



Fisheries New Zealand

Tini a Tangaroa

Review of East Coast Tarakihi Sustainability Measures for 2022/23

Fisheries New Zealand Decision Paper

ISBN No: 978-1-99-103987-3 (online)

August 2022

Disclaimer

While every effort has been made to ensure the information in this publication is accurate, Fisheries New Zealand does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decisions based on this information.

This publication is available on the Ministry for Primary Industries website at <http://www.mpi.govt.nz/news-and-resources/publications/>

© Crown Copyright – Fisheries New Zealand

Contents

Summary.....	1
1 Why are we proposing a review?.....	3
2 Overview of powers and obligations under the Fisheries Act 1996.....	5
2.1 Decisions Ministers may make in relation to sustainability reviews.....	5
2.2 Overarching requirements.....	5
2.3 Statutory Considerations.....	6
2.4 Maximum Sustainable Yield.....	8
2.5 Overview of the Harvest Strategy Standard.....	8
2.6 2021 High Court judgment and 2022 Court of Appeal hearing.....	9
3 About the stock.....	10
3.1 Fishery characteristics.....	10
3.2 Biology.....	10
3.3 Management background.....	11
4 Status of the stock.....	11
4.1 Stock assessments.....	11
4.2 Rebuild Strategy.....	14
4.2.1 Target.....	14
4.2.2 Appropriate period.....	14
4.2.3 Probability.....	17
4.2.4 Way and rate.....	18
5 Catch information and current settings within the TAC.....	23
5.1 Commercial.....	23
5.2 Customary Māori.....	23
5.3 Recreational.....	24
5.4 Other sources of mortality caused by fishing.....	25
6 Treaty of Waitangi Obligations.....	26
6.1 Input and participation of tangata whenua.....	26
6.2 Kaitiakitanga.....	26
7 Environmental and Sustainability Considerations.....	28
7.1 Marine Mammals.....	29
7.2 Seabirds.....	29
7.3 Fish bycatch.....	29
7.4 Benthic impacts.....	30
7.5 Habitats of particular significance for fisheries management.....	30
8 Relevant plans, strategies, statements and context.....	31
8.1 Draft National Inshore Finfish Fisheries Plan.....	31
8.2 Regional Plans.....	32
8.3 Hauraki Gulf Marine Park Act.....	32
8.4 Te Mana o te Taiao (Aotearoa New Zealand Biodiversity Strategy).....	33

8.5	Considerations in respect to ACE shelving.....	34
9	Submissions.....	35
10	Options and analysis.....	37
10.1	Rebuild strategy objectives.....	38
10.1.1	Target.....	38
10.1.2	Rebuild Period.....	39
10.1.3	Acceptable Probability.....	40
10.1.4	Way and Rate.....	41
10.2	Option 1.....	43
10.3	Option 2 – Fisheries New Zealand’s Preferred Option.....	45
10.4	Option 3.....	47
10.5	Other options proposed by submitters.....	49
10.5.1	Fisheries Inshore New Zealand (FINZ).....	49
10.5.2	Forest and Bird NZ.....	50
10.6	Economic considerations.....	51
10.7	Other matters.....	53
10.7.1	Voluntary QMA split.....	53
10.7.2	Ecosystem Management and Climate Change.....	53
10.7.3	Tarakihi Spawning and Nursery Grounds.....	54
10.7.4	Recreational allowance.....	54
10.7.5	Other Sources of Fishing Mortality.....	55
10.7.6	The Harvest Strategy Standard.....	55
10.7.7	Observer Coverage and On-board cameras.....	56
10.7.8	Fisher Wellbeing.....	56
10.7.9	Fisheries Plan.....	56
10.7.10	Preferential allocation rights (28N rights).....	57
10.8	Deemed values.....	57
11	Conclusions and recommendations.....	58
12	Decision for East Coast tarakihi.....	59
Appendix 1	61

Summary

East Coast Tarakihi (TAR 1 (East), TAR 2, TAR 3 & TAR 7 (East))

Includes all of the East Coast from Northland to Otago

Nemadactylus macropterus

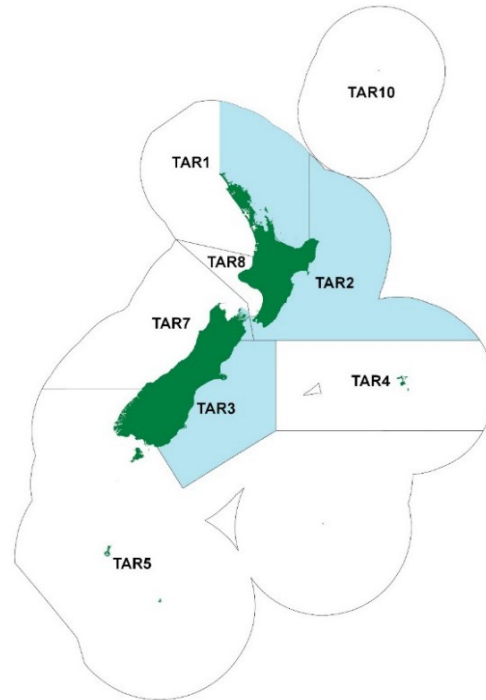


Figure 1: Quota Management Areas (QMAs) for East Coast tarakihi, with the TAR 2, TAR3 and the eastern portions of TAR1 and 7 highlighted in blue. A tarakihi is pictured on the left.

Table 1: Summary of options proposed for East Coast tarakihi from 1 October 2022. Numbers are all in tonnes. The preferred option of Fisheries New Zealand is highlighted in blue.

Stock	Option	TAC	TACC	Customary	Recreational:	Other mortality
East Coast TAR Combined	Current setting	5205	4355	193	221	436
	Option 1	3803 ↓ (1402 t)	3081 ↓ (1274 t)	193	221	308 ↓ (128 t)
	Option 2	4561 ↓ (644 t)	3770 ↓ (585 t)	193	221	377 ↓ (59 t)
	Option 3	4864 ↓ (341 t)	4045 ↓ (310 t)	193	221	405 ↓ (31 t)
TAR 1*	Current setting	1333	1045	73	110	105
	Option 1	1137 ↓ (196 t)	867 ↓ (178 t)	73	110	87 ↓ (18 t)
	Option 2	1259 ↓ (74 t)	978 ↓ (67 t)	73	110	98 ↓ (7 t)
	Option 3	1308 ↓ (25 t)	1023 ↓ (22 t)	73	110	102 ↓ (3 t)
TAR 2	Current setting	1658	1350	100	73	135
	Option 1	1030 ↓ (628 t)	779 ↓ (571 t)	100	73	78 ↓ (57 t)
	Option 2	1387 ↓ (271 t)	1104 ↓ (246 t)	100	73	110 ↓ (25 t)

	Option 3	1529 ↓ (129 t)	1233 ↓ (117 t)	100	73	123 ↓ (12 t)
	Current setting	1060	936	15	15	94
TAR 3	Option 1	569 ↓ (491 t)	490 ↓ (446 t)	15	15	49 ↓ (45 t)
	Option 2	793 ↓ (267 t)	694 ↓ (242 t)	15	15	69 ↓ (25 t)
	Option 3	883 ↓ (177 t)	775 ↓ (161 t)	15	15	78 ↓ (16 t)
	Current setting	1154	1024	5	23	102
TAR 7*	Option 1	1068 ↓ (86 t)	945 ↓ (79 t)	5	23	95 ↓ (7 t)
	Option 2	1121 ↓ (33 t)	994 ↓ (30 t)	5	23	99 ↓ (3 t)
	Option 3	1143 ↓ (11 t)	1014 ↓ (10 t)	5	23	101 ↓ (1 t)

* Catch limit reductions are proposed to come exclusively from the East Coast portions of the TAR 1 and TAR 7 stocks, the proposed reductions for these areas are outlined in Table 2.

Table 2: Summary of options proposed for the Eastern portions of TAR 1 and TAR 7 from 1 October 2022. Numbers are all in tonnes. The preferred option of Fisheries New Zealand is highlighted in blue.

Stock	Option	TAC	TACC	QMA Split [^]	
				East	West
TAR 1	Current setting	1333	1045	466	579
	Option 1	1137 ↓ (196 t)	867 ↓ (178 t)	288 ↓ (178 t)	579
	Option 2	1259 ↓ (74 t)	978 ↓ (67 t)	399 ↓ (67 t)	579
	Option 3	1308 ↓ (25 t)	1023 ↓ (22 t)	444 ↓ (22 t)	579
TAR 7	Current setting	1154	1024	161	863
	Option 1	1068 ↓ (86 t)	945 ↓ (79 t)	82 ↓ (79 t)	863
	Option 2	1121 ↓ (33 t)	994 ↓ (30 t)	131 ↓ (30 t)	863
	Option 3	1143 ↓ (11 t)	1014 ↓ (10 t)	151 ↓ (10 t)	863

[^] The proportions by which the east and west zones are split have been calculated based on historical catch.

Table 3: Summary of options supported.

