Fisheries New Zealand
Tini a Tangaroa

Review of Sustainability Measures for the 2023 April round

Fisheries New Zealand Decision Paper

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Te Kāwanatanga o Aotearoa
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1 Introduction

1. This paper seeks your decisions in relation to the April 2023 sustainability review. You are asked to make decisions on sustainability measures and allowances for two different fish stocks, as summarised below in Table 1.

Table 1: Summary of stocks and measures reviewed as part of the April 2023 sustainability round.

Stock	You are asked to consider
Scallop (SCA CS) – Coromandel, Hauraki Gulf, and Western Bay of Plenty	• Closing the fishery under section 11 of the Fisheries Act. • Varying the Total Allowable Catch (**TAC**), allowances, and Total Allowable Commercial Catch (**TACC**) of the stock.
Rock lobster (CRA 1) – Northland	• Varying the TAC, allowances, and TACC of the stock. • Varying the recreational daily bag limit of the stock.

2. We have provided for input and participation of tangata whenua on these decisions, primarily through Iwi Fisheries Forums, which have been set up for this purpose. We have identified species and areas over which these groups have expressed kaitiakitanga (guardianship)[1], to which you must have particular regard when making these decisions.

3. Input and participation and submissions have been summarised where relevant for each stock. However, should you wish to view full submissions on the proposals, these have been provided separately to your office (titled: "*Public Submissions Received for the 2023 April Sustainability Round")*

Other proposals consulted on as part of this round, but not presented here

4. Two other proposals were consulted on as part of this sustainability round:

    - A review of sustainability measures for the central and lower North Island pāua fishery (PAU 2); and
    - A review of a proposed restrictions on commercial kina dredging in the Tory Channel (Marlborough Sounds).

5. In response to requests from tangata whenua, Fisheries New Zealand (**FNZ**) agreed to extend engagement on those proposals, noting that your decisions for them are not bound to the upcoming April 2023 fishing year.

6. For the PAU 2 proposal, in addition to extended engagement with tangata whenua, public consultation has been extended until 24 March 2023.

7. FNZ will advise you on these proposals later this year (approximately May 2023), once engagements have completed.

1.1 Implementation of decisions

8. Rock lobster and scallop stocks have an April fishing year. Decisions on their catch limits and allowances gazetted before the end of March 2023 will therefore take effect from 1 April 2023.

9. Area and method restrictions implemented under section 11 of the Fisheries Act and changes to recreational bag limits are not bound to a fishing year. However, FNZ will ensure that those measures can take effect as soon as is practicable after the decisions are made.

[1] The Act defines Kaitiakitanga to mean "the exercise of guardianship; and, in relation to any fisheries resources, includes the ethic of stewardship based on the nature of the resources, as exercised by the appropriate tangata whenua in accordance with tikanga Māori", where tikanga Māori refers to Māori customary values and practices.

10. For the Coromandel scallop fishery, the areas proposed for closure as part of the current advice are already closed to fishing under an emergency measure, which lapses on 16 March 2023. FNZ has provided you with a relevant *Gazette* notice for signing alongside the scallop decision paper to ensure that If you decide to close the fishery under section 11 of the Act, the decision can then take effect before that emergency closure lapses.

2 Overview of powers and obligations under the Fisheries Act 1996

2.1 Decisions Ministers may make in relation to sustainability reviews

11. Provisions of the Fisheries Act 1996 (**the Act**) allow you as Minister for Oceans and Fisheries to:

Part 3: Sustainability measures

- Set and vary sustainability measures such as the TAC.

Part 4: Quota Management System

- Make allowances for Māori customary and recreational fishing and all other mortality to the stock caused by fishing.
- Set and vary the TACC.
- Set deemed value rates to provide an incentive for fishers not to exceed the available annual catch entitlement (**ACE**).[2]

12. In making decisions on those matters there are several things you are required to do and take into account; these are outlined below:

2.2 Overarching requirements

13. Section 5: You must act in a manner consistent with New Zealand's International obligations relating to fishing, and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

14. Section 8: The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability.

- "Ensuring sustainability" is defined as: "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment".
- "Utilisation" of fisheries resources is defined as "conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural wellbeing."

15. The Supreme Court has stated that the purpose statement incorporates "the two competing social policies reflected in the Act" and that "both policies are to be accommodated as far as is practicable in the administration of fisheries under the quota management system". It has also stated "in the attribution of due weight to each policy that given to utilisation must not be such as to jeopardise sustainability".[3]

16. Section 9: you must take into account the following environmental principles:
    (a) associated or dependent species should be maintained above a level that ensures their long-term viability
    (b) biological diversity of the aquatic environment should be maintained

[2] Note that FNZ is not asking for your decisions to set or vary deemed value rates as part of this round.

[3] *Recreational Fishing Council Inc v Sanford Limited and Ors* [2009] NZSC 54 at [39].

(c) habitat of particular significance for fisheries management should be protected.

17. Section 10: you must take into account the following information principles:
    (a) decisions should be based on the best available information
    (b) decision makers should consider any uncertainty in the information available in any case
    (c) decision makers should be cautious when information is uncertain, unreliable, or inadequate
    (d) the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.
18. Sections 12, 21 and 75A require you to consult before making decisions on sustainability measures, the TACC, and deemed values rates, respectively.

2.3 The Hauraki Gulf Marine Park Act 2000

19. Section 11 of the Fisheries Act (discussed below) requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 (**HGMPA**) when setting or varying a TAC that includes the area of the Hauraki Gulf as defined in that Act. Section 13 of the HGMPA requires that you have particular regard to sections 7 and 8 of the HGMPA when setting or varying TACCs and deemed values.
20. Section 7 of the HGMPA recognises the national significance of the Hauraki Gulf and section 8 sets out objectives for management of the Gulf (see Table 2). The HGMPA is discussed in stock chapters of decision documents where this is relevant.

Table 2: Outline of the relevant sections of the Hauraki Gulf Marine Park Act 2000

Section 7: Recognition of national significance of the Hauraki Gulf	Section 8: Management of the Hauraki Gulf
(1) The interrelationship between the Hauraki Gulf, its islands, and catchments and the ability of that interrelationship to sustain the life-supporting capacity of the environment of the Hauraki Gulf and its islands are matters of national significance. (2) The life-supporting capacity of the environment of the Gulf and its islands includes the capacity— (a) to provide for— (i)the historic, traditional, cultural, and spiritual relationship of the tangata whenua of the Gulf with the Gulf and its islands; and (ii)the social, economic, recreational, and cultural well-being of people and communities: (b) to use the resources of the Gulf by the people and communities of the Gulf and New Zealand for economic activities and recreation: (c) to maintain the soil, air, water, and ecosystems of the Gulf.	To recognise the national significance of the Hauraki Gulf, its islands, and catchments, the objectives of the management of the Hauraki Gulf, its islands, and catchments are— (a) the protection and, where appropriate, the enhancement of the life-supporting capacity of the environment of the Hauraki Gulf, its islands, and catchments: (b) the protection and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments: (c) the protection and, where appropriate, the enhancement of those natural, historic, and physical resources (including kaimoana) of the Hauraki Gulf, its islands, and catchments with which tangata whenua have an historic, traditional, cultural, and spiritual relationship: (d) the protection of the cultural and historic associations of people and communities in and around the Hauraki Gulf with its natural, historic, and physical resources: (e) the maintenance and, where appropriate, the enhancement of the contribution of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments to the social and economic well-being of the people and communities of the Hauraki Gulf and New Zealand: (f) the maintenance and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments, which contribute to the recreation and enjoyment of the Hauraki Gulf for the people and communities of the Hauraki Gulf and New Zealand.

2.4 Statutory Considerations

21. Table 3 provides an overview of your central statutory considerations for varying TACs and TACCs under the Act. Where relevant, stock-specific details relating to these considerations are set out in the stock chapters within this paper.

Table 3: Information on your key requirements when making decisions under the Act.

Decisions you may make	Requirements – things you must do when making decisions
Part 3 Sustainability Measures	
Section 11 You may set or vary sustainability measures for any stock Sustainability measures may relate to (but are not limited to): • Catch limits • Size, sex or biological state • Areas • Fishing methods • Fishing seasons	(1) you must take into account: (a) effects of fishing on any stock and aquatic environment; and (b) existing controls under this Act that apply to the stock or area concerned; and (c) the natural variability of the stock concerned. (2) you must have regard to: (a) any regional policy statement, regional plan or proposed regional plan under the Resource Management Act 1991; and (b) any management strategy or plan under the Conservation Act 1987; and (c) sections 7-8 of the Hauraki Gulf Marine Park Act 2000; and (ca) regulations made under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; and (d) a planning document lodged with you by a customary marine title group under s 91 of the Marine and Coastal Area (Takutai Moana) Act 2011 – that apply to the coastal marine area and are considered by you to be relevant. (2A) you must take into account: (a) any conservation or fisheries services; and (b) any relevant fisheries plan approved under section 11A; and (c) any decisions not to require conservation or fisheries services.
Section 11A You may approve or revoke fisheries plans	Fisheries plans may include: (a-c) fisheries management objectives, strategies to achieve them, and performance criteria to measure achievement; (d) conservation or fisheries services; or (e) contingency strategies to deal with foreseeable variations in circumstances. To date national fisheries plans have been approved only for deepwater and highly migratory species, the Foveaux Strait oyster fishery, PAU 3 (A & B) and PAU 4 (Chatham Islands).
Section 12 Before making decisions, you must consult	(a) you must consult with such persons or organisations as the Minister considers are representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including Māori, environmental, commercial, and recreational interests; and (b) you must provide for the input and participation of tangata whenua that have: (i) a non-commercial interest in the stock concerned; or (ii) an interest in the effects of fishing on the aquatic environment in the area concerned— and have particular regard to kaitiakitanga. (2) you must provide the reasons for your decisions to the people consulted.
Section 13 You must set and may vary, a TAC for stocks in the Quota Management System (QMS)	(2) you must set (and may vary – subsection (4)) a TAC that: (a) maintains the stock at or above a level that can produce the maximum sustainable yield (***MSY***), having regard to the interdependence of stocks; or (b) enables the level of any stock below a level that can produce *MSY* to be altered: (i) in a way and at a rate that will restore the stock to a level that can produce *MSY* having regard to the interdependence of stocks; and (ii) within a period appropriate to the stock, having regard to the biological characteristics of the stock and environmental conditions affecting it, or

Decisions you may make	Requirements – things you must do when making decisions
	(c) enables the level of any stock above that which can produce *MSY* to be altered in a way and at a rate to move the stock toward or above that which can produce *MSY* having regard to the interdependence of stocks. (2A) If you consider that the stock level to produce *MSY* is not able to be estimated reliably using best available information, you must: (a) not use this as a reason to postpone or fail to set a TAC; and (b) have regard to the interdependence of stocks, biological characteristics of the stock and any environmental conditions affecting the stock; and (c) set a TAC (i) using the best available information; and (ii) that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above a level that can produce *MSY*. (3) In considering the way and rate at which a stock is moved toward or above a level that can produce *MSY* you must have regard to such social, cultural and economic factors as you consider relevant. (4) You may, by notice in the *Gazette*, vary any total allowable catch set for any quota management stock under this section. When considering any variation, you are to have regard to the matters specified in subsections (2), (2A) (if applicable), and (3).
Part 4 Quota Management System	
Section 20 You must set and may vary TACC for quota management stocks, unless a TAC has not been set for the stock	**Section 21** (1) you must have regard to the TAC and shall allow for (a)(i) Māori customary interests; and (ii) Recreational interests; and (b) all other mortality to the stock caused by fishing. (2-3) you must consult representatives of classes of people that have an interest and give reasons for your decision (4) When allowing for Māori customary interests you must take into account (a) any mātaitai reserve in the Quota Management Area (QMA) declared under s186: (b) any area closure or method restrictions/prohibitions imposed under s186A. (5) When allowing for recreational interests you must take into account any regulations that prohibit or restrict fishing under s311.

2.5 Judicial Guidance

2.5.1 2021 High Court judgment for East Coast Tarakihi

22. In December 2019, Forest and Bird New Zealand filed proceedings seeking judicial review of the 2019 decision on catch limit settings for East Coast tarakihi. Their arguments included that the catch limit reductions were not sufficient to allow the stock to rebuild in a "period appropriate to the stock."

23. The judgment[4] was delivered on 16 June 2021, with the following key findings:

- **first cause of action: period appropriate to the stock** – the Minister erred by not making an assessment of the period appropriate for rebuilding a stock, as required by s 13(2)(b)(ii), before applying social, cultural and economic factors to determine the way and rate of rebuild;
- **second cause of action: probability of achievement** – the Minister was required to identify a probability level at the time of setting the TAC. Her Honour found (by a fine margin) that a probability level of 50 percent was adequately identified in the 2019 decision;
- **third cause of action: failure to consider Harvest Strategy Standard guidance –** the Harvest Strategy Standard and associated Operational Guidelines advice on

[4] *Royal Forest and Bird Protection Society of New Zealand Incorporated v Minister of Fisheries [2021] NZHC 1427.*

probability for achieving a rebuild is a mandatory relevant consideration, which the Minister failed to have regard to; and

- **fourth cause of action: irrelevant consideration –** the Minister erred by taking into account an Industry Rebuild Plan in setting the TAC, and that, as inferred by her Honour, the Minister had regard to the plan in determining the period appropriate to the stock, as well as the way and rate of rebuild. Doing so had the effect of applying social, cultural and economic factors to the Minister's determination of the period appropriate to the stock. Steps taken by the industry which have the effect of speeding up a rebuild can be considered when determining the way and rate (refer s 13(2)(b)(i)), but not when determining the period approach to the stock.

24. This decision has implications for what matters you must, and must not, consider when deciding to set or vary a stock's TAC. More specifically, the judgment has provided direction on the application of s 13(2)(b) which pertains to any stock whose current level is below that which can produce Maximum Sustainable Yield (***MSY***).[5]

25. Notably, section 13(2)(b) does not apply to your decision for varying the TAC of Coromandel scallops (SCA CS), because the level of biomass that can produce *MSY* for SCA CS is unable to be reliably estimated using best available information (s 13(2A) applies for that stock). It also does not apply to your decision for varying the TAC of Northland rock lobster (CRA 1) because biomass of CRA 1 is not assessed as being below a level that can produce *MSY*. The first and second causes of action of the above judgment are therefore not relevant to your decisions for these stocks.

2.5.2 Allocation decisions under section 21

26. Relevant judicial findings provide useful guidance in terms of your allocation decisions under section 21 of the Act.

27. In a case relating to Kahawai the Supreme Court said that the wording of the Act sets out a particular order of decisions – after allowing for Māori customary non-commercial fishing interests, recreational fishing interests, and all other sources of mortality caused by fishing, the remainder constitutes the TACC.[6] On their ordinary meaning the words "allow for" require you both to take into account those interests, and to make provision for them in the calculation of the total allowable commercial catch.[7] That does not, however, mandate any particular outcome.[8]

28. Importantly, the Act does not confer priority for any interest over the other[9] and does not limit the relative weight which you may give to the interests of competing sectors.[10] It leaves that judgement to you.

