

Local Government Level Climate Change Adaptation and Disaster Resilience in Queensland

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Abstract: As climate change is increasing the frequency and severity of natural disasters resilience is becoming more and more important. While the need for an intergovernmental approach to adapt to climate change impacts and achieve disaster resilience is widely acknowledged, higher levels of government often delegate the responsibility to local governments without much guidance or support.

This paper examines local level barriers to climate change adaptation policies and resilience practice in Queensland, Australia through policy review and a survey of Queensland local governments on how they coordinate their planning activities at different levels. Specifically, the survey asks the respondents the severity of the risks natural disasters and climate change pose to their local governments, the actions they are undertaking to deal with them, the barriers they encounter as well as the mechanisms they use for intergovernmental coordination. The results will help identify the weaknesses of the current planning system in responding to the challenges of disaster resilience and climate change adaptation and the opportunities for improving the ways we plan and coordinate planning to improve resilience in advance of disasters so as to help speed up recovery when they occur.

Keywords: *Climate change adaptation; disaster resilience; barriers; local government; Queensland*

Introduction

More than 80 percent of Queenslanders live on the coast (DERM 2012). Coupled with rapid population growth and resulting development pressure, climate change impacts such as increasing annual average temperatures, decreasing rainfall patterns, increasing sea levels and intensity of storms and cyclones pose great risks to Queensland's lifestyle, environment and economy (DERM 2009). The Intergovernmental Panel on Climate Change (IPCC) has identified South East Queensland (SEQ) as one of the hotspots of high vulnerability with potentially large risks to coastal development by 2050 under a medium emissions scenario (Reisinger et al. 2014). According to a report by the Department of Climate Change and Energy Efficiency (2011), nationally Queensland has the highest number of residential and light industrial buildings and the greatest value of existing road infrastructure at risk from a sea level rise of 1.1 meters (high end scenario for 2100). This results in the greatest combined value of commercial, light industrial, transport and residential infrastructure at risk, in terms of both quantity and 2008 replacement value (DCCEE, 2011).

The 2011 floods highlighted Queensland's vulnerability to flooding and similar disasters. Climate change will increase the frequency and magnitude of such events and will have a variety of other impacts. To deal with these impacts governments at all levels need to be prepared and work together. This paper examines the efforts of Queensland local governments in improving their disaster resilience and responding to climate change impacts. Following a review of local governance and climate adaptation policies in Queensland to set the context local barriers to adaptation are discussed. Then the results of a survey of Queensland local councils on intergovernmental coordination and barriers to disaster resilience and climate adaptation at the local level are presented.

Background

Local Councils in Queensland

Compared to many other countries, local governments in Australia have less power, where services such as education, health, policing, utilities (water, sewerage), fire protection, public transport, and social housing, are provided by state governments. While there are many advantages to this system (greater equality of service provision, less socio-economic fragmentation and local competition, possibility of higher level of state intervention), local governments at times feel powerless to tackle the challenges they face (Dedekorkut-Howes and Mayere-Donohue 2009). The removal of climate adaptation policies at the state level and shifting the responsibility to local governments means uneven local adaptation across the state due to ideological and capacity differences between councils.

Queensland, like the rest of Australia, has a single-tiered local government structure. The 78 local governments (77 councils and a town authority) (see Figure 1) cover the whole state and there is great

diversity between them. Because of the stark contrast between rural and urban Australia, local government areas come in many different forms. City councils cover predominantly urban areas, shire councils cover predominantly rural areas and regional governments are somewhere in between. Aboriginal (indigenous) councils have specific additional functions to other local governments because of the need to manage land trusts and particular changes when they were established as indigenous councils. Half of the councils in the state are coastal and highly vulnerable to natural disasters and impacts of climate change.