Outcomes of Consultation		
New option incorporated following consultation	No	
Total submissions received	25	
Number of submissions received in support of each option	Option 1	6
	Option 2	7
	Option 3	2
	Other	10

1 Why are we proposing a review?

1. Fisheries New Zealand (FNZ) is proposing a review of the sustainability measures for East Coast tarakihi in Quota Management Areas (QMA) TAR 2, TAR 3 and the eastern portions of TAR 1 and TAR 7 for the 1 October 2022 fishing year.
2. East Coast tarakihi is a shared fishery, caught by customary Māori, recreational, and commercial fishers. The most recent stock assessment, November 2021, provided an estimate of 19.3% SB_0 ¹ for the 2020/2021 fishing year. This is below the level that would support the maximum sustainable yield (MSY)², which for tarakihi is 40% of the unfished biomass (40% SB_0)³, and below the soft limit (20% SB_0)⁴.
3. As a part of the 2018 sustainability round, the Minister at the time decided to initiate a two-staged plan to rebuild tarakihi abundance back to a target level of 40% SB_0 . This approach was to provide the commercial fishing industry an opportunity to plan and adjust their operations before any additional changes.
4. This two-staged plan included a 20% cut to the Total Allowable Commercial Catch (TACC) and the Minister directing FNZ officials to work with industry to further develop industry-initiated measures to support the rebuild, which could be considered as part of the 2019 sustainability round. At the time the Minister indicated that a further 35% reduction would be required in 2019.
5. In 2019, the Minister implemented the second stage of the plan, which included a further 10% reduction to the TACC. During the 2019 review, the Minister also agreed to the implementation of the Eastern Tarakihi Management Strategy & Rebuild Plan 2019 (the Industry Rebuild Plan)⁵. The Industry Rebuild Plan consisted of a series of voluntary measures intended to reduce the rebuild timeframe and committed to a shorter rebuild period of 20 years with an interim target of 35% SB_0 .
6. To provide a higher level of confidence in the Industry Rebuild Plan, the Minister also requested that industry deploy on-board cameras to monitor a significant majority of the catch in the areas with the highest level of juvenile tarakihi (TAR 2 and TAR 3).
7. At the time it was too soon to track any changes in abundance due to the 2018 and 2019 decisions. However, based solely on these reductions, the stock was projected to rebuild to the target (40% SB_0) in 25 years.
8. In December 2019, the Royal Forest and Bird Protection Society of New Zealand Incorporated (Forest and Bird NZ) filed proceedings seeking a judicial review of the Minister's 2019 decision, arguing that the catch limit reductions were not sufficient to allow East Coast tarakihi to rebuild within a "period appropriate to the stock".
9. In June 2021, the High Court found in favour of Forest and Bird NZ and directed you to review the Total Allowable Catch (TAC) and TACC settings for East Coast tarakihi in 2021, having

¹ SB_0 , also known as virgin spawning biomass (also referred to in the paper as unfished biomass), is the theoretical carrying capacity of the spawning biomass of a fish stock. In some cases, it refers to the average spawning biomass of the stock in the years before fishing started. More generally, it is the average over recent years of the biomass that theoretically would have occurred if the stock had never been fished.

² Maximum sustainable yield is the largest long-term average catch or yield that can be taken from a stock under prevailing ecological and environmental conditions, and the current selectivity patterns exhibited by fisheries. It is the maximum amount of fishing that a stock can sustain without impairing its renewability through natural growth and reproduction.

³ This is the biomass target about which the East Coast tarakihi stock should fluctuate.

⁴ The soft limit is a biomass limit, below which the requirement for a formal, time-constrained rebuilding plan is triggered.

⁵ Fisheries Inshore New Zealand; Southern Inshore Fisheries; Te Ohu Kaimoana. (2019). [Eastern Tarakihi Management Strategy and Rebuild Plan](#).

regard to findings in the judgment. In the meantime, the Minister's 2019 decision would continue to take effect until a new decision could be made.

10. In light of the planned November 2021 stock assessment, the High Court granted a stay of its decision until 1 October 2022 to enable you to consider this assessment for the October 2022 review.
11. Following the High Court decision, Fisheries Inshore New Zealand (an organisation representing the inshore commercial fishing industry) filed an appeal of the June 2021 High Court decision. This was heard in March 2022 by the Court of Appeal, which is yet to issue its decision.
12. The most recent (November 2021) stock assessment noted that the fishing mortality rate⁶ declined considerably in 2019 and 2020, following reductions in TACCs, although current fishing mortality rates are estimated to remain too high.
13. In undertaking this review, FNZ is proposing further reductions to the TACs and TACCs for East Coast tarakihi to ensure the stock rebuilds within a period appropriate to the stock. FNZ proposes three options for consideration as outlined in Table 1 and Table 2.
14. This paper seeks your decisions in relation to the October 2022 Sustainability Round. You are asked to make decisions on sustainability measures for East Coast tarakihi. Your decisions on catch limits and allowances will take effect on 1 October 2022.

⁶ The fishing mortality rate is the proportion of a fish stock removed by fishing.

2 Overview of powers and obligations under the Fisheries Act 1996

2.1 Decisions Ministers may make in relation to sustainability reviews

15. 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

- Set and vary the TACC within the limits of the TAC having allowed for Māori customary and recreational fishing and all other mortality to the stock caused by fishing.
- Set deemed value rates to provide an incentive for fishers not to exceed the available annual catch entitlement (ACE).

16. In making decisions on those matters there are several things you are required to do and take account of, these are outlined below:

2.2 Overarching requirements

17. 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.

18. 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."

19. 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. In the attribution of due weight to each policy that given to utilisation must not be such as to jeopardise sustainability".

20. 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
- (c) habitat of particular significance for fisheries management should be protected.

21. 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.

22. Sections 12, 21 and 75A require you to consult before making decisions on sustainability measures, the TACC, and deemed values rates, respectively.

2.3 Statutory Considerations

23. Table 4 provides an overview of your central statutory considerations for varying TACs and TACCs under the Act. Where relevant, specific details relating to these considerations and East Coast tarakihi are set out in later sections of this paper.

Table 4: Information on your key requirements when making decisions under the Act.

Decisions you may make	Requirements – things you must or may do when making decisions
Part 3 Sustainability Measures	
<p>Section 11 You may set or vary sustainability measures for any stock</p> <p>S11(3) Sustainability measures may relate to (but are not limited to):</p> <ul style="list-style-type: none"> • Catch limits • Size, sex or biological state • Areas • Fishing methods • Fishing seasons 	<p>(1) you must take into account</p> <p>(a) effects of fishing on any stock and aquatic environment; and</p> <p>(b) existing controls under this Act that apply to the stock or area concerned; and</p> <p>(c) the natural variability of the stock concerned.</p> <p>(2) you must have regard to:</p> <p>(a) any regional policy statement, regional plan or proposed regional plan under the Resource Management Act 1991; and</p> <p>(b) any management strategy or plan under the Conservation Act 1987; and</p> <p>(c) sections 7-8 of the Hauraki Gulf Marine Park Act 2000; and</p> <p>(ca) regulations made under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; and</p> <p>(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.</p> <p>(2A) you must take into account:</p> <p>(a) any conservation or fisheries services; and</p> <p>(b) any relevant fisheries plan approved under section 11A; and</p> <p>(c) any decisions not to require conservation or fisheries services.</p>
<p>Section 11A You may approve or revoke fisheries plans</p>	<p>Fisheries plans may include:</p> <p>(a-c) fisheries management objectives, strategies to achieve them, and performance criteria to measure achievement;</p> <p>(d) conservation or fisheries services; or</p> <p>(e) contingency strategies to deal with foreseeable variations in circumstances.</p> <p>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).</p>
<p>Section 12 Before making decisions, you must consult</p>	<p>(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 Maori, environmental, commercial, and recreational interests; and</p> <p>(b) you must provide for the input and participation of tangata whenua that have:</p> <p>(i) a non-commercial interest in the stock concerned; or</p> <p>(ii) an interest in the effects of fishing on the aquatic environment in the area concerned—</p> <p>and have particular regard to kaitiakitanga.</p> <p>(2) you must provide the reasons for your decisions to the people consulted.</p>

Decisions you may make	Requirements – things you must or may do when making decisions
<p>Section 13 You shall set and may vary, a TAC for stocks in the Quota Management System (QMS)</p>	<p>(2) you must set (and may vary – s(4)) a TAC that:</p> <ul style="list-style-type: none"> (a) maintains the stock at or above a level that can produce the maximum sustainable yield (<i>MSY</i>), having regard to the interdependence of stocks; or (b) enables the level of any stock below a level that can produce <i>MSY</i> to be altered: <ul style="list-style-type: none"> (i) in a way and at a rate that will restore the stock to a level that can produce <i>MSY</i> 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 (c) enables the level of any stock above that which can produce <i>MSY</i> to be altered in a way and at a rate to move the stock toward or above that which can produce <i>MSY</i> having regard to the interdependence of stocks. <p>(2A) If you consider that the stock level to produce <i>MSY</i> is not able to be estimated reliably using best available information, you must:</p> <ul style="list-style-type: none"> (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 <ul style="list-style-type: none"> (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 <i>MSY</i>. <p>(3) In considering the way and rate at which a stock is moved toward or above a level that can produce <i>MSY</i> you shall have regard to such social, cultural and economic factors as you consider relevant.</p> <p>(4) You may, by notice in the <i>Gazette</i>, 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).</p>
Part 4 Quota Management System	
<p>Section 20 You must set and may vary TACC for quota management stocks, unless a TAC has not been set for the stock</p>	<p>Section 21</p> <p>(1) you must have regard to the TAC and shall allow for</p> <ul style="list-style-type: none"> (a)(i) Māori customary interests; and (a)(ii) Recreational interests; and (b) all other mortality to the stock caused by fishing. <p>(2-3) you must consult representatives of classes of people that have an interest and give reasons for your decision</p> <p>(4) When allowing for Māori customary interests you must take into account</p> <ul style="list-style-type: none"> (a) any mātaihai reserve in the Quota Management Area (QMA) declared under s186; (b) any area closure or method restrictions/prohibitions imposed under s186A. <p>(5) When allowing for recreational interests you must take into account any regulations that prohibit or restrict fishing under s311.</p>

