

# GEOGRAPHY Year 12

## Stage 6 Sample Fieldtrip



## Careel Bay - an Ecosystem at Risk

### Student Outcomes Students will;

- Explain how biophysical interactions have produced this ecosystem.
- Use a range of resources and field techniques to investigate the spatial patterns and biophysical interactions of an intertidal wetland.
- Observe and identify a range of both positive and negative human impacts.
- Evaluate current management strategies to see if they are ecologically sustainable.

**Fieldtrip Planning:** Read Careel Bay Ecosystem Summary, as provided

### Sample Ecosystems at Risk Program and suggested times.

Arrive after lunch if continuing from Dune Field Study in the morning or earlier. There are no toilet or shop facilities in Careel Bay so I would recommend a stop before arriving for this session. Possibly stop at Avalon Beach SLSC, which you pass through just before Careel Bay.

- 12.30 Refer to the provided field map for starting location for saltmarsh study area. Draw the saltmarsh profile and compare this area on aerial photos. Identify its spatial patterns and dimensions. State why this threatened area has diminished over time. Measure and record a number of physical parameters to explain how the biosphere has interacted to produce two different vegetation communities within this intertidal ecosystem.
- 13.30 Identify the nature and extent of human induced stress around the mangroves. Describe the effect of stormwater including sedimentation, pollutants, bank scouring, litter, increased nutrients and weed infestation. Evaluate consequences of past and present land use, ie; leachate from tip and dog exercise area. Walk along the new boardwalk to identify and investigate the resilience of the two mangrove species. Explore the mangroves to discover the rich biodiversity and the interdependence of organisms within the mangrove foodweb.
- 14:45 Conclude on why Careel Bay is an ecosystem at risk.

**Please note:** This is a sample program for Year 12 students who wish to study dune and wetland ecosystems. These programs may be studied individually as one four hour program, or as a 5-6 hour fieldtrip for both. The Careel Bay fieldtrip should be organised to coincide with a low tide. Schools with small groups may combine with other schools to make up minimum numbers. Detailed master student worksheets are prepared and sent to you before your fieldtrip.



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