

## Terminology

Below are commonly used terms related to coastal hazards, and the development of a Coastal Hazard Adaptation Strategy.

### The Coastal Setting

#### Barrier island

A long, relatively narrow island (often in a chain of islands) running parallel to the mainland, consisting of sand built up by the action of waves and currents, and serving to protect the mainland coast from erosion by surf and tidal surges.

#### Bay

A part of the coast where the land curves so that the sea is surrounded by land on three sides.

#### Beach

The portion of the coastal zone periodically subjected to wave action. The seaward limit of a beach is typically defined as the spring low tide line, while the landward limit, as the vegetation line.

#### Climate change

A change in the state of the climate that persists for an extended period, typically decades or longer.

#### Coastal geomorphology

The physical shape, processes and patterns associated with the coast, including landforms, soils, and geology.

#### Landform

The natural shape of the Earth's surface. Landforms range in size from small features such as dunes and estuaries found at a local scale, to large features such as mountain ranges and coastal plains that may exist at regional scales.

#### Relative sea level

Sea level as measured by an official tide gauge with respect to the land where it is situated.

#### Sea-level rise

An increase in the mean level of the ocean.

#### Shoreline

A designated line representing the landward limit of the sea. Methods used to define shorelines include fixed vertical levels or identifying the physical interface of water and land (e.g. with aerial photography).

#### Tides

The regular rise and fall of the water surface resulting from gravitational attraction of the moon, sun and other astronomical bodies acting on the rotating earth.

### Coastal Hazards

#### Accreting coast

Coasts that experience a deposition of sand instead of erosion. Accretion occurs during the calmer seasons. Beach accretion is generally much slower than beach erosion.

#### Coastal erosion

Erosion occurs when winds, waves and coastal currents act to shift sediments away from an area of the shore.

#### Coastal hazards

Natural coastal processes that may negatively impact on the natural environment and human use of the coastal zone. Hazards include coastal erosion, storm tide inundation and inundation due to sea-level rise.

#### Long-term erosion (recession or retreat)

Erosion resulting in a continuing landward movement (loss) of the shoreline or a net landward movement of the shoreline within a specified time.

#### Overtopping

When water splashes over a seawall due to wave action.

#### Storm surge

Elevated sea level at the coast caused by the combined influence of low pressure and high winds associated with a severe storm such as a tropical cyclone or east coast low.

## Storm tide

The total elevated sea height at the coast combining storm surge and the predicted tide height.

## Storm tide inundation

When ocean water levels and waves are high enough to cause localised flooding of normally dry land.

## Short-term erosion (storm bite)

Erosion that occurs periodically on a short-term basis, often during a storm. The shoreline and beach then gradually regain sediment (rebuild).

## Resilience and adaptation

### Adaptation

The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm, or exploit beneficial opportunities. In some natural systems, human intervention may help a system adjust to the expected climate and its effects.

### Adaptation pathway

A series or sequence of management actions (over time) directed to achieving long-term adaptation objectives.

### Adaptive capacity

The ability of systems, institutions, humans, plants and animals to adjust to potential damage, to take advantage of opportunities or to respond to consequences.

### Coastal adaptation

Future modification of actions and behaviour through construction of infrastructure or change in land use practices that prevents or reduces adverse impacts associated with coastal hazards.

## Coastal vulnerability

The threat to coastal landforms, social, economic and environmental systems, associated infrastructure or land use that may be caused by a sustained shift in environmental conditions.

## Resilience

The capacity of social, economic and environmental systems to cope with or 'bounce back' following a hazardous event or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity to adapt and transform.

## Risk assessment

A systematic process of evaluating the potential risks that may be associated with an event or activity.

**Reference:** National CoastAdapt information manuals: <https://coastadapt.com.au/information-manuals>

## Stay Connected



Subscribe - CHAS eNewsletter (see website below)



Speak with a technical officer on (07) 3205 0555 or email [livingcoast@moretonbay.qld.gov.au](mailto:livingcoast@moretonbay.qld.gov.au)



[www.moretonbay.qld.gov.au/CHAS](http://www.moretonbay.qld.gov.au/CHAS)

