

Ian Steele  
President  
NZ Sport Fishing Council  
PO Box 54242, The  
Marina, Half Moon Bay,  
Auckland 2144  
[secretary@nzsportfishing.org.nz](mailto:secretary@nzsportfishing.org.nz)



Fisheries New Zealand  
[FMSubmissions@mpi.govt.nz](mailto:FMSubmissions@mpi.govt.nz)



29 July 2024

## Submission: Review of sustainability measures for kina (SUR 3) for 2024/25

### Recommendations

1. **The Minister allows for utilisation whilst ensuring sustainability** setting the Kina 3 (SUR 3) Total Allowable Catch (TAC) as follows -
  - a. The TAC is set at 113 tonnes
  - b. The allowance set aside for Māori customary interests is 30 tonnes.
  - c. The allowance set aside for recreational interests is 30 tonnes.
  - d. The allowance set aside for Other Mortality is 3 tonnes.
  - e. The TACC is set as 50 tonnes.
2. **If the TAC is set as above, we recommend the Minister supports** an increase in the SUR 3 recreational daily bag limit – increasing the DBL from 50 to 70 kina per person per day.
3. **The Minister requires Fisheries New Zealand to review SUR 3** in three years as part of the 2027 October Sustainability Review.
4. **The Minister acknowledges his statutory duty** to make a precautionary decision given the uncertain, unreliable, and inadequate information available regarding the abundance of the SUR 3 fishery.
5. **The Minister must support** the development of a monitoring plan which implements data from Geospatial Position Reporting (GPR) to map change in the area and extent of commercial harvest of kina in SUR 3.

## The submitters

6. The New Zealand Sport Fishing Council (**NZSFC**) is a recognised national sports organisation with over 37,000 affiliated members from 48 clubs nationwide. The Council has initiated LegaSea to generate widespread awareness and support for the need to restore abundance in our inshore marine environment. Also, to broaden NZSFC involvement in marine management advocacy, research, education and alignment on behalf of our members and LegaSea supporters. [legasea.co.nz](http://legasea.co.nz).
7. The New Zealand Angling and Casting Association (**NZACA**) is the representative body for its 24 member clubs throughout the country. The Association promotes recreational fishing and the camaraderie of enjoying the activity with fellow fishers. The NZACA is committed to protecting fish stocks and representing its members' right to fish.
8. The New Zealand Underwater Association (**NZUA**) comprises three distinct user groups including Spearfishing NZ, affiliated scuba clubs throughout the country and Underwater Hockey NZ. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and the wellbeing of many of our members.
9. Collectively we are '*the submitters*'. The joint submitters are committed to ensuring that sustainability measures and environmental management controls are designed and implemented to achieve the Purpose and Principles of the Fisheries Act 1996, including "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations..." [s8(2)(a) Fisheries Act 1996].
10. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Helen Pastor, [secretary@nzsportfishing.org.nz](mailto:secretary@nzsportfishing.org.nz).

## Proposals

11. **Table 1:** Fisheries New Zealand's proposed management options (in tonnes) for SUR 3, from 1 October 2024.

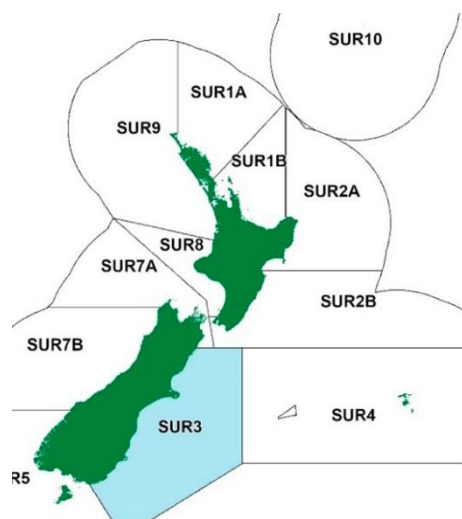
| Option                         | TAC        | TACC       | Allowances      |              |                                       |
|--------------------------------|------------|------------|-----------------|--------------|---------------------------------------|
|                                |            |            | Customary Māori | Recreational | All other mortality caused by fishing |
| Option 1 ( <i>Status quo</i> ) | 42         | 21         | 10              | 10           | 1                                     |
| Option 2                       | 163 (↑121) | 121 (↑100) | 20 (↑10)        | 20 (↑10)     | 2 (↑1)                                |
| Option 3                       | 284 (↑242) | 221 (↑200) | 30 (↑20)        | 30 (↑20)     | 3 (↑2)                                |

