



Climate Report Card

SOUTH AUSTRALIA

JUNE 2026



SEA CHANGE
AUSTRALIA

Australia's Changing Climate

What is climate change?

Increases in greenhouse gases lead to changes in the atmosphere and the physical and biogeochemical ocean environment.

Australia's sea surface temperature (SST) has warmed by over 1 °C since 1900¹. Ongoing ocean warming contributes to longer and more frequent marine heatwaves. As waters warm, they also become more stratified – altering circulation and currents and reducing nutrient availability in surface waters.

Increased atmospheric CO₂ increases how much is absorbed by the ocean, leading to shifts in ocean chemistry and ocean acidification.

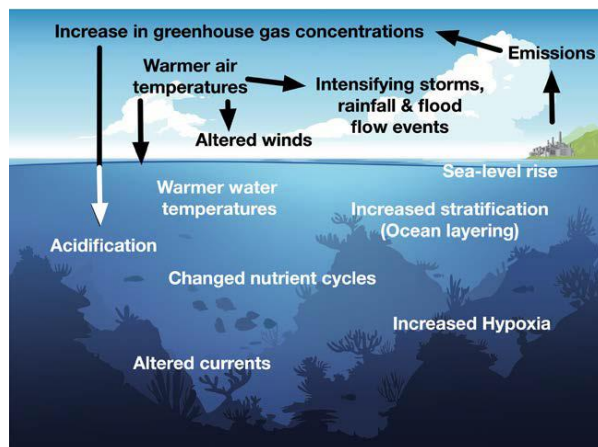


Image credit²



What impacts are expected for the seafood sector?

The seafood we eat relies on healthy marine ecosystems. Ecosystem productivity can be impacted through changing nutrient cycles, increasing temperatures, and habitat loss. Shallow coastal and estuarine ecosystems are particularly vulnerable to climate change.

The impact of climate change on the seafood sector will vary by the degree of exposure to physical change and species vulnerability.

How to use this report



Use **page 2** to find information on SST changes over the past year and forecasts for the next two months in your area.



Use **pages 3-4** to learn about potential future ocean conditions due to climate change. These projections are based on a 'business as usual' scenario and show two global warming levels: 1.5°C (expected around 2015-2034) and 2°C (expected around 2030-2049). The Paris Agreement aims to limit global warming to well below 2°C above pre-industrial levels.



Report your climate observations and go 'Fishing for Climate Answers'

Check out the [Sea Change Australia](https://www.seachangeaustralia.org.au) website to log potential climate related observations in your area and submit your climate questions. Our team connects your questions with climate and fisheries experts who provide clear, practical answers.



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SYMBOL FOR THE
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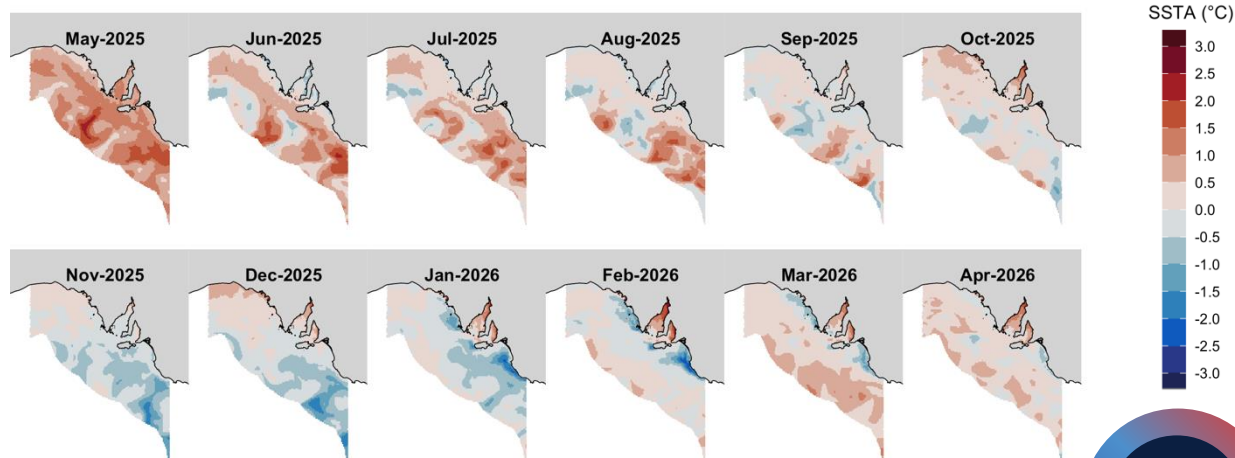
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Observed SST anomalies in 2025-26

Sea Surface Temperature Anomalies: May-2025 to Apr-2026



The graphic shows monthly SST anomalies from May 2025 to Apr 2026 (base period 1993–2016)³. Marine heatwave conditions began in Sep 2024 and have persisted through May 2025⁴. Above average temperatures persisted until Oct 2025, after which offshore waters cooled to below average. Inshore coastal waters became cooler than average from Jan 2026. In Mar–Apr 2026, much of the domain is warmer than average.