Decisions you may make	Requirements – things you must or may do when making decisions
<p>Section 75</p> <p>You must set and may vary interim and annual deemed value rates for each quota management stock</p>	<p>(2)</p> <p>(a) you must take into account the need to provide incentive for fishers to acquire or maintain sufficient ACE</p> <p>(b) you may have regard to:</p> <p>(i) the desirability of fishers landing catch for which they do not have ACE</p> <p>(ii) the market value of the ACE for the stock</p> <p>(iii) the market value of the stock</p> <p>(iv) the economic benefits obtained by (parties involved in commercial fishing, processing, sale)</p> <p>(v) the extent to which catch has exceeded/is likely to exceed TACC for the stock in any year</p> <p>(vi) any other matters you consider relevant</p> <p>(3) Annual deemed values must be greater than interim deemed values</p> <p>(4) Different deemed values may be set for different levels of excess catch</p> <p>(5) Different deemed values may be set for the Chatham Islands</p> <p>(6) When setting deemed value rates, you must not:</p> <p>(a) have regard to the personal circumstances of any individual or class of person</p> <p>(b) set separate deemed values in individual cases.</p>

2.4 Maximum Sustainable Yield

24. 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. Where a stock is below the level that can produce the MSY, the TAC must be set at a level which enables the stock to move to a level that can produce MSY within a period appropriate to the stock.
25. The MSY of a stock is the largest long-term average catch or yield that can be taken without impairing the stock's renewability through natural growth and reproduction (under prevailing ecological and environmental conditions). 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.
26. In general, stock assessment working groups will estimate MSY-compatible reference points for stocks based on best available information, and management forums will set fishery or stock targets that consider these estimates as an input.

2.5 Overview of the Harvest Strategy Standard

27. The Harvest Strategy Standard (HSS)⁷ 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.
28. 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).

⁷ [Harvest Strategy Standard for New Zealand Fisheries](#). October 2008. Ministry for Primary Industries.

29. 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.
30. 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).

2.6 2021 High Court judgment and 2022 Court of Appeal hearing

31. In December 2019, Forest and Bird NZ filed proceedings in the High Court seeking judicial review of the then Minister of Fisheries 2019 decision on catch limit settings for East Coast tarakihi. Forest and Bird NZ's arguments included that the catch limit reductions were not sufficient to allow the stock to rebuild in a "period appropriate to the stock."
32. The High Court's judgment was delivered on 16 June 2021, with the following key findings:
 - **period appropriate to the stock** – the Minister erred by not making an assessment of the appropriate period 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;
 - **probability of achievement** – the Minister was required to identify a probability level at the time of setting the TAC. It was found (by a fine margin) that a probability level of 50 percent was adequately identified in the 2019 decision;
 - **failure to consider Harvest Strategy Standard (HSS) guidance** – the Harvest Strategy Standard and associated Operational Guidelines advice on probability for achieving a rebuild is a mandatory relevant consideration, which the Minister failed to have regard to; and
 - **irrelevant consideration** – the Minister erred by taking into account an Industry Rebuild Plan in determining the period appropriate to the stock, which had the effect of applying social, cultural and economic factors. 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 appropriate to the stock.
33. The High Court directed that in making your 2021 decision you should have regard to the findings contained in the Court's judgment. However, in September 2021 a stay was granted until October 2022 to allow for a planned stock assessment to be considered in your decision for the October 2022 sustainability round. This stock assessment was completed in November 2021.
34. Fisheries Inshore New Zealand (an industry organisation and the second respondent in the High Court proceeding) appealed the High Court judgement. This appeal was heard in March 2022, with the Court of Appeal yet to deliver its judgement.
35. The Court of Appeal's judgment can be delivered at any time between now and 1 October 2022 (or possibly later), with a judgment that could vary from the initial High Court judgment.
36. Until the Court of Appeal delivers its judgement, you must have regard to the findings contained in the High Court judgement when making your decision. FNZ has recently completed consultation on proposed options to give effect to the High Court judgment.

37. In addition to the implications for East Coast tarakihi, this decision has wider 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 further clarity on applying s 13(2)(b) which pertains to any stock whose current level is below that which can produce Maximum Sustainable Yield (MSY)⁸. FNZ has reflected the court's decision within our advice to you.

3 About the stock

3.1 Fishery characteristics

38. Tarakihi are caught in coastal waters off the North and South Island in depths from 50 metres (m) to 250 m. Tarakihi is an important species to customary, recreational and commercial fishers. More than 80% of the East Coast tarakihi TAC is caught by the commercial sector.
39. Spatial analysis of the age composition and catch per unit effort (CPUE) data from commercial and research tarakihi catches has indicated that tarakihi off the East Coasts of both the North and South Islands exist as a combined biological stock, which is separate from tarakihi occurring on the west coasts. As a result, TAR 2, TAR 3, and the Eastern portions of TAR 1 and TAR 7, are assessed and managed as single stock.
40. Targeted commercial fishing for tarakihi is mainly confined to the inshore domestic trawl fishery, as well as a targeted setnet fishery off the coast of Kaikōura. Commercial catch and effort data from the 2020/21 fishing year indicates that these fleets catch roughly 96% of all commercial tarakihi landings, with 91% of this attributed to bottom trawling.
41. Recreational catch is predominantly caught via rod and line from boats.
42. The amount of customary take of tarakihi is largely unknown, however, tarakihi are considered an important taonga species to many iwi.

3.2 Biology

43. Tarakihi is a relatively long-lived species, with a maximum age of 40+ years. The first 8 years is a period of rapid growth, with tarakihi reaching minimum legal size (MLS) (25 cm fork length) at 4 years and sexual maturity, on average, at 6 years of age and 33 cm in length.
44. Under the HSS the biological characteristics and natural mortality rate of tarakihi indicate that it is a low productivity species, meaning it is less resilient to high levels of fishing pressure than high productivity species.
45. Recent sampling of the age composition of the tarakihi catches from the main fisheries around coastal New Zealand identified persistent differences in the age structure between the fisheries in the eastern and western areas. TAR 2, TAR 3, and the Eastern portions of TAR 1 and TAR 7, are assessed and managed as single stock. While there is sufficient information available to support this hypothesis, FNZ acknowledges the broader stock structure around mainland New Zealand is not fully understood.
46. A recent study⁹ examined the genetic structure of the whole New Zealand tarakihi population across 14 locations. While weak genetic breaks were detected between certain populations, no clear genetic structure was detected for the overall New Zealand population. This one study concluded that tarakihi have a high level of genetic diversity and appear to have a historically

⁸ Refer to section 2.4 for an explanation of Maximum Sustainable Yield.

⁹ Papa, Y., Halliwell, A. G., Morrison, M. A., Wellenreuther, M., & Ritchie, P. A. (2021). Phylogeographic structure and historical demography of tarakihi (*Nemadactylus macropterus*) and king tarakihi (*Nemadactylus n. sp.*) in New Zealand. *New Zealand Journal of Marine and Freshwater Research*, 1-25.

large and stable population with a long evolutionary history. It went on to say that further studies would be required to improve the understanding of tarakihi stock status and connectivity.

47. Two main spawning grounds have been identified, one from Cape Runaway to East Cape (North Island), and the other from Cape Campbell to Pegasus Bay (South Island). However, some spawning is likely to occur throughout the distributional range. Tarakihi have a long pelagic¹⁰ phase, where larvae and juveniles are pelagic for up to 9 months before settling. Primary nursery areas for the East Coast tarakihi stock are found in the Canterbury Bight and Pegasus Bay. Juveniles move out to deeper water at about 3-5 years of age, which is when they enter the fishery.
48. Along the East Coast of the South Island (TAR 3), a higher proportion of the bottom trawl catch is composed of immature fish in comparison with other East Coast tarakihi fisheries. In contrast, the seasonal Kaikōura setnet fishery is composed mainly of mature fish. Tagging studies indicate that adults and juveniles can move significant distances. Results of tagging data, and the analysis of age composition of commercial bottom trawl and survey catches along the East Coast of New Zealand, suggest that as tarakihi age and grow, they move progressively northward from the Canterbury Bight to East Northland. The level of connectivity between sub-populations and the differential fishing pressure may have implications for rebuilding the stock.
49. There is considerable variation in the relative abundance of individual age classes of tarakihi taken in trawl surveys in the Canterbury Bight, indicating high inter-annual variability in recruitment. Recruitment is considered to be strongly influenced by prevailing oceanographic conditions during the long pelagic phase of larval and post-larval tarakihi. Changes in these oceanographic conditions, including circulation patterns, could disrupt the transfer of larvae from spawning sites to nursery grounds.
50. Tarakihi primarily predate on a variety of marine invertebrates and are prey species for a wide range of finfish species in coastal ecosystems.

3.3 Management background

51. The commercial fishery developed with the introduction of steam trawlers in the 1890s, and by the mid-1930s, annual catches had increased to about 2,000 tonnes.
52. For the East Coast tarakihi stock, catches peaked from the 1940s to 1980 at around 5,000 to 6,000 tonnes per annum. Since 1989/90, following introduction to the Quota Management System (QMS) in 1986, the total annual catches from the East Coast stock have been around 3,000 to 4,000 tonnes per annum.

4 Status of the stock

4.1 Stock assessments

53. The 2017 stock assessment represented the first fully quantitative stock assessment for East Coast tarakihi. Previous attempts had been unsuccessful due to limited data from trawl surveys, stock age composition studies and uncertainty about stock structure.
54. The 2017 stock assessment integrated all available commercial catch and CPUE, recreational catch estimates, relative biomass estimates, and catch-at-age data from both commercial catch and fishery-independent surveys from the East Coast of the South Island. There have been further updates to the stock assessment in 2018, 2019, and 2021.

