



COASTS & CLIMATE CHANGE







2010 aerial photograph of Wreck Creek, Surf Parade and adjoining housing

Use this photo from 2010
to highlight changed coastline



Figure 6 Annotated Google Earth image of the Wreck Creek coastline (SLC to Eastern end of Rock Wall) showing Dune Loss from 14/3/2010 to 19/9/2020

Inverloch Surf Beach Lifesaving Tower





28 Oct 2013
Photo: The Star

12 October 2013

5 December 2014





October 2016



2017



8 July 2018



20 July 2018



December 2018





25 March 2019

WET SAND FENCING



25 March 2019
morning



25 March 2019





10 Sept 2019



Sept 13
Photo Geoff Ellis



28 September 2019

The Victorian Government has provided \$1.15 million in further funding towards addressing coastal erosion issues along the Inverloch foreshore



+

\$700,000 has been provided to form a pilot Regional and Strategic Partnership (RaSP) under the new *Marine and Coast Act 2018*, over the wider Inverloch marine and coastal area.

\$450,000 to install a 70-metre sand-filled geotextile container wall at the lifesaving clubhouse

December 2020



18 August 2021



Bunurong Road Corner



26 April 2019
Bunurong Rd/Surf Pde
wet sand fence



14 April 2020





October 2021 looking east towards SLSC from Bunurong Rd corner. The next 5 photos taken from here



September 2022



February 2023

June 2024



3 September 2024



Where's the creek?
January 28 2025



Inverloch beach erosion worsens after 'huge' storms and high tides

William Howard ABC Gippsland 4 September 2024



3 September 2024



Note: excavator at work.
Image supplied ISLSC

The state government is planning to use a dredge & pump 150,000cum back along the surf beach later 2025. See slide set on Reporting... this issue for more information



Amazon shipwreck July 2020

Amazon floated to
a new site
September 2024

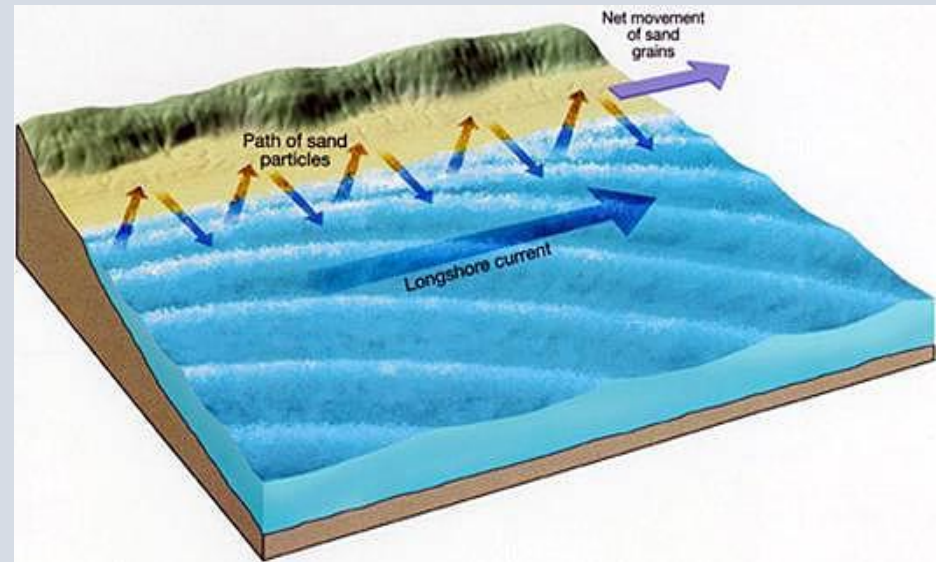





Tea tree flooded by sea water
dies & exposes sand to erosion

Longshore drift

Inverloch Surf Beach



www.3dgeography.co.uk

An aerial photograph showing a large, winding lagoon with turquoise water and sandy banks. The lagoon is bordered by a residential area with houses and trees on the left, and a forested area on the right. The water is shallow and clear, revealing the sandy bottom. The sky is blue and clear.

