



Climate Report Card

NORTHERN TERRITORY

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.

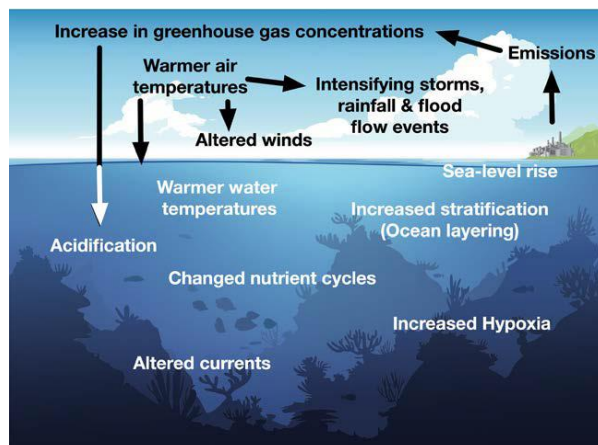


Image credit²



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.

Image credit: Olivia Johnson

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.

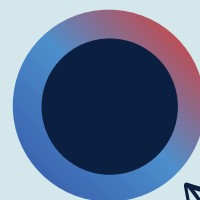


Use **pages 3-4** to learn about potential future ocean conditions due to climate change. These projections are based on a 'business as usual' scenario and show two global warming levels: 1.5°C (expected around 2015-2034) and 2°C (expected around 2030-2049). The Paris Agreement aims to limit global warming 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.gov.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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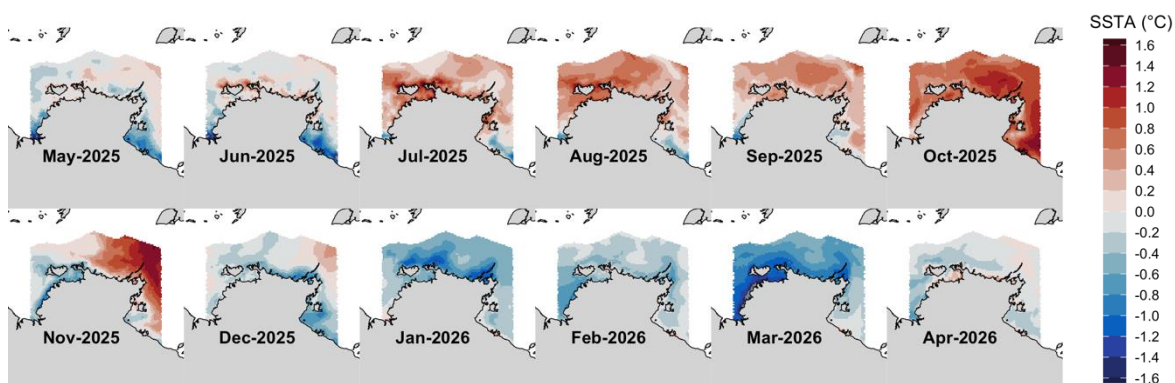
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Observed SST anomalies in 2025-26

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. For most of the domain, surface temperatures were notably warmer than average from Jul-Oct 2025 before switching to being cooler than average Dec-Apr 2026. Coastal waters in the Gulf of Carpentaria were below average from May-Aug 2025.