¹⁰ Occurring in the open water of the ocean, within the water column.

55. The November 2021 stock assessment updated and refined the previous assessments with the inclusion of recent fishery catches, recent fishery age compositions, updated CPUE indices, and recent east coast South Island trawl survey abundance indices and age composition. This stock assessment was accepted by the Fisheries Assessment Plenary in late 2021 and FNZ considers this the best information to inform you for your 2022/23 decision. FNZ deems it appropriate that your decision is based on science that has been accepted by the Plenary.
56. In 2018, the abundance of the stock was estimated at 17% SB_0 , below the level that would support the MSY, which for tarakihi is 40% of the unfished biomass (40% SB_0). The 2019 stock assessment provided an estimate of 15.9% SB_0 .
57. It is important to note that the difference between 15.9% SB_0 in 2019¹¹ and 17% SB_0 in 2018¹² does not necessarily represent a reduction in abundance given uncertainties in assessments, but more likely indicates a more accurate estimation of abundance as a result of refinements to the modelling and new data.
58. The stock assessments provide the basis for the abundance estimate for East Coast tarakihi. The assessment models have been thoroughly peer reviewed and accepted by the FNZ Inshore Stock Assessment Working Group and the Fisheries Assessment Plenary. The stock assessments have provided the basis for the 2018 and 2019 decisions, and FNZ considers they represent the best available information.
59. The abundance of East Coast tarakihi was most recently (November 2021) estimated at 19.3% SB_0 ¹³, which is below the soft limit of 20% SB_0 and the management target of 40% SB_0 .
60. The 2021 stock assessment has indicated that the stock has been below the soft limit since the early 2000s and had an overall downward trend for approximately 30 years, reaching its lowest point around 2014. Over the same time period, fishing mortality had been rapidly increasing, and from 2018 to 2021 overfishing has been assessed as being 'Virtually Certain' to be occurring.
61. As with any fish stock assessment, there are uncertainties around the estimated stock structure and other assumptions in the assessment model. These lead to uncertainty in estimates of stock status, demonstrated by the grey shading in Figure 2. There is greater uncertainty around projections of future stock status based on alternative TACC options, due to unpredictable fluctuations in recruitment and environmental factors (red shading in Figure 2).

¹¹ The 2019 stock assessment estimated the spawning biomass of the stock in the 2017/18 fishing year.

¹² The 2018 stock assessment estimated the spawning biomass of the stock in the 2016/17 fishing year.

¹³ A stock assessment of eastern tarakihi for 2021. 2022. Langley. New Zealand Fisheries Assessment Report 2022/07.

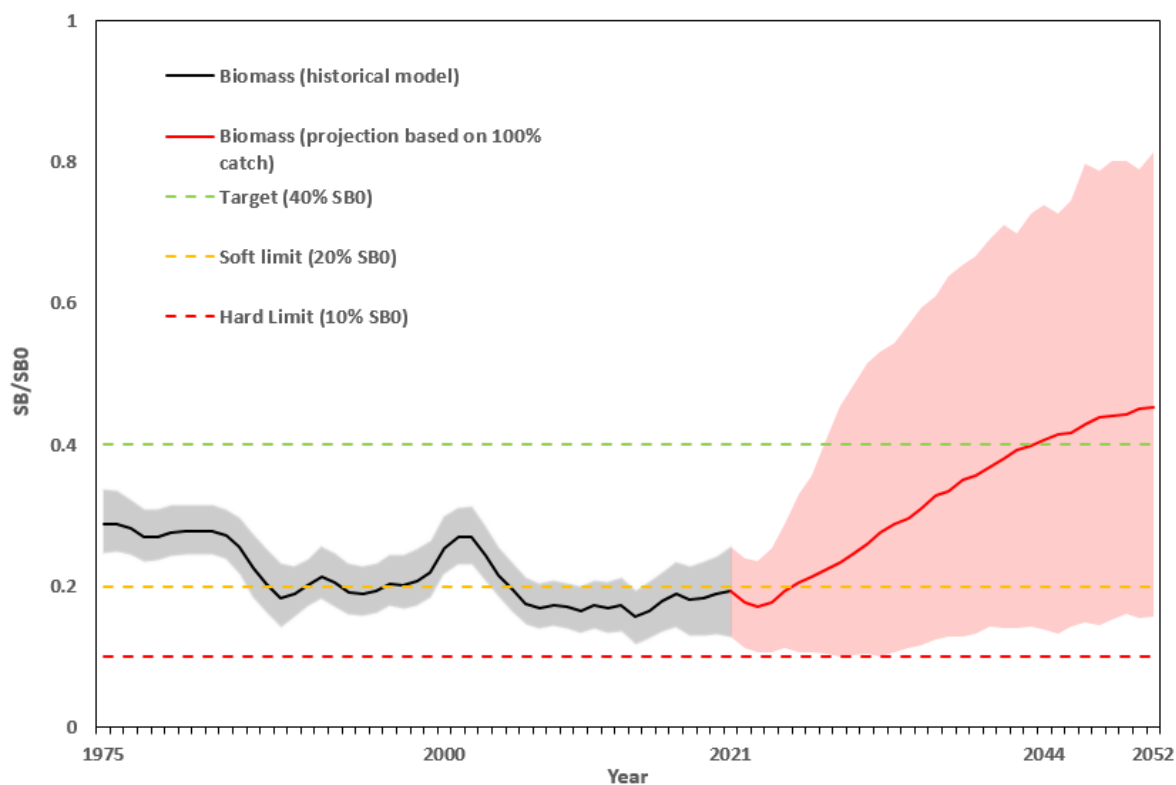


Figure 2: Spawning biomass levels. The projection from 2022 forward (using the 2021 Eastern Tarakihi stock assessment base-case model) is based on 2019/20 fishing year catch. The confidence intervals (red shading) reflect uncertainty in recent and future spawning success and subsequent recruitment.

62. FNZ notes that the previous figure included in the consultation document of this review was from 2018 projections. It was used to summarise the stock history and to highlight that uncertainty increases the further into the future stock forecasts are made (paragraph 61). A number of submitters raised in their feedback that as this figure did not use the most up to date projections, using this figure was potentially misleading and that an updated figure should have been used. An updated graphic projection has been provided to you (Figure 2).
63. The 2021 stock assessment noted that fishing mortality rates declined considerably in 2019 and 2020, following reductions in TACCs, although current fishing mortality rates are estimated to remain too high (fishing mortality in 2020-21 was estimated to be about 60% higher than the overfishing¹⁴ threshold).
64. The recent stock assessment and projections show that, under the current commercial catch levels, the stock is expected to be above the soft limit (20% SB_0) with a greater than 50% probability by 2026 (4 years) and at or above the target (40% SB_0) with a greater than 50% probability by 2044 (22 years), as demonstrated in Figure 2.
65. It is important that you are aware that while the stock is projected to increase under current catch levels over the long term (and all FNZ proposed options, see section 10 'Options and analysis'), over the next two years the stock is forecast to decrease. This is due to recruitment being estimated to have been below average in 2017 and 2018. Specifically, under current catch levels the stock is forecast to decrease to 17.2% SB_0 by 2023, and then increase from 2024.

¹⁴ Overfishing is where observed fishing mortality (or exploitation) rates are higher than target or threshold levels.

4.2 Rebuild Strategy

66. Section 13 of the Act gives you the power to set or vary a TAC and sets out matters that you must have regard to when making decisions. As the current level of the stock is below that which can produce the MSY, East Coast tarakihi is managed under section 13(2)(b) of the Act. Following the 2021 High Court judgment you must:

- Set a biomass target for the stock that can produce MSY having regard to the interdependence of stocks;
- Set a rebuild time period to achieve the biomass target that is appropriate to the stock having regard to the biological characteristics of the stock and any environmental conditions affecting the stock;
- Ensure the rebuild has an acceptable probability of achievement; and
- Set a way and rate to achieve the rebuild, having regard to the interdependence of stocks, but only after you have set a rebuild time period appropriate to the stock. And in considering the way and rate you must have regard to such social, cultural, and economic factors as you consider relevant.

67. The HSS provides further guidance in relation to rebuilding stocks that are below MSY and below the soft limit. The High Court held that the HSS (and the HSS operational guidelines) is an implied mandatory relevant consideration for you when setting a TAC under section 13 of the Act¹⁵. In addition, the Court found that the HSS is the “best available information” in relation to acceptable probability levels (as well as for other matters relevant to the determination of section 13)¹⁶.

68. The following sections outline the key rebuild objectives for East Coast tarakihi, and the associated relevant considerations.

4.2.1 Target

69. The general objective of section 13(2) of the Act¹⁷ is that stocks are maintained at or above a level that can produce the MSY or moved towards that level within a period appropriate to the stock. The HSS recommends a default MSY biomass target of 40% of the unfished biomass (40% SB_0) for long-lived stocks such as tarakihi, in the absence of a robust peer reviewed alternative.

70. FNZ considers a biomass target of 40% SB_0 robust and that it constitutes best available information, noting that an alternative species-specific target may be considered if supported by scientifically robust and peer-reviewed information to agree an MSY compatible reference point for the stock. However, there is no such alternative species-specific target for East Coast tarakihi at this time.

4.2.2 Appropriate period

71. When a stock is below the level that can produce the maximum sustainable yield, the Act requires that you determine a rebuild time period that is appropriate to the stock, having regard to the biological characteristics of the stock and any environmental conditions affecting the stock.

72. In June 2021 the High Court found that a “*period appropriate to the stock*” should be assessed before deciding the way and rate a fish stock is rebuilt to its management target. Social,

¹⁵ *Royal Forest and Bird Protection Society of New Zealand Incorporated v Minister of Fisheries* [2021] NZHC 1354 at [153].

