

Subtidal macroalgae: percentage cover



Biodiversity | Coastal and marine

South Australia's environmental trend and condition report cards 2023



STATE

Trend

The statewide trend in macroalgal percentage cover is stable based on assessment of reefs along the Adelaide and Fleurieu Peninsula coastlines.

Between 2005 and 2020, assessments of macroalgal percentage cover on subtidal reefs have mainly been conducted in the waters off Green Adelaide (GA) and Hills and Fleurieu (HF) landscape regions. Statewide trend is assessed as stable based on limited data from reefs along the Adelaide and Fleurieu Peninsula coastlines.

Surveys indicated that macroalgal percentage cover in the northern metropolitan subregions 1 and 2 (GA) was stable. Southern metropolitan (GA, subregion 3) and HF (subregions 4 to 7) all indicated some improvement in macroalgal percentage cover. Variations between regions may be due to poorer water quality and different environmental conditions further north in Gulf St Vincent compared to southern sites.

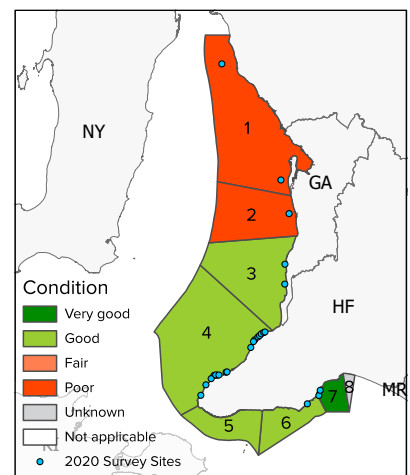
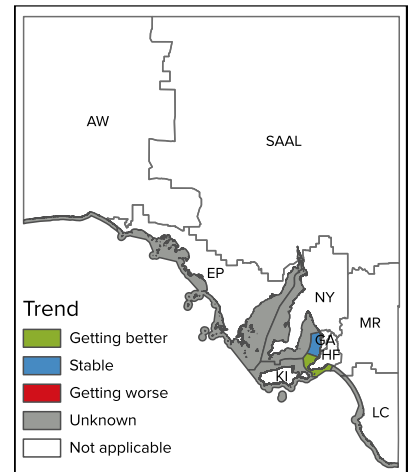
The trend of macroalgal percentage cover on subtidal reefs in other landscape regions is unknown (top figure).

Condition

The condition of macroalgal percentage cover where known is mostly good.

Macroalgal assessments indicate that there is a north-south gradient of decreasing cover as a result of both natural differences in the environment and the impacts of urban development and increased pollution levels near metropolitan areas. Macroalgal cover in the GA metropolitan areas (subregions 1 and 2) is generally less than 40% (poor condition), while condition in the southern GA and HF region (subregions 3 to 7) ranges from good to very good with cover between 70 to 82% (bottom figure).

The percentage cover of macroalgae on subtidal reefs is stable, based on limited data along the Adelaide and Fleurieu Peninsula coastlines.



Why is macroalgal cover on subtidal reefs important?

Subtidal macroalgal cover is a measure of reef health. It provides diverse habitats that support biodiversity and productive food webs in subtidal reef ecosystems.

Maintaining reef health is important because reefs support marine biodiversity and regional economies through tourism and commercial and recreational fishing.

What are the pressures?

Macroalgal cover on reefs is threatened by declining water quality due to nutrient inputs and pollutants, as well as sediment loads and turbidity, from a range of sources including stormwater and agricultural run-off, treated sewage and industrial discharges, and aquaculture. Physical disturbance, impacts of dredging, introduced marine pests, anchor damage, illegal harvesting and overfishing are also threats.

What is being done?

In South Australia, marine parks, fisheries management and environmental protection legislation provide protection for the state's reefs.

Improving macroalgal cover and the condition of reefs more broadly requires management of land-based discharges and improvements to water quality (e.g. through the Adelaide Coastal Water Quality Improvement Plan), and management of marine pests, physical disturbances, and overfishing.

For further information see: [technical information](#)



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