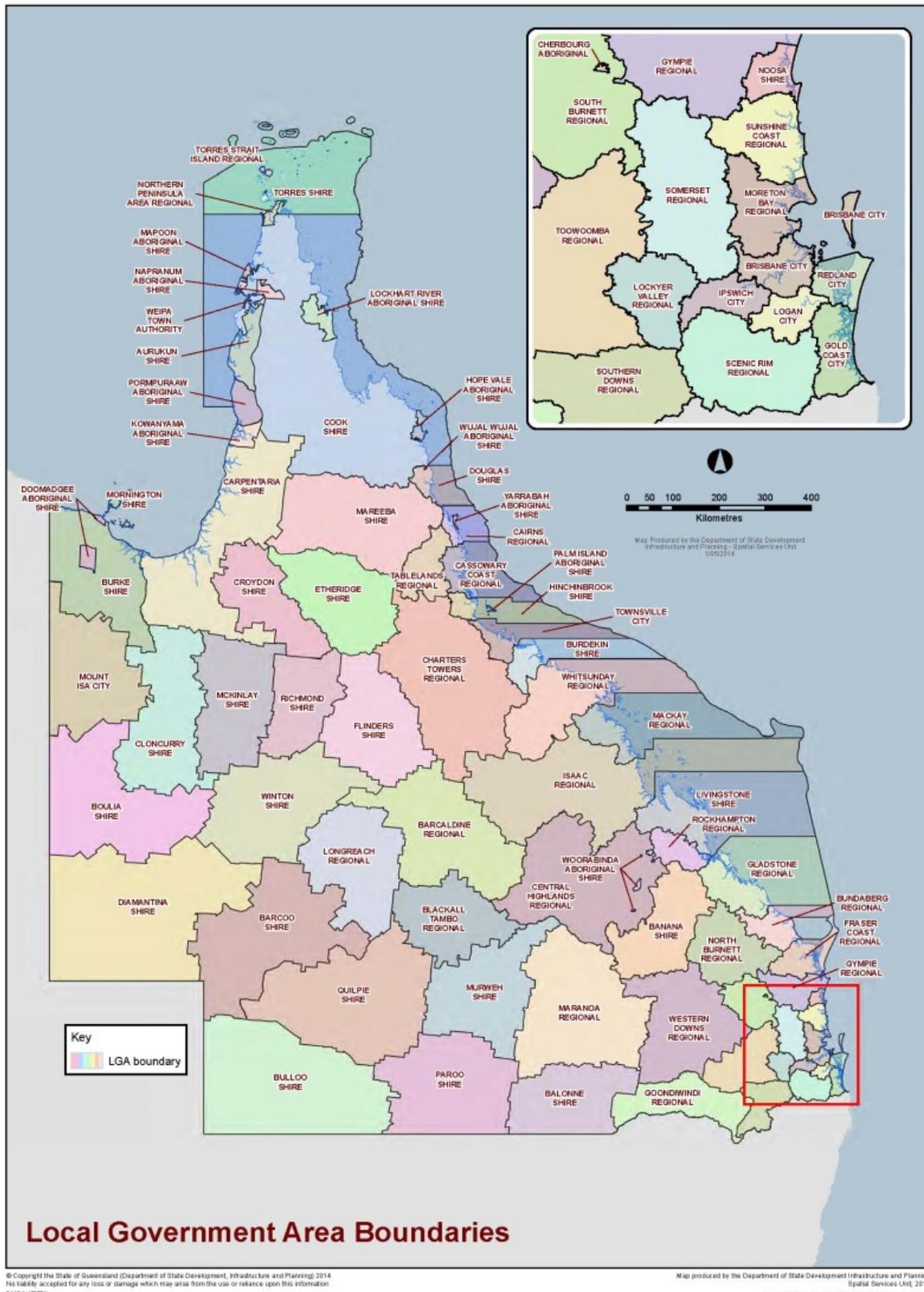


Figure 1. Queensland Local Government Areas (DILGP 2015a)

There is also great diversity in the size of the councils, from the relatively small but densely populated city councils to the larger but more sparsely populated Shire councils to the (see Table 1). In terms of geographic area, the largest of the coastal local governments (Cook Shire) covers an area of 106,168

km², more than one and a half times larger than the state of Tasmania and slightly larger than Kentucky and Bulgaria, while the smallest one (Weipa Town Authority) is barely 11 km². The two most populous councils of the nation, Brisbane and Gold Coast, cover 1326 km² and 1333 km² respectively, approaching the area of Greater London at 1,572 km² (although with a much lower population density). Of the governments with available information on the number of employees, Brisbane is the largest with over 7500 full time equivalent personnel (DILGP 2015b), while Croydon Shire is the smallest with a staff of 33 serving a population of 324. Clearly, these councils have very different patterns of population density and levels of vulnerability to natural disasters and climate change impacts, as well as differing capacities of adapting to them (Dedekorkut-Howes and Sloan 2012).

