

CoastAdapt refresh

Updating the national coastal decision support platform

Anne Leitch

NCCARF, Griffith University

Anne.Leitch@griffith.edu.au



Australian Government



NCCARF

National
Climate Change Adaptation
Research Facility

UNIVERSITY of
TASMANIA



CoastAdapt

coastadapt.com.au

A national online platform for adaptation information and guidance for coastal managers

Designed for local governments
Useful for SMEs, NGOs, community groups, community, (newly elected councillors)

Australian Government funded

- 2014-2017: \$4.5M development and launch
- 2023-2024: \$800k update and refresh

The screenshot shows the CoastAdapt website homepage. At the top, there is a navigation bar with links for 'About CoastAdapt', 'Disclaimer', and 'Saved pages', along with a search bar and a 'Resource centre' icon. The main header features the CoastAdapt logo and a background image of a coastal landscape. Below the header, a prominent message reads: 'A changing climate in coastal Australia: Build knowledge, take action'. The main content area is organized into a grid of colorful tiles. The first row contains five tiles: 'What is climate change?' (green), 'Assess risks and impacts' (orange), 'Understand adaptation' (blue), 'Undertake adaptation' (purple), and 'Connect with the adaptation community' (yellow). The second row contains four tiles: 'Getting started' (blue), 'Sea-level rise and you' (green), 'Shoreline Explorer' (dark blue), and 'Coastal Climate Adaptation Decision Support' (purple). The third row contains four tiles: 'Infographics' (red), 'Case studies' (blue), 'Information manuals' (orange), and 'Impact sheets' (blue). Each tile includes a small image and a brief description of the resource.

To be useful and used CoastAdapt must be:

- Relevant: address the needs of users at the time
 - Accessible: easy to navigate, easy to read, interpret, apply
 - Credible:
 - is transparent, trusted sources, up-to-date
 - includes current regulatory/ legal frameworks
 - integrates/demarcates with similar sources
 - has longevity
- 

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



What is
climate change?



Assess risks
and impacts



Understand
adaptation



Undertake
adaptation



Connect with the
adaptation community



Getting started

Not sure where to begin with
CoastAdapt?