¹⁶ *Royal Forest and Bird Protection Society of New Zealand Incorporated v Minister of Fisheries* [2021] NZHC 1354 at [152].

¹⁷ The [Fisheries Act 1996](#). Section 13(2) sets out the operating parameters for the Minister to set a TAC for a stock.

cultural, and economic factors are only relevant when considering the way and rate of rebuild. They are not relevant factors when determining the period appropriate to the stock.

73. The HSS provides further guidance in relation to rebuilding stocks that are below the soft limit. The HSS provides standards that represent the minimum performance level determined to be acceptable for a comprehensive sustainable fisheries management regime.
74. East Coast tarakihi is below the level that can produce MSY (based on the default target of 40% SB_0) and below the soft limit (20% SB_0). For stocks that have fallen below the soft limit, the HSS recommends that a formal, time-constrained rebuilding plan is adopted, which should aim to restore the stock to, at least, the target level of biomass within a timeframe of between T_{min} (minimum time to achieve rebuild to target in the absence of all fishing related mortality) and $2 * T_{min}$ (twice the minimum time).
75. T_{min} reflects the extent to which a stock has fallen below the target, the biological characteristics of the stock that limit the rate of rebuild, and the prevailing environmental conditions that also affect the rate of rebuilding.
76. Tarakihi are long-lived but grow relatively rapidly in their first 8 years. Due to the rapid growth and relatively early age of maturity of tarakihi, there is a potential, from a biological and environmental perspective, to rebuild the stock in a shorter timeframe than some other species with a similar maximum age. Projections suggest the East Coast tarakihi stock could reach 40% SB_0 within 5 years in the absence of fishing (T_{min}). Applying the default approach of the HSS would suggest a rebuilding period of between 5 to 10 years.
77. A review of international best practice for rebuilding timeframes for stocks that have fallen below biomass limits in countries with strong fisheries management systems indicates that a mixture of multiples of T_{min} and generation times (which, in New Zealand, is defined as the weighted average age of a mature female in an unexploited population, and has been calculated as 14.7 years for East Coast tarakihi) are used. For example:
 - Canada¹⁸ requires rebuilding plans to be in place for stocks that are in the 'Critical Zone' (i.e. below the soft limit), with the aim of having a high probability of the stock growing out of the Critical Zone within a reasonable timeframe. Canada have used 1.5-2 generations as a rebuilding timeframe since 2009. Furthermore, a recent Canadian Department of Fisheries and Oceans workshop report¹⁹ suggested that the maximum rebuild time (T_{max}) could be defined as 2-3 * T_{min} based on international practice and experience. The report went on to say that if 2-3 * T_{min} cannot be calculated then 1.5 to 2 generation time²⁰ can be an appropriate rebuild period instead.
 - The Marine Stewardship Council (MSC) Fisheries Standard sets out requirements that a fishery must meet to enable it to claim and certify that it is well-managed and sustainable. For stocks that are not at or fluctuating around a level consistent with MSY, the Performance Indicator seeks to verify that there is evidence of stock rebuilding within a specified timeframe. The standard sets the rebuild timeframe as the shorter period of either 20 years or twice the generation time²¹.
 - The European International Commission for the Exploration of the Sea (ICES), which provides scientific advice to European countries, suggests a maximum rebuilding period of $X * T_{min}$, where $X > 1$. A recent ICES workshop evaluating fishery rebuild plans²² reviewed appropriate rebuild times that can be considered. Attendees could not reach full agreement on the value of X but noted that $2 * T_{min}$ and T_{min} plus one generation time were rebuild periods used in other jurisdictions of developed countries.

¹⁸ Fishery Decision-Making Framework Incorporating the Precautionary Approach 2009. Government of Canada.

¹⁹ DFO. 2021. Proceedings of the national peer review of science guidelines to support development of rebuilding plans for Canadian fish stocks; January 14-16, 2020. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2021/022.

²⁰ Canada defines generation time as the average age of first maturity, whereas other entities generally use the weighted average of mature females, which can be considerably longer.

²¹ The MSC defines a generation time as the average age of a reproductive individual in an unexploited stock.

²² ICES workshop on guidelines and methods for the evaluation of Rebuilding plans 2020.

- As is the case with New Zealand's HSS, the Australian Harvest Strategy Policy (HSP)²³ and associated guidelines²⁴ specifies a rebuild timeframe should typically be between T_{min} and twice T_{min} as an appropriate time period to rebuild a stock. Where T_{min} cannot be estimated, the HSP states that it may be appropriate that a rebuilding time frame is defined as the lesser of the mean [average] generation time plus 10 years, or three times the mean generation time. The HSP only specifies the timeframe required to rebuild above the limit reference point (equivalent to New Zealand's soft limit) with a reasonable level of certainty.
- In the United States of America (the US) the Magnuson-Stevens Act²⁵ indicates that the rebuilding time period shall not exceed 10 years, except where biology of the stock, other environmental conditions, or management measures under an international agreement to which the US participates, dictate otherwise. The associated National Standard 1 Guidelines further elaborate that if T_{min} is less than 10 years, then a rebuilding period of 10 years is allowed, but if T_{min} exceeds 10 years, the rebuilding period can be as long as T_{min} plus one generation (where the generation time is the same as New Zealand's definition: the weighted average age of a mature female in an unexploited population). The latter has been used extensively since it was first approved in 1998 as part of the National Standard 1 Guidelines that were implemented at that time.
- For both the US, ICES, and most other jurisdictions, the rebuilding timeframe is the time to reach the management target from a level below a biomass limit that is equivalent to the soft limit, whereas for Canada and Australia, the rebuilding timeframe is the time to simply exceed the biomass (soft) limit.

78. Table 5 summarises the possible rebuild time periods for tarakihi when applied to the international fishery management systems discussed in paragraph 77. Note this table is divided by the management system's target biomass that is required by the authority's rebuild protocol; biomass limit (equivalent to the soft limit) and management target (B_{MSY} ²⁶, in this instance 40% SB_0).

Table 5: Summary of applying East Coast tarakihi stock to rebuild protocols of authorities with strong fisheries management systems, within their applicable targets.

Management system	Rebuild time period required to reach target (years)	
	Biomass Limit (approx. 20% SB_0)	Management Target (B_{MSY} proxy or higher)
Australia	5 – 10	
Canada	7.5 – 10	
European International Commission for the Exploration of the Sea		10 – 19.7
Marine Stewardship Council		20
New Zealand (Harvest Strategy Standard)		5 – 10
United States of America		10 – 19.7

²³ Commonwealth Fisheries Harvest Strategy Policy 2018.

²⁴ Guidelines for the Implementation of the Commonwealth Fisheries Harvest Strategy Policy 2018.

²⁵ Magnuson-Stevens Fishery Conservation and Management Act 2007.

²⁶ The average stock biomass that results from taking an average catch of the maximum sustainable yield (MSY).

79. The FNZ consultation advised $2 * T_{min}$ (10 years) as an appropriate minimum rebuild period. A shorter rebuild time closer to T_{min} (5 years) may be more appropriate for a stock which is below the hard limit. FNZ notes that the East Coast tarakihi stock is above the hard limit and projected to increase (slowly) over the long term under current catch levels. However, following further review, FNZ notes that you can consider T_{min} (5 years) to be an appropriate minimum limit for the rebuild period for the East Coast tarakihi stock in making your decision.
80. Paragraph 77 and 78, and Table 5, demonstrate that jurisdictions that focus on rebuilding fish stocks to an equivalent soft limit, 5 to 10 years is considered appropriate, and where jurisdictions are required to rebuild fish stocks to a B_{MSY} equivalent, 10 to 20 years is considered appropriate. This does go outside the standard rebuild protocol recommended in New Zealand's HSS (in this instance a maximum of 10 years, or $2 * T_{min}$).
81. For East Coast tarakihi, FNZ considers the generation time is relevant when determining an appropriate period as it provides a measure of the potential growth rate of a population.
82. The generation time for East Coast tarakihi, calculated as the weighted average age of a mature female in an unexploited population, has been estimated to be 14.7 years. Use of T_{min} plus one generation time gives a maximum rebuilding period of 19.7 years. Use of 1.5 generation times gives a maximum rebuilding period of 22 years. Use of 2 generation times gives a maximum rebuilding period of 29.4 years. Use of $2-3 * T_{min}$ gives a maximum rebuilding time of 10-15 years.
83. Taking this information into consideration, along with the low productivity of tarakihi and the high inter-annual variability in recruitment (refer to section 3.2 'Biology') FNZ considers that the use of T_{min} plus one generation time (19.7 years) is appropriate as the upper limit for the rebuild period (otherwise known as T_{max}).
84. The HSS recommends T_{max} be $2 * T_{min}$ (10 years) for rebuilding a stock below the soft limit. However, FNZ's review of best practice suggests T_{min} plus one generation time (19.7 years) is acceptable as T_{max} when defining an appropriate rebuild period for the East Coast tarakihi stock.
85. FNZ considers that any time period in the range of 5-19.7 years is appropriate for rebuilding the East Coast tarakihi stock. FNZ considers all options proposed are within a period appropriate to the stock.

