the 'four pillars' policy and sought to streamline the processing of development applications (DSDIP 2012a). In September the Deputy Premier and Minister for State Development, Infrastructure and Planning, Jeff Seeney, introduced the *Sustainable Planning and Other Legislation Amendment Bill* (2012) into parliament, which included specific amendments designed to cut 'green tape' in environmental protection legislation (Part 4), changes to coastal protection legislation (Part 3), and alterations to the *Sustainable Planning Act* (Part 7). Under these amendments the *Sustainable Planning Act* (2009) will retain its existing three references to climate change (twice in section 5 and once in section 11) although the focus is now more on mitigation than adaptation. In his speech to parliament the Minister pointed out that:

'The state government is committed to restoring efficiency and consistency to the planning and development assessment system to get the property and construction industries back on track. As promised, our government is well underway in reforming and simplifying the planning framework through removing unnecessary regulation from the system and fixing the Sustainable Planning Act 2009' (Queensland Parliament 2012: 1945).

In October 2012 Department of State Development, Infrastructure and Planning released the *Draft Coastal Protection State Planning Regulatory Provision: Protecting the Coastal Environment* (the Draft SPRP) (DSDIP 2012b). This new policy suspended parts of the *Queensland Coastal Plan* and parts of some of the regional plans. The *Queensland Coastal Plan* prepared by the previous Labor government was composed of two policies: *State Policy for Coastal Management* and *State Planning Policy 3/11: Coastal Protection*. The new Draft SPRP suspended the operation of the *State Planning Policy 3/11: Coastal Protection* which required coastal development to consider the projected effects of climate change such as a sea-level rise and an increase in the maximum cyclone intensity. In contrast, the new policy has only one cursory reference to climate change impacts in its preamble. It also suspends the operation of parts 1.4.3 and 2.4 of the SEQRP which required consistency with the *Coastal Plan* in general as well potential sea level rise projections specifically.

In April 2013 the Newman government released the *Draft State Planning Policy* (DSDIP 2013) which sets out the state interests and related policies that should be used in preparing or amending local planning instruments and regional plans. There is no mention of climate change in this document. It identifies a series of principles to support and guide the development of efficient and effective planning instruments. While the principles mention sustainability and protection of natural environment the implementation strategies are clearly focused on facilitating development.

These changes suggest that there has been a significant shift in state-level planning and climate change adaption policies which affect not only South East Queensland but the whole state. Neither climate change nor adaptation has been a priority in any of the LNP's policies, either before or after the election, and it does not appear in any of the legislative changes outlined above. The party has been consistent in its pursuit of its 'four pillar' policy of economic development, with environmental and planning laws being streamlined if they are considered as inhibiting development. Further, there has been a deliberate move to hand back more responsibilities to the local level of government.

After the local council elections in May 2012, a new government took over the Gold Coast City Council and the attitude towards environmental protection, climate change and development shifted in parallel to the changes in the state government. While the council website still states that climate change is one of the biggest challenges, in October 2012 councillors asked for the status of the climate change department to be reviewed with a view to cutting back its operations (The Gold Coast Bulletin 2012). In addition to budgetary constraints the councillors cited state and federal government withdrawal from climate change policy to justify their decision.

Conclusions

The risk that climate change poses to the Gold Coast are increasing, and are also better understood than ever before, yet paradoxically adaptation responses at all levels of government peaked in 2012 and have been declining ever since. What are the possible explanations for this situation? Limited space does not allow for a detailed analysis here, but we would like to offer some suggestions that might be useful to follow up with later research. First, the three-tiered structure of the Australian system of government may create a situation where a wicked policy problem falls between the gaps with each level assuming that the others have responsibility for climate change adaptation (DCC 2010; Bita 2012; Westthorp 2012). Second, there appears to be a strong correlation between conservative political views and climate scepticism which is driven both by ideology and perceived economic interests (Pearce 2009; Jacques, Dunlap & Freeman 2008), so the election of conservative governments at the local, state and national levels is likely to discourage action on climate change adaptation. The third point comes down to electoral politics, where a party leader might see a switch to opposing action as a way to both differentiate themselves from their opponents and a way to pick up marginal seats - as appears to be the case with the opposition at the federal level in 2010 (Tranter 2011). Fourth, some governments might be reluctant to acknowledge the impacts of climate change and impose restrictions on development because they are concerned about the potential legal liability for economic losses of developers that may result (England 2007). Finally, the Gold Coast is a unique social, economic and political environment, so local factors could also be at work (Howes & Dedekorkut-Howes 2011). These points pose many further questions and are worthy of future investigation.

