



Submission to the Senate Standing Committees on Environment and Communications Inquiry into Algal Blooms in South Australia

Thank you for the opportunity to contribute to the Senate Inquiry into the ongoing Harmful Algal Bloom (HAB) and its impacts.

South Australia's Yorke Peninsula is located west of Adelaide. The Yorke Peninsula is bordered by the Spencer Gulf to the west, Gulf St Vincent to the east, and is separated from Kangaroo Island to the south by the Investigator Strait.

The Yorke Peninsula is primarily an agricultural region and a major producer of grain. Tourism is the second largest industry after agriculture contributing \$358 million annually to the economy, however tourism, in particular regenerative tourism, is one of the largest growth areas for Yorke Peninsula Council.

Yorke Peninsula Council covers an area of 5,899km², is approximately 175km from north to south, and being a Peninsula, has a varying width east to west averaging approximately 30km. The Council is unique in comparison to other local government authorities in that it is bordered by sea on three sides and as such has **485km of coastline**.

Yorke Peninsula Council's population is 12,165, less than one percent of the total South Australian population.

The Council area contains 12 larger towns and 33 smaller townships and holiday settlement zones, the latter being predominately located along the vast coastline. There are 10,687 private dwellings in the Council area.

Yorke Peninsula Council has a large amount of infrastructure to maintain including a 4,000km unsealed road network; 12 jetties (the largest number of any Council in the State via the divestment program); and 33 boat ramps. These infrastructure items are all very costly for maintenance and impact Council's delivery of services, due to it being such an outer regional and remote area (as classified by the Remoteness Structure), with limited capacity to raise revenue due to a small ratepayer base.

The Yorke Peninsula is a major tourist destination within South Australia attracting 1.3 million visitors annually (Tourism Research Australia YE Dec 2024). The intrastate market accounts for 89% of visitation, many of whom visit predominately for coastal activities and recreational fishing.

It is vital that Yorke Peninsula has a healthy marine environment to sustain its economy, its businesses and its community.

Yorke Peninsula – The Epicentre of Impact

While several coastal regions are affected, Yorke Peninsula is the epicentre of this monumental ecological event in terms of environmental, economic and community impact.

Our regional economy is heavily reliant on marine tourism:

- Tourism is our second-largest industry, worth \$358 million annually and supporting 2,400 jobs.
- 58% of visitors come for the beach, and over one-third for fishing
- If the bloom persists, even a 10% drop in summer visitation represents a \$25 million hit to the local economy – a conservative estimate.

Local business sentiment reflects deep concern. While winter trade is always variable, there is real fear about what summer will bring. For many operators, summer income is what sustains them through the year. South Australians' confidence in visiting Yorke Peninsula this summer is in question due to the perceived and real implications of the HAB on our coastline. If the algal bloom continues into peak season, the risk of widespread business failure and job loss is very real.

Businesses along the St Vincent Gulf coast are already reporting trade downturns between 8.5% and 40%. The professional fishing industry is at a standstill, with marine ecosystems severely impacted. Oyster growers remain in limbo, unable to sell product and facing prolonged income loss with no relief in sight.

Importance of Sea Country to Nharangga dhura (Narungga people)

Guuranda (Yorke Peninsula) is Nharangga Banggara (Narungga Country) of Nharangga dhura (Narungga people). Nharangga dhura are the Butterfish mob, butterfish being gynburra (Dusky morwong), because of their deep connection to Sea Country. Nharangga dhura have creation stories, one even tells the flooding of the two Gulfs.

Nharangga dhura have four clan groups, and the totem of the Dhillba clan, down south, is widhadha, the shark. With permission of Uncle Michael Wanganeen in the spirit of reconciliation, we summarise its creation story, which is about how one day, a group of fishermen wrapped a small fish in bark and sent it off to sea, to bring back more fish for a celebration. The fishermen would call for the fish to come back (and bring its mates) but each time the fish came back, it had outgrown its bark wrapping. It was rewrapped and resent many times, each time coming back larger, until it came back the largest fish they had ever seen. It opened its mouth, and it was the widhadha, the great white shark. They all jumped back and called out "Badja!", in warning.

This deep connection, and this deep wisdom, teaches us not to take so much from our oceans, to limit our impact. It demonstrates the importance of Sea Country to Narungga. This is a shared importance.

The decline of Sea Country due to the HAB not only impacts Narungga culture, but it impacts native title such as loss of traditional fishing – there are no fish to catch in the impacted areas. It's not as simple as fishing in another area – cultural obligations are site specific. Cultural sites need to be maintained.

Additionally, on the evidence we have, there has been limited engagement with Narungga and other Sea Country First Nations; their voice is not being heard. For example, we are aware that there are two First Nations representatives on the State Governments Task Force Reference Group, though unsure how this came to be and who they represent (for example,

whilst one representative is a Narungga man, Narungga Nation Aboriginal Corporation were not involved and not aware of how he was made representative).