Table 1. Overview of Queensland coastal local governments^a

Council type	Number	Average land area ^b (km ²)	Area range (km ²)	Average population ^c	Population range
City Council	4	1,734	537-3,738	487,685	144,936-1,079,392
Regional Council	14	11,087	491-58,870	102,017	1,412-389,684
Shire Council	8	28,506	885-106,168	5,467	566-18,535
Aboriginal shire Council	9	1,610	11-4,445	1112	270-2,739
Town Authority	1	10.9	-	3,400	-
Total	36	11,241	11-106,168	95,448	270-1,079,392

^a This table uses data from the 2011 census, de-amalgamations that took place in 2013 are not reflected here, but this does not significantly affect the overall picture.

^b ABS, 2011

^c 2012 figures (OESR, 2012)

Climate Adaptation Policies in Queensland

Until 2012, all levels of government had plans and policies in place to deal with the impacts of climate change. National level policies emphasized intergovernmental coordination and there was a statewide policy framework for transitioning to a more sustainable and climate friendly economy (Howes and Dedekorkut-Howes 2012). The statutory *Queensland Coastal Plan* required taking climate change impacts into account (i.e. a sea-level rise factor of 0.8 meters and an increase in the maximum cyclone intensity by 10 per cent by the year 2100) in areas identified as hazardous. It also required local government authorities to prepare a coastal hazard adaptation strategy for areas that are at risk and incorporate these strategies into their planning scheme within five years (Dedekorkut-Howes and Howes 2014). This plan was intended to inform regional plans, local government planning schemes and decisions on development applications as well as provide detailed guidance on how to design and locate development to avoid coastal hazard risks. It aimed to keep coastal hazard risk areas free of permanent development by not allocating new land for future urban development within such areas. It also included measures to ensure that developments that must occur within these areas, and in areas where previous urban development allocations had been made, were designed and located to minimise coastal hazard risks (Dedekorkut et al. 2010).

South East Queensland (SEQ), the most populated part of the state, had a statutory regional plan (*South East Queensland Regional Plan 2009-2031*) which not only included a section on 'Sustainability and Climate Change' and considered the impacts of climate change throughout the other sections, but also called for the preparation of a separate regional *Climate Change Management Plan*. This latter plan was released in draft form in 2009 and was followed by a discussion paper in 2011, but neither were put into effect before the advent of the new state government in 2012 (Dedekorkut-Howes and Howes 2014).

In 2012, there was a change of government at both state and national levels to more conservative parties that changed policy direction about climate change. One of the earliest policy changes suspended parts of the *Queensland Coastal Plan* that required coastal development to consider the projected impacts of climate change such as a sea-level rise and an increase in the maximum cyclone intensity. Its successor transferred the task of land-use planning and development in coastal areas to the new *State Planning Policy*, which does not itself address climate change but mentions climate variability (Howes and Dedekorkut-Howes 2016). Yet another change in state government in early 2015 created significant uncertainty about the future direction of these policies.

With the state government pulling back from climate adaptation policies after the 2012 election the responsibility shifted to local governments. Interestingly, Moreton Bay Council, which included a 0.8-metre sea level rise in its draft planning scheme (effectively barring any development below that water mark), was directed by the former conservative government's deputy premier Jeff Seeney 'to remove any assumption about a theoretical projected sea level rise' to protect the rights of existing property owners (Solomons and Willacy 2014). This caused concern and confusion among other councils that were contemplating similar measures as well as waterfront property owners (Kerr 2014).

Barriers to Climate Change Adaptation Policies at the Local Level

At the time that the *Queensland Coastal Plan* required coastal local councils to develop coastal hazard adaptation strategies only five councils had adopted climate strategies (Brisbane, Cairns, Gold Coast, Redland and Sunshine Coast), with a further one in preparation (Moreton Bay). Previous research results show that certain characteristics of communities and local governments might explain why some local governments are more active in responding to the threats posed by climate change and disasters than others. For example, local governments that have a climate change plan in Queensland tend to be located in areas of high risk of inundation, in a region that has a statutory regional plan with adaptation measures and are among the most populous local governments in the state (Dedekorkut-Howes and Sloan 2012).