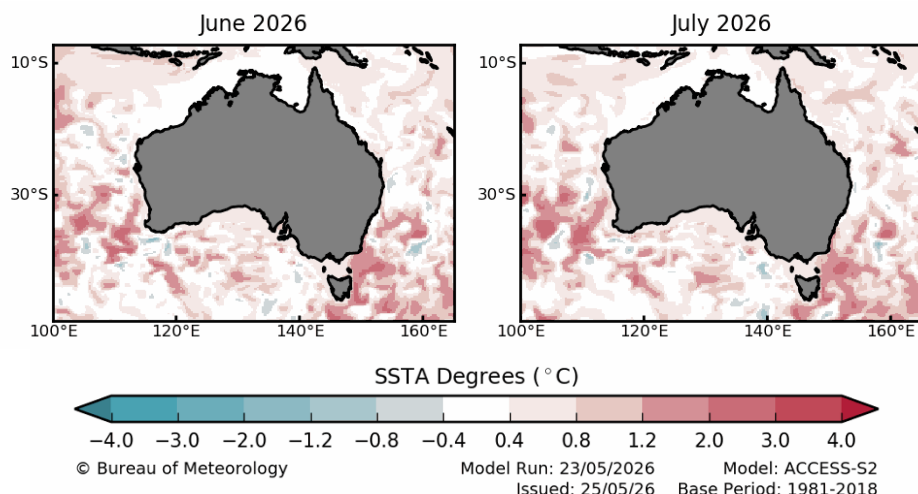
Similar SST anomaly maps from BOM can be accessed [here](#).



Waters have alternated between being warmer or cooler than usual over 2025–2026.

Forecast Conditions: Jun–Jul 2026

Australia Sea Surface Temperature Anomaly Outlook



See BOM for seasonal forecast outlooks for SST

Monthly SST anomalies are forecast to remain anomalously warm from Jun–Jul 2026⁵. Forecasts are updated regularly and can be accessed [here](#).



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SOUTH AUSTRALIA

JUNE 2026



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Projected Change: Ocean Warming

Baseline

Projected



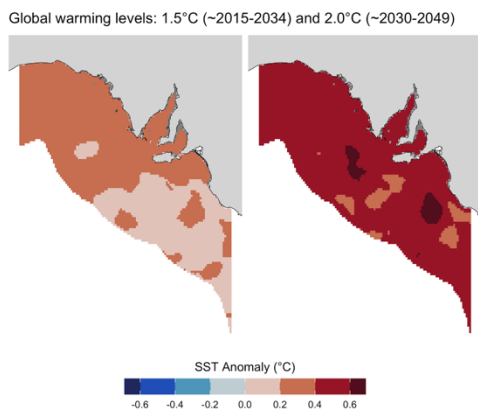
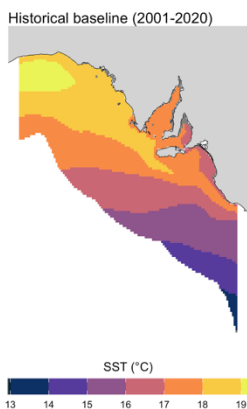
Waters are projected to warm, with longer-lasting marine heatwaves.

SSTs are projected to increase under climate change. The degree of warming is highest in the west.

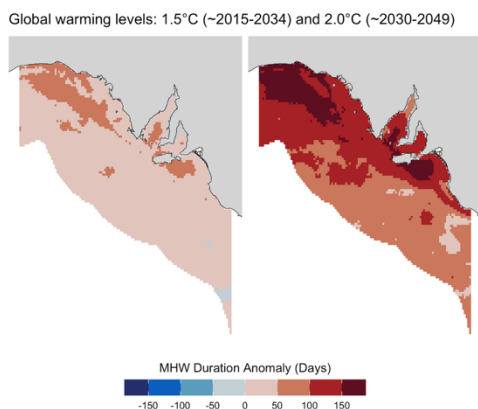
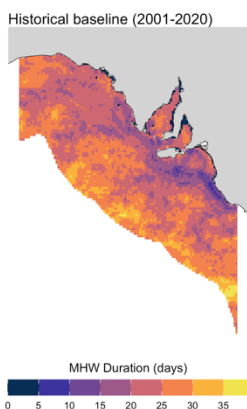
Marine heatwaves are projected to increase in duration, and this pattern is highest in the west. Under a 2°C global warming level (~2030-2049), this region is projected to experience marine heatwave conditions for much of the year (relative to the baseline).

Bottom temperatures are projected to increase under climate change. The degree of warming is highest in shallow waters on the continental shelf.