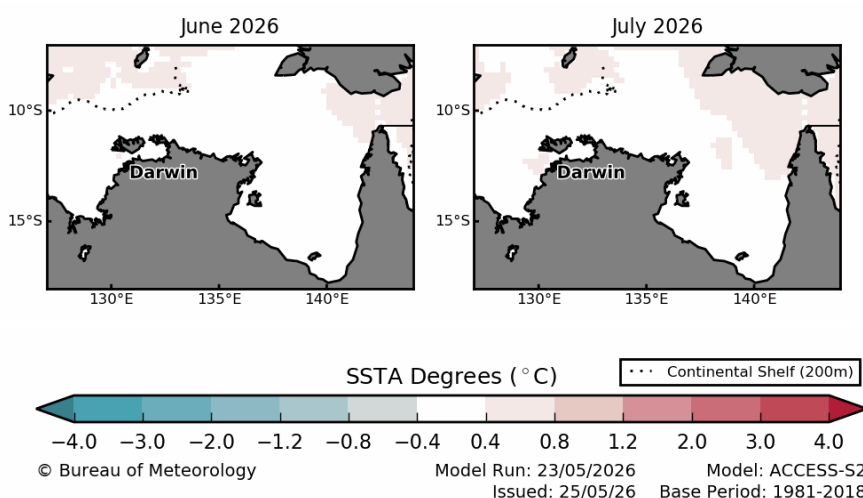
Similar SST anomaly maps from BOM can be accessed [here](#).



**Waters have switched
from being warmer to
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 2026⁴. Forecasts are updated regularly and can be accessed [here](#).



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Projected Change: Ocean Warming

Baseline

Projected

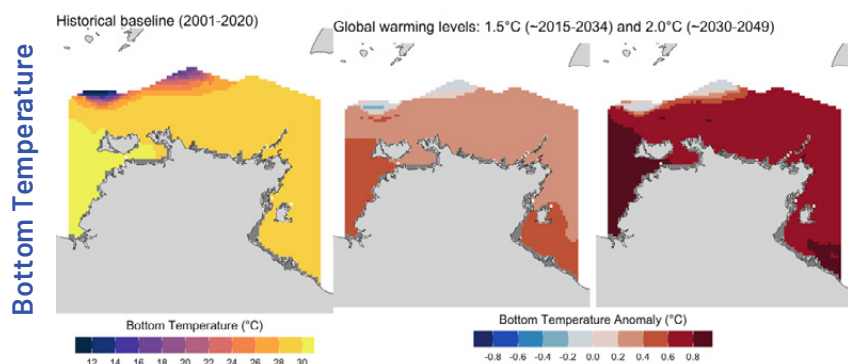
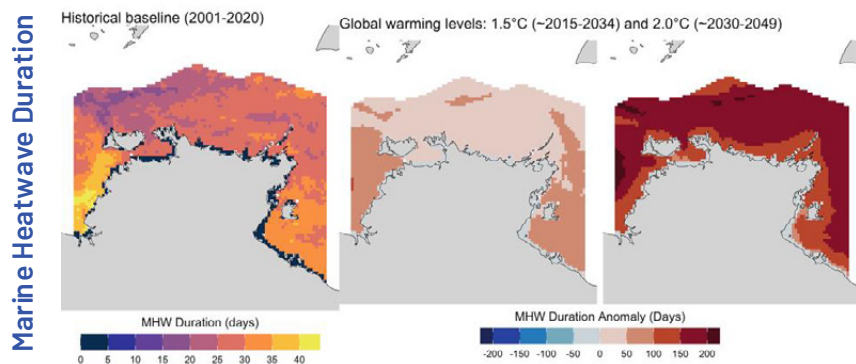
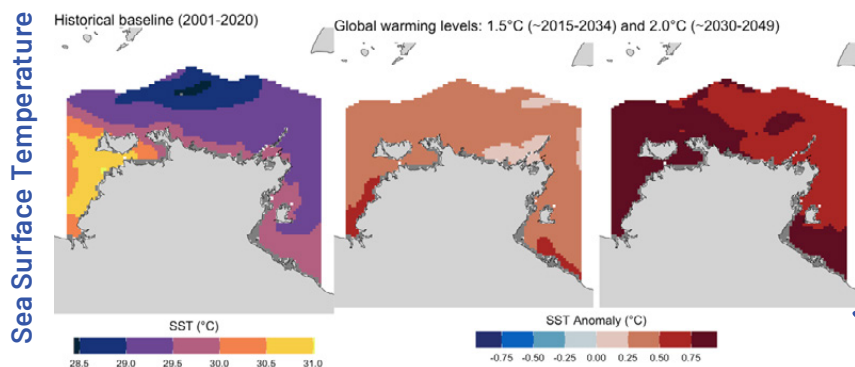


Waters are projected to warm, with longer-lasting marine heatwaves.