Surf beach sand transported east
to Anderson Inlet.
New lagoon at Ayr Creek
Photo: Alison & Leo Brewster
Jan 2016

November 2014 Ramsay
Boulevard rock platform

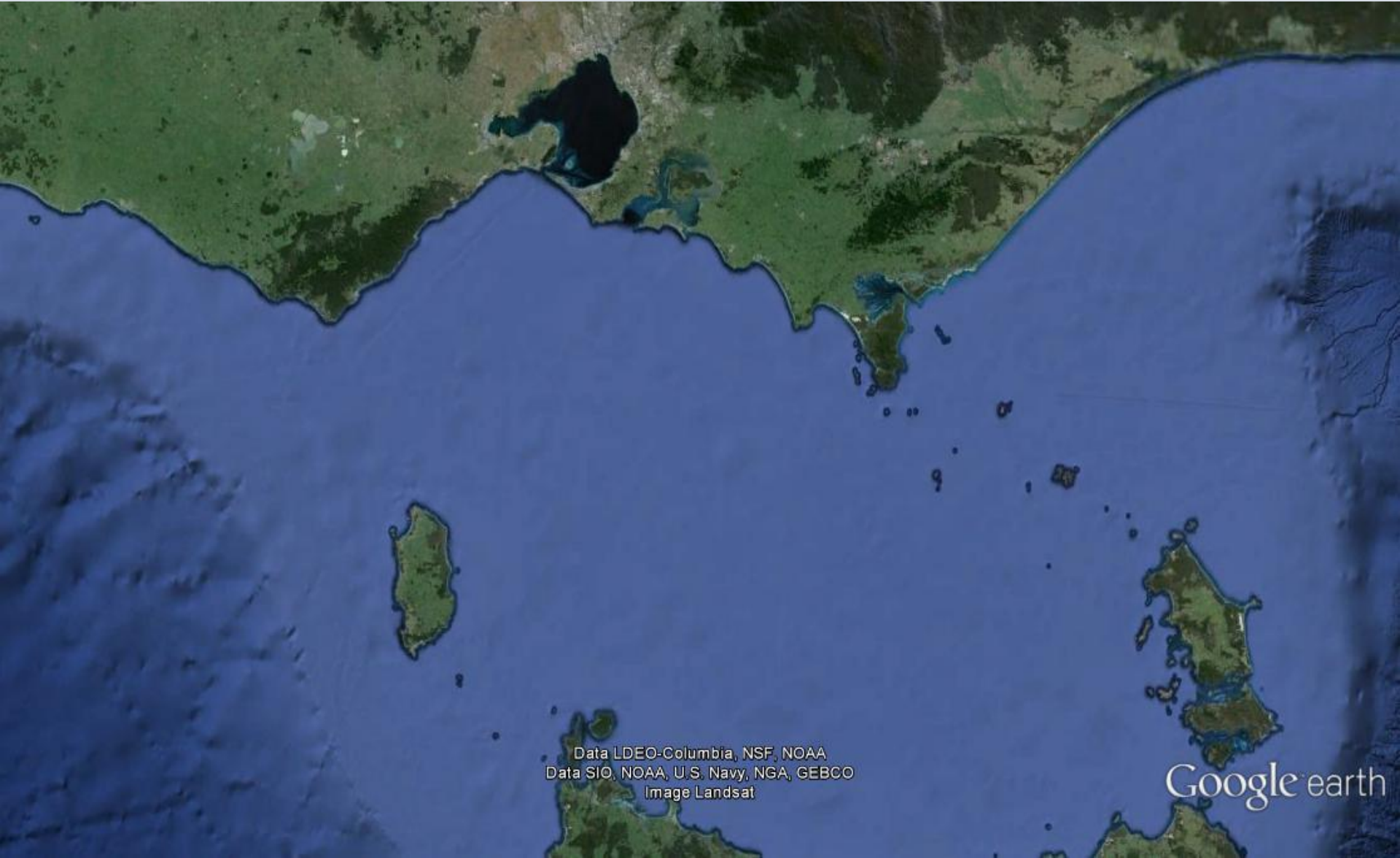


July 2022 rocks covered
by tonnes of sand
& new dunes building



The climate's always been changing

20,000 years ago during the last ice age, there was a land bridge to Tasmania