Environmental Impacts

The HAB has led to the devastation of the marine environment along approximately two thirds of our coastline (from Point Turton on Spencer Gulf, around to the top of St Vincent Gulf), with our coastline along St Vincent Gulf experiencing the longest duration of impact to date.

The number of marine mortalities is not measured, but with commercial fisheries stating they have not caught a single fish in over 100 days, it is clear the marine habitat is almost devoid of marine fauna. There has also been impact to flora (such as kelp). There is the very real possibility of not only localised extinction, but also extinction in the wild, and extinction of marine species.

The main driver is the marine heatwave which caused seagrass dieback at an unusual time, of unusual volume, and of unusual duration. This rotting seagrass provided the perfect food (via Dissolved Organic Carbon [DOCs]) for the HAB (which, whilst not stated by the State Government, has enough evidence to indicate commenced in the State's south-east, long before the impacts to people on the Fleurieu Peninsula coast). Combined with other climate change impacts, such as drought (lots of sunlight) and still conditions (no wind), the marine heatwave also provided warmer waters (allowing the HAB to breed faster) and weaker currents (preventing flush out of the Gulfs and removal of the DOCs). All these factors combined, allowed the HAB to gain dominance over other plankton and bloom.

Restoration, Prevention and Recovery

If the gulfs had been at optimum health, they would have been more resilient to the HAB.

Sadly, our marine ecosystems have suffered greatly. In the very early years of colonisation, the State lost 99% (of 1500 kilometres) of its oyster shellfish reefs to dredging and overfishing. Then over time, land-based activity within the catchments saw the decline of seagrass meadows, with one third of seagrass lost off the Adelaide metropolitan coastline over the past half century (saying that, there has been action to mitigate impacts, including diversion of wastewater from treatment plants, catchment care education, creation of wetlands and stormwater harvesting, and small-scale marine restoration efforts).

The importance of healthy shellfish reefs and seagrass meadows cannot be emphasised enough.

Scientific examination of oysters in the oyster farms at Stansbury, has found the oysters are “eating” the *Karenia mikimotoi*. This is because they are filter feeders and naturally clean the water. One hectare of shellfish reef, in one year:

- Filters 2.7 billions of seawater
- Removes 225 kilograms of nitrogen and phosphate
- Produces 375 kilograms of new fish (ecosystem engineers) and provides new homes for over 100 marine species.

Seagrasses host a bacteria that is a natural algaecide, therefore “killing” or “treating” the HAB. Every hectare of seagrass, in one year:

- Sequesters 1.3 tonnes of carbon dioxide (oysters also sequester carbon dioxide when building their shells).
- Removes 175 kilograms of nitrogen

- Provides nursery habitat for over 117 fish species. Not only that, seagrass meadows cool the ocean.

As such, this problem of lower resilience of the marine environment can be addressed through marine restoration.

Whilst the announcement of 15 new shellfish reefs to be funded by the partnership of the State and Federal Governments is a start, the combined size of 15 hectares is nowhere near what is needed to have meaningful impact. As an example, the Windara Reef restoration project completed off our coastline in Gulf St Vincent in 2018, and of which Yorke Peninsula Council was a project partner, spans 16 hectares.

The Federal Government needs to make substantial investment into marine restoration. We understand the need to exercise the precautionary principle, however shellfish reefs are proven science (see the Reef Builder program across southern Australia), with Windara Reef one of now four State reefs that are extensively monitored.

Additionally, works have been conducted, prior to the HAB, by Government and Non-Government agencies such as The Nature Conservancy, that identify suitable locations for restoration. These locations are ready to act on.

The importance of intertidal and coastal land to marine health must also be a focus – they are all connected. For example, mangroves and salt marches are providing retreat zones for impacted fish species; dune morphology sustains our beaches and inshore marine habitats.

Yorke Peninsula Council is already seeing increased pressure on the areas of our coast unaffected by HAB. This is largely the west side of the Peninsula, which is already the most accessible (naturally) to vehicles, and the most degraded. Increased visitation will increase degradation, impacting our inshore marine ecosystems. This adds to the importance of a regenerative tourism lens for our region.

Yorke Peninsula Council also has limited resources to manage the coastal land it is responsible for. Due to the geographical expanse and limited revenue, Council relies on grant funding to undertake coastal management works. The State Government has no dedicated resources to manage their unalienated Crown land. The Guuranda Yorke Peninsula Coastal Access Strategy has been drafted by State entities, but not endorsed, and no budget allocated. This problem can be addressed by increasing resourcing to all levels of Government for coastal management, including on-ground works delivered by Indigenous Rangers.

Yorke Peninsula Council, our community and our economy, is reliant on a healthy marine environment. A healthy marine environment is only achievable through measures that will reduce the frequency and severity of marine heatwaves, and the subsequent emergence of HABs and other impacts (as experienced across Australia).

