

Submission from STET Limited on PHC1 partial closure

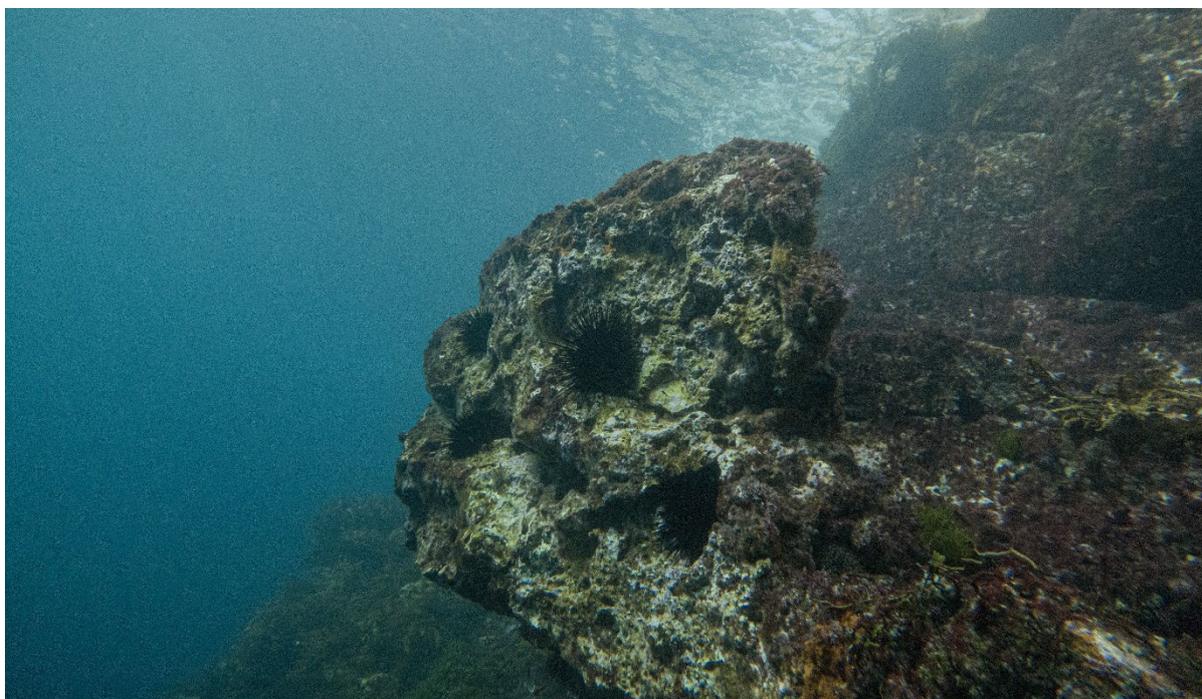
11/09/2025

STET Limited welcomes the opportunity to provide additional feedback on the discussion paper Rock lobster fishery management measures for urchin barrens in northeastern New Zealand. This submission focuses on the role of packhorse lobster (*Sagmariasus verreauxi*) in controlling the spread of *Centrostephanus rodgersii* (long-spined sea urchin) barrens, and the urgent need for a precautionary closure of the PHC 1 packhorse lobster fishery in northeastern New Zealand.

Ecological context

The scientific consensus is clear: *Centrostephanus rodgersii* has expanded rapidly in northern New Zealand waters, forming extensive urchin barrens that displace kelp forests and the diverse communities they support. Balemi & Shears (2023) demonstrates that packhorse lobster are the only known effective predator of adult *Centrostephanus*, capable of reversing or preventing barren formation when present at sufficient density. The authors note that declines in packhorse lobster abundance, driven by sustained fishing pressure, have left ecosystems highly vulnerable to urchin outbreaks¹.

Marine reserves like Poor Knights show that even in fully protected areas, recovery of packhorse populations has not occurred — likely due to regional recruitment limitations caused by overfishing across the wider PHC 1 stock.



Centrostephanus barren at the Poor Knights Marine Reserve. Photo by Shaun Lee April 2025.

¹ <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2023.1224067/full>

Shortcomings of current approaches

Fisheries New Zealand (FNZ) has proposed new restrictions on spiny lobster (CRA 1, CRA 2), but the discussion paper does not adequately address the ecological role of packhorse lobster. Without full closure of PHC 1, displacement of effort could further depress packhorse populations.

Meanwhile, the Department of Conservation has trialled large-scale culling of *Centrostephanus* at the Poor Knights, removing 130,000 individuals at a cost of \$150,000, or ~\$25,000 per hectare (cost obtained via Official Information Act request). With more than 1.5 million urchins present, scaling this approach would cost millions and require repeated interventions every 5–10 years.

