



Adaptation framework

A strategic approach and framework

Across Australia and internationally, coastal land managers are taking a strategic approach to managing the risk of coastal hazards and enhancing the resilience of our coastal zones.

Common elements of this strategic approach include:

- Developing a locally relevant adaptation framework
- Assigning a strategic adaptation response and pathways (Table 1) to different localities, to guide decision making over multiple planning horizons from present day to 2100
- Assessing the range of adaptation options (Table 2) suitable in different locations to help mitigate the risk of coastal hazards
- Developing a strategy for coastal adaptation with a view to 2100, with prioritised actions over a 10-year timeframe.

Table 1. Adaptation framework

Adaptation response	Monitor, maintain and prepare	Mitigate	Transition
	Monitor the risk of coastal hazards. Monitor until local trigger levels are reached to initiate mitigation. Maintain existing arrangements and prepare for future actions.	Actively mitigate the risk of coastal hazards through a range of adaptation options. Mitigate until local trigger levels are reached to initiate transition.	A strategic decision to transition to an alternative land use in some areas. Mitigation may be part of the transition process.
Adaptation options	Full range of adaptation options		



Image credit: Martin Rich

Table 2. Adaptation options

Enhancing adaptive capacity	Community stewardship
	Knowledge sharing
	Monitoring
Planning	Land use planning
	Disaster management
Modifying infrastructure	Increase infrastructure resilience
	Relocate infrastructure
Coastal management and engineering	Dune protection and maintenance
	Beach nourishment
	Structures to assist with sand retention
	Structures to dissipate wave energy
	Last line of defence structures
	Structures to minimise inundation

The Coastal Adaptation factsheet provides further information on adaptation options and is available at haveyoursay.sunshinecoast.qld.gov.au/our-resilient-coast or [here](#).

Applying the framework

A tailored framework has been developed for the Sunshine Coast Coastal Hazard Adaptation Strategy, to guide decision making on adaptation response and options across the region. This framework has been informed by:

- Consultation with council and stakeholders, including the Community Advisory Group
- The values and objectives for different localities gathered from engagement activities
- The 10-year Shoreline Erosion Management Plan (SEMP) for the Sunshine Coast, prepared in 2014
- An understanding of the risk and cost of coastal hazards for a diversity of asset types, across multiple planning horizons (from the risk assessment)
- A whole-of-coast perspective of the range of values, uses and pressures in the coastal zone.



The broad adaptation responses are described as:

Monitor, maintain and prepare

At localities where the coastal hazard risk profile is low, the adaptation response is to monitor risk, undertake existing maintenance/asset management activities, and continue active stewardship of the coastal zone. Preparation for potential future adaptation actions will also be undertaken.

If, over time, the risk profile is observed to increase (as indicated by local trigger levels), then the adaptation response may shift to mitigate.

Mitigate

At localities where coastal hazard risks have been identified, the adaptation response is to actively mitigate the risk through implementing a range of fit for purpose and cost-effective adaptation options. Adaptation options will be tailored to each locality, incorporating site-specific activities, community input, and statutory planning considerations.

If, over time, the risk profile is observed to increase (as indicated by local trigger levels), and mitigation becomes infeasible (due to economic or other factors), then the adaptation response may shift to transition.

Transition

In some specific areas, if the coastal hazard risk profile is very high, and mitigation becomes infeasible (due to economic or other factors), a strategic decision may be made to transition to an alternative land use. Any such transition would be guided and informed by locality-based adaptation planning.

Transition is about changing how we use land in coastal areas in a way that assists to lower the long-term coastal hazard risk. This can often involve a localised planned retreat of assets, or alternative planning approaches.

If transition is identified, it is likely to be a gradual process over time, where mitigating hazards for a period is part of the transition process. However, in some cases a more rapid transition response may be required subject to a threshold trigger, and there is a need to remain agile. A range of adaptation options will be part of the transition process.

Implementing adaptation actions

Through the adaptation process, Sunshine Coast Council will continue to plan for future challenges by implementing strategies that support our resilience outcomes.