References

- Australian Academy of Science (2010) The Science of Climate Change: Questions and Answers, AAS. Canberra.
- ABC News (2007) Council amalgamation laws pass through Qld parliament, (August 10), Australian Broadcasting Commission: Sydney. http://www.abc.net.au/news/2007-08-10/council-amalgamation-laws-pass-through-qld/636100
- Australian Local Government Association (2011) About ALGA, Canberra, http://www.alga.asn.au/?ID=42&Menu=41,81
- Australian Parliament House [1900] (2012) The Australian Constitution, Canberra, http://www.aph.gov.au/About_Parliament/Senate/Powers_practice_n_procedures/Constitution
- Australian Public Service Commission (2007) Tackling Wicked Problems: A Public Policy Perspective, Australian Government, Canberra.
- Berwick, M. (2006) The Challenge of Coastal Governance, in A. J. Brown & J. A. Bellamy (eds), Federalism and Regionalism in Australia: New Approaches, New Institutions? ANU E-Press, Canberra, pp. 83-94.
- Bita, N. (2012) Campbell Newman orders Anna Bligh's husband Greg Withers to kill green schemes, The Australian (March 28) http://www.theaustralian.com.au/national-affairs/elections/campbell-newman-orders-anna-blighs-husband-greg-withers-to-kill-green-schemes/story-fnbsqt8f-1226311864712
- Blunden, J., and D. S. Arndt (eds) (2013), State of the Climate in 2012, Bulletin of the American Meteorological Society, 94 (8), S1-S238.
- Brown, A. J. (2006), Federalism, Regionalism and the Reshaping of Australian Governance, in A. J. Brown & J. A. Bellamy (eds), Federalism and Regionalism in Australia: New Approaches, New Institutions? ANU E-Press, Canberra, pp. 11-32.
- Climate Commission (2012), *The Critical Decade: Queensland Climate Impacts and Opportunities*. CC, Canberra, http://climatecommission.gov.au/wp-content/uploads/Queensland-report_web_final-Dec.pdf
- Commonwealth Industrial Research Organisation (CSIRO) and the Bureau of Meteorology (2012) State of the Climate, CSIRO, Melbourne.