## Consultation

12. On 27 June 2024 Fisheries New Zealand (**FNZ**) released the [Discussion Paper: 2024/18](#), seeking to review the Total Allowable Catch, Total Allowable Commercial Catch, Recreational Allowance, Māori customary allowance and Other Mortality allowance for kina (**SUR 3**). Submissions are due by 29 July 2024. The NZSFC released a Preliminary View for [Kina 3](#) on 15 July requesting feedback prior to developing a submission.
13. **The submitters** appreciate the opportunity to submit on the proposal, however we object to the unreasonable timeframe available to respond to these proposals and those for 17 other fish stocks.
14. The 21 working days submission period is inadequate and likely unlawful given the Court of Appeal Wellington Airport judgment determining that, “**Consultation must allow sufficient time**, and a genuine effort must be made. It is a reality not a charade...Implicit in the concept is a requirement that the party consulted will be (or will be made) adequately informed so as to be able to make intelligent and useful responses”<sup>1</sup>. [emphasis added]

## Background

15. There are two main species of sea urchin on coastal rocky reefs in New Zealand. Kina (*Evechinus chloroticus*) is endemic to New Zealand and is a valued species for Māori customary and recreational fishers. Long-spined urchins (*Centrostephanus rodgersii*) have been known to occur in New Zealand since the 1920s or earlier. *Centrostephanus* are less common and are primarily isolated to the northern regions of New Zealand, however, with warming waters their range and abundance has been increasing.



**Figure 1.** SUR 3 Quota Management Area highlighted blue.

16. Kina was introduced into the Quota Management System (**QMS**) in 2002. The Quota Management Areas (**QMAs**) were created based on the Fisheries Management Areas (**FMAs**).
17. Depending on the environmental conditions, kina are found in waters up to 20 m deep and are harvested by hand gathering while freediving. Harvesting kina with underwater breathing apparatus is not permitted for commercial fishers. Recreational fishers harvest kina while wading, freediving or scuba.
18. Fisheries New Zealand (**FNZ**) is reviewing the TAC for kina in SUR 3. SUR 3 encompasses the inshore waters along the east coast of the South Island (**Figure 1**). The options proposed

<sup>1</sup> Wellington International Airport Limited and others v Air New Zealand [1993] 1 NZLR 671. At [p.675].

include significant increases in the TACC and increases in Māori Customary, Recreational and Other Mortality allowances.

19. To date, there have been no reviews of the SUR 3 TAC since kina was introduced into the QMS. The TAC is 42 tonnes (t) and consists of 21 t for commercial, 10 t set aside for Māori customary allowance, 10 t Recreational allowance and 1 t set aside for Other Mortality. Additionally, the recreational daily bag limit has remained at 50 kina per person per day. There is no minimum legal size (MLS) for kina.
20. There is currently no stock status estimate for SUR 3<sup>2</sup>. An estimate of biomass by NIWA using data from an industry-led survey suggests that biomass in the region is high highlighting a potential opportunity for utilisation, however FNZ has stated in their proposal paper there are uncertainties in the survey method used<sup>3</sup>.
21. Commercial landings in the 2022-23 fishing year were 14 t. The recreational harvest estimate is based on individual fish, the 2022-23 National Panel Survey (NPS) estimated recreational harvest to be 24,000 fish. When converted to tonnes using an average weight of 715 grams per individual kina, this is equivalent to 17 t for 2022-23<sup>4</sup>.

## Proposed TACC increase

22. FNZ are reviewing the catch settings for kina in SUR 3 as it has been recognised that there is a utilisation opportunity. The proposal to increase the allowance for recreational interests takes into consideration new information of the recreational harvest estimate from the 2022-23 National Panel Survey and potential increase in recreational interest<sup>5</sup>.
23. There have been no stock assessments for any kina stock around New Zealand. FNZ have proposed significant increases in SUR 3 based on an industry-led biomass survey. Option 2 increases the TACC by 100 t and Option 3 is a 200 t TACC increase. We are concerned that such a large TACC increase could lead to localised depletion. FNZ has stated that there are uncertainties associated with the biomass estimates and although they acknowledge that Option 2 and 3 allow for these uncertainties<sup>6</sup>, we do not agree that a 100 or 200 tonne increase is acceptable or justifiable.
24. The suite of proposals do not meet the statutory test of 'ensuring sustainability', as required by the Fisheries Act and as confirmed by the High Court. The CRA 1 High Court decision in 2022 confirmed that ***the Fisheries Act requires the Minister to act in accordance with New Zealand's international obligation to favour a precautionary approach where information is uncertain, unreliable, or inadequate***<sup>7</sup>.
25. Since kina were introduced into the QMS in 2002 the TACC of 21 t in SUR 3 has not been fully