The literature and policy reviews conducted prior to the survey identified a number of barriers to intergovernmental coordination, disaster resilience and climate change adaptation. In terms of coordination between governments, Bajracharya et al. (2011) reported that Queensland councils noted their lack of control over the location of state infrastructure and facilities, where this resulted in inconsistencies with local planning schemes and/or subsequent exposure of this infrastructure to risks that were locally acknowledged. Lack of appropriate capacity and skills is cited often in the literature as a barrier faced by local governments in responding to the impacts of climate change (Nurse-Bray 2010) or improving disaster resilience (Deyle et al. 2008). This might be an important factor for less populous councils with fewer resources, which are unlikely to have the necessary capacity and skills to tackle such a complicated problem in-house. Further complicating the issue is the fact that some of the smaller councils are indigenous. When community government functions were handed over to aboriginal councils in the 1980s under self-management, little training, support and capacity building was provided (Limerick 2010). With the additional responsibilities they have due to the nature of their constituency, these councils are already resource stressed delivering the services required of them. Aboriginal councils were brought to mainstream council status in 2004, however they still need capacity building to be able to tackle all their responsibilities.

Methods

The survey instrument comprised three main sections addressing intergovernmental coordination, disaster resilience and climate change adaptation. The survey questions were designed based on the findings of the literature and policy reviews and included both open and closed-ended questions. Respondents were asked about the mechanisms they used for intergovernmental coordination, severity of the risks natural disasters and climate change pose to their councils, the actions they were taking to deal with them, and the barriers they encountered.

The survey was web-based and self-administered through the Survey Monkey software. The targeted respondents were managers/directors of strategic planning in each council. The survey was pretested to make sure that the questions were understood correctly, they were measuring the variables they were intended for, and that the categories in closed-ended questions were exhaustive. Following Dillman's (1978) suggestions, pretesting was done with colleagues and the full survey was administered in four waves from December 2013 to September 2014 to maximize the response rate. The survey received an overall response rate of 50% with similar rates for coastal and noncoastal councils (see Table 2). However, city and regional councils that were more urban and populous (and consequently had more staff) had almost double the response rate (66%) of the staff and resource poor shire and aboriginal shire councils (35%).

Table 2. Survey response rate

Council Type	Location	Total Number of Councils	Response Rate
City Council	Coastal	4	3 (75%)
	Non-Coastal	3	2 (67%)
Regional Council	Coastal	14	9 (64%)
	Non-Coastal	16	11 (69%)
Shire Council	Coastal	11	5 (45%)
	Non-Coastal	17	4 (24%)
Aboriginal Shire Council	Coastal	9	3 (33%)
	Non-Coastal	3	2 (67%)
Town Authority	Coastal	1	0 (0%)
	Coastal	39	20 (51%)
Total	Non-Coastal	39	19 (49%)
	All	78	39 (50%)

Results

Intergovernmental Coordination

In two closed questions, respondents were asked to identify the frequency of engagement and the mechanisms they most often used to engage in intergovernmental coordination activities when making planning decisions. Results indicated that Queensland councils coordinated their planning activities with state government agencies more often than with other local councils (see Table 3). This is not surprising considering that the state government reviews and approves local planning schemes.

Table 3. Frequency of coordination of activities with other local councils and state government agencies when making planning decisions

	With other local councils	With state government agencies
Always	0%	5%
Very frequently	21%	61%
Occasionally	54%	26%
Rarely	23%	8%
Never	2%	0%

From the list provided in the closed-ended question, the engagement mechanisms most often used were *membership in appropriate regional organizations* (74%), *information sharing* (67%) and *ad hoc interagency staff communication* (59%). Other commonly used mechanisms used included regular meetings (46%), interagency task forces/committees (38%), joint planning and formal reporting (both 33%), review of each other's plans (31%) and intergovernmental agreements (26%).