4.2.3 Probability

86. In June 2021 the High Court stated that setting the probability is an inherent component of the requirement to set a TAC that will result in the stock being restored to a level that can produce MSY and acknowledged that the HSS and the HSS Operational Guidelines is the best available information in relation to probability levels.
87. The HSS recommends that stocks that have fallen below the soft limit should be rebuilt back to at least the target level, in a timeframe between T_{min} and $2 * T_{min}$, with an acceptable probability, and states that: "*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*".
88. FNZ notes that 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, and understands that this is an error and that the 50% should have been a higher number, such as 80% or 90%.
89. The HSS Operational Guidelines provide that "*the minimum standard for a rebuilding plan is that 70% of the projected trajectories will result in the achievement of a target based on MSY-compatible reference points or better within the timeframe of T_{min} to $2 * T_{min}$* ". According to the HSS, a probability of 70% may be needed to ensure that not only the biomass, but also the age

structure is fully rebuilt. FNZ considers this will be able to be ascertained as the stock approaches the rebuilding target in the future and is only a probability to ensure that rebuilding has been fully-achieved, rather than an aim for a rebuilding strategy.

90. The HSS defines the target as “*a biomass or fishing mortality level that management actions are designed to achieve with at least a 50% probability*”.
91. In June 2021 the High Court found, while reviewing the Minister’s 2019 decision on tarakihi, that it was not an error of law for the Minister to adopt a TACC that had modelled a 50% probability of achieving the target (40% *SB*)²⁷.
92. FNZ suggests that a probability of 50% of having achieved the target may be considered reasonable for East Coast tarakihi given the current status of the stock, the size of the rebuild required, and the uncertainty caused by natural variations in recruitment and environmental conditions.
93. Projections over the extent of a rebuild period become less certain the further out in time they are made, given unpredictable fluctuations in recruitment and environmental factors. Generally, projections of 1-5 years are reasonably reliable with anything beyond that becoming significantly less certain. An example of this is shown in Figure 2 whereby the confidence intervals for projections of East Coast tarakihi abundance increase markedly in later years of the projection.
94. The uncertainty associated with longer term projections (as demonstrated in Figure 2) can have ramifications for the longer-term outlook of the rebuild strategy.
95. When referring to the probability of rebuild, a 50% probability does not mean a 50% chance of rebuild versus a 50% chance of not rebuilding at all. Rather, the 50% probability level should be thought of as the median of a distribution around the target. In other words, there will be a 49% probability of being somewhat above the target and a 49% chance of being somewhat below. There will also be a 20% probability of being well above and a 20% chance of being well below.
96. The calculation of T_{min} itself also uses a 50% probability. FNZ notes that higher probability in the calculation of T_{min} , would result in T_{min} being a longer time period.
97. The use of a 50% probability level for reaching the target within the specified timeframe is also consistent with international best practice and is recognised in other management jurisdictions. For example:
 - The US: The US National Standard 1 Guidelines state that the minimum time for rebuilding a stock means the amount of time the stock or stock complex is expected to take to rebuild to its MSY biomass level in the absence of any fishing mortality. The guidelines state that in this context, the term “expected” means to have at least a 50 percent probability of attaining MSY, where such probabilities can be calculated.
98. FNZ considers the use of a 50% probability level for reaching the target within the specified timeframe appropriate as it is consistent with current fishery science and international best practice. All options proposed have at least a 50% probability of achievement, based on the March 2022 East Coast tarakihi stock projections.

4.2.4 Way and rate

99. The Act identifies the need for you to consider the way in which, and rate at which, a stock is moved towards or above a level that can produce MSY, having regard to the interdependence of stocks. In considering the way and rate you must have regard to such social, cultural and economic factors as you consider relevant.
100. Interdependencies of stocks broadly fall in two categories:

²⁷ Royal Forest and Bird Protection Society of New Zealand Incorporated v Minister of Fisheries [2021] NZHC 1427 at [127]

- Ecological interdependence: when stocks have a competitive or a predator-prey relationship; and
 - Technological interdependence: when fleets with different characteristics (e.g., fishing power and/or gear types) target different components of a single stock (e.g., juveniles or adults) or different species of a mixed stock, or when a fleet catches species coexisting within the same space regardless of whether or not they are interdependent at an ecological level.
101. Tarakihi is taken as a target and bycatch species in a number of inshore fisheries, which results in a technological interdependence between the East Coast tarakihi stock and other key commercial stocks. Any modification in the TACCs for tarakihi will have impacts on other bycatch and target species. Industry has raised concerns about the risk of tarakihi becoming a choke²⁸ species. This is likely to result in catch of species caught in combination with tarakihi becoming constrained unless ways to avoid tarakihi can be found. Subsequent flow-on economic impacts associated with other species are also anticipated.
102. Approaches to the way in which, and rate at which, a stock is moved towards the target include, but are not limited to, different rates of reductions to TACs and TACCs (e.g., immediate or gradual/phased), gear modifications/restrictions (e.g., to increase selectivity), and closed areas (e.g., spawning or nursery grounds).
103. FNZ expects that restoring the East Coast tarakihi stock will bring the following potential longer-term benefits:
- Increased resilience of tarakihi to years of poor or below average recruitment and to the negative effects of climate change, potentially resulting in a more stable fishery;
 - Improved catch rates in the long term for all sectors;
 - Higher net revenues for the fishing industry through a fully rebuilt stock which will enable higher catch rates;
 - Tarakihi becoming more widespread in key commercial fishing grounds and areas accessible to customary and recreational fishers;
 - Lower costs of fishing due to decreased searching time and higher catch rates as abundance increases.
104. While there will be social, cultural, and economic benefits from a rebuilt stock, catch reductions can also have immediate, substantial impacts. These impacts are likely to be felt by commercial fishers and quota holders who are engaged in fisheries targeting East Coast tarakihi and where it is taken as bycatch.
105. Many inshore vessels target tarakihi as their primary catch. The ability for industry to adapt to catch limit reductions in East Coast tarakihi is unknown and varies in severity depending on the size of the reduction chosen. Fishers will need to modify their operations, although the level of individual impact will vary depending on how important tarakihi is within the mix of catch, access to Annual Catch Entitlement (ACE), and the ability to adjust to other target species.
106. It is a legislative requirement that all QMS species caught, unless specifically listed in Schedule 6 of the Act or below MLS, are landed and accounted for with ACE (or a deemed value cost paid). There is a risk that reductions in tarakihi ACE may create incentives to discard tarakihi, while fishers continue to target other species. However, tarakihi tend to be caught at deeper depths than many other inshore species, giving fishers some opportunity to adapt to catching tarakihi less frequently.

²⁸ In a mixed fishery, a choke species is a stock whose available quota is exhausted while other stocks still have quota available to the fisher. In this instance it restricts the fisher's ability to continue to fish for stocks where quota is still available.

Phased approach to setting TACs and TACCs

107. Impacts from reductions in TACs, TACCs and allowances can potentially be mitigated by taking a phased approach to their implementation, that is, a reduction in October 2022 and then a further reduction in October 2023, as long as this adheres to the rebuild period appropriate to the stock.
108. Such a way and rate could reduce short-term social, cultural and economic impacts associated with these reductions. This would provide industry time to plan for the change by adjusting their budgets and operations, including their ACE distribution and harvesting plans.
109. FNZ notes that you can only at this time make a decision about the TACs, TACCs and allowances for the 2022/23 fishing year. A separate decision would need to be made about future year reductions and consideration of any new information available between now and the time of the next review, to ensure the rebuild of the stock to the target within an appropriate period.

Voluntary catch splitting

110. Science information currently indicates that East Coast tarakihi comprises a single biological stock and as a result FNZ seeks to manage TAR 2, TAR 3 and the eastern portions of TAR 1 and TAR 7 together.
111. To ensure catch reductions directly support the rebuild, it is important that they are targeted to the eastern portions of TAR 1 and TAR 7, while not affecting the western portions which the rebuild objectives do not apply.
112. Managing catch at a level that is smaller than the QMA can be difficult if voluntary arrangements with industry are not in place. Since 2018 a voluntary catch splitting arrangement with industry has been operated (Table 6 and Figure 3), providing a mechanism for the commercial catch reductions for TAR 1 and TAR 7 to be taken exclusively from the eastern portion of these stocks.

Table 6: Current catch splitting arrangements for TAR 1 and TAR 7 (expressed as a percentage in brackets).

Stock	Total TACC (tonnes)	East (tonnes)	West (tonnes)
TAR 1	1,045	466 (44.6%)	579 (55.4%)
TAR 7	1,024	161 (15.7%)	863 (84.3%)