The Federal Government must take meaningful climate action; switch to renewables; cease subsidies to the big polluters; implement carbon levies to generate Climate Disaster and Ecological Event funds (which could fund measures described above, as well as coast defence and natural asset protection/coastal management needed as a result of sea level rise). Restore the marine environment to support the Yorke Peninsula Council region in becoming a sustainable community and a leading regenerative tourism destination for future generations.

Local Community Impacts

For the past two months, Yorke Peninsula Council has been working closely with community and businesses who are being affected by the impacts of HAB every day. Council staff are hearing stories of loss and devastation, and the wellbeing effects of HAB on our community is significant. It is impacting all ages and demographics.

Our communities are impacted on many levels, experiencing everything from financial loss, loss of self-identify, witnessing every day the devastating loss of marine life, not being able to fish, right through to talking about the impacts of HAB with business owners at local cafes and pubs. Some locals have lived in the same coastal township for 65 years and for the first time are witnessing this monumental devastation and their childhood memories being ripped away right before their eyes. Communities are grieving.

Council Impacts

Another issue is the capacity of Yorke Peninsula Council to manage the workload and demand associated with this ecological event. State and Federal Government staff do not have an awareness of the lack of resources, the lack of staff, the geographical expanse faced by our Council; their expectations are too great. For example, Council has 485 kilometres of coastline with numerous pedestrian and vehicle access points, with 32 settlements on the coast. The State Government expected Yorke Peninsula Council to arrange the manufacture and installation of their beach advisory signage (250 across the 485 kilometres); this is not possible with our number of staff, and there is no budget to engage a contractor (even if there was, no local contractor could undertake the works).

Yorke Peninsula Council's products and assets are also under strain:

- Visitation to our Bush Campgrounds is down 61%
- At our six Council owned and operated Caravan Parks, bookings have dropped significantly, with summer cancellations rising.
- With 485km of coastline, we cannot manage clean-up demands as dead marine life continues to wash ashore.

This loss of visitation threatens our long-term financial sustainability. Yorke Peninsula Council maintains a tremendous amount of assets and infrastructure on a modest \$44 million budget. A prolonged downturn will affect our rate base, service delivery, and asset management capacity.

Yorke Peninsula Council continues to do all it can to support our region through this crisis, communicating updates, facilitating events, promoting visitation, and engaging directly with affected businesses. But this disaster is larger than any one Council can manage.

It should be noted that Yorke Peninsula Council has formally endorsed the South Australian Government's request for the bloom to be declared a national natural disaster. Our Elected Members unanimously passed a motion of support at the Council meeting held on 23 July 2025.

State Government & Council's Response

The Government of South Australia kept Yorke Peninsula Council informed when it became apparent that the HAB was substantial. The Government of South Australia has invited Council to numerous meetings, the first being early April. At these meetings, they have always made it clear that the HAB couldn't be "stopped" or treated, and that they could not predict its size, impact, nor duration. This information was reiterated on their various

Department websites. However, despite this, Council has received numerous requests for information, and demand for Council action, even though it is not within our responsibilities.

In response, on Thursday 24th July, Yorke Peninsula Council hosted its own information session to explain the science of algal blooms and a path forward by way of restoration ("treat" via natural systems, to improve the resilience of the Gulfs to HABs), presented by Faith Coleman, an ecologist specialising in algae, and Anita Thomas, SA Oceans Program Coordinator for The Nature Conservancy. Within one week, Council received over 200 registrations for this community event held in Minlaton. This was a significant response rate illustrating the concern of the community.

On Tuesday 15th July, Yorke Peninsula Council was invited to present at a Southern Yorke Peninsula Community Forum held in Port Vincent which was attended by approximately 100 concerned community members. It was at this forum in which Council was very clearly made aware of the current state of play and the immense effects HAB was having on local businesses, professional fishers and oyster growers. Ever since this meeting, Council has worked on supporting communities and businesses with the algal bloom crisis.

State Government has since held its own Algal Bloom Community Session in Minlaton on Thursday 14th August and continues to support the region through tourism marketing support and regular updates and meetings.

Council's Key Requests

As part of our contribution to this inquiry, Yorke Peninsula Council respectfully makes the following three key requests:

1. Grant funding specifically ringfenced for Yorke Peninsula Council to enable the development of a regional community hub, in collaboration with industry, providing ongoing economic benefits through the following: driving tourism, environmental education, allied health response to psychosocial hazards and local community support.
2. Further investment in environmental initiatives, specifically restoration to build long-term resilience and recovery of the marine ecosystem (Windara Reef).
3. Financial support for a dedicated Algal Bloom Response Officer (minimum 24-month contract) to coordinate local recovery and stakeholder engagement.

Thank you again for considering our submission. We welcome the opportunity to provide further information or appear before the Committee if required.