Respondents were then asked about the barriers to intergovernmental coordination. In order not to limit the responses to given categories, participants were first asked to list the barriers to intergovernmental coordination they had experienced in an open-ended question. Following this, they were asked to rank a provided list of barriers to more effective intergovernmental coordination. In response to the open-ended question, the most common barrier identified was *different political agendas and priorities*. Other significant factors mentioned include *the geographic distance of higher level governments*¹ and their subsequent *lack of knowledge on local issues, having access to the right people in these agencies, short consultation times and limited time to coordinate activities*. The ranking of barriers was consistent with the findings of the open-ended questions in the most important barrier. An overwhelming majority of the responding councils (almost 90%) ranked *different priorities of organizations* among the top three barriers (see Table 4) followed closely by *lack of communication*.

¹ Queensland is the second largest state in Australia and larger than Alaska. The state capital is located in the southeast corner, resulting in a distance of over 2000 kilometers for councils in the far north.

Table 4. Most important barriers to more effective intergovernmental coordination

Barriers	% Councils Ranking in Top 3	Rank Range ^a	Average Rank ^a
Different priorities of organizations	89%	1-6	2
Lack of communication	76%	1-5	3
Technical issues	51%	1-6	3
Lack of incentives to coordinate	32%	1-6	4
Belief that coordination doesn't affect performance/outcome	24%	1-7	4
Turf protection	24%	1-8	5
Lack of sanctions	3%	2-7	7

^a Including category "other"

When asked in what ways state agencies can help local councils to achieve greater resilience to disasters, survey respondents suggested funding, better communication and data, policy direction, and strategies and processes that facilitate local government.

Disaster Resilience and Climate Change Adaptation

This section of the survey sought to elicit views and responses to the related areas of disaster resilience and climate change adaptation. With the election of conservative governments in 2012, climate change was removed from the government policy the agenda. While the threats and responses to, natural disasters and climate change are overlapping, elected officials and the public may be more likely to accept the same measure when it is presented as increasing disaster resilience rather than improving climate adaptation. The survey deliberately separated the questions on disaster resilience and climate adaptation to discover whether this disconnect would be observed at the local government level.

Perceptions of the need for disaster resilience and climate change adaptation

Respondents were first asked to rank nine policy areas in order of importance in order to ascertain the level of importance placed on disaster resilience and climate change adaptation in relation to other areas of activity.

One respondent noted their 'Council considers all of the above priorities and would not usually seek to rank them in order of importance' and another commented that 'The top five policy areas are really all considered equally and given different weight depending upon the circumstances. It is not possible really to allocate a rank of these policy areas - it is not that clear cut'. However, these were minority opinions, where the rest of the councils did not express any difficulties in prioritizing policy areas.

The survey responses indicated that for the majority of the councils the most important policy area was either *economic development* or *infrastructure* (often one followed by the other) (see Table 5). Beyond this, *disaster resilience* had a much higher priority than *climate change adaptation*, with 43% of councils ranking *disaster resilience* in the top three policy areas (ranked first by 16%) and only 16% of councils ranking *climate change* in the top three policy areas (ranked first by 8%).

Table 5. Most important policy areas for the council

Policy areas	% Councils Ranking in Top 3	Rank Range ^a	Average Rank ^a
Economic development	76%	1-8	2
Infrastructure	68%	1-10	3
Disaster resilience	43%	1-9	4
Transport	35%	1-9	5
Housing	20%	2-9	6
Environmental protection	19%	1-8	5
Climate change adaptation	16%	1-10	7
Health care	14%	2-9	6

^a Including category "other"

In two statement agreement questions, respondents were then asked to identify the level of threat posed to their council areas by both natural disasters (Figure 2) and climate change (Figure 3). An overwhelming majority of the respondents (81%), most of whom were planners, agreed that natural disasters were a serious or very serious threat to their council area. However, climate change was perceived as an equally serious threat by less than half of that figure (39%). The results also highlight that coastal councils perceive the threats of both natural disasters and climate change more seriously than noncoastal councils, most likely due to their much higher vulnerability.