29. The Courts have also provided guidance as to the nature of the allowances to be provided. Where there are competing demands exceeding an available resource it could perhaps be said you can "allow for" use by dispensing a lesser allotment than complete satisfaction, creating not a full priority but some degree of shared pain.[11] The requirement to "allow for" the recreational interest can be construed as meaning to "allow for in whole or part".[12] The Supreme Court stated that the Act envisages that the allowance for recreational interest, as well as Māori customary fishing interests and the TACC, will be a reasonable one in all the circumstances.[13]

[5] Refer to section 3.1 below for an explanation of Maximum Sustainable Yield.
[6] *New Zealand Recreational Fishing Council Inc v Sanford Limited and Ors* (Supreme Court, SC 40/2008, 29 May 2009) at [53].
[7] Above n 5 at [55].
[8] *Sanford Limited and Ors v New Zealand Recreational Fishing Council Inc and Anor* (Court of Appeal, CA 163/07, 11 June 2008) at [57].
[9] *New Zealand Recreational Fishing Council Inc v Sanford Limited and Ors* (Supreme Court, SC 40/2008, 29 May 2009) at [65].
[10] *Sanford Limited and Ors v New Zealand Recreational Fishing Council Inc and Anor* (Court of Appeal, CA 163/07, 11 June 2008) at [61].
[11] *Roach v Minister of Fisheries* (HC, Wellington CP715/91, 12/10/92, McGechan J) at [16].
[12] *New Zealand Federation of Commercial Fishermen (Inc) & Ors v Minister of Fisheries & Ors* (HC, Wellington CP237/95, 24/4/97) at [150].
[13] *New Zealand Recreational Fishing Council Inc v Sanford Limited and Ors* (Supreme Court, SC 40/2008, 29 May 2009) at [65].

30. Section 21 is concerned with allocation of a limited resource and that what is allowed for non-commercial fishing interests will impact on the total allowable commercial catch.[14] The consideration of the wellbeing factor (as expressed in section 8 of the Act) requires a balance of competing interests, especially in the case of a shared fishery.[15]

31. In terms of recreational interests, the Supreme Court stated that "Although what the Minister allows for, is an estimate of what recreational interests will catch, it is an estimate of a catch which the Minister is able to control. The Minister is, for example, able to impose bag and fish length limits. The allowance accordingly represents what the Minister considers recreational interests should be able to catch but also all that they will be able to catch. The Act envisages that the relevant powers will be exercised as necessary to achieve that goal".[16]

32. No implied obligation to attain proportionality between commercial and recreational catch arises from the legislation. The imprecise [estimation] of the recreational catch precludes strict proportionality.[17] Further, in the Snapper 1 case the Court of Appeal said:

> *"We can see no reason why either as his primary purpose or as a consequence of some other purpose the Minister should not be able to vary the ratio between commercial and recreational interests."* [18]
>
> *"If over time a greater recreational demand arises it would be strange if the Minister was precluded by some proportional rule from giving some extra allowance to cover it, subject always to his obligation to carefully weigh all the competing demands on the TAC before deciding how much should be allocated to each interest group."* [19]

33. The High Court earlier said in that case:

> *"It is not outside or against the purposes of the Act to allow a preference to non-commercials to the disadvantage in fact of commercials and their valued ITQ rights, even to the extent of the industry's worst case of a decision designed solely to give recreationalists greater satisfaction. Both are within the Act."*[20]

34. The Courts have also emphasised the importance of decisions undertaken for sustainability purposes not being undermined by increased fishing by one or other of the fishing sectors. In the Snapper 1 case the High Court said:

> *"When Parliament empowered the Minister to reduce the TACC for conservation purposes—not to improve recreational catch rate—it expected the Minister to take any concurrent steps necessary to minimise sabotage by recreational fishing. . . The significant point is that both law and common sense dictate that a Minister should not reduce the TACC for conservation reasons unless able to take, and taking, reasonable steps to avoid the reduction being rendered futile through increased recreational fishing."*[21]

35. While this statement relates to reduction of the TACC, the principle equally applies in situations where measures are enacted to rebuild a fishery. Litigation relating to management decisions for kahawai involved this very issue, where the failure to agree to a reduction in the daily bag limit was found to be unlawful.[22]

36. In respect of quota granted to iwi under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and the Māori Fisheries Act 1989, in the Snapper 1 case the Court of Appeal said:

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[14] Above n 12 at [53].
[15] *Sanford Limited and Ors v New Zealand Recreational Fishing Council Inc and Anor* (Court of Appeal, CA 163/07, 11 June 2008) at [61].
[16] *New Zealand Recreational Fishing Council Inc v Sanford Limited and Ors* (Supreme Court, SC 40/2008, 29 May 2009) at [56].
[17] *New Zealand Federation of Commercial Fishermen (Inc) & Ors v Minister of Fisheries & Ors* (HC, Wellington CP237/95, 24/4/97, McGechan J) at [18].
[18] *New Zealand Fishing Industry Association (Inc) and Ors v Minister of Fisheries and Ors* (Court of Appeal, CA82/97, 22/7/97) at [17]-[18].
[19] Above n 17 at [18].
[20] *New Zealand Federation of Commercial Fishermen (Inc) & Ors v Minister of Fisheries & Ors* (HC, Wellington CP237/95, 24/4/97, McGechan J) at [89].
[21] *New Zealand Federation of Commercial Fishermen (Inc) & Ors v Minister of Fisheries & Ors* (HC, Wellington CP237/95, 24/4/97, McGechan J) at [102].
[22] *New Zealand Recreational Fishing Council Inc & Anor v Minister of Fisheries* (HC, Auckland CIV 2005-404-4495, 21 March 2007, Harrison J) at [110]-[126].

"Under the settlement Māori became holders of quota along with all other holders. Their rights were in our view no more and no less than those of non-Māori quota holders."[23]

"Under s5 of the 1996 Act the Minister in making future decisions is obliged to act in a manner consistent with the Settlement Act. The idea that the settlement is any the less just, honourable and durable should Māori quota be reduced, is unpersuasive. An asset which Māori obtained under the settlement had within it the capacity for diminution. If that capacity is lawfully realised, there cannot be any complaint on the basis that the settlement has been broken or have not proved durable. Something which was liable to happen under the settlement has happened. A reduction in TACC, which is otherwise lawful, cannot be viewed as a decision by the Minister inconsistent with the Settlement Act."[24]

37. While the Court of Appeal was dealing with a TAC/TACC reduction for sustainability purposes, the same principle would apply in terms of an adjustment of the ratio of the TAC allocated to commercial and non-commercial fishing interests.

3 Relevant Standards, Guidelines and Strategies

3.1 Maximum Sustainable Yield (*MSY*)

38. As noted above in Table 3, section 13 of the Act requires you to set a stock's TAC at a level that maintains the stock at or above a level that can produce the ***MSY***.

39. *MSY* is defined under the Act as the greatest yield that can be achieved over time while maintaining the stock's productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock. There are a number of factors that contribute to the determination of a stock's *MSY*, including how fast the species grows, when and how they reproduce, and the pattern of harvesting in the fishery. Typically, *MSY* for a fish stock is also variable over time, because of changes in productivity and environmental factors.

40. In general, scientific working groups will estimate *MSY*-compatible reference points for stocks based on the best available information, and management working groups will set fishery or stock targets that consider these estimates as an input.

41. In the context of this review there are a number of stocks for which *MSY* is not able to be estimated due to a lack of available scientific information. In addition to their interdependence, biological characteristics, and environmental conditions, proposals for changes in catch limits have been based on best available information (which is often an assessment of trends in catch) and are considered to be consistent with the objective of maintaining the stock at or above levels that can produce *MSY* as provided for by s 13(2A) of the Act.

3.2 Overview of the Harvest Strategy Standard

42. The Harvest Strategy Standard (**HSS**) is a policy statement of best practice in relation to the setting of fishery and stock targets and limits for fish stocks in New Zealand's Quota Management System (**QMS**). It is intended to provide guidance as to how fisheries law will be applied in practice, by establishing a consistent and transparent framework for decision-making to achieve the objective of providing for utilisation of New Zealand's QMS species while ensuring sustainability.

43. It is important to note that a minimum requirement for satisfying the HSS is that fishery or stock targets will be set at the level of *MSY*-compatible reference points (however, they may also exceed this minimum requirement).

44. The HSS outlines FNZ's approach to relevant sections of the Act and, as such, forms a core input to FNZ's advice to you on the management of fisheries, particularly the setting of TACs under section 13.

[23] *New Zealand Fishing Industry Association (Inc) and Ors v Minister of Fisheries and Ors* (Court of Appeal, CA82/97, 22/7/97) at [20].
[24] Above n 22, at [21].

45. The High Court has held that the HSS is a mandatory relevant consideration that you must have regard to when setting a TAC under section 13 of the Act. In addition, the Court concluded that the HSS is the "best available information" in terms of section 10(a) of the Act in relation to acceptable probability levels for rebuilding stocks (as well as for other matters relevant to the interpretation of s 13).

46. The HSS assists us to decide when a review of sustainability and related settings for a stock may be warranted, by establishing reference points and guidance for the fisheries management responses when stocks are at those reference points. The HSS establishes default targets and limits as a minimum standard (Table 4):

Table 4: Guidelines on default targets as set out in the Harvest Strategy Standard.

Reference point	Default	Management response
Management target	*Differs depending on productivity of the stock* 40% unfished biomass (B_0) is the default target for low productivity stocks	Stock permitted to fluctuate around this management target. TAC/TACC changes will be employed to keep the stock around the target (with at least a 50% probability of being at the target).
Soft limit	½ B_{MSY}[25] or 20% B_0, whichever is higher	A formal time constrained rebuilding plan will be implemented if this limit is reached.
Hard limit	¼ B_{MSY} or 10% B_0, whichever is higher	The limit below which fisheries will be considered for closure.
Rebuild strategy		Stocks that have fallen below the soft limit should be rebuilt back to at least the target level in a time frame between T_{min} and 2 * T_{min} with an acceptable probability. Stocks will be considered to have been fully rebuilt when it can be demonstrated that there is at least 70% probability that the target has been achieved and there is at least 50% probability that the stock is above the soft limit.[26] T_{min} is the number of years to rebuild a stock to the target, in the absence of fishing.

47. FNZ is doing foundational work to support an upcoming review of the HSS. This future review will consider any relevant findings of the Court of Appeal judgment on East Coast Tarakihi when it is delivered.

3.3 Relevant Strategies and Plans

48. In our advice to you on different fish stocks we have highlighted which strategies and plans are important to consider for those stocks and their proposed sustainability measures (including those plans which you must take into account or have regard to under the Act).

49. Te Mana o te Taiao (the Aotearoa New Zealand Biodiversity Strategy) is also broadly relevant to the proposed changes for all stocks in this round.[27] Te Mana o te Taiao sets a strategic direction for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity in New Zealand. The strategy sets a number of objectives and goals across three timeframes. The most relevant to setting sustainability measures for fish stocks are Objectives 10 and 12:

[25] B_{MSY} is the biomass that enables a fish stock to deliver the maximum sustainable yield.

[26] A stock that has a probability of 70% of having achieved the target must have more than a 50% probability of being above the soft limit. Fisheries New Zealand notes this was an error and that the 50% should have been a higher number, such as 80% or 90%.

[27] Te Mana o te Taiao is not a mandatory consideration under section 11 of the Act. However, the strategy is intended to guide in maintaining biodiversity, consistent with the purpose of the Act and the environmental principle under section 9(b) that biological diversity of the aquatic environment should be maintained.

Objective 10: Ecosystems and species are protected, restored, resilient and connected from mountain tops to ocean depths.

Relevant goals within Objective 10 include:

- **10.1.1** Prioritised research is improving baseline information and knowledge of species and ecosystems.
- **10.4.1** Significant progress has been made in identifying, mapping and protecting coastal ecosystems and identifying and mapping marine ecosystems of high biodiversity value
- **10.5.1** A framework has been established to promote ecosystem-based management, protect and enhance the health of marine and coastal ecosystems, and manage them within clear environmental limits.
- **10.6.1** A protection standard for coastal and marine ecosystems established and implementation underway.

Objective 12: Natural resources are managed sustainably.

Relevant goals within Objective 12 include:

- **12.1.1** Environmental limits for the sustainable use of resources from marine ecosystems have been agreed on and are being implemented.
- **12.1.2** Marine fisheries are being managed within sustainable limits using an ecosystem-based approach.
- **12.1.3** Marine fisheries resources are abundant, resilient and managed sustainably to preserve ecosystem integrity.
- **12.2.1** The number of fishing-related deaths of protected marine species is decreasing towards zero for all species.
- **12.2.2** The direct effects of fishing do not threaten protected marine species populations or their recovery.
- **12.2.3** The mortality of non-target species from marine fisheries has been reduced to zero.

50. FNZ is working with the Department of Conservation and other agencies on implementation of the strategy. As part of that work we are progressing to a more integrated ecosystem-based approach to managing oceans and fisheries. In that context, this advice contains information on biodiversity impacts, ecosystem function and habitat protection associated with adjustments to sustainability measures, consistent with your legislative obligations and the intent of Te Mana o te Taiao.

4 Input and participation of tangata whenua

51. Section 10 of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (the Settlement Act) requires you to develop policies and programmes to give effect to the use and management practices of tangata whenua.

52. The Ministry has worked with Iwi to develop engagement processes that enable Iwi to work together to reach a consensus where possible and to inform the Ministry on how tangata whenua wish to exercise kaitiakitanga in respect of fish stocks in which they share rights and interests, and how those rights and interests may be affected by sustainability measures proposed by the Ministry.

4.1 Input and participation in the April 2023 Sustainability Round

53. As noted above in Table 3, section 12 (1)(b) of the Fisheries Act requires that before undertaking any sustainability process you shall provide for the input and participation of tangata whenua who have a non-commercial interest in the stock or an interest in the effects of fishing on the stock. In considering the views of tangata whenua, you are required to have particular regard to Kaitiakitanga.

54. Input and participation of tangata whenua into the sustainability decision-making process is provided mainly through Iwi Fisheries Forums, which have been established for that purpose.

55. Each Iwi Fisheries Forum can develop an Iwi Fisheries Forum Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interest in fisheries. Iwi Fisheries Forums may also be used as entities to consult iwi with an interest in fisheries.[28]

56. For input and participation into this sustainability round, Iwi Fisheries Forums were invited to have input into the selection of stocks for review and to provide feedback on the various proposals to set or vary sustainability measures. The main pathway used by Forums to provide feedback on proposals was through scheduled hui attended by FNZ representatives.

57. The decision documents for Coromandel scallop and Northland rock lobster provide specific information about input and participation of tangata whenua and kaitiakitanga in relation to those stocks, including what feedback (if any) was provided by Forums on those proposals.

5 Public consultation

58. Public consultation on the Coromandel scallop proposal commenced on 15 December 2022. Consultation on proposed changes for the Northland rock lobster fishery (CRA 1) commenced later, on 10 January 2023.

59. Upon commencement of consultation, FNZ notified Treaty Partners and stakeholders that consultation documents were available for the stocks under review and directed them to a relevant consultation page on FNZ's website. The consultation page had links to each of the consultation papers, and an invitation to provide written submissions on any or all of the proposed changes.

60. Submissions officially closed for both proposals at 5.00 pm on 8 February 2023.[29]

61. Table 5 below provides a summary of the submissions received during consultation, with a breakdown of how many submissions were received from different interest groups and on each proposal.

Table 5: Summary of submissions received on proposals included in the April 2023 Sustainability Round.

Fish stock(s) reviewed	Total submissions	Submissions by main interest group of submitters[1]				
		Commercial fishing	Recreational fishing	Conservation/ Environmental	Tangata whenua and iwi representatives	Other[2]
Scallop	**35**	2	6	22	4	1
Rock lobster	**41**	14	6	8	6	7
Total[3]	**70**	**16**	**13**	**27**	**7**	**8**

[1] Main interest group was derived by how submitters identified themselves, but some submitters may fit within multiple categories (for example, there are tangata whenua and iwi representatives who also represent commercial fishers and quota holders).
[2] Other includes science-related groups, groups or people not involved in the fishing industry and unspecified interests.
[3] This is the total number of submissions from each interest group. Some submitters commented on multiple proposals.