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<sup>2</sup> Fisheries Assessment Plenary – Volume 3: Red Gurnard to Yellow-eyed mullet. May 2024. Fisheries New Zealand. At [p.759]

<sup>3</sup> Review of sustainability measures for kina (SUR 3) for 2024/25. Fisheries New Zealand. At [4]

<sup>4</sup> Fisheries Assessment Plenary – Volume 2: Horse mussel to Red crab. May 2024. Fisheries New Zealand. At [p. 752]

<sup>5</sup> Review of sustainability measures for kina (SUR 3) for 2024/25. Fisheries New Zealand. At [p.4]

<sup>6</sup> At [3 & 4]

<sup>7</sup> Environmental Law Initiative v Minister for Oceans and Fisheries [2022] NZHC 2969 [11 Nov 2022]. At [17 & 44]

caught, and only since 2019 have commercial landings been over 10 t. The proposed options from FNZ are to increase the TACC to 5-10 times more than the current TACC. FNZ has not provided sufficient evidence to justify such a large TACC increase. If there is greater utilisation opportunity then a more precautionary, lawful approach is for the Minister to make incremental changes to the TAC and TACC and then monitor the response. This isn't a race, the kina are not going anywhere so there is no urgency.

26. Kina is almost exclusively consumed by the domestic market. We are not aware of international markets opening for kina and do not see any benefits of flooding the current domestic market<sup>8</sup>.
27. It is stated in the proposal paper that "industry is developing a harvest plan to ensure catch is spread to reduce the risk of localised depletion"<sup>9</sup>. Commercial interests cannot expect to be granted greater catching rights just to fit in with their plan. It's not a harvest plan unless there is fish available to catch. Up until now, it's clear the abundance has not been available.
28. We may consider support for greater increases to the TACC for SUR 3 when the harvest plan is publicly available and has been reviewed.

## Ecosystem effects

29. We acknowledge that there may be a utilisation opportunity in SUR 3, however, we have concerns that a significant increase in catch may shock the ecosystem. There have been historically low catches in the area. Incremental increases will allow for utilisation whilst also allowing the fishery and wider ecosystem to adjust to greater fishing pressure. Increasing the TACC by 100 or 200 t will not allow fisheries managers to respond effectively to localised depletion.
30. We do not believe that the large TACC increases proposed by FNZ adequately take into considerations uncertainties regarding the effects of climate change and other environmental perturbations. FNZ mention climate in their proposal paper but note that any extent of impacts on kina populations in SUR 3 is unknown. Given that there is uncertainty and shellfish species are highly susceptible to a multitude of factors i.e., sedimentation, rising sea surface temperature and land-based run off, we insist the Minister supports an alternative option.
31. Moreover, FNZ has not explained how localised depletion of kina on reefs may impact predator species. The Minister has a statutory obligation to **ensure sustainability** and make a precautionary decision where there is limited information.

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<sup>8</sup> Fisheries Assessment Plenary – Volume 2: Horse mussel to Red crab. May 2024. Fisheries New Zealand. At [p. 746]

<sup>9</sup> Review of sustainability measures for kina (SUR 3) for 2024/25. Fisheries New Zealand. At [p.2]

## Spatial conflict

32. We have concerns that the proposed increases in commercial catch, of 5 to 10 times the existing limit, will lead to increased competition between commercial and non-commercial fishers. FNZ has highlighted that Options 2 and 3 risk localised depletion in commercial fishing areas that overlap with fishing areas that are important to recreational and customary fishers<sup>10</sup>. **FNZ need to outline how they will monitor and respond to increased spatial overlap and competition between sectors for kina.**
33. **We recommend** the Minister requires mapping of geospatial positions from the Electronic Reporting System to track changes in the extent of the commercial harvest footprint due to any increased TACC.

## Daily bag limit

34. The current recreational daily limit is 50 kina per person. The submitters have received information from avid kina fishers in northern New Zealand, stating that the average divers catch bag can fit approximately 70 kina and if a diver has filled their catch bag, then that was a successful day. **If there is a utilisation opportunity in SUR 3, we recommend the Minister increases the recreational daily limit from 50 to 70 kina per day.**
35. **If the Minister supports an increase in the recreational daily limit to allow for more utilisation, we recommend the Minister sets the Total Allowable Catch as follows –**
- a. Increases the Total Allowable Catch from 42 tonnes to 113 t.
  - b. Increases the Māori customary allowance from 10 t to 30 t.
  - c. Increases the Recreational allowance from 10 to 30 t.
  - d. Increases the allowance set aside for Other Mortality from 1 t to 3 t.
  - e. Increases the TACC from 21 t to 50 t.