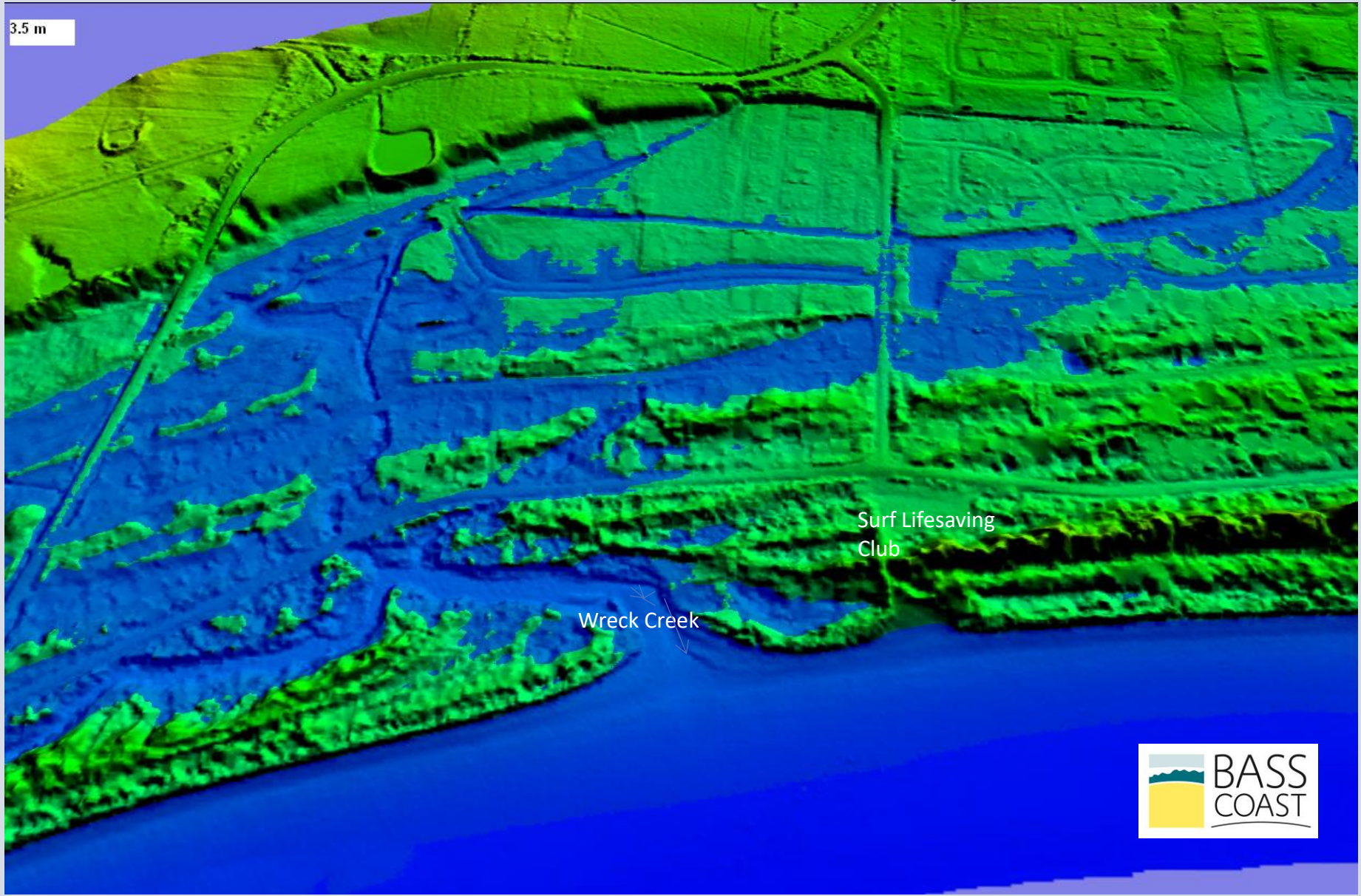


Former shoreline at Flat Rocks

5,000 years ago the sea level was higher, reaching the foot of the sea cliffs at RACV



Wreck Creek catchment with .8 metre sea level rise by 2100





Mid 2020



Inverloch

BIG4 Inverloch
Holiday Park

Inverloch
Coastal
Reserve

3D

One solution to erosion at Inverloch – an offshore artificial reef to break up wave energy