Sea-level rise and you

Select your local area to view future
sea-level rise and climate extremes



Shoreline Explorer

Use an interactive map to discover
more about your current coastline



Coastal Climate Adaptation Decision Support



Infographics

A picture says a thousand words



Case studies

Learning by sharing: case studies of
adaptation in Australia and beyond



Information manuals

Ten in-depth studies of key
adaptation topics of concern to
coastal managers

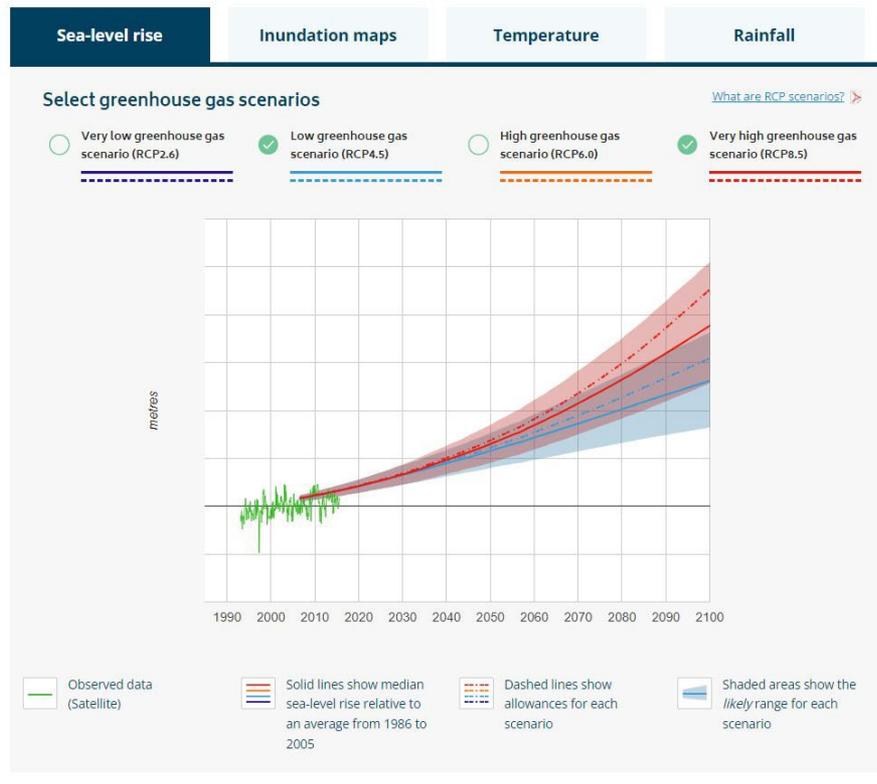


Impact sheets

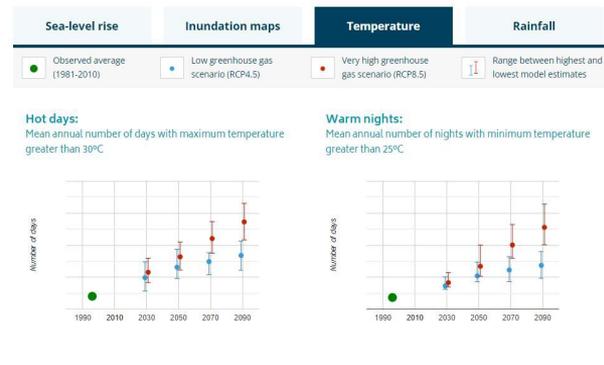
Sector-wide studies of climate
change impacts in coastal Australia

SLR and you

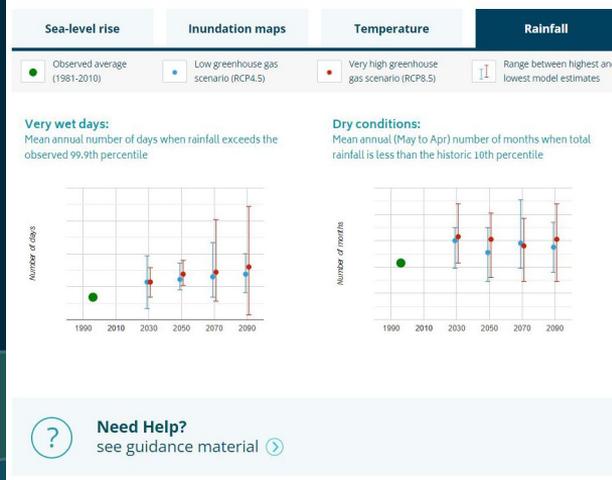
Burdekin, QLD

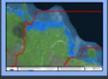


Burdekin, QLD



Burdekin, QLD





1



The adaptation process

Coastal Climate Adaptation Decision Support (C-CADS)

C-CADS
track your progress

Template 

? Using C-CADS

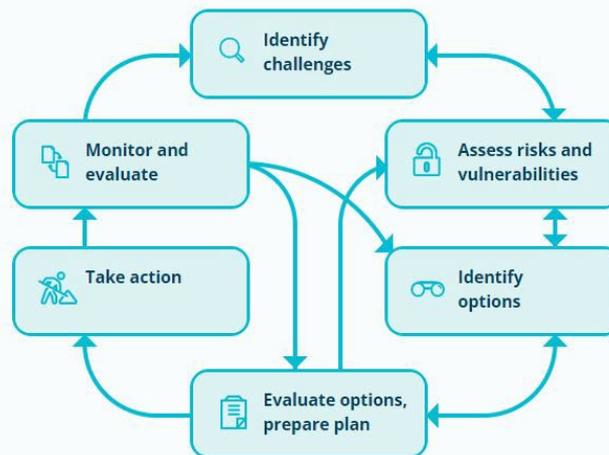
- Identify challenges  
- Assess risks and vulnerabilities  
- Identify options  
- Prepare plan  
- Take action  
- Monitor and evaluate  

Using C-CADS

C-CADS is an iterative decision support process designed to support adaptation planning and decision-making about all climate change related risks on the Australian coast. It is consistent with coastal zone management and adaptation planning approaches used by Australian states and territories.

04 May 2017

 Print  Save



 See our

Infographics

Case studies

Explainers

Impacts on sectors

Why should we adapt to climate change?

1 Because climate change is inevitable. Our options to reduce climate change:

- > **Geoengineering**
Large-scale projects to change the climate system (e.g. using solar reflectors to reduce the amount of solar radiation reaching the Earth) or to increase uptake of CO₂ by the environment (e.g. by reforestation).
- > **Mitigation**
Reducing greenhouse gas emissions by changing energy, transport, industry, or through reforestation.