- Council of Australian Governments (COAG) (2011) Guide to Intergovernmental Agreements, Department of Prime Minister and Cabinet, Canberra. http://www.coag.gov.au/intergov_agreements/index.cfm
- COAG (2007) National Climate Change Adaptation Framework, COAG, Canberra.
- COAG Standing Council on Environment and Water (CSCEW) (2013) *About the Council*, Canberra, http://www.scew.gov.au/about_us#About_the_Council
- Council of Mayors (South East Queensland) (2011) About the Council of Mayors (SEQ), Brisbane. http://www.councilofmayorsseq.qld.gov.au/About/
- Dedekorkut-Howes, A., J. Mustelin M. Howes & J. Byrne (2010) Tempering Growth: Planning for the Challenges of Climate Change and Growth Management in SEQ. Australian Planner. 47(3): 203-215
- Dedekorkut-Howes, A. & M. Howes (Forthcoming). Climate adaptation policy and planning in South East Queensland in *Responding to climate change: lessons from a hotspot.* Paul Burton (ed.). CSIRO Publishing.
- Department of Climate Change (DCC) (now Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education) (2013) Successful applicants, Local Adaptation Pathways Program Round 1. http://www.climatechange.gov.au/climate-change/adapting-climate-change/adaptation-program/local-adaptation-pathways-0
- DCC (2009) Climate Change Risks to Australia's Coasts: A first pass national assessment, DCC, Canberra. http://www.climatechange.gov.au/climate-change/adapting-climate-change/australias-coasts-and-climate-change/coastal-risks-0/climate
- DCC (2010) Climate Change in Australia: An Australian Government Position Paper, Australian Government, Canberra.
- Department of Environment (DoE) (2013) Repealing the Carbon Tax Call for public comment. Canberra. http://www.environment.gov.au/carbon-tax-repeal/consultation.html
- Department of Infrastructure and Transport (DIT) (2013) State of Australian Cities Report, DIT Major Cities Unit, Canberra.
- Department of State Development, Infrastructure and Planning (DSDIP) (2012a) Temporary State Planning Policy 2/12 Planning for Prosperity, Queensland Government, Brisbane.
- DSDIP (2012b) Draft Coastal Protection State Planning Regulatory Provision: Protecting the Coastal Environment, Queensland Government, Brisbane,
- DSDIP (2013) Draft State Planning Policy, Queensland Government, Brisbane.
- England, P. (2007) Climate Change: What Are Local Governments Liable for? Issue Paper 6. Urban Research Program, Griffith University, Brisbane. http://www.griffith.edu.au/__data/assets/pdf_file/0011/48566/urp-ip06-england-2007.pdf
- Ghazarian, Z. (2012) COAG could hurt the Gillard government, The Conversation, (April 13), Melbourne. http://theconversation.edu.au/coag-could-hurt-the-gillard-government-6389
- Gold Coast City Council (GCCC) (2009) Climate Change Strategy 2009-14, DCC & GCCC, Southport.
- GCCC (2011) History, GCCC, Bundall. http://www.goldcoast.qld.gov.au/t_standard2.aspx?pid=1442
- GCCC (2013a) The Gold Coast, http://www.goldcoast.gld.gov.au/thegoldcoast/default.html
- GCCC (2013b) Community Profile. http://profile.id.com.au/gold-coast/home
- GCCC (2013c) Community Profile: Service Age Groups. http://profile.id.com.au/gold-coast/service-age-groups
- GCCC (2013d) Community Profile: Dwelling Type. http://profile.id.com.au/gold-coast/dwellings
- GCCC (2013e) Community Profile: Industry Sectors of Employment. http://profile.id.com.au/gold-coast/industries
- GCCC (2013f) Community Profile: Household Income. http://profile.id.com.au/gold-coast/household-income
- Grant, W. (2013) There's no place for politeness when you're fighting a fire. The Conversation (October 22). https://theconversation.com/theres-no-place-for-politeness-when-youre-fighting-a-fire-19370
- Howes, M. (2013) What firefighters say about climate change. The Conversation (October 23). https://theconversation.com/what-firefighters-say-about-climate-change-19381
- Howes, M. (2005) Politics and the Environment: Risk and the role of government and industry, Allen & Unwin, Sydney/ Earthscan, London.
- Howes, M. & A. Dedekorkut-Howes (2011) Climate Adaptation and the Australian System of Government: The Gold Coast Example, in K. Crowley & K. Walker (eds), Environmental Policy Failure? Learning from Australian Studies. Tilde University Press: Melbourne. Chapter 9, pp. 116-130.
- Howes, M., D. Grant-Smith, K. Reis, K. Bosomworth, P. Tangney, M. Heazle, D. McEvoy & P. Burton. (2013) Rethinking Disaster Risk Management and Climate Change Adaptation: Final Report, National Climate Change Adaptation Facility, Griffith University: Brisbane.