62. Many submissions and responses were received from stakeholders on behalf of large representative bodies and organisations:

    - Te Ohu Kaimoana, the Iwi Collective Partnership, and several other Mandated Iwi Organisations and tangata whenua responded in relation to Māori commercial and customary interests.

[28] However, FNZ also engages directly with Iwi (outside of Forums) on matters that affect their fisheries interests in their takiwa and consults with any affected Mandated Iwi Organisations and Iwi Governance Entities where needed.

[29] Extensions were provided for submitters upon request and within reason. FNZ also continued to accept and consider submissions received after the deadline until 5.00 pm on 10 February 2023.

- Several quota owner and commercial representative groups submitted, including Fisheries Inshore Council New Zealand, New Zealand Rock Lobster Industry Council, CRA 1 Rock Lobster Industry Council Association Inc (CRAMAC 1), and Leigh Commercial Fishermen's Association.
- Several large recreational representative groups submitted, including NZ Sport Fishing Council (joint submission with the NZ Angling and Casting Association and NZ Underwater Association), and Whangamata Ocean Sports Club.
- Some large eNGO's responded to consultation, including Environmental Law Initiative (ELI), Forest and Bird NZ and the Environmental Defence Society (EDS).

5.1 Feedback on consultation timing

63. A number of submissions commented on the timing provided for consultation, with some noting the consultation period was too short.

64. FNZ notes that the consultation periods provided for submissions were in line with the statutory requirements, but acknowledges the issues raised by some submitters, particularly with respect to organisations who need to consult with other parties during the timeframe to provide consensus within the final submission.

65. FNZ aims to run longer public consultations on sustainability rounds where possible to lessen these difficulties. However, the amount of additional time that can be provided is limited by the need for changes to be implemented in time for the start of each fishing year following the release of Fisheries Assessment Plenaries (which provide the best available information on the status of most fish stocks).

6 General themes

6.1 Ecosystem based fisheries management and habitats of particular significance for fisheries management

66. Submissions from across various interest groups emphasised the need for ecosystem-based fisheries management to be clearly reflected in our approach to managing fisheries. FNZ understands this need and is taking steps towards better reflecting an ecosystem-based approach in sustainability rounds. In recent rounds, FNZ has tried to provide clearer links between reviews of interdependent stocks (where relevant) so that decisions on their settings are better informed and take the wider ecosystem into account. FNZ has also expanded the discussions in advice papers around ecosystem considerations, particularly in relation to how proposed changes might impact the stocks' wider ecosystem and environment.

67. One of the recommendations of the Prime Minister's Chief Science Advisor's report titled The Future of Commercial Fishing in Aotearoa New Zealand (March 2021) was to create a framework for prioritisation and protection of habitats of particular significance for fisheries management and a guidance document for their definition and identification.

68. Last year FNZ consulted on guidance for defining, identifying, and managing habitats of particular significance for fisheries management, including how FNZ takes into account that these habitats should be protected when preparing fisheries management advice. The consultation ended in mid-November 2022 and FNZ is now working through updating and finalising the guidelines, which will support fisheries managers in developing better management advice. The guidance and supporting information will be living documents, evolving alongside our growing understanding of species-habitat relationships and their sensitivity to impacts.

69. In relation to our advice to you on fish stocks within this sustainability round, we have provided relevant information on potential habitats of particular significance for fisheries management for each stock under review.

70. FNZ is not asking for your decisions in relation to protection or mitigation measures for any habitats of particular significance within this round. FNZ has provided more detail as to what is known about habitats of particular significance in the final advice for each stock so that this can be taken into consideration within your decisions on their management settings. In cases where habitats of significance to fisheries management are identified to be at risk, FNZ will initiate separate processes for mitigating and addressing those risks which may result in future decisions being warranted.

6.2 Concerns about dredging/bottom contact fishing

71. Recently there has been considerable attention from stakeholders and the public on the effects of bottom contact fishing on our fisheries and the benthic environment. Submissions on this sustainability round from Forest and Bird NZ, Royal NZ Society for the Prevention of Cruelty to Animals (RNZSPCA), and some individual submitters emphasised their concerns over the impacts of dredging in relation to the review of Coromandel scallops.

72. Bottom contact fishing is closely monitored as part of our management regime and FNZ recognises the need to ensure the marine environment is adequately managed to mitigate fishing impacts, which includes ensuring that the effects of dredging are managed to an acceptable level. FNZ has implemented, and will continue to implement, management controls that help to ensure any adverse effects from dredging on the aquatic environment are avoided, remedied and mitigated.

73. Within our advice for Coromandel scallops, we have outlined what is known about the impacts of dredging and other fishing methods as it relates to the scallop stock and surrounding aquatic environment. Where relevant, we have also responded to submitters' specific concerns about dredging and provided our analysis for you to consider.

6.3 Managing recreational catch

74. Te Ohu Kaimoana and other groups, particularly commercial fishers, raised concerns about the reliability of recreational catch and effort information. The responses suggested that any reductions in catch, which are required to ensure the sustainability of a fishery, need to be shared equally by both the recreational and commercial sectors. They note that, because recreational take is so poorly understood, management focuses on constraining commercial catch rather than understanding total harvest.

75. They also note that parallel regulatory changes are required for the recreational sector to contribute to a TAC decrease and a corresponding reduction in the recreational allowance. Simply changing the recreational allowance does not constrain the recreational sector. Regulatory changes such as adjustments to bag limits and accumulation limits need to occur alongside TAC adjustments.

76. In line with this view, FNZ has increasingly moved to incorporate options to change recreational controls within options to change catch settings and allowances. For example, in this round in the review of Northland rock lobster there are options for recreational bag limit adjustments presented alongside the catch setting and allowance options. Te Ohu Kaimoana and other commercial groups have expressed their support for this approach.

77. FNZ notes that recreational controls such as specific bag limits were previously set in regulations, but as of November 2022, these controls can now be set in many cases through a *Gazette* process, similar to implementation of TAC and TACC changes. This means that it will be easier to align the implementation of changes to recreational controls with changes to the TAC and allowances.

Coromandel Scallops (SCA CS) – Hauraki Gulf, Coromandel, and Western Bay of Plenty

Pecten novaezelandiae, New Zealand Scallops, *Kuakua/Tipa*

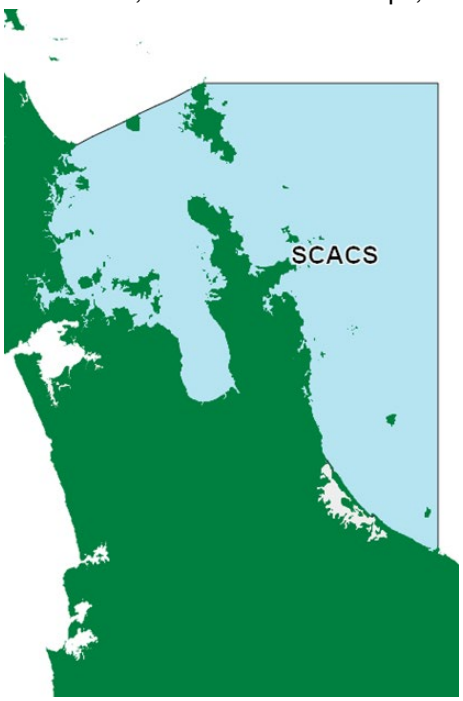

Figure 1: Quota Management Area (QMA) for Coromandel scallops (SCA CS).

Table 1: Summary of recommended options for SCA CS from 1 April 2023. Figures are all in tonnes. The preferred option of Fisheries New Zealand is highlighted in blue.

Option	Management	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
Current settings *(Status quo)*	Partial closure (s11)	19	5	10	3	1
Option 1	Closure of Little Barrier and Colville (s11)	19	5	10	3	1
Option 2	Closure of Little Barrier and Colville (s11) and reduce TAC, TACC and allowances	11 (↓ 8)	0 (↓ 5)	10	0 (↓ 3)	1
In total, 35 submissions were received on the proposed options.						

1 Why are we proposing a review?

78. The Coromandel scallop fishery (**SCA CS**) underwent extensive surveys in 2021 and results indicated significant declines in biomass and abundance. As a result, in March 2022, most of the fishery was closed to recreational and commercial harvesting under section 11 of the Fisheries Act 1996 (**the Act**), except for in two areas where some level of utilisation was considered sustainable – Te Hauturu-o-Toi/Little Barrier Island (**Little Barrier**) and the Colville Channel (**Colville**) (Figure 2).

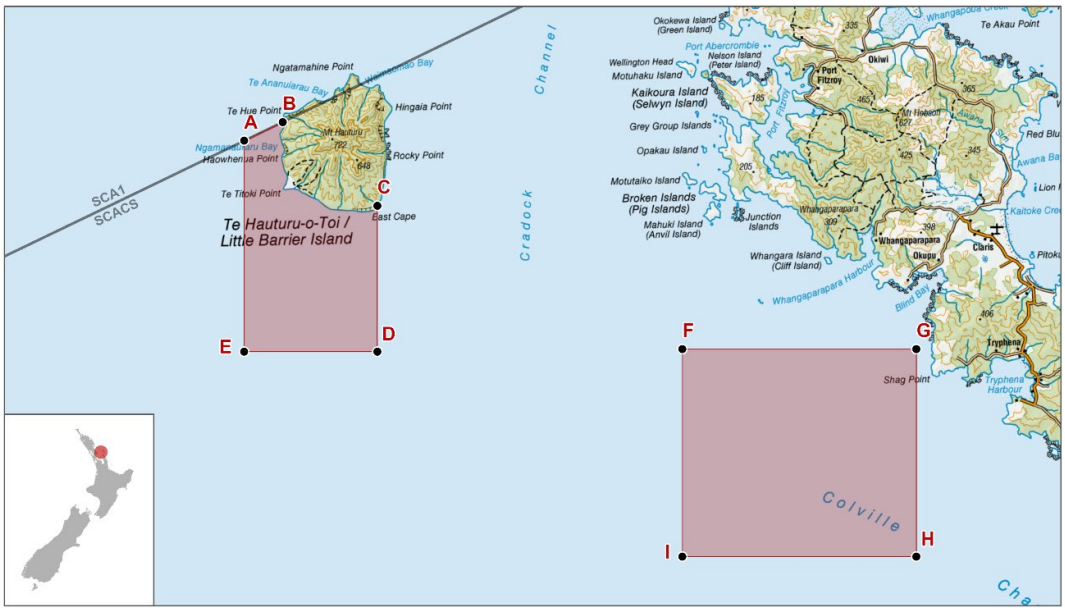

Figure 2: Areas in the Coromandel (SCA CS) scallop fishery closed to scallop harvest under an emergency measure: Te Hauturu-o-Toi/Little Barrier Island (A-E) and Colville Channel (F-I). The remainder of SCA CS is closed to scallop fishing under section 11 of the Act.

79. Subsequent surveys of the open areas were carried out in mid-2022. The mid-2022 surveys for both the Little Barrier and Colville areas showed serious declines in abundance compared to the 2021 results, continuing the decline seen between 2012 and 2021.

80. In response to the serious declines in the open areas, the previous Minister for Oceans and Fisheries implemented an emergency measure under section 16 of the Act to immediately close the Little Barrier and Colville areas to fishing. This emergency closure came into effect on 16 December 2022 and expires on 16 March 2023. The emergency measure was implemented to protect the remaining scallop populations and habitat in these areas and to mitigate the risk of further impact from fishing activity over the summer period while longer-term measures were considered.

81. FNZ is now advising you on options to close the Little Barrier and Colville areas to fishing under section 11 of the Act, noting that closing these areas would see the entirety of SCA CS closed to commercial and recreational scallop harvest. We are also advising you on whether to retain or decrease the Total Allowable Catch (**TAC**) of SCA CS under section 13(2A) of the Act.

82. FNZ considers that decreasing the TAC would be consistent with section 13(2A), better address the sustainability risks to the stock, and would also better reflect the status of the fishery under a closure. Any decisions you make on these measures would come into effect for the upcoming fishing year and would remain in place after the emergency measure has lapsed.

1.1 About the stock

1.1.1 Fishery characteristics

83. Scallops are an iconic New Zealand shellfish species. They are highly valued by tangata whenua and recreational fishers as kaimoana, and historically they supported localised commercial fishing, processing, and retail industries.

84. The commercial scallop fishery supplies scallops to the domestic market and historically has been responsible for most of the overall scallop catch in SCA CS. All commercially caught scallops are taken by dredge. All northern commercial scallops are caught using 'Victorian box dredges.' Commercial fishers report that this dredge design suits the northern fishery conditions, which includes corrugated seabed environments.

85. Prior to the closure of most of SCA CS, scallops were amongst the top three shellfish species harvested by recreational fishers in the Hauraki/Coromandel area. The most common method for recreational harvest is diving/hand gathering, but there is also recreational dredging in SCA CS, which can be concentrated in popular and easily accessible beds/areas.

86. Prior to the emergency closure, the area at Colville was largely inaccessible to the recreational sector due to its depth and distance from the coast, but some recreational dredging may have occurred in this area. The Little Barrier bed was known to be a popular recreational harvest area but is also somewhat remote, lying 16 nautical miles from the north Auckland coastline.

1.1.2 Biology

87. Scallops are functional hermaphrodites, meaning they possess both male and female reproductive organs and can produce the associated eggs and sperm. They generally reach sexual maturity at approximately 70 mm shell length and usually mature by the end of their first year. However, scallops contribute little to the spawning pool until the end of their second year and their contribution increases more in subsequent years. Year 1 scallops contain around 500,000 eggs each while year 4 and 5 scallops can contain over 40 million eggs each.

88. Scallops may spawn sporadically from August to February, but spawn prolifically over the summer months. Like other broadcast spawners, high density beds and close proximity (to other scallops) are vital for successful fertilisation of the eggs that are released and the subsequent ongoing recruitment. Based on recent declines in abundance, there is a concern that if fishing continues in the Little Barrier and Colville areas, scallop density may become too low for successful spawning. As well as having immediate implications for the overall spawning success of scallops in these areas, low density could also affect the contribution of spat to surrounding scallop beds.

89. Scallop populations worldwide are highly variable from one year to the next due to the variability in annual recruitment. This variability is a result of high fecundity, variability in larval and adult mortality, as well as growth rates in adults.

1.1.3 Management background

90. The SCA CS fishery extends south from Leigh (north of Auckland) to Maketu on the north east coast of the North Island and encompasses the Hauraki Gulf and the Western Bay of Plenty.

91. SCA CS was introduced into the Quota Management System (**QMS**) in 2002 and an initial TAC of 48 tonnes was set. Catch limits and allowances have fluctuated over time based on available information and historically the SCA CS stock supported significant customary, recreational and commercial fisheries.

92. Scallop populations are highly variable from year to year and are listed in Schedule 2 of the Act to recognise this variability. For Schedule 2 stocks, you may increase the TAC within a fishing year after considering information about a stock's abundance and having regard to other matters in section 11 of the Act. Historically, this was the basis for managing SCA CS, with a "baseline" TAC set and in-season TAC increases based on survey information about current abundance within that year. The in-season TAC was based on the sustainable yield available that year – known as the Current Annual Yield (**CAY**). If the TAC was increased, allowances could be altered, and additional Annual Catch Entitlement (**ACE**) generated for commercial fishing. The TAC and allowances would revert to the baseline TAC at the start of the next fishing year.