PALM BEACH, GOLD COAST artificial reef

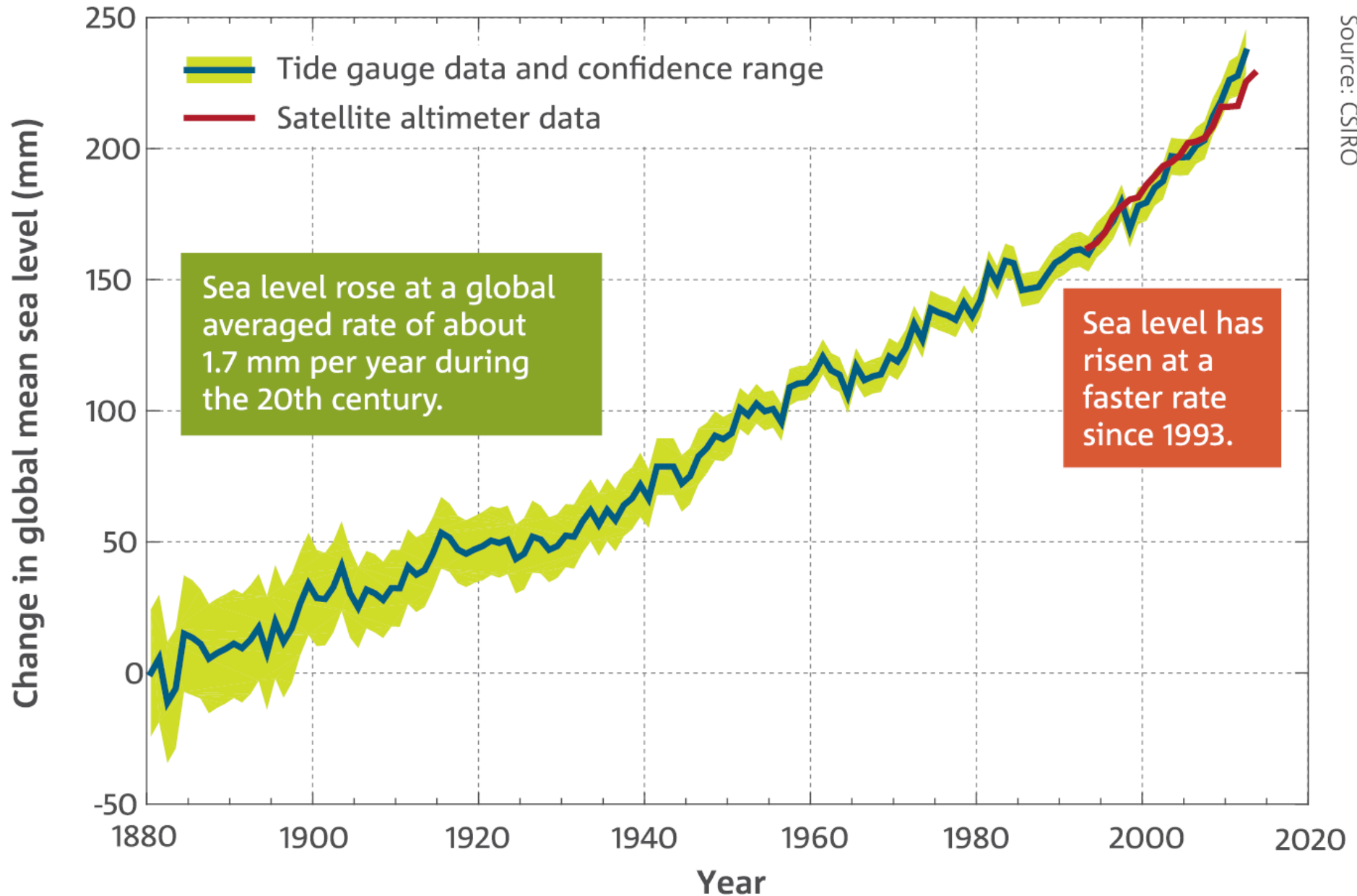
COST: \$18.2 million

270 metres offshore, 160 metres long and 80 metres wide. Constructed using 60,000 tonnes of boulders



