

Cassowary Coast Coastal Hazards Adaptation Strategy

Frequently Asked Questions

What is a Coastal Hazards Adaptation Strategy, in brief?

A Coastal Hazard Adaptation Strategy (CHAS) is the product of a series of studies that seek to:

- identify coastal hazards
- understand vulnerabilities and risks to a range of assets (including tangible and intangible assets)
- engage with the community to better understand their preferred approach to adaptation
- determine the costs, priorities and timeframes for their implementation.

How is this program of work being delivered?

The Queensland Government has made a commitment of \$12M over 3 years to assist eligible coastal councils in the preparation of a Coastal Hazard Adaptation Strategy (CHAS) relevant to their specific coastal issues. The program is managed by the Local Government Association Queensland and is titled QCoast2100.

Cassowary Coast Regional Council (CCRC) has been successful in obtaining funding under the QCoast2100 program to develop a CHAS for coastal areas within the council area.

How is the Cassowary Coast CHAS being funded?

Primary funding for the Cassowary Coast CHAS has been provided through the financial support of the Local Government Association of Queensland (LGAQ), QCoasts2100 program and the Queensland Government.

What is the objective in developing a Cassowary Coast CHAS?

CCRC acknowledges that coastal hazards, exacerbated by climate change, will pose risks to CCRC and its operations, the local community, economy and environment. The Cassowary Coast Coastal Hazard Adaptation Strategy (CHAS) is proposed to improve the resilience of the Cassowary Coast region to coastal hazards, in the context of changing climate conditions.

The purpose of the CHAS is to assess the risk from coastal hazards and the projected effects of climate change over the medium to long term; propose adaptation measures to respond to these impacts; and establish a strategy for the implementation of these adaptation measures.

Why does Cassowary Coast Need a Coastal Hazard Adaptation Strategy?

Cassowary Coast Regional Council (CCRC) is taking a proactive approach to climate change, by identifying climate change adaptation as a key focus for the region. With over 120km of coastline and a number of offshore islands, the Cassowary Coast region and its residents are vulnerable to the long-term impacts of climate change. Coastal areas experience a range of impacts including beach erosion, coastal recession and inundation. These impacts and the damage caused can be significant when associated with a major storm event, cyclone or east coast low.

Traditionally, Council has sought to reduce the effects of these hazards through a range of measures including:

- undertaking coastal management activities such as sand dune restoration, beach



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replenishment and the provision of protective works

- establishing appropriate planning, development and design standards

To date management of coastal hazards has been largely undertaken in response to a particular event or impact rather than as part of a broad, holistic and pro-active approach.

In recent years there has been discussion concerning climate change and the potential impacts associated with the anticipated changes. Climate change has the potential to increase coastal hazards as a result of sea level rise and the increased intensity of cyclones and storms. These changes have the potential to:

- accelerate coastal erosion
- permanently inundate low lying areas
- increase the impacts associated with storm surges and king tides.

When completed the CHAS will provide a consolidated view of hazards that are anticipated to impact our coastal areas within the short, medium and long-term horizons and how these hazards can best be managed.

CHAS Delivery Phases

Council has been successful in receiving grant funding approval towards development of a CHAS. Based on current timeframes it is anticipated that the project will be completed around June 2019. In accordance with the [QCoast2100 Developing a CHAS Minimum Standards and Guidelines \[PDF 5.7MB\]](#) the following 8 phases are to be followed:

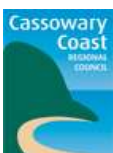
- **Phase 1:** Development of Communication & Engagement Strategy
- **Phase 2:** Development of Scoping Study (gap analysis)
- **Phase 3:** Identifying areas exposed to current & future hazards (completion of additional relevant studies identified within Phase 2)
- **Phase 4:** Identifying assets potentially affected
- **Phase 5:** Risk assessment of potentially affected assets
- **Phase 6:** Identification of potential adaptation options
- **Phase 7:** Socio-economic appraisal of potential adaptation options
- **Phase 8:** Finalise: Coastal Hazard Adaptation Strategy

How can I get involved?

For us to develop a Coastal Hazard Adaptation Strategy that best meets the need of all community and stakeholders we need your input and involvement at a number of key points. There are a number of ways for Cassowary Coast residents to become involved ranging from those who only have time to fill out a quick online survey to those who can commit to regular meetings and many hours of consultation with local community members in their area.