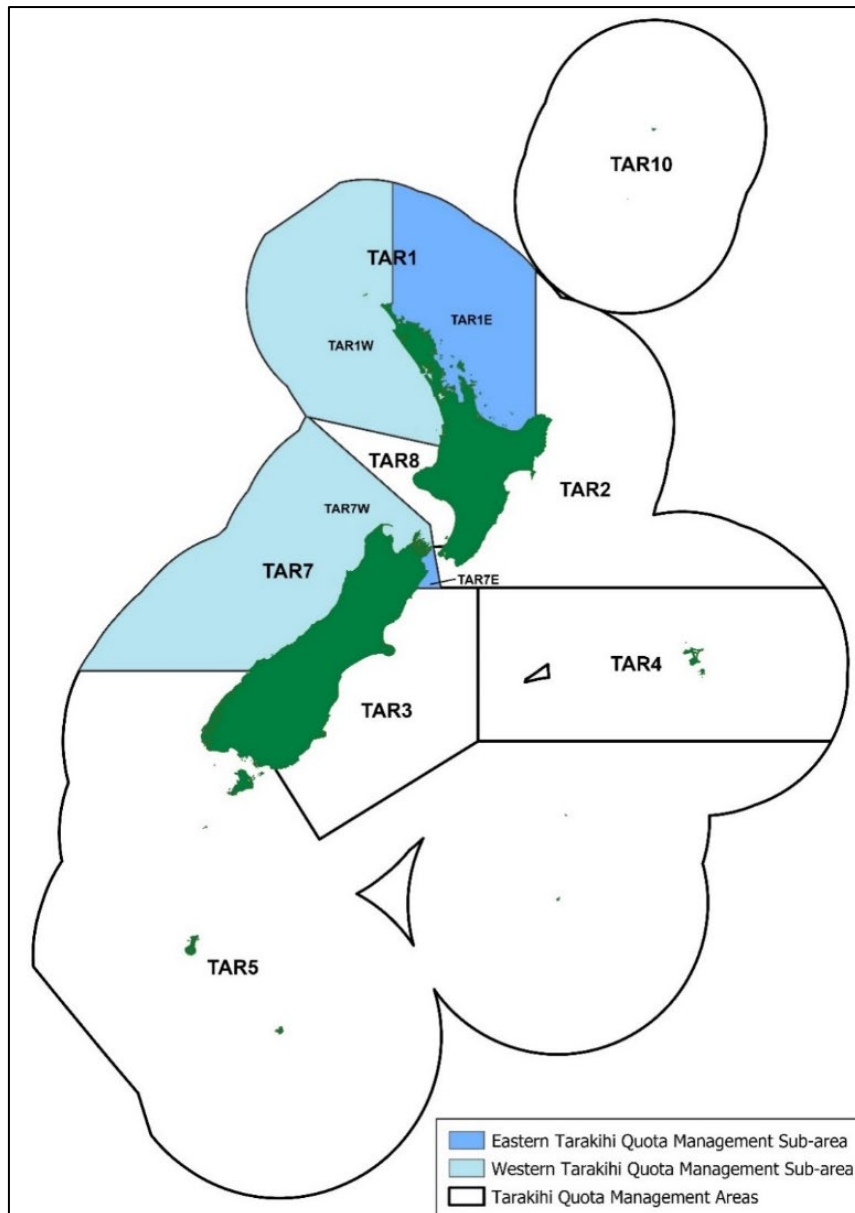


Figure 3: Tarakihi Quota Management Areas, with East and West portions of TAR 1 and TAR 7 highlighted.

113. The proportions by which the east and west zones are split have been calculated based on historical catch levels.
114. Without voluntary catch splitting arrangements, alternative solutions may need to be found for achieving this objective. This could include making greater catch reductions across entire QMAs (so also reducing the TACC in the western portions) to ensure a corresponding reduction in the eastern portions of TAR 1 and TAR 7; or to consider altering QMAs under other mechanisms within the Act.
115. Adherence to the catch split arrangement is monitored using electronic catch and position reporting. This arrangement has been successfully monitored and implemented, as demonstrated in Table 7.

Table 7: Percentage of Annual Catch Entitlement (ACE) caught for Eastern and Western portions of both TAR1 and TAR 7 over the last two fishing years.

Stock	Fishing Year	Eastern Portion ACE caught (%)	Western Portion ACE caught (%)
TAR 1	2019 / 2020	96.5	63.0
TAR 1	2020 / 2021	96.2	74.6
TAR 7	2019 / 2020	98.9	85.2
TAR 7	2020 / 2021	105.4	84.1

116. FNZ notes that precedents exist for voluntary catch-spreading agreements, including in the hoki and orange roughy fisheries, which have been operated successfully for a number of years. When implemented successfully, voluntary catch splitting arrangements provide a responsive mechanism for achieving catch reductions at sub-Quota Management Area (sub-QMA) level²⁹.

Voluntary Additional Measures

117. The Industry Rebuild Plan³⁰ was developed by Fisheries Inshore New Zealand, Te Ohu Kaimoana and Southern Inshore Fisheries. It represents the industry's commitment to the sustainable management of the East Coast tarakihi fishery, and a desire to work with FNZ to provide for the rebuild of the fishery, while also maintaining a viable inshore fishing industry.

118. The High Court in June 2021 found that steps taken independently by the industry, which aims to have the effect of speeding up the rebuild of the stock, can only be taken into account when considering the way and rate of the rebuild under s 13(2)(b)(i) of the Act³¹.

119. The Industry Rebuild Plan comprises a series of voluntary measures aimed at improving the management of the fishery, while also adopting alternative approaches to contribute to the rebuild beyond simply reducing catch limits. These measures offer alternative ways of rebuilding the stock that could improve the rate of the rebuild. The core elements include:

- Commitment to a time constrained rebuild (20 years);
- Catch Splitting – West/East Split;
- Reporting sub–Minimum Legal Size (now a mandatory requirement);
- Selectivity Research;
- Move on Rule;
- Voluntary Closed Areas;
- Enhancing Science; and
- On-board cameras.

120. As most of these measures have only been in place since the 2019/20 fishing year, their efficacy remains uncertain at present. As more information becomes available it may be possible to quantify the effect these measures have on the rate of rebuild.

²⁹ The alternative option would be to consider a regulatory alteration to quota management areas, under either section 25A or 25B of the Act.

³⁰ Fisheries Inshore New Zealand; Southern Inshore Fisheries; Te Ohu Kaimoana. (2019). [Eastern Tarakihi Management Strategy and Rebuild Plan](#).

³¹ Royal Forest and Bird Protection Society of New Zealand Incorporated v Minister of Fisheries [2021] NZHC 1427 at [189]

121. Fisheries Inshore New Zealand, Te Ohu Kaimoana and Southern Inshore Fisheries have committed to quarterly reporting outlining progress towards meeting key performance indicators in the Industry Rebuild Plan³².
122. Industry has recently advised FNZ of its continued commitment to the rebuild of the East Coast tarakihi stock.
123. Industry has committed to shelve approximately 10% of its East Coast tarakihi allowance. To date they have collectively transferred 9.65% of that allowance into a separate FishServe³³ account following the normal and well-established shelving procedures. This has been verified independently by FNZ and is publicly available information via FishServe. Industry has stated that it remains committed to using shelving where appropriate as a dynamic management tool to support the ongoing rebuild of the east coast TAR fishery. Section 8.5 'Considerations in respect to ACE shelving' discusses what you must consider in this regard.
124. The Industry Rebuild Plan, and the Industry commitment to shelving approximately 10% of its allowance, are not relevant considerations for you in determining the rebuild period appropriate to the stock. However, they can be considered when considering the way and rate. FNZ considers it important to highlight the additional measures that have been undertaken in recent years, to support the rebuild of East Coast tarakihi to a sustainable level.

5 Catch information and current settings within the TAC

5.1 Commercial

125. Nationally, tarakihi is the third most valuable inshore commercial finfish fishery, following snapper and blue cod. More than 80% of the TAC is taken in commercial fisheries, both as a target and bycatch species. Most tarakihi is sold on the domestic market, while approximately 11% is exported.
126. In the 2020/21 fishing year just under 2,790 tonnes was commercially harvested from the East Coast tarakihi stock, with 16% caught from TAR 1 (east), 49% from TAR 2, 28% from TAR 3 and 6% from TAR 7 (Cook Strait).
127. In the 2020/21 fishing year, the number of vessels targeting tarakihi was 20 in TAR 1 (east), 22 in TAR 2, 23 in TAR 3 and 8 in TAR 7 (east).
128. The MLS for commercial caught tarakihi is 25 cm. Any tarakihi below the MLS must be returned to the sea and, since the introduction of electronic reporting in 2019, fishers must record an estimate of the quantity of undersize tarakihi returned for each fishing event where undersize tarakihi is caught (noting fishers have been voluntarily doing this since 2018).
129. Inshore domestic trawling of East Coast tarakihi is a mixed species fishery, therefore tarakihi stocks have interdependence with multiple other fish stocks in the form of bycatch. These include; barracouta, flatfish, gemfish, gurnard, John dory, red cod, snapper, trevally and blue warehou. The tarakihi target setnet fishery bycatch also includes small amounts of ling and spiny dogfish.

5.2 Customary Māori

130. Tarakihi is an important species for customary fishing and is identified as a taonga (treasured) species in several Iwi Fisheries Plans that apply to the East Coast of the North and South

³² Publications of quarterly progress reports are available on the MPI website [East coast tarakihi: rebuilding numbers](#).

³³ [FishServe](#) provides administrative services to the New Zealand commercial fishing industry.

Islands³⁴. Customary non-commercial catch in the East Coast tarakihi fishery makes up only a small quantity of total removals (less than 5%). Based on the best available information, the current settings are considered to meet the needs of tangata whenua. There are no proposals to change the current allowances for customary non-commercial catch.

131. Best available information shows only 33 customary authorisations for tarakihi have been reported over the last 10 years and based on this information alone customary catch would be less than one tonne annually.
132. Under all proposed options, allowances for customary fishing are proposed to remain at current levels, recognising that customary catch data for East Coast tarakihi is limited. The proposed allowances are considered likely to provide for current and aspirational use by customary fishers.
133. FNZ will continue to promote the implementation of the Customary Fishing Regulations across the tarakihi stocks and strengthening the reporting capability of Kaitiaki authorising customary harvest. In turn this will provide more complete data on customary fishing and further inform fisheries management decisions.

