Climate Change Planning by Queensland Coastal Councils

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INTRODUCTION

The *Queensland Coastal Plan* (DERM, 2011) requires councils to prepare coastal hazard adaptation plans for the parts of their urban areas at risk from a projected sea level rise of 80cm by 2100. This poster reviews adaptation actions in climate change strategies prepared by four urban Queensland coastal councils (e.g. Cairns, Gold Coast, Redland, and Sunshine Coast), and two community-based climate adaptation action plans, for Bribie Island in Moreton Bay, and the Noosa Biosphere in the northern Sunshine Coast.

METHODOLOGY

The actions in these six climate change plans for Queensland coastal councils/regions are analysed for their adaptive response categories: *Emphasising Nature*, *Emphasising Development* and *Managed Nature* (Vasey-Ellis, 2009), along with *Emphasising Community*, and *Council Governance* of climate change. The six plans are:

- ***Cairns Regional Council Climate Change Strategy 2010-2015***
- ***Gold Coast City Council Climate Change Strategy 2009-2014***
- ***Redland City Council Climate & Energy Action Plan 2010-2015***
- ***Sunshine Coast Climate Change & Peak Oil Strategy 2010-2020***
  Council assets/services, development, environment **(n=27 coastal actions)**
- ***Noosa Climate Action Plan 2011***
  Coastal Management (n=12 actions); other coastal (n=6 actions)
- ***Climate Proofing Bribie: A Climate Adaptation Action Plan 2010***
  Shoreline Management (n=10 actions); Biodiversity (n=2 coastal)

Table 1. Adaptive Response Categories

Emphasising Nature
- **Relocate and prevent development**
- **Designate additional park protected land**
- **Create setback buffers**
- **Prevent unsustainable land use**
- **Create wetland buffers and revegetate vulnerable areas**

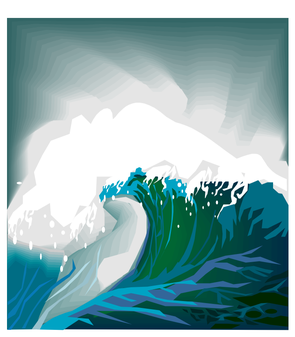
Emphasising Development
- **Private insurance for vulnerable properties**
- **Let developers accept full risk**
- **Elevate buildings and change building codes**
- **Build hard structures (such as dykes and levees)**

Managed Nature
- **Build artificial reefs**
- **Beach nourishment (or renourishment)**

Emphasising Community
- **Public access to open space and recreation areas**
- **Public consultation and engagement**
- **Health risks and safety issues**

Council Governance
- **Internal council processes (frameworks, leadership, policy, reports)**
- **Council staff training**

Source: Based on Vasey-Ellis (2009), Emphasising Community & Council Governance added by Zeppel (2011)



RESULTS

Table 2. Adaptive Responses in Queensland Coastal Climate Change Plans

Adaptive Categories	Noosa Bio-sphere	Bribie Island	Cairns*	Gold Coast City*	Sunshine Coast*	Redland City*	Total Actions (6 plans)	Council Actions* (4 plans)
Emphasising Development	16	4	4	4	6	6	40 (8.5%)	20 (9%)
Emphasising Nature	**88**	**52**	8	7	**19**	**47**	221 (46.7%)	81 (36.7%)
Emphasising Community	49	14	9	5	8	23	108 (22.8%)	45 (20.4%)
Council Governance	28	0	**15**	**19**	**19**	21	102 (21.6%)	74 (33.5%)
Managed Nature	0	1	0	0	0	1	2 (0.4%)	1 (0.4%)
Total Actions	181	71	36	35	52	98	473	221

Total actions by adaptation response categories were:

Emphasising Nature (46.7%)
Emphasising Community (22.8%)
Council Governance (21.6%)
Emphasising Development (8.5%)

Adaptive coastal actions in climate change plans were:

Sea Level Rise (n=16) Redland-12, Noosa-4
Storm Tide/Surge (n=12) Redland-11, Noosa-1
Coastal Inundation (n=12) Redland-9, Noosa-2, Sunshine Coast-1
Coastal/Shoreline Erosion (n=8) Bribie-3, Noosa-3, Sunshine Coast-2

CONCLUSION

Climate change planning and infrastructure responses by Queensland coastal councils mainly focus on protecting coastal development from erosion and other climate hazards, and building community resilience, supplemented by 'soft' environmental actions protecting nature. While some climate plans included actions for shoreline erosion, coastal inundation, and storm surges, only two plans addressed sea level rise impacts on buildings and land (i.e. Redland City, & Noosa Biosphere).

References
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