2 Because otherwise, the negative impacts will be too great.

- 1 Sea level rise
- 2 Increase in temperature and extreme weather
- 3 Increase in extreme weather
- 4 Increase in extreme weather

Climate change risk assessment basics

Basic concepts

Climate change projections (e.g. change in temperature, sea level rise) → Leads to hazards (e.g. increased frequency and intensity of extreme weather events) → Leads to risks (e.g. further erosion of the coast will destabilise foundations of a nearby infrastructure)

Risk assessment

step 1 Analyze and evaluate risks
step 2 Identify future climate change risks and opportunities
step 3 Identify existing climate risks
step 4 Establish the context (scope of risk assessment)

Rating of a given risk: Risk = Consequence x likelihood

Low	Medium	High	Extreme
Low	Low	High	High
Low	Low	High	High
Low	Low	High	High

Example: Consequence: A sewerage pumping station located near an eroding coastal pumping out the treated waste of the full catchment. Therefore, destabilisation of the foundation of the sewerage pumping station has a major consequence. Likelihood: A 1 in 50 year storm event can trigger this, therefore it is likely to occur within the design life of the pump.

Adaptive capacity influences the consequence. Adaptive capacity is the capacity of the system of risk to sustain change. In general, the consequences of a risk will be relatively lower if the adaptive capacity of the system is higher (and vice versa).

Beach and Coastal Tourism

IMPACTS: Sea level rise, Increased frequency and intensity of extreme weather events, Beach erosion, Reduced amenability of beaches.

RISKS: Reduced amenability of beaches, Beach erosion, Reduced amenability of beaches.

ADAPTATION: Coastal defences, Beach nourishment, Beach management, Beach management, Beach management.

Ocean and Sea Life Tourism

IMPACTS: Changes in fish and other marine life, Changes in marine ecosystems, Changes in marine ecosystems.

RISKS: Changes in fish and other marine life, Changes in marine ecosystems, Changes in marine ecosystems.

ADAPTATION: Marine protected areas, Artificial reefs, Marine protected areas, Artificial reefs, Marine protected areas, Artificial reefs.



The UK Coastal Change Pathfinder Programme

Summary: Aims to help coastal communities adapt to the risk of significant and permanent coastal change. The program will help coastal communities adapt to the risk of significant and permanent coastal change.

Keywords: UK, Local councils, Adaptation projects

Using drone technology to monitor coastal change

Summary: Aerial imagery provides useful additional data for understanding coastal change. Drone imagery provides a high-resolution view of the coastline and can be used to monitor coastal change.

Keywords: imagery, drone, monitoring, aerial photography

Snapshot

Summary: Aerial imagery provides useful additional data for understanding coastal change. Drone imagery provides a high-resolution view of the coastline and can be used to monitor coastal change.

Keywords: imagery, drone, monitoring, aerial photography

What has changed since CoastAdapt1.0?

- Grand narrative around climate change
 - Yet still patchy awareness of adaptation
- Experience of climate impacts (compounding, cascading, colliding)
- Increased scope & sophistication of users and data, topics
- Changing consultation
 - Interest, tolerance,
 - Quality (of engagement more broadly)
- New NGOs
 - Positive Change for Marine Life (international)
 - Ozfish (national)
 - Revive the Northern Rivers (local)

What coastal decision makers want for 2.0

- (supportive adaptation environment)
- Update of everything already on CoastAdapt1.0
- More about planning & doing:
 - Business cases – scope, fund, partner, monitor
 - Evidence of what works
- Less text, more interactive
- More linkages/ consideration of compounding, cascading risks
 - Coping with bushfire while recovering from flood, COVID19
 - Housing crisis vs sterilising/building on high-risk areas
 - Disasters and their impacts
- More consideration of interfaces - estuaries, catchments, ICOLLs, sediment



- New topics:
 - Indigenous engagement, cultural heritage & protection
 - how to do it meaningfully?
 - Nature-based solutions/living shorelines - how to do it, does it work?
 - Blue carbon – how to do it, does it work?
 - Climate justice – how to ensure adaptation is fair?
- Deeper dives:
 - Data – where, what, how to use when
 - Communication, consultation & engagement through living labs, codesign, human-centred design
 - Creative coasts – helping elicit coastal values, explore past and future coasts
 - Volunteers – who/where the bloody hell are they?



What else?

- Where do you get coastal information?
- What else 'coastal' do you grapple with?
- Can you share a snapshot or case study?
- Do you often need to print web content?



I'm here to listen

Anne.Leitch@griffith.edu.au