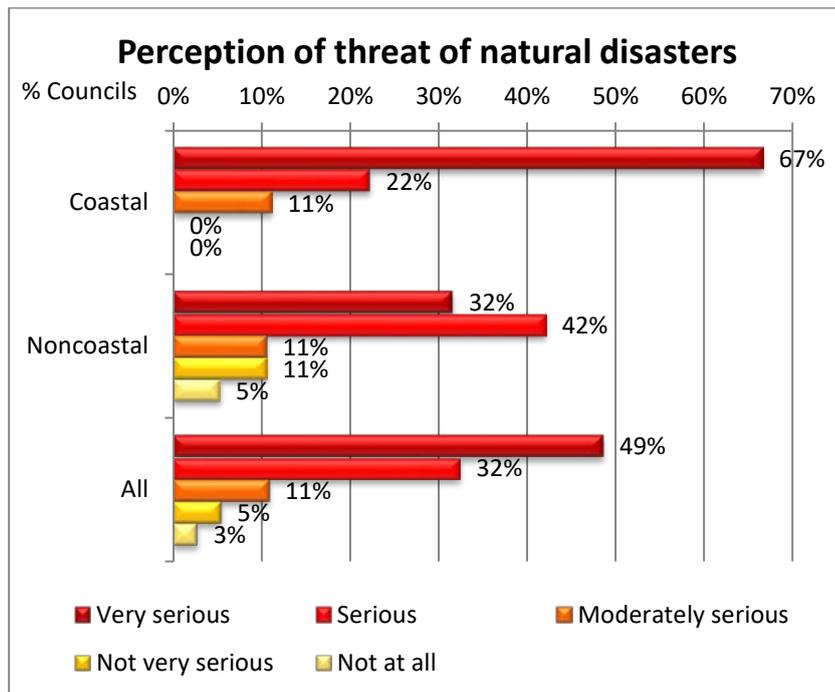


Figure 2. Perception of threat of natural disasters

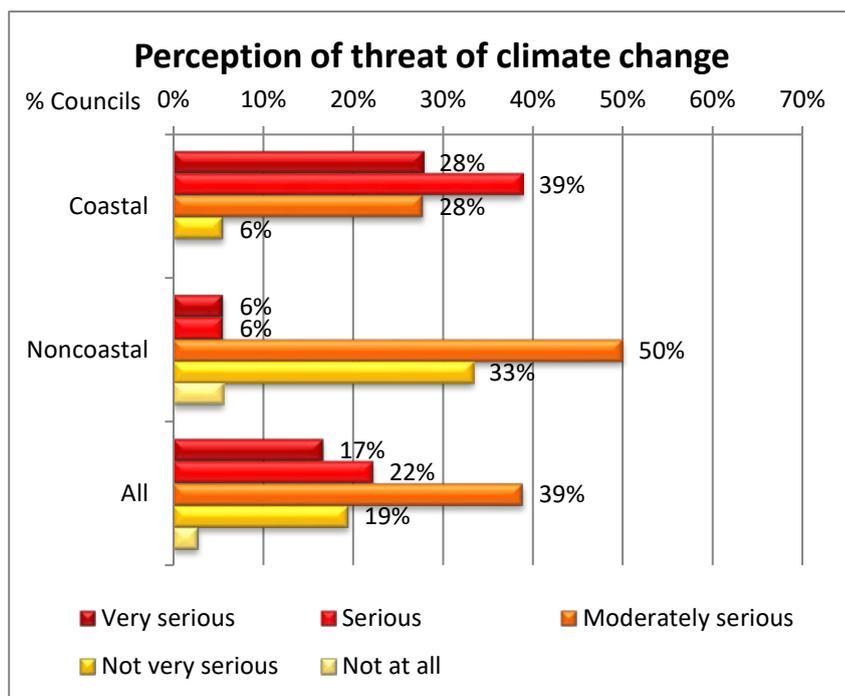


Figure 3. Perception of threat of climate change

Respondents were then asked to select from a list the type(s) of natural disaster they considered their council area to be most vulnerable to. The results (see Table 6) show that all of the identified types of disaster are climate related, in that they are expected to increase in either frequency and/or severity under predictions of future climate change.