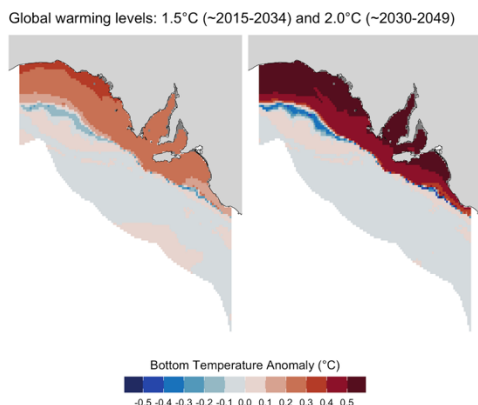
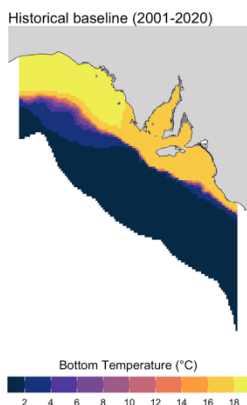
Sea Surface Temperature



Marine Heatwave Duration



Bottom Temperature



Climate projections are from the Ocean Forecasting Australian Model (OFAM), which is a spatially-downscaled ocean model⁶. Projections are based on a 'business as usual' scenario (CMIP5) and show two global warming levels: 1.5°C (expected around 2015-2034) and 2°C (expected around 2030-2049) relative to a historical baseline (2001-2020).



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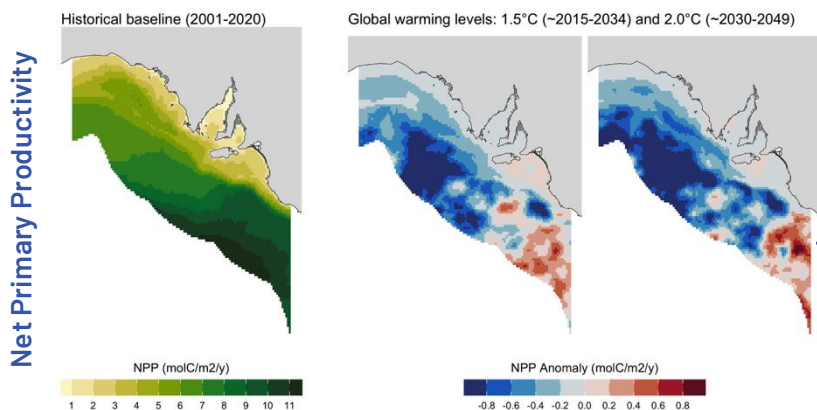


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Projected Change: Ecosystem Productivity

Baseline

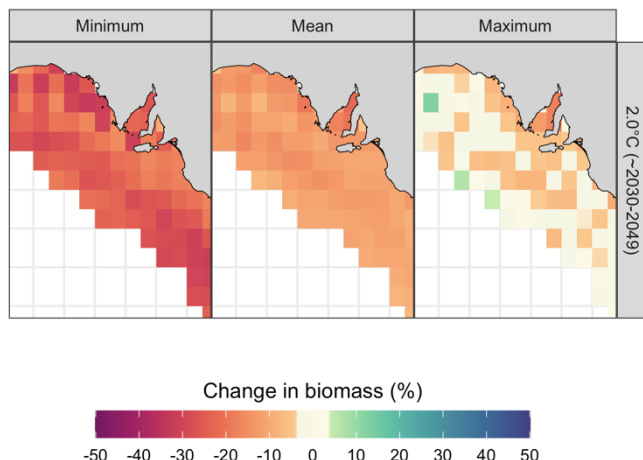
Projected



Productivity is projected to decline but is uncertain.

Projections of **net primary productivity**, the base of the marine food web, show decreases in the west and increases in the east. Projections are highly uncertain⁶.

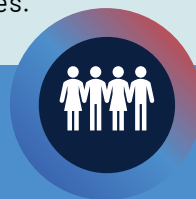
Exploitable Fish Biomass



Ecosystem models project changes in the biomass available to fisheries (animals 10g - 100kg) under a 2.0°C global warming level.

On average, there is a decline in biomass, but this is uncertain. Minimum and maximum biomass estimates show divergent patterns.

Biomass is estimated from 6 ecosystem models projected under CMIP6⁷. Ecosystem models integrate temperature, oxygen, salinity, acidity, nutrients, & primary productivity, among other variables.



Climate adaptation in action

Fishers and the seafood sector have been responding to a harmful algal bloom. Many fishers were the first to notice changes on the water and report them. Fishers have become partners in the state's recovery planning, while industry and community reporting has given scientists a clearer, near real-time picture of where the bloom is moving. It is a reminder that the people who work on the water are often our sentinels of ocean change, and valuable partners in managing it. In a changing world, extreme events are no longer isolated shocks but systemic risks. Supporting industry adaptation will require not only emergency response but planning that balances ecological recovery with economic resilience.



Image credit: Stefan Andrews



Produced by CSIRO in partnership with Sea Change Australia.

Sources: ¹BOM State Of the Climate 2024 ²Fulton et al., 2021

³CMEMS ⁴MHW Tracker ⁵BOM ⁶CSIRO ⁷Blanchard and Novaglio 2024

Regional Partners: South Australia Department of Primary Industries and Regions

How to cite: <https://doi.org/10.2.100.100/706875>