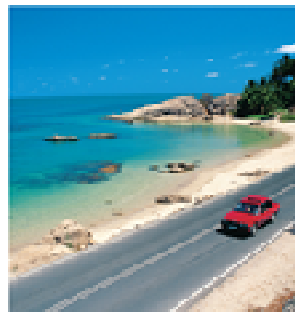
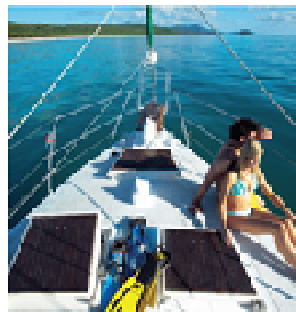


Whitsunday Regional Council Climate Change Adaptation Strategy 2016 – 2020



Whitsunday Regional Climate Change Adaptation Strategy

Strategy Aims

The Whitsunday Regional Council Climate Change Adaptation Strategy is designed to guide Council's response to the effects of climate change. The overall aims of the strategy are threefold:

1. **Empower resilience:** Support long term financial planning, asset management, strategic planning, emergency management and other key Council processes with consistent, timely and scientifically sound information related to climate change.
2. **Mainstream Adaptation:** Ensure that climate change adaptation is a core component of planning for a more resilient Whitsunday Region and mainstreamed into Council's functions and activities.
3. **Identify opportunities:** Ensure that Whitsunday Regional Council is well placed to benefit from economic development opportunities that may eventuate due to its proactive climate change adaptation and community resilience commitment.

This Strategy is for climate change adaptation only. The Whitsunday Regional Council's mitigation actions (that reduce greenhouse gas emissions) will be guided by other key documents. However the Strategy recognizes that climate change adaptation will ultimately have to occur in a carbon constrained economy.

Introduction

Climate change is one of the most difficult challenges facing local governments, who are at the coalface of the current and projected impacts.

The Whitsunday Region is exposed to a number of natural hazards, all of which are likely to be exacerbated by climate change. These direct hazards include tropical cyclones, extreme storms, landslides, riverine flooding, coastal erosion, heatwaves and bushfires.

Modelling done by the Bureau of Meteorology and the Commonwealth Scientific and Industrial Research Organisation in the recent Climate Change in Australia 2015 study show that climate change is projected to affect the Whitsunday Region.¹ The average annual projected temperature increase for the Whitsunday Region ranges from 0.5°C – 1°C by 2030 to 1.5°C - 3°C by 2050 (compared to the 1981-2010 average). The increase in the number of maximum temperature days is quite alarming. For example Proserpine currently has an average of 4 days per year where temperatures exceed 35°C. By 2030 this has been projected to increase to 8 – 20 days per year (with mean results of 10.7 days per year). By 2050 the number of days over 35°C increase to 12-47 (with mean results of 22 days per year over 35°C).

As well as increased temperatures the region will face changes to rainfall (with a range of -18% to +3% by 2030 and -24% to +1.4% by 2050); increased intensity of tropical cyclones and increases in sea level rise (the Queensland Government identifies 80cm increase by 2100, although it may be higher).

Many of the coastal settlements in the Whitsunday Region are especially susceptible to known risks that have in recent history caused damage to rural and residential properties and businesses. For example Bowen faces considerable risks from flooding from the Don River, which is one of the fastest flowing rivers in Australia. Together with other coastal communities, the Whitsunday Region is also exposed to tropical cyclones which can generate strong winds and dangerous storm tide conditions. All of these hazards are likely to increase under a changing climate.

As well as increased risk to natural hazards, the indirect risks present a range of challenges to the Council and the community it represents. These include:

- Insurance availability and affordability

¹ Bureau of Meteorology and the Commonwealth Scientific and Industrial Research Organisation (2015) Climate Change in Australia, available at <http://www.climatechangeinaustralia.gov.au/en/>

- Finance availability and affordability (e.g. mortgage availability)
- Water security (water quality and quantity)
- Food security
- Economic viability
- Litigation
- General health and wellbeing
- Impacts on the natural environment (and associated ecosystem services)²

The Whitsunday Region has a range of economic attributes that are particularly vulnerable to the direct and indirect impacts of climate change. In particular tourism (associated with the Great Barrier Reef) and sugar production are especially vulnerable to the effects of climate change. Managing the risks from climate change will help Council maintain a vibrant economy that supports job and wealth creation in the region. By providing resilient infrastructure and effective informed decision-making Council will also be able to help business capitalise on any opportunities that may also arise from climate change.

This Climate Change Adaptation Strategy aims to help guide Whitsunday Regional Council to implement its responsibilities under the Local Government Act (1993) (the Act). While it does not specifically mention climate change (or any other issue for that matter) the Act mandates that Local Governments, elected members (Councillors) and staff adhere to the Local Government Principles, which include 'sustainable development and management of assets and infrastructure, and delivery of effective services.' Other relevant responsibilities of Councillors and/or staff include:

- representing the current and future interests of the residents of the local government area; and
- the effective, efficient and economical management of public resources.

This Climate Change Adaptation Strategy also supports the way in which Council discharges its responsibilities in-line with Council's Corporate Plan 2014-2019. While the Climate Change Adaptation Strategy will support informed decision-making for most of the Corporate Plan 2014-2019 it will directly help Council inform and support decisions for the following Outcomes:

Outcome 2.1 Our region is active, healthy, safe and resilient.

Outcome 3.1 Our built environment is well planned, effectively managed and protects our region's heritage and character.