Sea Level

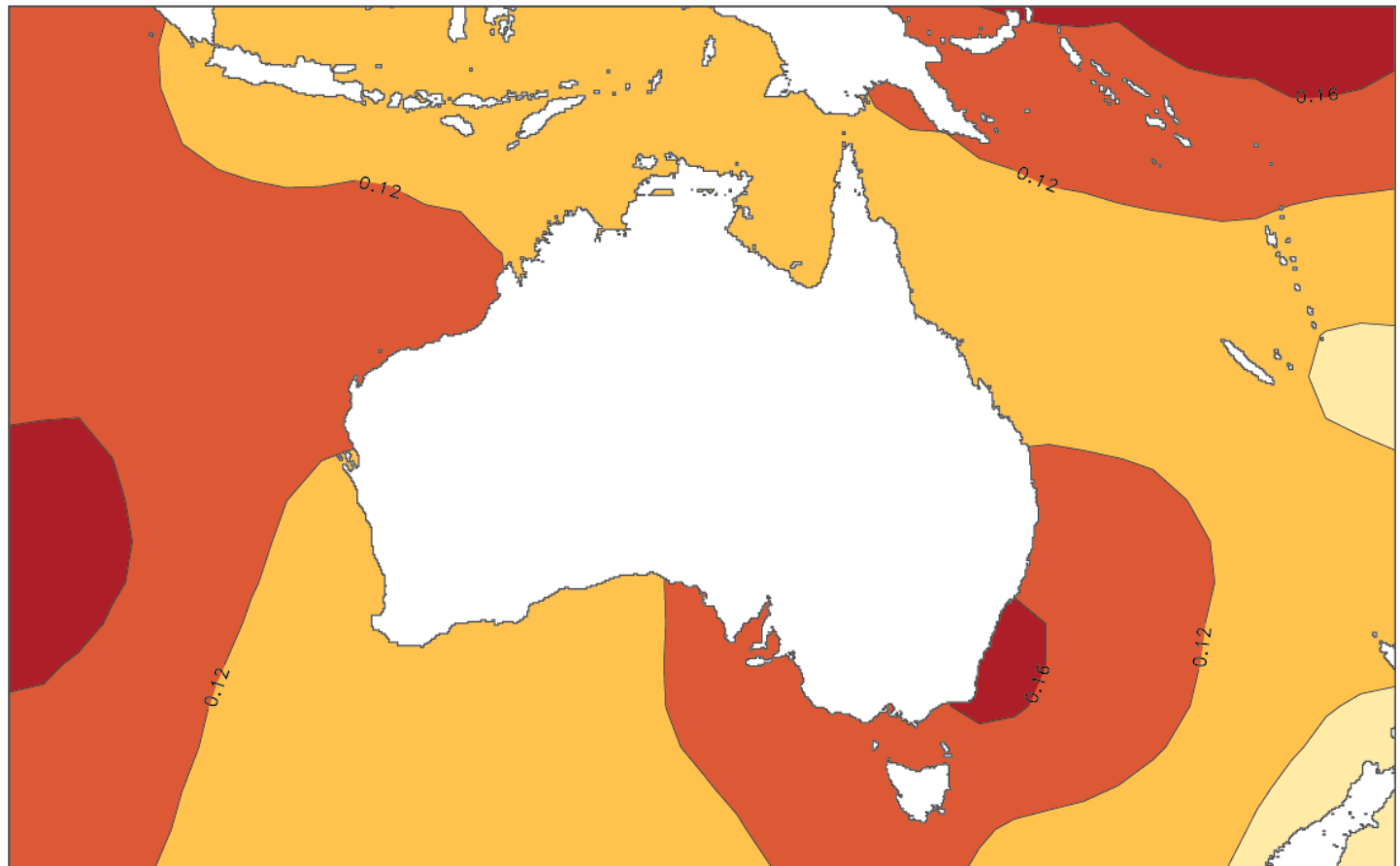
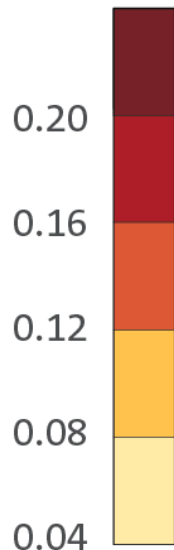
Source: CSIRO



Ocean surface temperature trend

The ocean surface around Australia has warmed, with the greatest ocean warming occurring off south-east Australia and Tasmania.