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

Marine heatwaves are projected to increase in duration. Under a 2°C global warming level (~2030-2049), waters off NT are projected to experience marine heatwave conditions for most of the year (relative to the baseline).

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



Climate projections are from the Ocean Forecasting Australian Model (OFAM), which is a spatially-downscaled ocean model⁵. 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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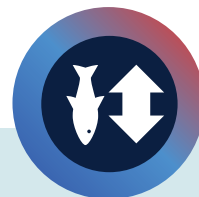
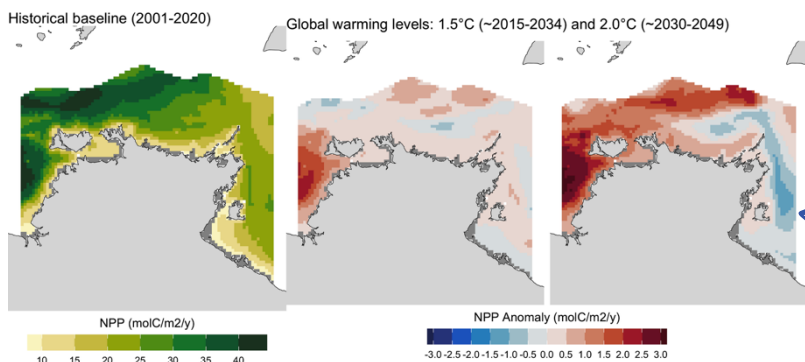
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Projected Change: Ecosystem Productivity

Baseline

Projected

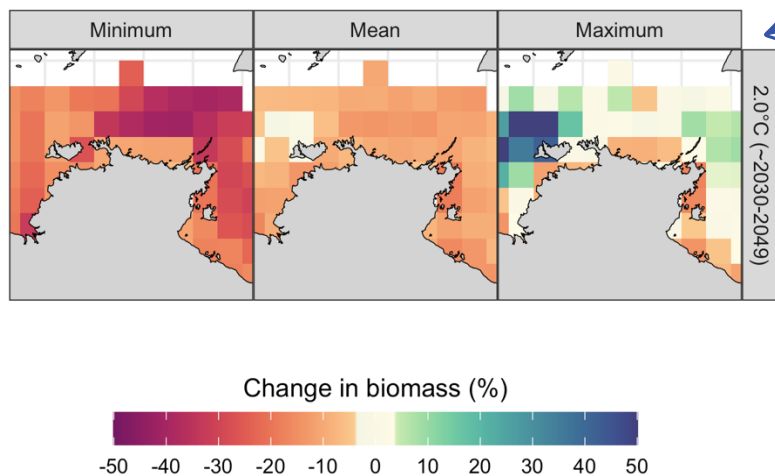
Net Primary Productivity



Productivity trends are uncertain.

Projections of **net primary productivity**, the base of the marine food web, show an increase in the west and decrease in the east. Projections are highly uncertain, particularly for the western region⁵.

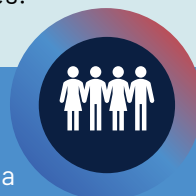
Exploitable Fish Biomass



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 CMIP6⁶. Ecosystem models integrate temperature, oxygen, salinity, acidity, nutrients, & primary productivity, among other variables.



Climate adaptation in action

The Northern Territory seafood industry is taking a proactive approach to climate adaptation through a sector-wide sustainability and resilience strategy. Industry members are working together to improve data collection, prepare for changing species distributions, manage emerging disease risks and build the capacity needed to respond to future environmental change.

Image credit: Olivia Johnson



Produced by CSIRO in partnership with Sea Change Australia

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

³CMEMS ⁴BOM ⁵CSIRO ⁶Blanchard and Novaglio 2024

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