Outcome 3.2 Our natural environment is valued and sustainable.

Outcome 3.3 Our infrastructure supports our region's current and future needs.

Outcome 4.1 Our infrastructure enables economic development and facilitates investment opportunities.

Outcome 4.3 Our agriculture sector is sustainable and enjoys access to strong export and development opportunities.

Outcome 4.4 Our tourism and small business sectors are strong, sustainable and actively promoted.

The Whitsunday Regional Council is not acting alone in the implementation climate change adaptation actions. The Queensland Government is preparing the Queensland Climate Adaptation Strategy (Q-CAS), released in 2016 which aims 'to improve opportunities and reduce risks to our economy, environment, infrastructure and communities from current and future climate impacts.'³

In order to achieve the above in regards to climate change Council needs this Climate Change Adaptation Strategy to help it map out priorities for action, clarify roles and responsibilities, identify triggers for action, improve capacity, obtain relevant information and generally improve climate change adaptation governance.

² Edwards, I (2014) If my insurer says "no" what then? Queensland local government understanding of emergent climate change risk and implications for risk transferal mechanisms. Master of honours of environment dissertation, Griffith University.

³ For further information see <https://www.qld.gov.au/environment/climate/adapting/#qcas>

The Climate Change Adaptation Strategy Guiding Principals

This Climate Change Adaptation Strategy is the beginning of a climate change adaptation pathway. Council's response to managing the effects of climate change will be guided by the following five principles:

1. **Informed Decision-Making:** Use an adaptive management approach, by implementing a policy to outline Whitsunday Regional Council's position by continuing to review actions in the light of new information. Furthermore where possible Council will quantify attributes (e.g. assets, vulnerable population etc) exposed to the effects of climate change. Whitsunday Regional Council will make decisions based on the information supplied in the Whitsunday Regional Council Technical Climate Change Guidelines.
2. **Skilling up for the Challenges:** Ensure that Council's adaptive capacity is maintained to a level commensurate with adaptive treatment options. Where possible, project outsourcing to consultants should be minimised and done in a way that supports the increased capacity of Council to respond to the effects of climate change.
3. **Community Inclusion:** Maintain appropriate community and business participation, including awareness raising and education. Council recognises that sharing information reduces risk and will maintain a commitment to transparency of climate change information.
4. **Improving Climate Change Adaptation Governance:** Undertaking actions that improve adaptation governance and ultimately mainstream climate change adaptation into Council's activities.
5. **Utilise Synergies with Disaster Risk Reduction:** There are many synergies with climate change and disaster management. Council will, where practical, utilise the synergies between climate change and disaster risk reduction.

Priority Actions in the Strategy

This Climate Change Adaptation Strategy is a founding stone in Council's response to the effects of climate change. While the Strategy is intended to be a dynamic document that is reviewed frequently, the following activities have been identified by climate change adaptation experts as the priorities for action for the next five years:

1. Ensure Council is well placed to apply for and receive available grants. For example the LGAQ is distributing grants for Queensland's Climate Change (Coastal Hazards) Adaptation Program (\$12 million over the next three years). Other sources of funding may be available (e.g. Australian and State Government).
2. Create a climate change adaptation working group: Council will establish an internal climate change adaptation working group that has representatives from all departments. Where practical and required, the working group will also engage with representatives from State agencies, utilities, businesses and community groups.
3. Undertake an initial information gap analysis to identify the data it needs to quantify the exposure of Council assets and other community and environmental attributes to the effects of climate change.
4. Undertake an historical review of extreme weather events. This is to place the analysis of climate change in context and use historical examples to better understand the current risks.
5. Develop technical climate change guidelines to show climate change projections for the Whitsunday Regional Council area and update when relevant information is available.
6. Undertaking a scoping climate change risk assessment for Council and the community to identify projected climate change scenarios for the Whitsunday Region and identify vulnerable elements of the community, economy, environment and Councils operations. In particular the assessment should specify how climate change may affect the Outcomes identified in the Corporate Plan.
7. Undertake further detailed studies of Bowen to quantify attributes exposed to natural hazards and climate change (Council assets, residential and commercial properties). Lessons learned and methods refined in the detailed case study of Bowen can be replicated throughout the Whitsunday Region.

8. Improve the capacity of Council staff to undertake decision-making for issues associated with climate change. This may include training and /or extra-curricular studies for some staff members.
9. Engage the community and raise the awareness of climate change impacts and describe the range of climate change adaptation options. This will occur through community workshops, drop-in events, reports, website updates and social media announcements.
10. Identify specific risks to water security (water quality and quantity). Including a detailed assessment of the exposure of water assets to climate change and undertake an assessment of potable water supplies under climate change. Also undertake a study of planning and other mechanisms that can be used to improve water quality.
11. Undertake activities that foster regional and inter-governmental collaboration.
12. Identify adaptation options for the range of climate change risks, present the options to the community and select the most appropriate adaptation options.
13. Develop a Climate Change Plan which includes financial planning and clear implementation actions
14. Review the climate change adaptation governance baseline indicators and take measures to improve the performance.

Measuring Success

The following key performance indicators will help Council assess the success of the Climate Change Adaptation Strategy:

1. Specific consideration of climate change in the next or amended Corporate Plan;
2. The implementation of a climate change risk and/or vulnerability assessment;
3. Quantification of Council assets exposed to the effects of projected climate change;
4. Implementation of a climate change adaptation policy; and
5. Improvement on Councils Climate Change Adaptation Governance
6. The development of a Climate Change Plan