93. This approach was considered to enable Maximum Sustainable Yield (***MSY***) to be achieved on average over time and allowed some utilisation to be available at almost any level of abundance. This approach required that a biomass survey was conducted each year. However, there had been no biomass surveys from 2012 to 2021 or in-season increases in TAC settings for SCA CS. Instead, SCA CS has been managed to a higher TAC and Total Allowable Commercial Catch (**TACC**). This was informed by the discovery of a large scallop bed in the Hauraki Gulf and the introduction of the industry voluntary Catch Per Unit Effort (**CPUE**) limit rule management procedure.

94. The Coromandel Scallop Fishermen's Association managed the commercial fishery at a fine spatial scale with a voluntary CPUE limit rule-based approach. This additional management operated within the limits of the TACC and had rules that were intended to protect individual scallop beds within the wider QMA from overfishing. While this fine-scale, voluntary management approach was likely to distribute fishing activity across the available beds, and prevent concentration of fishing in certain areas, it was not known if the CPUE limit rule was effective at maintaining sustainable stock levels.

95. While it is acknowledged that there was a lack of data on how the biomass may have fluctuated over the years between the 2012 and 2021 surveys, it is noted that commercial landings show a general decline since 2012. Following further and increasing concern around scallop abundance in several areas, in 2020 FNZ commissioned extensive dredge and dive surveys, which were carried out by the National Institute of Water and Atmospheric Research (**NIWA**) in 2021, to provide an estimate of biomass and density of scallops within a number of scallop beds across the Northland (SCA 1) and SCA CS quota management areas. The results of the survey were reported to FNZ's Shellfish Working Group in late 2021.

96. The 2021 survey results showed that in many areas the biomass was substantially lower than the previous surveys carried out in 2012 and that overall, the biomass had declined close to lowest recorded levels. The specific reasons for the observed decline across the different sites were not known and were likely a combination of both fishing and non-fishing related stressors. The surveys showed that the Little Barrier and Colville areas (Figure 2) had some biomass of scallops at high density levels, which was predicted would support some level of ongoing sustainable utilisation.

97. The previous Minister took action to protect the northern scallop stocks by closing the Northland scallop fishery (SCA 1) and all of SCA CS except for the Little Barrier and the Colville areas. This decision was based on surveys showing serious decline of the two northern scallop stocks and was also driven by the concern of treaty partners, key stakeholders, and the public. The previous Minister noted his commitment to stopping further deterioration and allowing these stocks the opportunity to recover. Accordingly, the two areas kept open had significantly reduced catch limits and allowances.

98. The catch limits set for 2022 were derived from the survey results and based on conservative estimates of the yield considered to be sustainable in the areas left open. The viable commercial yield for each area was calculated using estimates of critical scallop density in those areas. SCA CS currently does not have target and limit reference points, and the biomass that supports the *MSY* cannot be estimated reliably with available information.

99. Further surveys for the Little Barrier and Colville areas were scheduled and undertaken in 2022 to provide good baseline data for future comparison and to support improved management and long-term sustainability.

1.2 Status of the stock

100. Recent commercial landings in SCA CS have been at historical lows, driven by a range of factors including direct and indirect effects of fishing, disease, natural recruitment cycles, land-based impacts, and the profitability of fishing operations when abundance is low.

101. The 2021 survey results remain the best available information on the status of scallop populations throughout the closed area within SCA CS (those areas have not been re-surveyed in 2022). For the Little Barrier and Colville areas, the additional camera-based surveys conducted in 2022 represent the best available information. Prior to the 2022 surveys of Little Barrier and Colville, scallop surveys have largely been undertaken by dredging, but in response to concerns over the impacts of dredging on benthic habitats, the 2022 pre-season survey was conducted using underwater cameras. While this method and approach of surveying is new, preliminary analysis suggests that the camera survey scallop detection efficiency is very high, and that it is appropriate to compare the 2021 dredge and 2022 camera survey results.

102. Imagery from 53 transects across Little Barrier and Colville (Figure 3) was examined by NIWA technicians and the review data was used to develop estimates of scallop density, abundance, and biomass. The 2022 survey also included new strata (sub areas) which were not surveyed in 2021 so that biomass and density could be assessed more widely within each area. The images were then reviewed to identify the presence and size of live scallops and the data used to estimate overall biomass and density across the areas.[30]

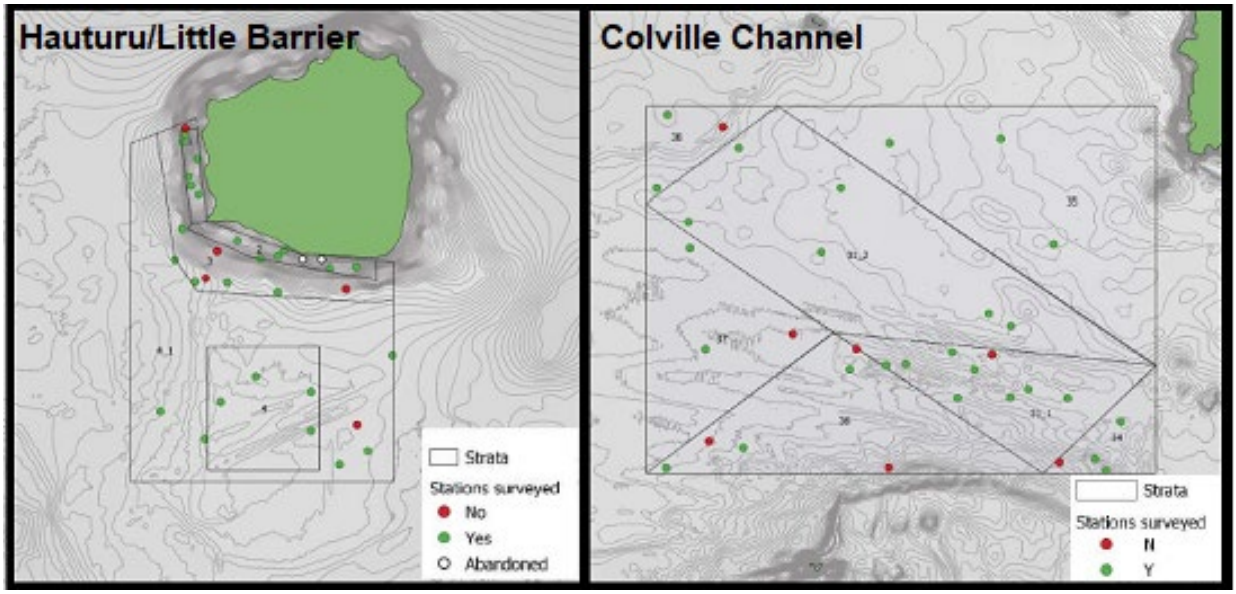

Figure 3: Camera survey sites in the areas at Te Hauturu-o-Toi/Little Barrier Island (left) and Colville Channel (right).

103. Average biomass and density of scallops was shown to be low (and lower than expected) in most of the surveyed areas. For the total Little Barrier area, scallop biomass was estimated to be 12.56 tonnes (median), and the median density of scallops was 0.018 scallops/m^2 (Table A1 in Addendum 1). For the total Colville area, scallop biomass was estimated to be 62.04 tonnes, and the median density of scallops was 0.042 scallops/m^2 (Table A1).

104. The pre-season camera surveys of Little Barrier and Colville conducted by NIWA in 2022 revealed a further decline in density and biomass at comparable areas at both sites. The survey results showed an approximate 85% decline in absolute biomass of recruited (>90 mm) scallops in comparable areas of Little Barrier from the 2021 biomass estimate (Table 2) and the median density of scallops in the area showed an 87% decline from 2021. For comparable areas of Colville, the survey results showed an approximate 37% decline in absolute biomass of recruited scallops from 2021, and density of scallops showed a 42% decline (Table 2).

Table 2: Comparison of 2021 and 2022 biomass estimates (meatweight tonnes) and densities of recruited (>90 mm) scallops for comparable survey strata at Te Hauturu-o-Toi/Little Barrier Island and Colville Channel.

Location	Metric	2021		2022		Biomass decline (% median)
		Median	95% Confidence interval	Median	95% Confidence interval	
Hauturu/Little Barrier	Biomass (t)	31.14	18.98 – 47.11	4.70	1.26 – 9.66	85%
(Strata 1-4)	Density (scallops per m^2)	0.120	0.074 – 0.178	0.016	0.004 – 0.031	87%
Colville Channel	Biomass (t)	57.15	21.78 – 105.63	35.98	21.28 – 53.71	37%
(Stratum 31)	Density (scallops per m^2)	0.112	0.045 – 0.194	0.065	0.039 – 0.093	42%

[30] The review of images also included an auditing process involving an independent comparer to ensure that readings and categorisation of scallop life status was consistent.

105. The biomass of scallops in each area was also estimated at a range of specified density levels (Table 3). The level of scallop biomass at higher density levels can be more informative than just absolute biomass levels given that high density scallop beds are disproportionately more important for the fertilisation success of scallops during spawning. As shown in Table 3, most of the scallop biomass at Little Barrier and Colville was present in beds of lower density (< 0.1 scallops m^2), particularly at Little Barrier where no biomass was at or above a density level of 0.07 scallops/m^2.

Table 3: Biomass estimates for a range of specified critical density levels (0, 0.04, 0.07, 0.10 and 0.12 scallops/m^2) for Te Hauturu-o-Toi /Little Barrier Island and Colville areas in SCA CS. B_{mean} represents mean biomass at the specified density level, and B_{cv} represents the CV (coefficient of variation) associated with the mean estimate. B_{median} represents the median scallop biomass at the specified density level.

Density level (scallops m^2)	Location	Biomass of recruited (>90 mm) scallops (tonnes, meatweight)		
		Bmean	Bcv	Bmedian
0	Hauturu/Little Barrier	12.78	± 4.60	12.56
	Colville Channel	62.39	± 13.10	62.04
	Combined	75.17	± 14.28	75.27
0.04	Hauturu/Little Barrier	2.67	± 1.82	2.58
	Colville Channel	23.82	± 8.10	22.89
	Combined	26.49	± 8.48	25.55
0.07	Hauturu/Little Barrier	0	-	0
	Colville Channel	12.40	± 5.33	11.79
	Combined	12.40	± 5.33	11.79
0.10	Hauturu/Little Barrier	0	-	0
	Colville Channel	6.19	± 2.79	5.87
	Combined	6.19	± 2.79	5.87
0.12	Hauturu/Little Barrier	0	-	0
	Colville Channel	2.54	± 1.24	2.41
	Combined	2.54	± 1.24	2.41

106. The 2021 survey estimated commercially exploitable biomass for the 2022 fishing season for Little Barrier and Colville at 5 tonnes using a critical density threshold and a conservative harvest rate. The estimated exploitable biomass for 2023 would be 0.6-0.9 tonnes if the same approach was used based on the 2022 survey results, with all the biomass coming from Colville. However, based on the overall survey results and the observed declines in biomass (especially at higher density levels) within the last year, FNZ considers that this would not be an appropriate or sustainable method for estimating yield.

107. In response to the decline in density and biomass at Little Barrier and Colville evidenced in the 2022 surveys, the previous Minister implemented an emergency measure to close these areas to fishing to protect remaining scallop populations and habitat in the short term. The emergency measure under section 16 of the Act came into effect on 16 December 2022 and will expire on 16 March 2023.

108. FNZ notes that no new information was obtained during the emergency measure to inform the status of scallops and while *MSY* is not able to be estimated reliably using these survey results due to the lack of reference points for SCA CS in these areas, these declines in biomass have occurred over a short period of time and far exceed estimated fishing removals in the same period. Because of this, and the overall low density of scallops estimated in these areas, FNZ considers that the current management controls in place are very unlikely to maintain the stock at a level that can produce *MSY*.

109. Based on the best available information on estimated levels of decline at both Little Barrier and Colville over the last year, FNZ considers that retaining the *status quo* at this time would not be adequate to address the risks of further decline and to ensure sustainability of the stock.

2 Catch information and current settings within the TAC

2.1 Commercial

110. Commercial fishing in SCA CS operates to a restricted season, which runs from 15 July to 21 December each year with commercial fishers operating five days a week during the season. A Minimum Legal Size (**MLS**) of 90 millimetres in shell length applies to commercial fishing in SCA CS and is lower than the 100 millimetres for recreational catch. Further to the legislated requirements, commercial fishers in SCA CS operate as a collective and employ additional voluntary measures around scallop harvesting, such as the CPUE based management approach.

111. From 1992, up to and including the 2012 fishing year, the base SCA CS Total Allowable Commercial Catch (**TACC**) was set at 22 tonnes, before being increased to 100 tonnes in 2013 based on the discovery of a significant scallop bed in 2012 (Hauraki bed) with an estimated 1,005 tonne meat weight biomass. This bed had largely disappeared by 2014, despite little fishing occurring, and in 2016 the TACC was reduced to 50 tonnes.

112. From 2017 to 2021, landings decreased with an estimated 12 tonnes (meatweight) landed in 2019-2020 and approximately 13 tonnes in 2020-21. There was an increase in catch over the last fishing season (2021-22), with 22 tonnes being taken. Most landings in this fishery have been reported to be from beds around Little Barrier and Mercury Islands. For the current fishing year, landings were reported only in October and November of 2022 and totalled to 1.25 tonnes out of the 5-tonne TACC. The SCA CS commercial fishing season closes on 21 December, however fishing was prohibited under the emergency measure from 16 December.

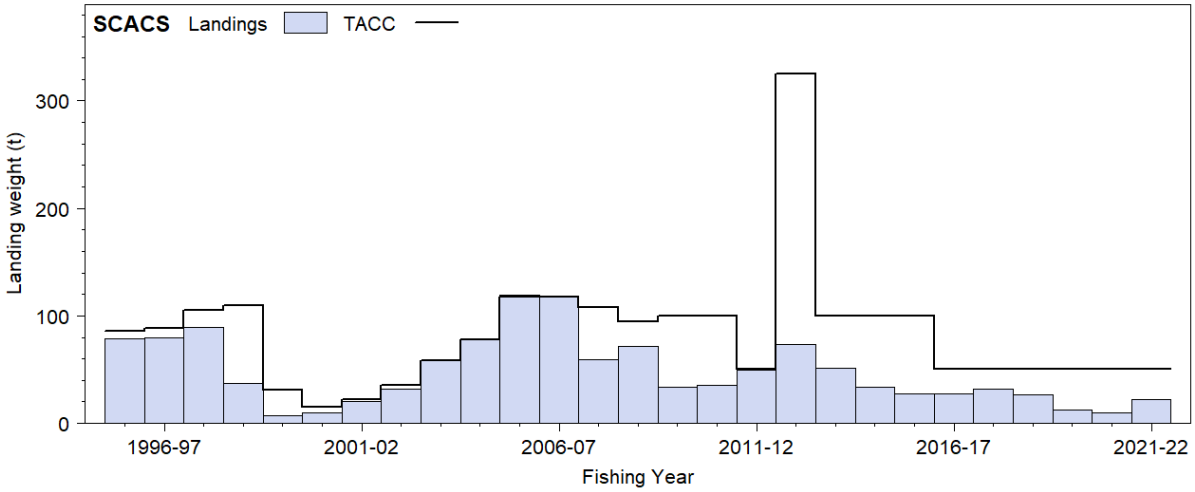

Figure 4: Landings and catch limits for SCA CS (Coromandel) from 1995–98 to 2021–22. TACC refers to catch limit (including in-year increases), and weight refers to meatweight.