- Hunt, G. (2013) Coalition commits funding to National Climate Change Adaptation Research Facility. Media release by the Shadow Minister for Climate Action, Environment and Heritage (August 24): Canberra.
 - http://www.nccarf.edu.au/sites/default/files/research_content_downloads/Greg%20hunt%20press%20release.pdf
- Intergovernmental Panel on Climate Change (IPCC) (2012) Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: A special report of Working Groups I and II of the Intergovernmental Panel on Climate Change. [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.).] Cambridge University Press, Cambridge, UK.
- IPCC (2007) Climate Change 2007: Impacts, Adaptation and Vulnerability, Contribution of Working Group 2 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. [M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson (eds)] Cambridge University Press, Cambridge, UK.
- Ironside R (2012) Three State Government agencies closed with up to 50 workers made redundant. Courier Mail. May 18, Brisbane.
- Jacques, P., R. Dunlap & M. Freeman (2008) The organisation of denial: Conservative think tanks and environmental scepticism, Environmental Politics, 17:3, 349-385.
- Liberal National Party (LNP) (2012a) 'Policies'. LNP, Brisbane.
- LNP (2012b) 'Property and Construction Strategy'. LNP, Brisbane.
- LNP (2012c) 'Protecting the Scenic Rim'. LNP, Brisbane.
- Local Government and Other Legislation Amendment Bill 2012 (Qld). Queensland Parliament, Brisbane.
- Metcalf, J. (2013) Axing the Climate Commission splits Australians from science. The Conversation (September 19). https://theconversation.com/axing-the-climate-commission-splits-australians-from-science-18425
- Nicholls T (2012) 'State Budget 2012-13: Budget Speech'. Budget paper number 1. Queensland Government, Brisbane.
- Local Governments for Sustainability (formerly the International Council for Local Environmental Initiatives (ICLEI)) (2011) About ICLEI, Bonn. http://www.iclei.org/index.php?id=about
- Low Choy, D., S. Serrao-Neumann, F. Crick, G. Schuch, M. Sanò, R.i van Staden, O. Sahin, B. Harman & S. Baum (2012) Adaptation Options for Human Settlements in South East Queensland Main Report, unpublished report for the South East Queensland Climate Adaptation Research Initiative, Griffith University. https://www.terranova.org.au/repository/adaptation-options-for-human-settlements-in-south-east-queensland-main-report
- National Climate Change Adaptation Research Facility (NCCARF) (2013) National Research Grants Program. http://www.nccarf.edu.au/research/thematic-research-grants
- Office of Climate Change (2011) Climate Change: Adaptation for Queensland Issues Paper, DEHP, Brisbane.
- Pearse, G (2009) Quarry Vision: Coal, climate change, and the end of the resources boom, Quarterly Essay, vol. 33, pp. 1-122.
- Queensland Electoral Commission (QEC) (2012) 2012 State General Election Summary of Results, Queensland Government, Brisbane.
- Queensland Government. [1978] (2009) Cabinet Minutes 1978 Important Decisions. Short summary of some of the major decisions of the 1978 Queensland Cabinet Released to the public 1 January 2009, Dr David Solomon AM. Queensland State Archives: Brisbane. http://www.archives.qld.gov.au/Researchers/CommsDownloads/Documents/1978CabinetMinutes
- ImportantDecisions.pdf
 Queensland Government (2011) Creation of a State, Brisbane. http://www.qld.gov.au/about/about-
- <u>queensland/history/creation-of-state/</u>
 Queensland Government (2012) An important announcement form the Climate Smart home service, Brisbane.
- Queensland Parliament (2012) Hansard, Record of Proceedings (Proof) for Thursday, 13 September. Brisbane.
- Rolfe, J., P. Bishop, L. Cheshire, M. Howes, G. Lawrence, T. Liebrecht, B. Loechel, P. Oliver, S. Yee. (2009) Engaged Government: A study of government-community engagement for regional outcomes Final Report, Central Queensland University, Rockhampton.
- Spearritt, P. (2009) The 200 km City: Brisbane, the Gold Coast, and Sunshine Coast, Australian Economic History Review, 49(1): 87-106.
- Stern, N (2006) Stern Review on the Economics of Climate Change, HM Treasury/Cabinet Office, London.

- Sydney Morning Herald (2005) Council sacked after property corruption probe, (May 25), Sydney. http://www.smh.com.au/news/National/Council-sacked-after-property-corruptionprobe/2005/05/25/1116950735308.html
 Toyne, P. (1994) The Reluctant Nation, ABC Books, Sydney.
- Tranter, B. (2011) Political divisions over climate change and environmental issues in Australia, Environmental Politics, 20:1, 78-96
- United Nations Environment Program (UNEP) (2012), Global Environmental Outlook 5, UNEP, Nairobi.
- Westthorp, T. (2012) Report shows climate change danger, Gold Coast Bulletin. (September 27). http://www.goldcoast.com.au/article/2012/09/27/438737 gold-coast-news.html