As development of the CHAS progresses Council will be seeking a range of community involvement, including:

- Nominate for a position as a community delegate on the Coastal Adaptation Advisory Group



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- Share your thoughts on coastal related climate change with Council
- Share your thoughts on coastal related climate change with a Coastal Adaptation Advisory Group representative
- Upload your images from previous weather events and email them to Council
- Provide a public submission on the draft strategy

The final outcomes of the consultation will be documented. This may include a summary of all contributions collected as well as recommendations that fed into the final strategy.

Where can I find more information on the background to Coastal Related Climate Change and adaptation?

The local climate of the Cassowary Coast region is tropical, characterised by a monsoonal wet season (typically December to April) and a dry season (May to November). Climate during the wet season is dominated by prevailing north-westerly winds, and inter-annual variability of the monsoon, tropical cyclones and El Niño Southern Oscillation (ENSO) influences variability of rainfall for the region.

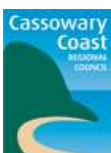
Developed areas within the Cassowary Coast (and more broadly, coastal regions around the world) are at risk from a number of different coastal hazards. These can include:

- **Coastal erosion** – Coastal erosion occurs as waves, wind and tidal currents act in combination to move sediment away from the shoreline. This movement can be out into the ocean (erosion), over the existing dune / shoreline (deposition) or up and down

the beach depending on the current (sediment transport).

- **Cyclones** – Cyclones are intense, low-pressure storms that develop over warm waters and have sustained winds of a least 63km/h. Based on the sustained wind speeds (and strongest gusts), cyclones are described and ranked according to a categorical scale between 1 and 5. For reference, Cyclone Yasi eventually reached Category 5 (winds in excess of 200 km/h).
- **Storm surge (inundation)** – Storm surge occurs during cyclone / storm events when pressure changes and wind result in increased wave heights along the coast. Where this occurs, the water level generally exceeds the normal high tide level and can result in the inundation of areas that are typically outside the high tide.
- **Sea-level rise** – Sea-level rise occurs as the waters in the ocean begin to warm and expand. As the sea rises, this results in both the average low tide and high tide being higher than historically experienced. This in turn means that areas previously located outside of the high tide areas may now be subject to inundation and flooding.

It is noted that while each of these coastal hazards has the potential to impact the assets within the Cassowary Coast, given the interrelated nature of these processes, many of these hazards can also combine to further exacerbate the risk to coastal areas. For instance, an increase in sea-level, coupled with a storm surge could result in the inundation of areas not previously subject to flood risks. Current scientific



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predictions have provided a range of scenarios associated with estimated sea level rise. Three scenarios have been developed by CSIRO for sea level rise between 2030 - 2100 (relative to 1990). The low scenario identifies a rise of 0.5m by 2100. The medium scenario proposes a rise of 0.8m by 2100 and the high-end scenario suggests a rise of 1.1m by 2100. As scientific understanding of climate change develops these predictions could change, resulting in sea level rises occurring earlier or later. For this reason, we are developing our adaptation strategy based on sea level rise 'triggers' and not specific timeframes.

Reference [OzCoasts Sea level rise maps](#) and [Australian Government - Department of Environment and Energy](#)

Where can I find more information about climate change and sea level rise?

The science related to climate change and sea level rise constantly changes. As a result the predictions for levels of climate change vary from location to location especially with a country as large and with a diverse range of climates as Australia. Predictions are usually framed in rise of sea level (measured in cm) with relation to the year.

Reference [OzCoasts Sea level rise maps](#) and [Australian Government - Department of Environment and Energy](#)

How can I make a submission on the proposed strategy?

The Coastal Hazard Adaptation Strategy will undergo extensive community consultation before the draft version is made available for feedback via formal submission.

How can I keep informed about the project?

In the near future you will be able to sign up to receive updates.

For more information about the project and Council's vision for climate change adaptation, visit Council's website, [www.cassowarycoast.qld.gov.au](#) at [www.cassowarycoast.qld.gov.au](#).

Should you have any questions in relation to this matter, please contact Planning Services on Ph: (07) 4030 2222 or email enquiries@ccrc.qld.gov.au.