2.2 Customary Māori

113. Scallops are an important traditional food for Māori. The current allowance for Māori customary non-commercial harvesting of scallops in SCA CS is 10 tonnes. Under the current section 11 closure in SCA CS, the ability remains for scallops to be gathered under provisions for customary fishing.

114. While scallops are a common species for which customary authorisations are issued, there is limited quantitative information available on the level of customary take of scallops from SCA CS. It is likely that Māori customary fishers also utilise the provisions under recreational

fishing regulations, noting the recent closures will have significantly reduced recreational access.

115. FNZ has been informed by tangata whenua throughout the SCA CS area that to protect local scallop populations, the issuing of customary authorisations has declined or in many cases ceased.

116. Customary fishing authorisations in some parts of SCA CS, if issued, would be under the Fisheries (Amateur Fishing) Regulations 2013, where there is no requirement to report on catch. As such, customary harvest records held by FNZ are likely to be incomplete.

2.3 Recreational

117. The current allowance for recreational harvesting of scallops in SCA CS is 3 tonnes and the recreational scallop fishing season opens on 1 September and runs through to 31 March each year.

118. Historically there was significant recreational interest in scallops in suitable areas throughout SCA CS, mostly in enclosed bays and harbours, some of which are set aside as non-commercial scallop areas. Harvesting of scallops was reported from larger boats/launches, off land and, most commonly, by trailer boats, from which an estimated 66% of scallops were taken nationally in 2017/18.

119. Every 5 to 6 years FNZ runs the National Panel Survey of Marine Recreational Fishers (**NPS**) to collect fishing information from marine recreational fishers. The next NPS is currently underway, with results expected in 2024, however, the best available information on current recreational catch is from the 2017/18 NPS.

120. Scallops were reported to be harvested using dredging and/or by hand gathering from either the shore or while diving. The 2017/18 NPS estimated 468,843 scallops were harvested for that year across all scallop areas in New Zealand by hand gathering while diving, the popular method of choice.

121. A total estimated weight of 62 tonnes (green weight – the unprocessed weight) of scallops was harvested for the 2017- 2018 fishing year. Of the overall national scallop take, 93% came from within Fisheries Management Area 1 (FMA 1), which includes the main scallop beds in SCA 1 and SCA CS. Within FMA 1, approximately 60% of recreational scallop catch is taken from SCA CS. In both areas the predominant recreational fishing method is hand-gathering. The NPS estimated 37 tonnes was harvested from SCA CS. Another NPS is currently underway and will run until the end of September 2023. Final results are not expected until early in 2024 and will be significantly affected by the current scallop closures that are in place.

122. Following the partial closure in SCA CS, recreational fishing for scallops was permitted only in the Little Barrier and Colville areas from the fishing season beginning on 1 September 2022. While the level of recreational take is uncertain, it is anticipated to be relatively low due to the remote nature of the areas. There have not been any indications of increased or concentrated recreational fishing effort in these areas since the closure was put in place. However, there was some concern that the busy summer period may pose a risk to the areas, particularly in light of the observed decline in abundance, which was part of the rationale for the previous Minister implementing an emergency closure of Little Barrier and Colville over the summer period. It is noted that recreational take can be self-limiting where abundance is low, as effort to achieve catch exceeds people's willingness to engage in the fishery.

2.4 All other mortality caused by fishing

123. You must set an allowance within the TAC for all other sources of mortality caused by fishing. The current allowance for recreational harvesting of scallops in SCA CS is 1 tonne. This allowance is intended to provide for unrecorded mortality of fish associated with fishing activity, including incidental mortality from fishing methods, or illegal fishing.

124. Incidental damage to uncaught or undersize scallops can occur during commercial dredging. The box dredges used in the SCA CS commercial fishery have been found to be more efficient in the sandy conditions prevalent in the northern region than the ring-bag dredges used elsewhere in New Zealand. However, scallops encountered by box dredges have shown modest reductions in growth rate compared with scallops collected by divers, and quite high levels of mortality (20–30% total mortality, and up to 50% mortality for scallops returned to the water). Experiments and modelling suggest that dredging also reduces habitat diversity and increases juvenile mortality.

125. Other sources of mortality are also likely to occur from recreational dredging and the illegal take or 'poaching' of scallops. The proposed closure to scallop fishing in Little Barrier and Colville under the options in this document would restrict all commercial and recreational fishing effort and associated incidental mortality in those areas. However, there may still be some level of illegal take of scallops in those areas and/or in the wider SCA CS area.

3 Treaty of Waitangi Obligations

3.1 Input and participation of tangata whenua

126. Input and participation of tangata whenua into the sustainability decision-making process is provided mainly through Iwi Fisheries Forums, which have been established for that purpose.

127. To facilitate input and participation, Fisheries New Zealand engages with tangata whenua at Iwi Fisheries Forum hui. The review of the SCA CS fishery and proposed closure of Little Barrier and Colville was noted at the Mai i ngā Kuri a Whārei ki Tihirau forum hui held on 5 December 2022.

128. The Mai i Ngā Kuri a Whārei ki Tihirau forum did not have specific feedback on the review of the two areas at Little Barrier and Colville.

3.2 Kaitiakitanga

129. Particular regard must be given to kaitiakitanga when making sustainability decisions.

130. SCA CS covers northern parts of the rohe moana for the Mai i Ngā Kuri a Wharei ki Tihirau Iwi Fisheries Forum and scallops are identified as a taonga species within the Mai i Ngā Kuri a Whārei ki Tihirau.

131. Information provided by forums, and iwi views on the management of fisheries resources and fish stocks, as set out in Iwi Fisheries Plans, are ways that tangata whenua can exercise kaitiakitanga in respect of fish stocks.

132. FNZ considers that the proposed management options are in line with keeping the objectives of the Fisheries Forum plan for Mai I Nga Kuri a Wharei ki Tihirau, which generally relates to active engagement with iwi and the maintenance of the fisheries environment to ensure it is healthy and supports a sustainable fishery. FNZ considers Option 2 is also in line with the objective of Mai I Nga Kuri a Wharei ki Tihirau Iwi Forum Fisheries Plan because fisheries management activities support the growth and wellbeing of iwi.

3.3 Mātaitai reserves and other customary management tools

133. You must take into account any gazetted mātaitai reserves and fishing method restrictions or prohibitions in the relevant quota management area when allowing for Māori customary non-commercial interests while setting or varying any TACC under section 21(4) of the Fisheries Act.

134. There are six customary fisheries management areas within SCA CS. These include one taiāpure, one mātaitai reserve, and four temporary closures, implemented under section 186A

of the Act (Table 4). The Eastern Coromandel and Waiheke Island section 186A closure areas specifically prohibit the take of scallops to support local populations.

Table 4: Customary fishing areas within the Coromandel (SCA CS) scallop fishery.

Customary Area	Management Type
Maketu Taiāpure	**Taiāpure** All types of fishing are permitted within a Taiāpure. The management committee can recommend regulations for commercial, recreational, and customary fishing
Umupuia Beach Temporary Closure	**S186A Temporary Closures** Section 186A temporary closures are used to restrict or prohibit fishing of any species of fish, aquatic life or seaweed or the use of any fishing method
Te Mata and Waipatukahu Temporary Closure	
East Coromandel Temporary Closure	
Waiheke Island	
Te Maunga o Mauoa Mātaitai	**Mātaitai Reserve** Commercial fishing is not permitted within mātaitai reserves unless regulations state otherwise.

135. The Little Barrier and Colville areas are not adjacent to any of the customary fishing areas mentioned in Table 4 (Figure 5). It is, therefore, unlikely that the proposed closure of these areas will have any positive or negative impacts on these customary fishing areas.

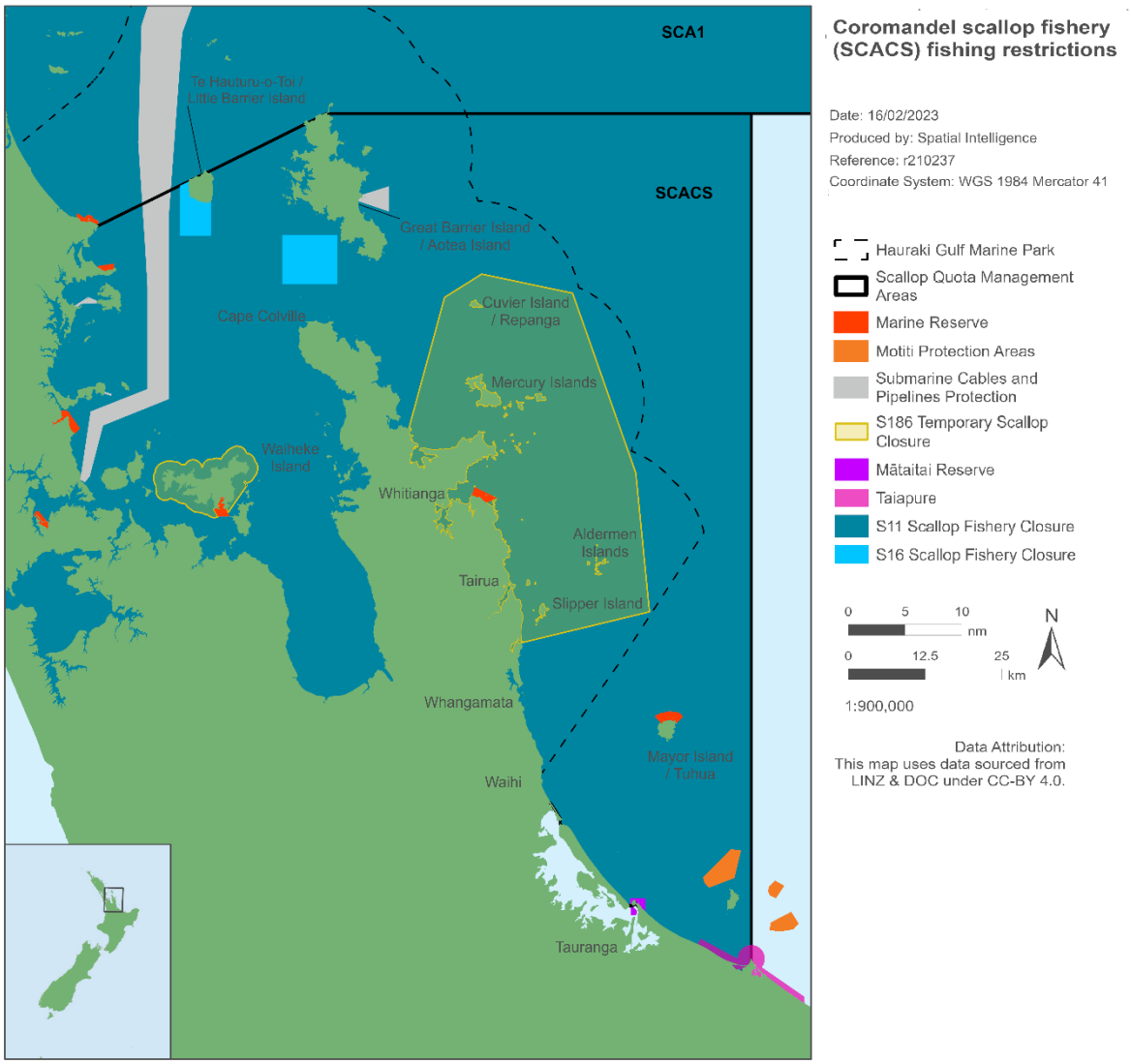

Figure 5: Fishing restrictions within the Coromandel scallop fishery.

4 Environmental and Sustainability Considerations

4.1 Environmental principles (section 9 of the Act)

136. The environmental principles, which must be taken into account when considering sustainability measures for SCA CS, are as follows:

    a) Associated or dependent species should be maintained above a level that ensures their long-term viability.

    b) Biological diversity of the aquatic environment should be maintained; and

    c) Habitats of particular significance for fisheries management should be protected.

4.1.1 Associated or dependent species – *section 9(a)*

Protected species interactions

137. Dredging and diving are considered to pose little to no risk to seabirds[31] and there are no known captures of marine mammals, seabirds, or protected fish species in New Zealand scallop fisheries. While the fishery poses little risk, the recommended options would remove any smaller residual risks, posed by fishing for scallops, on the long-term viability of any protected species.

Fish and invertebrate bycatch

138. In SCA CS, bycatch data is collected from each dredge survey. Bycatch data from the 2021 surveys was collected but has not been analysed. The best available information is from a photographic approach used in 2006 to provisionally examine bycatch groups[32], and a more quantitative and comprehensive study was conducted using bycatch data collected in the 2009 dredge survey.[33]

139. Survey catches were quantified by volume of different bycatch component categories. Over the whole 2009 survey, scallops formed the largest live component of the total catch volume (26%), followed by assorted seaweed (11%), starfish (4%), other live bivalves (4%), coralline turfing algae (1%) plus other live components not exceeding 0.5%. Dead shells (identifiable and hash) formed the largest overall component (45%), and rock, sand, and gravel formed 8%. Categories of bycatch species considered sensitive to dredging were caught relatively rarely.

140. This data represents what the fishery would have caught if it fished at the random survey stations, but commercial fishing is likely to target key locations with higher catch rates of scallops. The main scallop beds in the region have been fished consistently for a number of years and so it is considered unlikely benthic communities (and fishery bycatch) will have changed greatly since 2009.

141. If fishing pressure is removed, any adverse effects of scallop fishing on these bycatch species would be removed. These effects would need to be considered if the fishery were to be reopened.

4.1.2 Biological diversity of the aquatic environment – *section 9(b)*

142. The effects of scallop dredging on the benthos are well-studied, with New Zealand studies showing that with increasing fishing intensity, there are decreases in the density and diversity of benthic communities and, especially, the density of emergent epifauna that provide structured habitat for other fauna.[31]

[31] FNZ (2022) - Aquatic environment and biodiversity annual review (AEBAR) 2021

[32] Tuck et al. (2006)

[33] Williams & Parkinson (2010)

143. A closure of the Little Barrier and Colville areas to scallop fishing would remove any commercial or recreational dredging, which would be more likely to maintain biological diversity of the aquatic environment in those areas.

144. FNZ notes that while environmental factors, such as sedimentation and water quality, may also affect biological diversity in scallop habitat, it does not have a direct role in managing such environmental impacts. However, it will monitor existing work being done in this field and continue to engage with relevant local authorities in this regard.

4.1.3 Habitats of particular significance for fisheries management – *section 9(c)*

145. There are no specific habitats of particular significance for fisheries management identified for SCA CS at this time. What is known is discussed in Table 5. Irrespective of whether a habitat of particular significance for scallops has yet been identified, FNZ considers that a closure would avoid adverse effects from scallop fishing on any potential scallop habitats in SCA CS.

146. FNZ recently consulted on guidance for defining, identifying, and managing habitats of particular significance for fisheries management including how FNZ takes into account that these habitats should be protected when preparing fisheries management advice. FNZ is currently updating and finalising the guidelines, taking into account submissions received during the consultation.

Table 5: Summary of information on potential habitats of particular significance for SCA CS.