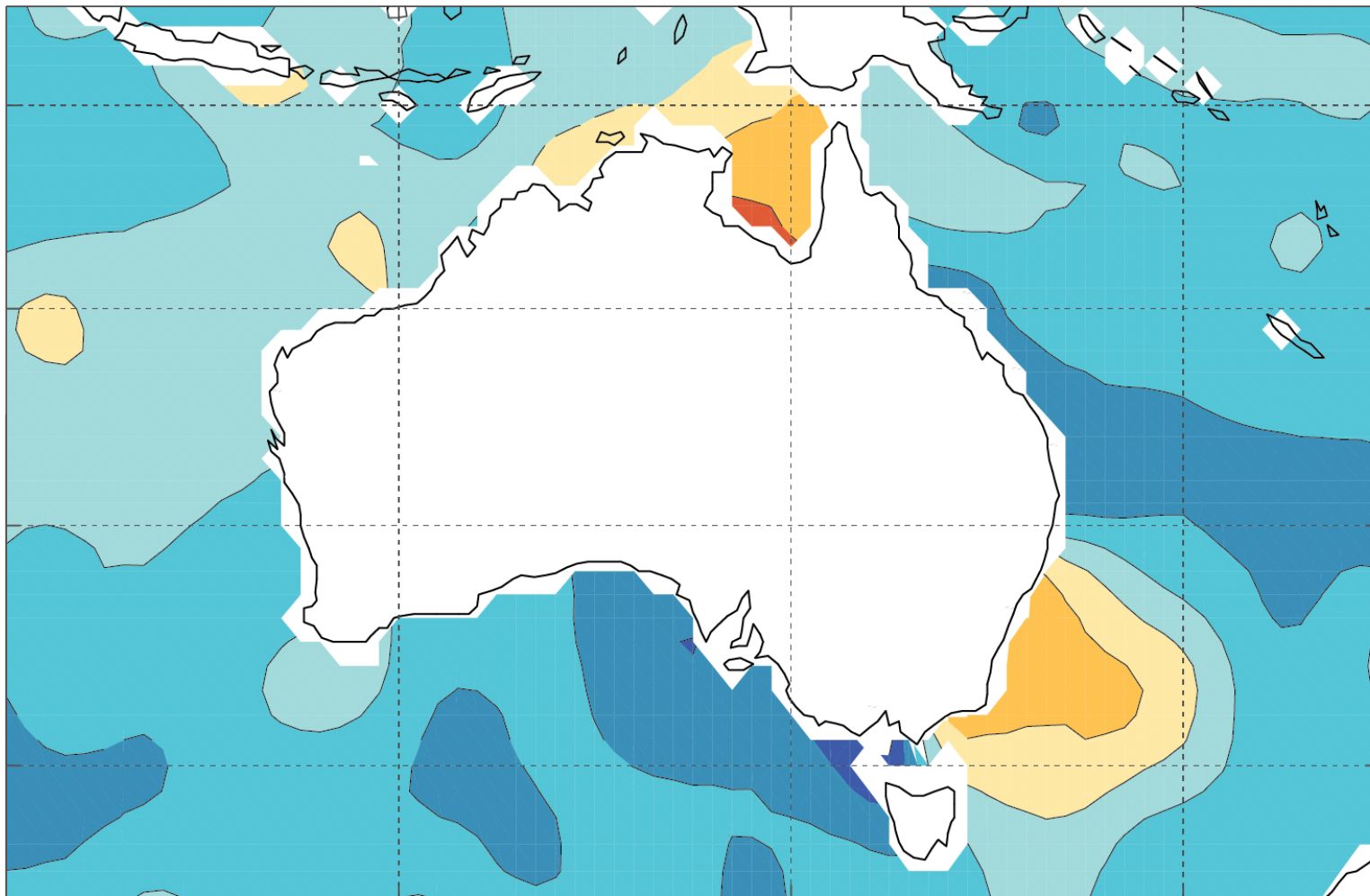
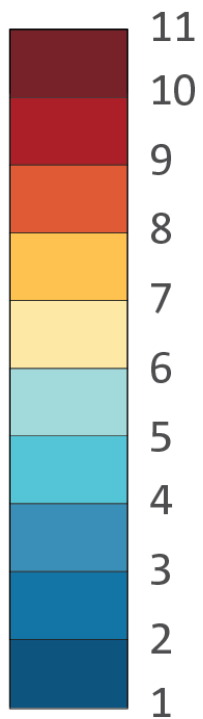
Trend in
sea surface
temperature
(°C per
decade)



Source: NOAA

Sea levels have risen
around Australia.

Sea level rise
(cm/decade)



Source: CSIRO

CLIMATE CHANGE

In a warming atmosphere there is:

- more evaporation
- more water vapour- 7% more water vapour with 1 degree warming
- more energy
- more volatility
- less predictable weather patterns

A warmer atmosphere warms oceans.

This means:

- more evaporation
- glaciers, ice caps melting
- oceans are bulking up
- higher sea levels
- disturbance of ocean currents

CRA 2100 scenario highest rise + .74m high tide