The cause is predator depletion. The only natural check on adult *Centrostephanus* is the packhorse lobster. Without rebuilding predator biomass, barrens will persist and expand.



Centrostephanus barren at the Alderman Islands February 2025. Photo by Shaun Lee.

Need for precautionary closure of PHC 1

Given the demonstrated ecological role of packhorse lobster, STET Limited strongly supports:

Immediate closure of the PHC 1 fishery in northeastern New Zealand, Cape Reinga to Cape Runaway, to allow rebuilding of predator biomass.

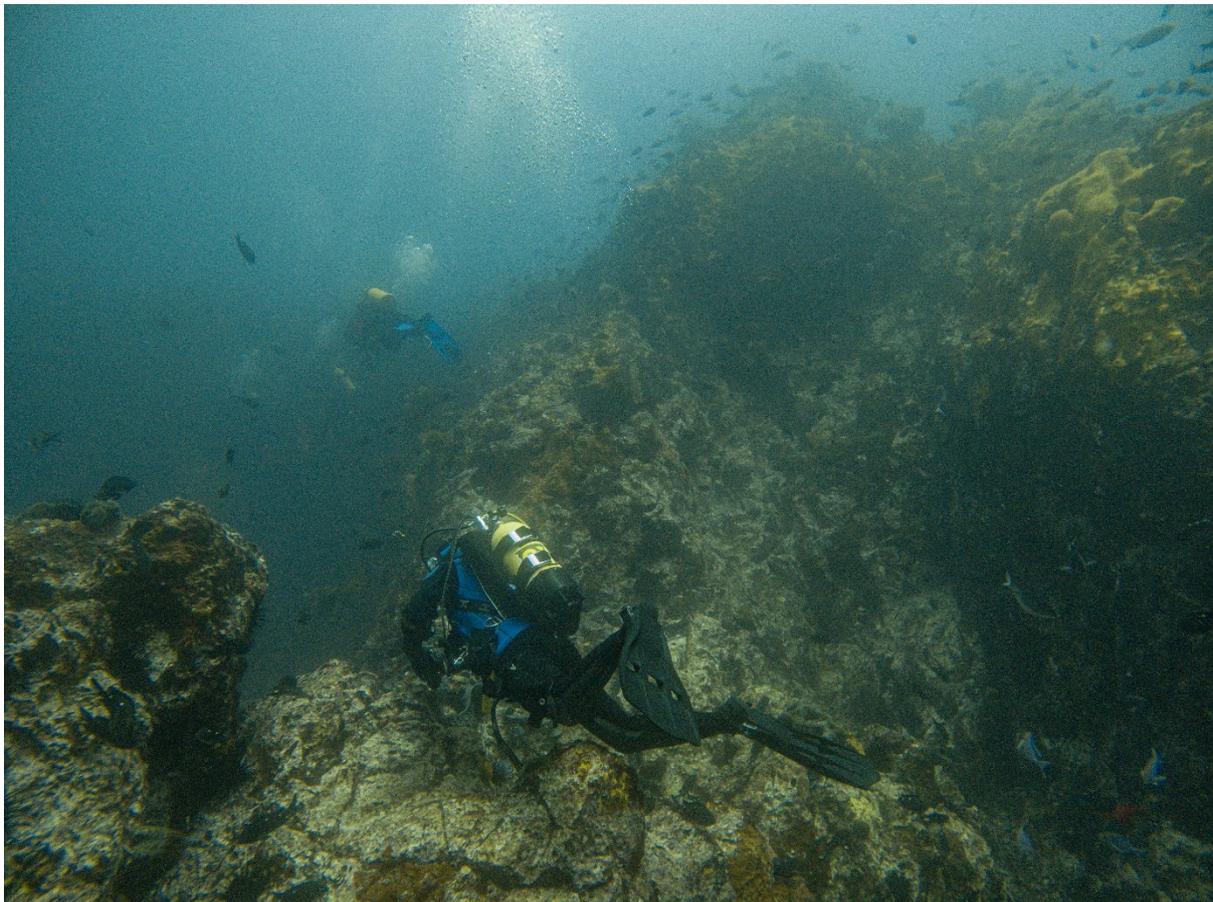
Review of recreational limits: FNZ's proposed limit of three per fisher nationally for packhorse is insufficient. In northeast waters where *Centrostephanus* barrens are expanding, the daily limit should be reduced to zero, or a highly precautionary allowance of one per fisher, aligned with customary authorisations.

Integration with CRA closures: Any closure of spiny lobster fisheries must be paired with protection for packhorse lobster, otherwise predator release on *Centrostephanus* will continue.

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Centrostephanus barren at the Alderman Islands February 2025. Photo by Shaun Lee.