Table 6. Top five disasters councils feel most vulnerable to

Rank	Coastal Councils	Noncoastal Councils	All Councils
1	Cyclones 78%	Bushfires 95%	Bushfires 81%
2	Storms 72%	Droughts 89%	Inland floods 78%
3	Storm surges 72%	Inland floods 84%	Storms 68%
4	Inland floods 72%	Storms 63%	Droughts 62%
5	Bushfires 67%	Heatwaves 37%	Cyclones 49%

The disaster prone nature of Queensland accounts for the ranking of disaster resilience among top three policy areas by nearly half the councils. While climate change seems to outrank health care and social services it is important to reiterate that in Australia these kinds of services are mostly provided by state governments. This means in essence within the domain of local governments climate change ranks at the bottom of the list. In fact, excluding the category “other” climate change adaptation was at the bottom of the list among most important policy areas for 43% of the councils. The wide range of rankings illustrates the diversity of councils in terms of vulnerability as well as different needs.

The difference between perceptions of threat of natural disasters versus climate change adaptation was striking. This indicates a serious disconnect in terms of the impact of climate change on natural disasters even though the top five disasters councils indicated they are most vulnerable to are all climate related (see Table 6).

Disaster resilience measures and barriers

When asked to identify from a list the measure(s) they were taking in response to the threat of natural disasters, most councils indicated utilizing soft measures. This included *policy and strategy development* (improving emergency response planning, adopting plans and policies to respond to specific disasters, as well as changing land use regulations and building codes to minimize risk), *developing public awareness and education campaigns*, *capacity building* and *building an information database* to support better decision making (see Table 7). Replacing, retrofitting or building new infrastructure for hazard mitigation was used in less councils comparatively. Almost all of the survey

respondents (97%) believed that the measures they are undertaking would improve the disaster resilience of their community to some extent.

Table 7. Most common disaster resilience measures used by councils

Measures	% Councils
Improving emergency response planning	89%
Adopting plans and policies to respond to specific disasters (e.g. flooding)	81%
Developing public awareness campaigns	78%
Capacity building	67%
Developing public education campaigns	64%
Changing land use regulations to minimize risk	58%
Replacement of critical public infrastructure	50%
Building an information database to support better decision making	50%
Building new infrastructure for hazard mitigation (e.g. dams, levees, seawalls)	47%
Retrofit/upgrade of existing buildings and infrastructure	31%
Clearing vegetation around homes	31%
Changing building codes to ensure more resilient buildings	28%
New institutional arrangements to improve disaster resilience	25%
Monitoring existing buildings and infrastructure for compliance	17%
Relocation of buildings and infrastructure away from high risk areas	14%

Responses to both open and closed-ended questions show that limited funding and resources are the most important barriers to increasing disaster resilience at the local level. The top three barriers councils indicated in response to the closed-ended question were resource related: *limited funding*, *insufficient staff or staff time* in the council, and *lack of other resources* (see Table 8). In fact, funding was mentioned by almost all the councils (91%), and has a score almost 35% higher than the next most common barrier.

Table 8. Barriers to local disaster resilience

Barriers	% Councils
Limited funding	91%
Insufficient staff or staff time in the council	57%
Lack of other resources	46%
Lack of coordination with other levels of government	43%
Competing local issues of greater perceived priority	43%
Lack of a common understanding of resilience	40%
Limited local capacity (e.g. expertise)	40%
Short-term political and fiscal costs combined with uncertain future benefits	37%
Lack of clarity about the roles of the stakeholders	37%
Lack of communication between stakeholders	34%
Pre-existing local development management measures that are perceived as entitlements to specific land uses and densities	23%
Lack of coordination with other local governments	11%
Lack of political will	11%
Lack of leadership	11%
Lack of engagement of some stakeholders	9%
The behavior of the media	3%

The disaster measures identified here are consistent with an earlier study that examined the content of climate adaptation plans of four Queensland councils (Cairns, Gold Coast, Redland and Sunshine Coast) and found that responses mainly focused on protecting coastal development from erosion and other climate hazards and building community resilience, supplemented by 'soft' environmental actions protecting nature (Zeppel 2012). The barriers to local resilience identified indicate that local governments need resources and capacity to be able to do more.