Habitat	Specific habitats of particular significance for scallops in SCA CS have not been identified at this time. However, certain features of the habitats with which scallops are associated are known to influence scallop productivity by affecting the recruitment, growth, and mortality of scallops, and therefore may in the future be useful in terms of identifying habitats of significance.
Attributes of habitat	• Scallops are found in a variety of coastal habitats, but particularly in semi-enclosed areas where circulating currents are thought to retain larvae. • Scallops inhabit waters of up to about 60 m deep but are more common in depths of 10 to 50 m on substrates of shell gravel, sand or, in some cases, silt. • Scallops are often marked by patchy distributions across a range of spatial scales. Some scallop beds are persistent, and others are short lived. The extent to which the various beds or populations are reproductively or functionally separate is not known. • Scallop larvae spend about three weeks in the plankton. They then attach to algae or some other filamentous material with fine byssus threads. This indicates that an important attribute of habitat is the presence of suitable settlement surfaces for larvae. When the spat reach about 5 mm they detach and take up the free-living habit of adults, usually lying-in depressions on the seabed and often covered by a layer of silt.
Reasons for particular significance	Scallops grow relatively fast, have high mortality, and have variable recruitment. The rates of these processes probably vary in relation to environmental conditions (e.g., temperature, water flow, turbidity, and salinity), ecological resources (e.g., food, oxygen, and habitat), and with intra- and interspecific interactions (e.g., competition, predation, parasitism, and mutualism), and the combination of these factors determines the species distribution and abundance. Scallops are a key component of the inshore coastal ecosystem, acting both as consumers of primary producers (e.g., plankton) and as prey for many predators. Scallops themselves can also provide structural habitat for other epifauna (e.g., sponges, ascidians, and algae)
Risks/Threats	*Fishing* • It is well known that fishing with mobile bottom contact gear such as dredges impacts benthic populations, communities, and their habitats.[34] The effects are not uniform but depend on at least: 'the specific features of the seafloor habitats, including the natural disturbance regime, the species present, the type of gear used, the methods and timing of deployment of the gear and the

[34] E.g., Kaiser et al. (2006), Rice (2006)

	frequency with which a site is impacted by specific gear; and the history of human activities, especially past fishing, in the area of concern'.[35] • The effects of scallop dredging on the benthos are relatively well studied and include several New Zealand studies carried out in areas of the northern fisheries (SCA 1 and SCA CS)[36] and the Golden/Tasman Bays region of the southern fishery (SCA 7).[37] The results of these studies are that, generally, with increasing fishing intensity there are decreases in the density and diversity of benthic communities and, especially, the density of emergent epifauna that provide structured habitat for fauna. *Sedimentation* • Fine sediments introduced from runoff from land may have adverse effects on scallops and scallop habitat. Layers of fine sediment can decrease heterogeneity in scallop habitats[38], and the resulting decrease in habitat complexity is likely to negatively impact survival of juvenile scallops.[39] The suspension of fine sediments has been implicated in scallop population declines in other parts of New Zealand.[40] Suspended sediments can reduce rates of respiration in scallops and some studies have demonstrated that suspended sediments disrupt feeding, decrease growth and increase mortality in New Zealand scallops.[41] Suspended sediments can also reduce light levels near the seabed, which could impact food availability for scallops in the habitat.[42] The effects of fine sediments on scallop habitat may be exacerbated by the use of mobile bottom contact gears such as dredging and trawling and by climatic changes in the frequency and severity of storm events which increase sedimentation rates and resuspension of seafloor sediments.[43] However, the specific impacts of sedimentation on habitats in SCA CS is unknown and requires further investigation. *Climate impacts* • The oceans around the East Coast North Island of New Zealand are warming at a rate well in excess of the global average[44], and moderate to strong heatwaves have been recorded in recent years in the Hauraki Gulf.[45] Changes in the environmental conditions associated with marine heatwaves may have impacts on both the timing of spawning, and food availability for survival of larval scallops (which might impact the availability of suitable habitats for scallops).[46] However, the extent to which changes in climate and temperature may be affecting scallop habitat suitability in SCA CS is unknown.
Existing protection measures	While specific habitats of significance have not been identified, there are scallop populations in many estuaries and harbours in SCA CS, and these are protected from benthic effects of commercial dredging, trawling and Danish seining.

4.2 Sustainability measures (section 11 of the Act)

147. Section 11 of the Act sets out various matters that you must take into account or have regard to when setting or varying any sustainability measures such as fishing area and method prohibitions. These include:

a) any effects of fishing on any stock and the aquatic environment; and

[35] Department of Fisheries and Oceans (2006)

[36] Thrush et al. (1995), Thrush et al. (1998), Cryer et al. (2000), Tuck & Hewitt (2013).

[37] Tuck et al. (2017)

[38] Gibbs & Hewitt (2004)

[39] Talman et al. (2004)

[40] NIWA (2012)

[41] Stevens (1987), Nicholls et al. (2003)

[42] Macdonald et al. (2006)

[43] Cummings et al. (2021)

[44] Sutton & Bowen (2019)

[45] https://www.moanaproject.org/recent-marine-heatwaves

[46] Williams (2005)

b) any existing controls under the Act that apply to the stock or area concerned; and

c) the natural variability of the stock concerned; and

d) any relevant planning instruments, strategies, or services.[47]

4.2.1 Effects of fishing on any stock and the aquatic environment

148. In setting or varying a sustainability measure you must take into account any effects of fishing on any stock and the aquatic environment.

149. Under both options, closing the Little Barrier and Colville areas to commercial and recreational fishing could help preserve the biological diversity of the aquatic environment in those areas by removing the impacts from commercial or recreational dredging as noted under environmental principles in section 4.1 above.

4.2.2 Existing controls that apply to the stock and area

150. In setting or varying a sustainability measure, you must take into account any existing controls under the Fisheries Act 1996 (including rules and regulations made under the Act (section 2(1A)) that apply to the stock or area concerned.

151. Along with the catch limits and allowances set under the TAC, there are several management controls currently in place for SCA CS. These include fishing seasons (for both commercial and recreational fishers), a MLS in place for commercial and recreational fishers and a maximum daily bag limit for recreational take (Table 6). These restrictions apply within Little Barrier and Colville.

Table 6: Recreational and commercial restrictions for SCA CS.

Fishery	Restrictions
Recreational	• Section 11 closure of all SCA CS except Little Barrier and Colville areas to recreational scallop harvest. • The recreational fishing season runs from 1 September – 31 March. • MLS of 100 millimetres in shell length. • Daily bag limit is 20 scallops per person. • Divers operating from a vessel can take scallops for up to two nominated safety people on board the vessel, in addition to daily catch limits for the divers. • Scallops must be brought ashore in a measurable state (i.e., not shucked). An exception applies for scallops consumed immediately on board a vessel.
Commercial	• Section 11 closure of all SCA CS except Little Barrier and Colville areas to commercial scallop harvest. • The commercial fishing season runs from 15 July to 21 December with commercial fisheries operation on weekdays only during the season. • There are significant spatial restrictions for commercial scallop fishers. • The regulated MLS for commercial scallops is 90 millimetres in shell length. Scallops must remain unshelled until they are delivered either to the first point of sale after being taken or to a processing factory. • No commercial fisher fishing for scallops is permitted to use more than 1 dredge with a bar or bit that is more than 2.5 metres long or more than 2 dredges, either of which has a bar or bit that is more than 1.4 metres long.

[47] Sections 11 (2) and (2A).

152. Spatial restrictions also prevented commercial fishing in certain recreationally important scallop areas, which are now closed under section 11 of the Act, and in customary areas (Figure 5 and Table 4).

4.2.3 Natural variability of SCA CS

153. In setting or varying a sustainability measure, you must take into account the natural variability of the stock concerned.

154. Scallop populations within the wider SCA CS area are highly variable from one year to the next due to the variability in annual recruitment. This is a result of their high fecundity, variability in larval and adult mortality, as well as growth rates in adults.

155. These “boom and bust” cycles occur in all main scallop fisheries and are influenced by environmental conditions. The “booms” in productivity are dependent on healthy environments and favourable conditions.

156. It is likely that fishing is not the only factor that has contributed to declines in scallop abundance in the Little Barrier and Colville areas and in the wider SCA CS area. However, there is a lack of information on those other factors or solutions to enable them to be managed. With additional non-fishing related stressors causing degradation, it is likely that the potential productivity of scallops will be limited even if there is a “boom” in spawning.

157. The recommended closure of Little Barrier and Colville to scallop fishing will remove any fishing-related stressors, which include dredging, and is likely to have a positive impact on the habitat.

158. FNZ will monitor the fishery and is anticipating undertaking another survey for the whole of SCA CS by 2025. The management settings will be reviewed should new information show that abundance has increased to a level that would allow sustainable fishing.

4.2.4 Relevant statements, plans, strategies, provisions, and documents

159. In setting or varying a sustainability measure, you shall have regard to any provisions of the following statements, plans, strategies, provisions, and planning documents that apply to the coastal marine area and that you consider to be relevant.

Regional Plans – section 11(2)(a)

160. Three Regional Councils have coastlines within the boundaries of the wider SCA CS area: Auckland, Waikato, and Bay of Plenty, and the Little Barrier and Colville areas are within Auckland’s coastline. Each of these regions have policy statements and plans to manage the coastal and freshwater environments, including terrestrial and coastal linkages, ecosystems, and habitats.

161. The provisions of these various documents are, for the most part, of a general nature and focus mostly on land-based stressors on the marine environment. There are no provisions specific to scallops.

162. FNZ has reviewed these documents and the provisions that might be considered relevant can be found in Table A2 of Addendum 1 (page 40). FNZ considers that the proposed options in this paper are consistent with the objectives of these relevant regional plans.

163. The FNZ Coastal Planning Team engages with the RMA coastal planning processes (including regional authorities) to support marine management decisions to manage not only the fishing effects on the coastal environment but also land-based impacts on fisheries.

Hauraki Gulf Marine Park Act (HGMPA) – section 11(2)(c)

164. SCA CS boundaries overlap within the Hauraki Gulf Marine Park (**HGMP**). Therefore, sections 7 (recognition of national significance of Hauraki Gulf) and 8 (management of Hauraki Gulf) of the Hauraki Gulf Marine Park Act 2000 (**HGMPA**) apply to the management of this fishery.[48]

165. FNZ considers that this review of SCA CS and the proposed options are consistent with obligations under sections 7 and 8 of the HGMPA in that the proposed options aim to address a sustainability risk in SCA CS, and addressing this risk should help to:

    a) Maintain the life-supporting capacity of the environment of the Hauraki Gulf and its islands; and

    b) protect natural and historic resources (i.e., scallops) in the Hauraki Gulf; and

    c) mitigate risks to the future use of these resources by people and communities in the Hauraki Gulf.

Harvest Strategy Standard

166. Section 13 of the Act provides for the setting of a TAC for SCA CS, and guidance is provided by the Harvest Strategy Standard for New Zealand Fisheries (**HSS**).

167. The High Court has held that the HSS is a mandatory relevant consideration that you must have regard to when setting a TAC under section 13 of the Act.

168. The HSS is a policy statement of best practice in relation to the setting of fishery and stock targets and limits for fish stocks in New Zealand's QMS.[49] It is intended to provide guidance on how fisheries law will be applied in practice, by establishing a consistent and transparent framework for decision-making to achieve the objective of providing for utilisation of New Zealand's QMS species while ensuring sustainability.

169. The HSS outlines the Ministry's approach to relevant sections of the Act and forms a core input to the Ministry's advice to the Minister on the management of fisheries. The HSS defines a hard limit as a biomass limit below which fisheries should be considered for closure and a soft limit as a biomass limit below which the requirement for a formal time-constrained rebuilding plan is triggered.

170. In the case of scallops in SCA CS, there are no established reference points or available estimates of B_{MSY} (the biomass that enables a fish stock to deliver *MSY*), and as such there is uncertainty as to where the current biomass sits in relation to the default targets (including the soft or hard limit) set out by the HSS. Biomass estimates from the recent surveys represent the best available information for monitoring stock health.

4.2.5 Relevant services or fisheries plans

171. Before setting or varying any sustainability measure (such as the TAC), you must take into account any conservation or fisheries services, and any relevant fisheries plans approved under section 11(2A) of the Act.

172. There are no fisheries plans approved under section 11(2A) specific to SCA CS, or of specific relevance to this review of measures for the fishery.

173. Fisheries services of relevance to the options in this paper include the research used to monitor stock abundance, such as the biomass surveys undertaken for SCA CS (which have been used to inform the status of the stock), and the tools used to enforce compliance with management controls in the fishery.

[48] NZ Legislation (2000) - Hauraki Gulf Marine Park Act.

[49] FNZ (2008) - Harvest Strategy Standard.

174. FNZ notes that the SCA CS fishery does not have observer or on-board camera coverage, but Fisheries Compliance regularly monitors the SCA CS area to ensure that management controls are being adhered to.

4.2.6 Other plans and strategies

175. The following plans and strategies are not mandatory considerations under section 11 of the Act, but you may consider them relevant (they are not impermissible).

176. In addition to the HGMPA, the recently released *Revitalising the Gulf: Government action on the Sea Change Plan* is relevant to the future management of the portion of SCA CS that lies within the HGMP. A key fisheries output from *Revitalising the Gulf* is the development of an area specific fisheries plan[50] under section 11A of the Fisheries Act. There are also new marine protection proposals for the HGMP which would overlap with scallop beds in SCA CS.

177. The draft Hauraki Gulf Fisheries Plan proposes specific management measures to support the sustainability and improved future management of scallops within the HGMP. This is currently being consulted on and you can expect final advice in mid-2023. If the proposed closure were to be implemented, the specific actions within the Fisheries Plan would be considered as part of the ongoing and longer-term management approach.

5 Submissions

178. A total of 35 submissions were received, with 19 supporting the submission from the Opito Bay Ratepayer's Association. Table 7 summarises the submissions received and shows submitters' support for each option.

Table 7: Written submissions and responses received for SCA CS (in alphabetical order).

Submitter	Option Supported			Comments
	1	2	Other	
A. Wills			✓	Supports continued closure. Also suggests other measures such as a max quota of 40 legally sized scallops per boat, a shorter 6-week harvest season, and restriction of commercial fishing to deeper less accessible areas.
Environmental Defence Society (EDS)		✓		Also supports measures to prohibit use of dredges for scallop fishing.
Fisheries Inshore Council New Zealand		✓		
Forest & Bird NZ		✓		Recommended the development of a set of criteria for reopening the fishery including identifying and resolving non-fishing threats; taking into account the need for high density beds; taking into account the wider restoration for the gulf ecosystem; the availability of low impact methods; and the consideration of customary management.
Hauraki Gulf Forum		✓		
Iwi Collective Partnership (ICP)		✓		
L. Williamson		✓		
NZ Sport Fishing Council, joint submission with the NZ Angling and Casting Association (NZACA) and		✓		Also support measures to prohibit use of dredges for scallop fishing and recommend establishing a collaborative working group before

[50] The Hauraki Gulf Fisheries Plan is still in draft and not yet approved under section 11A of the Fisheries Act, which means the Minister is not required to take it into account.

The NZ Underwater Association (NZUA)				the fishery is re-opened. Recommended a survey within the next 3 years with a review after 3 years.
Ngātiwai Holdings Ltd.		✓		
Opito Bay Ratepayers Association: This submission was also supported by 19 other individual submitters.			✓	Did not indicate option support, however, indicated support of closure. Also submit that commercial dredging should be banned.
Q. Hayward (Tairua Fishing Club)			✓	Did not indicate option support, however, does support a closure and recommended licensing recreational fishers with fees being used to fund future monitoring and funding.
R. Willis			✓	Recommended significant areas of the coastline and adjoining seas to be placed into marine sanctuaries free from commercial and recreational harvesting.
S. Kingdon			✓	Did not indicate option support, however, does support a closure of a minimum of 3 years with the development of a management approach.
S. Lee		✓		Recommended reducing all allowances to 0 tonnes.
Te Ohu Kaimoana		✓		
Whangamata Ocean Sports Club		✓		Also support measures to prohibit use of dredges for scallop fishing and recommend establishing a collaborative working group before the fishery is re-opened. Recommended a survey within the next 3 years with a review after 3 years.