## Sea urchin barrens

36. Sea urchin barrens have been described as:
- Sea urchin dominated areas of rocky reef that would normally support healthy kelp forest but have little or no kelp due to overgrazing by sea urchins.*<sup>11</sup>
37. Urchin barrens occur nationwide, however, the bulk of research completed has been in the North Island and knowledge of subtidal habitats, the extent of barrens and contributing factors in the South Island is poor.
38. Surveyed urchin barren sites in the South Island include areas in the Marlborough Sounds, Fiordland and Stewart Island<sup>12</sup>.

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<sup>10</sup> At [p. 2 & 3]

<sup>11</sup> Fishery-induced trophic cascades and sea urchin barrens in New Zealand: a review and discussion for management. AEER. Fisheries New Zealand. November 2023.

<sup>12</sup> At [p. 56]

39. The proliferation of urchin barrens throughout New Zealand is thought to be driven by a fishery induced trophic cascade, where fishing pressure has reduced or eliminated the functional role of top predators within an ecosystem.
40. FNZ has clearly highlighted in their proposal paper negative effects of an overabundance of kina and how this may lead to urchin barrens. However, there is information lacking on the impact of fishing down kina abundance and whether this could lead to a bottom-up effect on the food web.

## Interdependent species

41. The Minister has a statutory duty to take into consideration the lack of robust information available regarding status of the kina fishery. As such, he must acknowledge that kina are a contributor to the diet of highly valued reef species. If the TAC and TACC is to increase, an incremental increase to the TACC is essential to comply with the statutory requirements set out in the Fisheries Act 1996.
42. Despite the potential damaging effect of an overabundance of kina, it is vital to note that when the ecosystem is in balance kina are prey for reef species. Blue cod (*Parapercis colias*) and rock lobster (*Jasus edwardsii*) are known predators of kina in this South Island fishery. Other species that have been cited as predating on kina around New Zealand include snapper (*Chrysophrys auratus*), packhorse lobster (*Sagmariasus verreauxi*), large starfishes (*Coscinasterias muricata* and *Astrostele scabra*), red moki (*Cheilodactylus spectabilis*), banded wrasse (*Notolabrus fuciola*) and hāpuku (*Polyprion* spp.)<sup>13</sup>.
43. In their public discussion document, FNZ has omitted to highlight the contribution of kina to blue cod and rock lobster diet. Rock lobster (CRA 5 & CRA 7) biomass in the overlapping QMA is estimated to be high and blue cod on the east coast of the South Island (BCO 3) are in a rebuilding state (**Table 2**). For the Minister to make a precautionary decision taking into account associated and dependent species, the status of the predator/prey species must be taken into account and acknowledged as a necessary element of the decision-making process.

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<sup>13</sup> Fishery-induced trophic cascades and sea urchin barrens in New Zealand: a review and discussion for management. AEER. Fisheries New Zealand. November 2023. At [p. 10]

**Table 2.** List of known dependent species in SUR 3 with their current stock status. 2022-23 total allowable commercial catch (TACC) settings, in tonnes, and percentage of TACC caught in 2022-23.

| <b>Species and fish stock</b>   | <b>Stock status<sup>14</sup></b>   | <b>TACC (2022-23)</b> | <b>% TACC caught (2022-23)</b> |
|---|--|-----------------------|--------------------------------|
| Blue cod – BCO3 East Coast South Island                                   | Very unlikely (<10%) to be at or below the target <sup>15</sup>  | 130 t                 | 104%                           |
| Kina – SUR 3 East Coast South Island                                      | Unknown  | 21 t                  | 66%                            |
| Rock lobster – CRA 5 West of Marlborough Sounds, south to Banks Peninsula | 2020 stock assessment: Unknown<br>2023 rapid update: Virtually certain (>90%) to be above the reference level. | 350 t                 | 100%                           |
| Rock lobster – CRA 7 (Otago) Waitaki River south to Long Point            | Very likely (>90%) to be above the target  | 112 t                 | 100%                           |

<sup>14</sup> Stock status in relation to management targets provided as outlined in Volume 1-4 of the Fisheries Assessment Plenaries.

<sup>15</sup> The BCO 3 management target is set as an exploitation rate. It is considered sustainable to be below this management target. The BCO 3 fishery is in a rebuild state and is estimated to be overfished.