Climate change adaptation measures and barriers

With regards to climate change adaptation, about half (54%) of the councils responding to the survey

said they incorporated climate adaptation measures into their local planning scheme and other plans. When asked to identify from a list the adaptation measure(s) they were taking in response to the threat of climate change, the most common measure identified was *reviewing and updating current plans* (64% of the councils). Other measures used included *promoting alternative water or energy sources or alternative activities to reduce usage* (43%); *providing information to community or particular groups on climate change risks* (39%); *reviewing and updating design guidelines to reduce risk and collecting data and gathering information to make better decisions* (both 36%). More concrete infrastructure related hard measures were used less often: *changing the design and operation of waste management system* (32%) and *water supply infrastructure* (21%); *exploring alternative water sources to diversify water supply* (21%); *retrofitting new designs to existing structures* (14%); *relocation of activities from highly vulnerable sites* and (11%) and *changing the design and operation of transport infrastructure* (7%).

When asked to list barriers to climate adaptation they have experienced most council staff indicated *climate skepticism* and *lack of convincing scientific data*. When prompted to choose from a list, similar to disaster resilience, *lack of funding* was the barrier most councils indicated (Table 9). However, this was closely followed by *councilors, public and council staff lacking knowledge or awareness of climate change risks*. *Lack of information and policy inconsistencies between different levels of government*, *lack of technical capacity in the council* and *lack of commitment from elected members* were among the barriers more than half of the councils experienced.

Table 9. Most common barriers to local climate adaptation

Barriers	% Councils
Lack of funding	76%
Councilors lacking knowledge or awareness of climate change risks	69%
Public lacking knowledge or awareness of climate change risks	69%
Council staff lacking knowledge or awareness of climate change risks	66%
Lack of appropriate government guidance	62%
Lack of information	62%
Policy inconsistencies between different levels of government	59%
Lack of technical capacity in the council	55%
Lack of commitment from elected members	52%

Consistent with the findings of previous research, the *lack of a statutory requirement for local authorities to tackle climate change* was noted by almost half of the councils (45%) as a barrier to local climate adaptation efforts. A case in point is the replacement of the *Queensland Coastal Plan* which required coastal councils to develop strategies to deal with coastal hazards. In the absence of such a requirement only one sixth of the coastal councils adopted climate change strategies. Since the responsibility for adapting to sea level rise in Australia rests principally with local governments through spatial planning instruments, as the most recent IPCC report warns, the removal of long-term benchmarks gave local authorities broad discretion to develop their own adaptation plans in Queensland (Reisinger et al. 2014).

Conclusions

This study examined the role of intergovernmental coordination in local disaster resilience and climate adaptation. While responding councils indicated that they coordinate their planning activities more frequently with state government agencies than other local councils, a lack of communication was one of the major barriers to intergovernmental coordination and area of improvement they identified. In spite of indicating use of coordination mechanisms such as membership in appropriate regional organizations and ad hoc interagency staff communication, respondents also highlighted the geographic distance of higher level governments and their subsequent lack of knowledge on local issues, difficulty in accessing the right people in these agencies, short consultation times and limited time to coordinate activities as barriers. However, different political agendas and priorities of organizations was by far the most important barrier to effective intergovernmental coordination they identified.

Findings of this research indicate that climate change adaptation and disaster resilience are not top policy priorities for Queensland councils. In fact, climate change adaptation was at the bottom of the

list for 43% of the councils. Furthermore, compared to natural disasters, climate change is not perceived as a very serious a threat which is all the more striking in the light of the fact that top five disasters councils indicated they are most vulnerable to are all climate related. Due to their increased vulnerability coastal councils take both threats more seriously than noncoastal councils.

In responding to the threat of both natural disasters and climate change, most councils utilized soft measures such as policy and strategy development, though they did less for climate adaptation compared to disaster resilience. Most of the respondents of the survey believed that the measures they are undertaking would improve the disaster resilience of their community to some extent but since less was done for climate adaptation belief in improvement was also lower.

Limited funding was the most common barrier to both local disaster resilience and climate adaptation efforts. Other common barriers for disaster resilience were also resource related (lack of staff, staff time or other resources), whereas for climate adaptation a lack of knowledge and awareness of climate change risks by councilors, public and council staff was identified as a significant barrier. The survey results also highlight the importance of policy guidance by the state governments.

The findings of this research indicate that similar to the conservative federal government and the previous state government that was in power while the survey was under way local governments in Queensland also ignore the connection between climate change adaptation and disaster resilience. When it comes to improving both disaster resilience and climate change adaptation they expect more guidance and support from higher level governments in the forms of policy guidance, more funding, resources and capacity.

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