6 Options and analysis

6.1 Current settings

Partial closure under a Section 11 Sustainability measure. Little Barrier and Colville Channel areas closed to fishing under emergency measure that lapses on 16 March 2023				
TAC: 19 t	**TACC:** 5 t	**Customary**: 10 t	**Recreational**: 3 t	**Other mortality**: 1 t

179. FNZ considers that retaining the *status quo* for SCA CS would not respond to the declines in scallop abundance observed at Little Barrier and Colville, which are currently under a section 16 emergency closure, and noting the points raised in sections 1.1.3 and 1.2 of this paper, it would be inconsistent with the purpose of the Act to provide for the utilisation of fisheries resources while ensuring sustainability.

180. It was not consulted on as an option and none of the submissions received indicated support for the current settings being retained.

6.2 Option 1

Closure under a Section 11 Sustainability measure, including the Little Barrier and Colville Channel areas				
TAC: 19 t	**TACC:** 5 t	**Customary**: 10 t	**Recreational**: 3 t	**Other mortality**: 1 t

181. Option 1 recommends a closure of Little Barrier and Colville to the commercial and recreational harvest of scallops as a sustainability measure under section 11 of the Act. This option addresses the sustainability risk identified by the 2021 dredge surveys, which showed a general decline in scallop abundance in most of SCA CS, and the further decline evidenced in the 2022 camera-based survey of the Little Barrier and Colville beds. The closure will protect the scallop beds at Little Barrier and Colville from further direct and indirect impacts of fishing activity. A section 11 closure would remain in place to protect the scallop beds once the emergency measure has expired. A closure would also remove any bottom-contact fishing

methods and would protect marine benthic habitats from any adverse effects of these fishing methods.

182. The implementation of a section 11 closure to Little Barrier and Colville would result in the entire SCA CS fishery being closed. It would see the revocation of the previous implemented section 11 closure *Gazette* notice that applied to all of SCA CS except for Little Barrier and Colville, and the issuing of a new notice that implements a section 11 closure to all of the SCA CS fishery.

183. As noted above, the decline in scallop abundance may not only be caused by fishing but also by other factors. However, fishing impacts can be controlled under the Fisheries Act, and reducing these impacts may improve the chances of scallop recovery.

184. FNZ acknowledges that a closure of Little Barrier and Colville would further impact commercial and recreational fishers in SCA CS as this would result in the entire fishery being closed and utilisation would be completely prohibited. The most significant impact will be the complete exclusion of commercial fishing and associated industries, which are currently built around the SCA CS fishery. However, it is also noted that a closure is aimed at providing the best opportunity for scallops to recover, and if scallop numbers recover to higher levels that can sustain fishing, there would be longer-term socio-economic benefits for those associated with the fishery.

185. A section 11 closure is permanent until the closure is removed. FNZ would commission new information on the abundance of scallops in SCA CS by 2025. If this indicates that the stock has recovered FNZ will review whether the full closure of SCA CS is still required and, if not, what management measures would be required to enable utilisation while ensuring sustainability.

186. The Coromandel Scallop Fishermen's Association has signalled a desire to work collaboratively on innovation and improvement to scallop management in the future.

187. FNZ will also have the opportunity during the closure to research other factors that may be affecting the scallop populations and to review appropriate reference points (management targets and limits) for the fishery. In line with this goal, FNZ has recently commissioned a review of reference points for scallop fisheries (including SCA CS), and the results for this project (SCA2022-01) are due to FNZ in September 2023. A key aim of the project will be to establish a framework for setting reference points that appropriately consider fishery effects (e.g., benthic habitat damage from dredging) as well as non-fishery effects (e.g., land-based sedimentation) that can influence scallop productivity.

188. A closure under section 11 of the Act would not extend to customary fishing authorised under section 50 of the Fisheries (Amateur Fishing) Regulations 2013 (fish, aquatic life, or seaweed taken under authorisation for hui or tangi). It would also still allow for tangata kaitiaki/tiaki to authorise the taking of fisheries resources under regulation 11 of the Fisheries (Kaimoana Customary Fishing) Regulations 1998 (power to authorise the taking of fisheries resources for customary food gathering).

189. Under Option 1 no change would be made to the TAC, allowances or TACC, as access to the fishery would already be prohibited through the section 11 closure. FNZ notes that a consequence of this option would be that quota holders will continue to be charged fisheries cost recovery levies for the fishery despite not being able to harvest and sell scallops, however, this is not a relevant consideration for you when setting or varying a TAC.

190. Under this option FNZ would continue to monitor the fishery and, if new information indicated fishing could occur sustainably, the TAC and settings within the TAC would be reviewed prior to any recommendations to re-open the fishery.

191. None of the submissions received indicated support for Option 1.

6.3 Option 2 – Fisheries New Zealand preferred option

Closure under a Section 11 Sustainability measure, including the Little Barrier and Colville Channel areas, and reduction to the TAC, TACC, and recreational allowance.				
TAC: 11 t ↓ (8 t)	**TACC:** 0 t ↓ (5 t)	**Customary**: 10 t	**Recreational**: 0 t ↓ (3 t)	**Other mortality**: 1 t

192. As with Option 1, Option 2 recommends a closure to the commercial and recreational harvest of scallops in Little Barrier and Colville as a sustainability measure under section 11 of the Act. The benefits and impacts of the closure are discussed above under Option 1.

193. In contrast to Option 1, Option 2 recommends the TAC and settings within the TAC be changed. When setting or varying any TAC, you must give particular regard to Māori customary non-commercial fishing and recreational fishing interests as well as all other mortality caused by fishing. Under Option 2 the TAC would be decreased from 19 to 11 tonnes.

194. FNZ considers that a TAC of 11 tonnes would be consistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce *MSY* because it entails a substantial reduction to utilisation that would help to move scallops toward a higher biomass that is more likely to produce *MSY*.

195. FNZ acknowledges that the proposed closure under section 11 of the Act is the mechanism that would achieve this reduction in utilisation and the TAC reduction will not in itself change utilisation after a closure is already in place. However, the TAC change will better reflect the status of the fishery under the closure and meet your obligation under section 13(2A) to set an appropriate TAC.

196. Reducing the TAC to 11 tonnes is a cautious approach that considers there are environmental factors likely to be affecting the productivity of scallops, such as sedimentation and climate impacts (discussed in Table 5). It also considers the biological characteristics of scallops. Notably, success of scallop egg fertilisation is known to be dependent on high density beds and proximity to other scallops. It follows that a greater reduction in utilisation should help to rebuild the density of scallops in these areas more quickly and increase the probability of successful spawning.

197. While there is little information on the effects of a TAC reduction on interdependent stocks, it can be assumed that the effects will be positive as the removal of fishing pressure should lead to an increase in scallop abundance.

198. The customary allowance would be retained at 10 tonnes under this option. The allowance for other sources of mortality would be maintained at 1 tonne to account for possible illegal take of scallops during the closure and incidental fishing mortality from other non-target methods. Iwi have indicated that in order to support a recovery of the local scallop populations in their respective rohe moana, customary authorisations for scallop take have declined or ceased and cultural rāhui are in place for scallops over much of the SCA CS area.

199. The recreational allowance would be set at zero tonnes. Notably, if the recreational allowance is set at zero it would not actually impact take by this sector, which would already be prohibited under the section 11 closure. However, as with the proposed TAC change, the changes to these settings would better reflect the status of the fishery under the closure, and the level of harvest considered sustainable.

200. The TACC would be set at zero tonnes. As with Option 1, quota holders would be unable to harvest or sell scallops, and while not a relevant consideration in setting the TAC, a consequence of a TAC and TACC reduction would be to reduce or remove any levies on quota holders.

201. A total of 11 submissions supported this option. Submissions in support of Option 2 were received from the Environmental Defence Society; Fisheries Inshore Council New Zealand; Forest & Bird NZ; the Hauraki Gulf Forum; the Iwi Collective Partnership; the New Zealand

Sport Fishing Council; Ngātiwai Holdings Limited; Te Ohu Kaimoana; the Whangamata Ocean Sports Club; and two other individual submitters. These submissions supported the closure in conjunction with a TAC reduction as this option will protect scallop beds from the direct, and indirect, impacts of scallop fishing while the TAC will reflect the state of the fishery and alleviate the financial pressures on quota interests.

6.4 Economic considerations

202. The Coromandel scallop fishery supports a number of associated people and businesses. This includes but is not limited to:

- Quota holders.[51]
- Commercial fishers.
- Seafood processing facilities and licensed fish receivers.
- Suppliers of fishing, boating, and diving equipment and others in the marine industry.
- Dive shops.

203. Under both options in this paper, the commercial and recreational fisheries would be fully closed under section 11 of the Act. This would prohibit any commercial harvest of scallops thus reducing the maximum landed catch under the possible annual catch entitlement (ACE) (5,000 kgs) to 0 tonnes – a 100% reduction. Based on the 2020/21 port price of $15.90/kg, this would result in an approximate decrease in annual revenue of $79,500.

204. The closure would have socio-economic consequences, particularly at a regional scale, and is likely to reduce socio-cultural wellbeing in the short to medium term for those directly involved with the fishery.

205. It is noted that fishers and processors are not solely reliant on scallops and do or can catch/process other species, but a closure would remove all commercial revenue from scallops and fishers/vessel operators would likely consider moving into different fisheries. This would require some conversion of vessels to allow for alternative fishing gear to be used and purchase of that gear. The costs of conversion can be considerable, along with costs of obtaining quota or ACE for other species.

206. FNZ also notes that a closure of Little Barrier and Colville is proposed to provide an opportunity for scallops to recover, and if scallop numbers recover to higher levels that can sustain fishing, there would be longer-term socio-economic benefits for those associated with the fishery.

6.5 Other matters raised

207. There was widespread support from the majority of submissions received calling for a ban on dredging, with several submitters suggesting that all dredging be banned. This included submissions from organisations such the Opito Bay Ratepayer's Association, NZ Sport Fishing Council, Environmental Defence Society, Forest & Bird NZ, and many individual submitters.

208. All the submissions received supported a closure of the fishery even if a specific option was not supported, with several submitters calling for a closure of a minimum of three years and survey before another review. This period was suggested to allow suitable time for SCA CS to recover before a survey was carried out prior to the reviewing of the closure of the fishery.

209. Submissions in support of Option 2 acknowledged the reduced the burden of levies on quota holders considering they would not be able to harvest.

[51] This includes Māori who own Fisheries Settlement quota shares – Some iwi and mandated iwi organisations are therefore likely to be impacted by a closure of commercial take. However, FNZ does not have information to accurately quantify the potential loss in quota value or flow on impacts of this for iwi and their associated communities.

210. Forest & Bird NZ recommended the development of a set of criteria for reopening the fishery which included:

    a) identifying and resolving non-fishing threats,

    b) taking into account the need for high density beds,

    c) taking into account the wider restoration for the Hauraki Gulf ecosystem,

    d) the availability of low impact methods; and

    e) the consideration of customary management.

211. Submissions received also encourage FNZ to work collaboratively with stakeholders when it comes to future management. The Coromandel Scallop Fishermen's Association previously indicated a willingness to work collaboratively. FNZ is currently working towards creating a multi-stakeholder advisory group for the future management of SCA CS.

7 Deemed values

212. FNZ is satisfied that the current deemed value rates for SCA CS are consistent with section 75(2)(a) of the Act in that they provide sufficient incentive for fishers to balance their catch with ACE. FNZ therefore did not propose any deemed value changes as part of this review. None of the submissions received commented on SCA CS deemed values.

8 Conclusions and recommendations

8.1 Section 11 closure

213. The 2021 surveys of scallop abundance and density in the SCA CS fishery, and the subsequent pre-season surveys of the Little Barrier and Colville areas in 2022 have highlighted that there are concerns for the ongoing sustainability of scallop populations within these areas.

214. FNZ concludes that the best available information suggests that the SCA CS populations are at low abundance and low density with recent evidence from the survey results for Little Barrier and Colville suggesting significant declines in these areas. There is concern these declines may adversely affect scallop spawning success and subsequent recruitment.

215. While it is likely there are a number of contributing factors for the current low abundance of scallops, including uncertain environmental effects and other effects not related to fishing, FNZ considers it is clear that the current management settings pose a risk of further decline in this important shared fishery.

216. FNZ considers that the Little Barrier and Colville areas are no longer at levels which will sustain ongoing utilisation and there are concerns that the SCA CS fishery is not responding to the current management approach, despite the closure of majority of the fishery. While *MSY* is not able to be estimated reliably using these survey results due to the lack of reference points for SCA CS in these areas, the declines in biomass in the areas have occurred over a short period of time and far exceed estimated fishing removals in the same period. Because of this, and the overall low density of scallops estimated in these areas, FNZ considers that the current management controls in place are very unlikely to maintain the stock at a level that can produce *MSY*.

217. In addition, there are concerns regarding the impact of dredging on scallops, their habitat, and on the benthic environment more generally. FNZ considers that to ensure the recovery of the SCA CS population, protection of the entire scallop population and habitat is necessary.

218. Given the available information, a prohibition of scallop fishing in the Little Barrier and Colville areas, and consequently a closure of the entire SCA CS stock to recreational and commercial scallop fishing, is considered appropriate to provide the best opportunity for the SCA CS populations to improve, while further development of management approaches and harvesting technology is undertaken.

219. If you decide to prohibit recreational and commercial scallop harvest in the Little Barrier and Colville areas under section 11, the *Gazette* notice for the section 11 measure in place in the wider SCA CS area would be revoked and a new *Gazette* notice will be issued to consolidate the closures in one notice for SCA CS.

8.2 TAC reduction

220. FNZ believes that setting a TAC of 11 tonnes for SCA CS would help maintain or increase the stock to a level that can produce *MSY*. This is because it represents a significant reduction in utilisation, which would help move the scallops toward a higher biomass. FNZ also recognizes that the proposed closure under section 11 of the Act is necessary to achieve this reduction in utilisation, and that the TAC reduction alone will not change utilisation after the closure is in place. However, changing the TAC will better reflect the state of the fishery under the closure and meet the obligation to set an appropriate TAC under section 13(2A).

221. The proposal to reduce the TAC to 11 tonnes takes into account environmental factors affecting scallop productivity and their biological characteristics. High density beds and proximity to other scallops are necessary for successful fertilisation. A greater reduction in utilisation can help rebuild the density of scallops in these areas more quickly, increasing the probability of successful spawning.

8.3 Recommendation

222. FNZ concludes that all options presented satisfy your obligations under section 13 of the Act, will protect scallops and their habitat from the effects of dredging, and are likely to ensure sustainability by providing the opportunity for the scallop populations to improve their status. However, FNZ recommends that Option 2 as it is consistent with the objective of maintaining or increasing the stock to a level that can produce *MSY*. FNZ notes that the proposed prohibition of scallop harvest under section 11 of the Act would be the mechanism to reduce utilisation, in conjunction with the TAC reduction to better reflect the status of the fishery under the closure.

9 Decision for proposed sustainability measures for Coromandel scallops (SCA CS)

Option 1

Agree to prohibit commercial and recreational scallop harvesting in the Te Hauturu-o-Toi/Little Barrier and Colville Channel areas within the Coromandel scallop (SCA CS) fishery under a section 11 sustainability measure.

