

Climate & Ecosystem Status Report

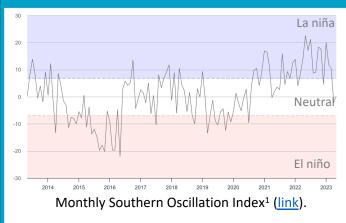
Bass Strait Central Zone Scallop Fishery

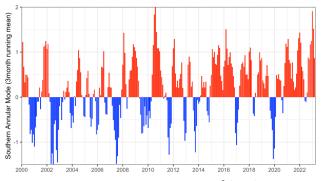
June 2023



Historical Period

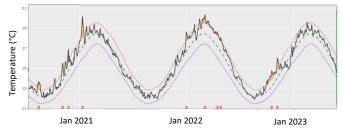






Historical Southern Annular Mode² (<u>link</u>). Positive values indicate westerlies are further south.

Temperature and Productivity for Bass Strait



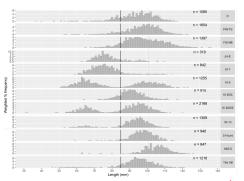
Temperatures in Bass Strait showing past marine heatwaves (orange shading; <u>link</u>). Marine heatwaves during Spring 2022 indicate potential for increased scallop growth during warm conditions.



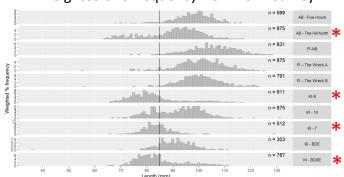
Mean monthly surface chlorophyll-a³. Chlorophyll-a has increased in recent years, which may influence scallop growth and recruitment.

Ecosystem and Fishery

Weighted size frequency from 2021 survey⁴



Weighted size frequency from 2022 survey⁴



* Beds where abundant but small scallops likely to reach legal size in 2023



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Bass Strait Central Zone Scallop Fishery

June 2023

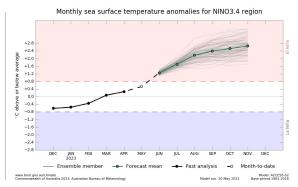


Future Outlook for the 2023 Season

Climate Drivers

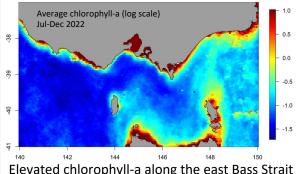


Currently in a Neutral phase (link)

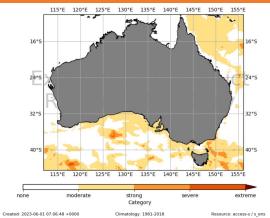


El Niño is predicted. These conditions favour a negative Southern Annular Mode, where westerly winds are further north and can affect recruitment^{1,5}. (link).

Temperature and Productivity for Bass Strait

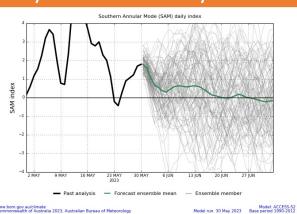


Elevated chlorophyll-a along the east Bass Strait may support improved growth and increased reproductive effort for Scallops in this region⁶.



A strong marine heatwave is forecast for August 2023³

Ecosystem and Fishery



Southern Annular Mode can vary from weeks to months. Forecasts suggest a decreasing trend towards neutral and negative conditions during June 2023 (link)¹. Negative conditions mean westerly winds are further north than normal, which can affect water flow and scallop recruitment in the Bass Strait.