Agreed / Agreed as Amended / Not Agreed

OR

Option 2 *(Fisheries New Zealand preferred option)*

Agree to prohibit commercial and recreational scallop harvesting in the Te Hauturu-o-Toi/Little Barrier and Colville Channel areas within the Coromandel scallop (SCA CS) fishery under a section 11 sustainability measure.

AND

Agree to set the TAC of SCA CS to 11 tonnes and within the TAC:

i. Retain the allowance for customary Māori, non-commercial fishing interests at 10 tonnes.

ii. Reduce the allowance for recreational fishing interests from 3 tonnes to 0 tonne.

iii. Retain the allowance for all other mortality caused by fishing at 1 tonne.

iv. Reduce the TACC from 5 tonnes to 0 tonnes.

Agreed / Agreed as Amended / Not Agreed

Hon Stuart Nash
Minister for Oceans and Fisheries

8 / 3 / 2023

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Addendum 1

Table A1: 2022 Survey biomass estimates (meatweight tonnes) and densities of recruited (>90 mm) scallops for all surveyed areas of Te Hauturu-o-Toi/Little Barrier Island and Colville Channel.

Location	Survey strata	Area (km^2)	No. survey stations	Biomass (absolute, in tonnes)			Density (scallops per m^2)		
				mean	median	95% CI	mean	median	95% CI
Hauturu/Little Barrier	1-4	25.5	20	4.83	4.70	1.26 - 9.66	0.016	0.016	0.004 – 0.031
	41 (new)	36.7	6	7.95	7.56	1.60 – 16.46	0.020	0.019	0.004 – 0.040
	Total	62.2	26	12.78	12.56	4.94 – 22.42	0.018	0.018	0.007 – 0.032
Colville Channel	31	52.7	14	36.17	35.98	21.28 – 53.71	0.065	0.065	0.039 – 0.093
	34 (new)	4.4	3	1.47	1.45	0.57 – 2.61	0.032	0.032	0.014 – 0.054
	35 (new)	35.7	3	13.75	13.89	3.82 – 23.52	0.032	0.032	0.012 – 0.000
	36 (new)	20.4	3	11.00	11.18	0 – 21.34	0.052	0.052	0.000 – 0.106
	37-38 (new)	23.0	4	0.00	0.00	0.00 – 0.00	0.000	0.000	0.000 – 0.000
	Total	136.2	27	62.39	62.04	41.77 – 84.93	0.042	0.042	0.028 - 0.057
Total area	All strata	198.4	53	75.17	75.27	51.58 – 100.95	0.035	0.035	0.024 – 0.046

Table A2: Table of relevant regional plan provisions and policy statements to SCA CS. The provisions are, for the most part, of a general nature and focus mostly on land-based stressors on the marine environment.

Regional Council	Document	Relevant sections
Auckland	Auckland Council Regional Policy Statement	**2.4.7** Auckland's coastal environment is a fundamental part of its heritage and is sensitive to the adverse effects of inappropriate subdivision, use and development. It is also essential for the Region's social and economic wellbeing. The Hauraki Gulf and its islands are resources of regional and national significance for navigation and port purposes, fishing, recreation, tourism and settlement. The Hauraki Gulf Marine Park Act 2000 requires the Council maintains the interrelationship between the Hauraki Gulf, its islands and catchments to sustain the life supporting capacity of the environment. Harbours, such as the Mahurangi, sustain a variety of recreational uses as well as commercial shell fisheries. The catchment also contains large tracts of forest and some urbanisation. These potentially conflicting uses must be carefully managed to ensure this diversity of use is sustainable and the resource qualities are maintained. **7 Coastal Environmental** 7.3 Objectives 2. To protect outstanding natural features and landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna, and significant historic and cultural places and areas in the coastal environment. **7.4.4 Policies: Natural character of the coastal environment** 1. The natural character of the coastal environment shall be preserved, and protected from inappropriate subdivision, use and development by: areas of indigenous vegetation and habitats of indigenous fauna and associated processes; g) habitat important for preserving the range, abundance and diversity of indigenous and migratory coastal species; (ii) In all other areas, avoiding any adverse effects which result in the significant reduction in habitat important for preserving the range and diversity of indigenous and migratory coastal species within the Auckland Region.

Regional Council	Document	Relevant sections
	Auckland Unitary Plan	**Section B6 – Mana Whenua** Section B6.3.2 of the Auckland Unitary Plan states its policy to: "(4) Provide opportunities for Mana Whenua to be involved in the integrated management of natural and physical resources in ways that do all of the following: (a) Recognise the holistic nature of the Mana Whenua world view; (b) Recognise any protected customary right in accordance with the Marine and Coastal Area (Takutai Moana) Act 2011; and (c) Restore or enhance the mauri of freshwater and coastal ecosystems." **Section B7 – Natural Resources** Section B7.1 of the Auckland Unitary Plan notes that the combination of urban growth and past land, coastal and freshwater management practices have placed increasing pressure on land and water resources including habitats and biodiversity. Section B7.7 of the Auckland Unitary Plan states that: Coastal and marine ecosystems are also subject to change, damage or destruction from inappropriate subdivision, use and development, as well as natural processes. Areas containing threatened ecosystems and species require effective management to protect them, and enhance their resilience which is important for the long-term viability of indigenous biodiversity and to help respond to the potential effects of climate change. Effectively addressing these issues requires a combination of regulatory and voluntary efforts. Areas of high ecological value have been identified as significant ecological areas using significance factors set out in the schedules of the Unitary Plan. (See Schedule 3 Significant Ecological Areas – Terrestrial Schedule and Schedule 4 Significant Ecological Areas – Marine Schedule.) The coastal marine area has not yet been comprehensively surveyed for the purpose of identifying marine significant ecological areas. Those that have been identified may under-represent the extent of significant marine communities and habitats present in the sub-tidal areas of the region. It is important that both areas be considered together because of the dynamic and interconnected nature of coastal environments and because the classes may change over time as more knowledge is gained and as pressures on receiving environments change. There is evidence that even moderate levels of degradation can result in ecosystem level changes, and it is not yet known how reversible these changes might be. **Section B8 – Coastal Environment** Section B8.3.2 of the Auckland Unitary Plan lists policies for use and development, including: Provide for use and development in the coastal marine area that: (a) Have a functional need which requires the use of the natural and physical resources of the coastal marine area; (b) Are for the public benefit or public recreation that cannot practicably be located outside the coastal marine area; (c) Have an operational need making a location in the coastal marine area appropriate and that cannot practicably be located outside the coastal marine area; or (d) Enable the use of the coastal marine area by Mana Whenua for Māori cultural activities and customary uses. **Section B8.5. Managing the Hauraki Gulf/Te Moana Nui o Toi/Tīkapa Moana** Section B8.5 lists objectives and policies provide guidance on giving effect to the Hauraki Gulf Marine Park Act. Objectives include: (1) The management of the Hauraki Gulf gives effect to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000. (2) Use and development supports the social and economic well-being of the resident communities of Waiheke and Great Barrier islands, while maintaining or, where appropriate, enhancing the natural and physical resources of the islands. (3) Economic well-being is enabled from the use of the Hauraki Gulf's natural and physical resources without resulting in further degradation of environmental quality or adversely affecting the life-supporting capacity of marine ecosystems. Policies include: Integrated management (1) Encourage and support the restoration and enhancement of the Hauraki Gulf's ecosystems, its islands and catchments.

Regional Council	Document	Relevant sections
		(2) Require the integrated management of use and development in the catchments, islands, and waters of the Hauraki Gulf to ensure that the ecological values and life-supporting capacity of the Hauraki Gulf are protected, and where appropriate enhanced. (3) Require applications for use and development to be assessed in terms of the cumulative effect on the ecological and amenity values of the Hauraki Gulf, rather than on an areaspecific or case-by-case basis. (4) Maintain and enhance the values of the islands in the Hauraki Gulf. (5) Avoid use and development that will compromise the natural character, landscape, conservation and biodiversity values of the islands, particularly in areas with natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal, historic heritage and special character. (6) Promote the restoration and rehabilitation of natural character values of the islands of the Hauraki Gulf. (7) Ensure that use and development of the area adjoining conservation islands, regional parks or Department of Conservation land, does not adversely affect their scientific, natural or recreational values. (8) Enhance opportunities for educational and recreational activities on the islands of the Hauraki Gulf if they are consistent with protecting natural and physical resources, particularly in areas where natural and physical resources have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal, historic heritage and special character. (9) Identify and protect areas or habitats, particularly those unique to the Hauraki Gulf, that are: (a) significant to the ecological and biodiversity values of the Hauraki Gulf; and (b) vulnerable to modification; (10) Work with agencies and stakeholders to establish an ecological bottom line, or agreed target, for managing the Hauraki Gulf's natural and physical resources which will do all of the following: (a) provide greater certainty in sustaining the Hauraki Gulf's ongoing life-supporting capacity and ecosystem services; (b) assist in avoiding incremental and ongoing degradation; (c) co-ordinate cross-jurisdictional integrated management and effort to achieve agreed outcomes; (d) better measure the success of protection and enhancement initiatives; (e) assist in establishing a baseline for monitoring changes; (f) enable better evaluation of the social and economic cost-benefits of management; and (g) provide an expanded green-blue network linking restored island and mainland sanctuaries with protected, regenerating marine areas where the ecological health and productivity of the marine area will be enhanced. Providing for the relationship of Mana Whenua with the Hauraki Gulf (11) Work in partnership with Mana Whenua to protect and enhance culturally important environmental resources and values of the Hauraki Gulf that are important to their traditional, cultural and spiritual relationship with the Hauraki Gulf. (12) Incorporate mātauranga Māori with western knowledge in establishing management objectives for the Hauraki Gulf. (13) Require management and decision-making to take into account the historical, cultural and spiritual relationship of Mana Whenua with the Hauraki Gulf, and the ongoing capacity to sustain these relationships. Maintaining and enhancing social, cultural and recreation values (14) Identify and protect the natural and physical resources that have important cultural and historic associations for people and communities in and around the Hauraki Gulf. (15) Identify, maintain, and where appropriate enhance, areas of high recreational use within the Hauraki Gulf by managing water quality, development and potentially conflicting uses so as not to compromise the particular values or qualities of these areas that add to their recreational value. (16) Encourage the strategic provision of infrastructure and facilities to enhance public access and recreational use and enjoyment of the Hauraki Gulf. Providing for the use of natural and physical resources, and for economic activities

Regional Council	Document	Relevant sections
		(17) Provide for commercial activities in the Hauraki Gulf and its catchments while ensuring that the impacts of use, and any future expansion of use and development, do not result in further degradation or net loss of sensitive marine ecosystems. (18) Encourage the strategic provision of infrastructure and facilities that support economic opportunities for the resident communities of Waiheke and Great Barrier islands. (19) Promote economic development opportunities that complement the unique values of the islands and the Hauraki Gulf. **Section B8.6** summarises the reasons of adopting the proposed policies, including: • The coastal environment and the resources of the coastal marine area comprise some of the most important taonga to Mana Whenua, who have a traditional and on-going cultural relationship with the coast. • Auckland's richly varied coastal environment is a finite resource with high environmental, social, economic and cultural values. Its coasts and harbours are among its most highly valued natural features. It is the location of New Zealand's largest commercial port and international airport. The marine industry, transport and aquaculture activities all contribute to social and economic well-being. • The coastal marine area also provides a range of ecosystem services, including providing food, assimilating discharges from land into coastal waters and enabling a range of coastal uses that support the economic well-being of people and communities. • Promoting use and development that provides for social and economic opportunities while avoiding further degradation of the marine environment of the Gulf. **Section D9 – Significant Ecological Areas** Significant Ecological Areas – Marine are identified areas of significant indigenous vegetation or significant habitats of indigenous fauna located in the coastal marine area. Policies for managing these areas include: (12) Manage the adverse effects of use and development on the values of Significant Ecological Areas – Marine, taking into account all of the following: (a) The extent to which existing use and development already, and in combination with any proposal, impacts on the habitat, or impedes the operation of ecological and physical processes; (b) The extent to which there are similar habitat types within other Significant Ecological Areas – Marine in the same harbour or estuary or, where the significant ecological area - marine is located on open coast, within the same vicinity; and (c) Whether the viability of habitats of regionally or nationally threatened plants or animals is adversely affected, including the impact on the species population and location.
Waikato	**The Waikato Regional Policy Statement**	**3.7 Coastal environment** The coastal environment is managed in an integrated way that: a) preserves natural character and protects natural features and landscape values of the coastal environment; b) avoids conflicts between uses and values; c) recognises the interconnections between marine-based and land-based activities; and d) recognises the dynamic, complex and interdependent nature of natural biological and physical processes in the coastal environment. **15.4.4 Coastal marine area** (c) Marine habitats and ecosystems are protected from significant adverse effects.
	Regional Coastal Plan for Waikato	**Section 3.4 – Protection of Coastal Processes** 3.4.3 Policy – Biodiversity Ensure the protection of biodiversity, the inter-relatedness of coastal ecology, and the natural movement of biota within the coastal marine area. **Section 13.1 – Integrated Management Across Boundaries** 13.1.2 Policy – Coastal Environmental Inter-Relationships When managing the use, development and protection of the coastal environment, provide for: (a) The interconnected nature of the coastal environment; and (b) The inter-relationships between natural and physical resources; and (c) The potential for adverse effects to occur; and (d) The range of social, cultural and economic values within the Region.

Regional Council	Document	Relevant sections
		Section 17.2 – Natural Character, Habitat and Coastal Processes 17.2.3 – Consultation with the Ministry of Fisheries Environment Waikato, in conjunction with the Ministry of Fisheries, will advocate management practices to resource users harvesting marine life that: i Do not adversely affect significant or extensive areas of indigenous vegetation and habitat of indigenous fauna; ii Avoid sensitive inshore areas; and iii Ensure marine ecosystems and fish stock are managed sustainably.
Bay of Plenty	**Regional Policy Statement**	**Part Two (Issues and objectives)** Objective 20 The protection of significant indigenous habitats and ecosystems, having particular regard to their maintenance, restoration and intrinsic values. **Part Three (Policies and methods)** Policy IR 6B: Promoting consistent and integrated management across jurisdictional boundaries Collaboration and information sharing between agencies with different responsibilities in the coastal environment such as fisheries and conservation should be encouraged to promote integrated and efficient resource management.
	Bay of Plenty Regional Coastal Environmental Plan	**Part 2, Section 2 – Objectives** Objective 1 of this section seeks to "achieve integrated management of the coastal environment" by: (a) Providing a consistent, efficient and integrated management framework; (b) Adopting a whole of catchment approach to management of the coastal environment; (c) Recognising and managing the effects of land uses and freshwater-based activities (including discharges) on the coastal marine area; (d) Enabling the exercise of kaitiakitanga; (e) Planning for and managing: i. cumulative effects; and ii. the effects of climate change; and (f) Promoting the sustainable management of the Bay of Plenty coastal fisheries. **Part 5 Methods, 1.2 Natural Heritage** Method 3A: Support research to identify areas in the Bay of Plenty region where ecosystems and biodiversity values are being, or are likely to be, adversely effected by fishing activities, and investigate the options available to manage such activities for the protection of indigenous biodiversity. Method 19AA: Council will partner with tangata whenua for additional spatial mechanisms for the coastal marine area that identify and protect: (a) Areas or sites of cultural, biodiversity and/or natural character value that may require additional protection and/or restoration; (b) Areas or sites of cultural, biodiversity and/or natural character value that are, or are likely to be, adversely affected by activities (including fishing), and options to manage such activities for the protection of cultural, biodiversity and/or natural character values.