5.3 Recreational

134. Tarakihi is one of the top five inshore recreational finfish species throughout New Zealand. However, recreational allowances in the East Coast tarakihi fishery make up only a small part of the TAC (less than 5%).
135. Recreational take of tarakihi is managed through daily bag limits. Tarakihi is included in the combined maximum daily bag limit of 20 or 30 finfish per person per day depending on the area. Within the combined daily bag limit for the Kaikōura Marine Area and South East Area, tarakihi has an individual species daily limit of 10 and 15 respectively. For all other areas within East Coast tarakihi, a maximum daily limit of 20 applies. Nationally, a MLS of 25 cm and a minimum net mesh size of 100 mm also applies to tarakihi.
136. FNZ notes that in 2018 the allowances for recreational fishers were reduced in TAR 1 and TAR 2 from 487 to 110 tonnes, and 150 to 73 tonnes respectively. The TAR 3 allowance of 15 tonnes was retained, while the TAR 7 allowance (23 tonnes) was set for the first time. These changes were made to align the recreational allowances with the results of the 2011/2012 Recreational National Panel Survey. Since then, no further adjustments have been made to either the recreational allowances or recreational bag limits for the East Coast tarakihi stocks.
137. The National Panel Survey of Marine Recreational Fishers (NPS) represents the best available information on recreational harvest, providing a snapshot of fishing activity over a fishing year. FNZ notes that recreational catch is also likely to vary from year to year due to factors such as weather and availability, in addition to being influenced by the overall level of biomass. The results of the 2017-18 survey show that the combined recreational harvest across the four relevant tarakihi stocks is approximately 198 tonnes.
138. Table 8 shows the 2017-18 NPS estimate of recreational harvest compared against the current recreational allowance for each relevant tarakihi stock. For TAR 1, TAR 3 and TAR 7 recreational harvest was below the current allowance, and quite significantly in TAR 1. For TAR 2 the survey estimated 110 tonnes was harvested recreationally, above the recreational allowance of 73 tonnes.

³⁴ Te Waka a Māui me Ōna Toka, Mai i Ngā Kuri a Whāreiki Tihirau, Ngā Hapū o Te Uru, and Te Hiku o te Ika Iwi Fisheries Plans

Table 8: Estimates of recreational catch from the 2017-18 National Panel Survey of Marine Recreational Fishers compared to the current recreational allowances. Numbers are in tonnes unless specified.

Stock	Current Allowance	National Panel Survey		Difference (%)
		Estimate	CV ³⁵	
TAR 1	110	62.23	(± 8.71)	- 43.43
TAR 2	73	110.23	(± 24.25)	+51.00
TAR 3	15	5.18	(± 1.66)	-65.47
TAR 7	23	20.57	(± 3.70)	-10.57
Combined	221	198.21		-10.31

139. FNZ notes that the combined recreational harvest of East Coast tarakihi is lower than that of the combined recreational allowance, being 90% of the allowance. Given the uncertainties associated with harvest estimates and that recreational harvest varies year to year FNZ is not proposing to change the current allowances for recreational catch at this time. However, there may be a case for modifying the allowances across the QMAs to reflect estimated catch.
140. It is important to note that since the last review there have been changes to the daily limits of recreational take of all finfish in NZ. Since May 2022, all recreationally caught finfish are subject to a combined daily limit of either 20 or 30 finfish (depending on the area). In respect to East Coast tarakihi, this may indirectly reduce the recreational take of tarakihi by the reduction of the total number of fish a recreational fisher can take a day.
141. There is a planned rerun of the NPS for the 2022/2023 fishing year that will provide updated estimates of recreational tarakihi catch. FNZ suggests reviewing recreational allowances after the survey, as the survey could inform such a review. Ongoing monitoring of recreational catch will be important as the stock rebuilds. It is expected that recreational catch will increase as tarakihi abundance grows.

5.4 Other sources of mortality caused by fishing

142. The allowance for other sources of mortality caused by fishing is intended to provide for unrecorded mortality of fish associated with fishing, including incidental mortality from fishing methods (including incidental mortality of sub-MLS fish) or illegal fishing. This is naturally difficult to quantify when considering the range of contributing sources and as a result there is uncertainty in the estimates used to set this allowance for tarakihi.
143. The previous Minister indicated a preference for standardising the other mortality allowance for inshore trawl fish stocks at an amount that equates to 10% of the TACC, unless there is evidence to suggest otherwise. The 2018 Inshore Science Working Group also used 10% of the commercial catch for estimating other mortality in the tarakihi assessment. The other mortality allowances for all East Coast tarakihi stocks align with this approach, and there is no new evidence to suggest that different levels would be more appropriate.
144. Note that other mortality is often uncertain. For deepwater fisheries with high observer coverage, other mortality might be set at 1% because data suggests that there is very little other mortality occurring. For inshore trawl fisheries with low coverage, there is generally more uncertainty, which is why the previous Minister of Fisheries in 2018 decided that the allowance should be set at an amount that equates to around 10% of the TACC for inshore trawl caught stocks.

³⁵ The coefficient of variation (CV) measures the extent of variability in relation to the mean (It is the ratio of the standard deviation to the mean).

145. Based on fishing event level data, observer coverage for all of the East Coast tarakihi stocks has been below 10% (between 0.1% and 7.2%) over the last 5 fishing years. FNZ deems this not sufficient to provide any further consideration of the other mortality allowance for East Coast tarakihi at this time. The planned camera rollout is likely to improve our understanding of other sources of mortality caused by fishing, which may provide an opportunity to review this setting in future (noting there is currently an industry led on-board camera project with 12 participating vessels).

6 Treaty of Waitangi Obligations

6.1 Input and participation of tangata whenua

146. Before making a sustainability decision you must provide for the input and participation of tangata whenua having a non-commercial interest in the stock or an interest in the effects of fishing on the aquatic environment in the area concerned. You are required to have particular regard to Kaitiakitanga.
147. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose.
148. 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 fisheries³⁶. Iwi Fisheries Forums may also be used as entities to consult iwi with an interest in fisheries.

2022 input and participation

149. Te Hiku o te Ika forum (Far North) supported the largest reduction option; saying the bigger the cut the better, to ensure a faster recovery of the stocks.
150. The Mid North forum agreed, by carried motion in the hui, that it supported Option 1, the largest reduction. The korero focused on “protecting what is left” and supporting a faster recovery of stocks.
151. The Mai I Ngā Kuri a Whārei ki Tihirau forum (Bay of Plenty) expressed concerns around iwi quota holders potentially not being aware of this current review. There was general agreement for the TACC to be decreased, with sustainability being the guiding principle. This forum asked for better explanation of the science of the sustainability for the options proposed and requested this is followed through in future.
152. Nga Hapu o Ngāti Porou (East Cape) stated Option 2 was the most consistent option with its previous responses to reviews on the sustainability measures for East Coast tarakihi. It said it does not oppose Option 3. Specifically, it considers Option 2 optimal as it is within a period appropriate to the stock and takes into account socio-economic and cultural factors. It also submitted it supports the Industry Rebuild plan.
153. FNZ notes that there was an opportunity for input and participation from other forums, but no specific feedback was received from them on the East Coast tarakihi review.

6.2 Kaitiakitanga

154. Under section 12(1)(b), you must have particular regard to kaitiakitanga before setting or varying any sustainability measure. Under the Act, kaitiakitanga means 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

³⁶ Not all Iwi Fisheries Forums have developed plans at this stage, though work in this area is ongoing.

with tikanga Māori.

Iwi Fisheries Forum Plans

155. Information provided by Iwi Fisheries Forums and iwi views on the management of fisheries resources and fish stocks, as set out in Iwi Fisheries Plans, are one way that tangata whenua exercise kaitiakitanga in respect to fish stocks.
156. Relevant Iwi or Forum Fisheries Plans provide a view of the objectives and outcomes iwi seek from the management of the tarakihi fishery. They can also provide an indication of how iwi exercise kaitiakitanga over fisheries resources, as can iwi views from Forum meetings and submissions received from iwi.
157. FNZ considers that the management options presented in this consultation paper contribute towards the objectives of relevant Iwi Fisheries Plans, which generally relate to the maintenance of healthy and sustainable fisheries. This is further illustrated in Table 9 below.

Table 9: Objectives and outcomes iwi seek from the management of the tarakihi fishery from Iwi or Forum Fisheries Plans.

Iwi Fisheries Forum	Relevant Management Objectives contained in Iwi Fisheries Forum Plan
Te Waka a Māui me Ōna Toka	<ul style="list-style-type: none"> • Create thriving customary non-commercial fisheries that support the cultural wellbeing of South Island iwi and our whānau; • Develop environmentally responsible, productive, sustainable and culturally appropriate commercial fisheries that create long-term commercial benefits and economic development opportunities for South Island iwi; and • Restore, maintain and enhance the mauri and wairua of fisheries throughout the South Island.
Mai I Ngā Kuri a Whārei ki Tihirau	<ul style="list-style-type: none"> • Iwi fisheries management activities support the growth and wellbeing of our people; • Iwi are actively engaged with others to increase their potential within environmental limits; and • The fisheries environment is healthy and supports a sustainable fishery.
Nga Hapu o Te Uru	<ul style="list-style-type: none"> • Support and help deliver the fisheries plan's vision to 'preserve, sustain and enhance the fisheries me ona tikanga', and deliver a key outcome/objective which is to ensure that the 'Fishery and its environment is healthy and sustainable'.
Te Hiku o te Ika	<ul style="list-style-type: none"> • objectives to support and provide for the interests of iwi in the far north. The management options proposed for tarakihi support and help deliver the fisheries plan's objectives.

Customary fisheries areas

158. Mātaitai reserves, taiāpure and temporary closures are customary management tools that also provide for kaitiakitanga. You are required to take these into account when making allowances for customary non-commercial fishing interests.
159. There are 30 mātaitai reserves and eight taiāpure within the East Coast tarakihi area (Table 10). Outside of the broad prohibition on commercial fishing activity within mātaitai reserves, none of these customary management areas have any specific restrictions on the taking of

tarakihi. The overall aim of the proposed options is to ensure sustainability and promote the ongoing availability of tarakihi throughout the QMA, including within these areas.

Table 10: Customary fisheries areas within East Coast tarakihi area.

Name		Management Type
Te Puna Mātaītai	Whakaraupō Mātaītai	Mātaītai Reserve <i>Commercial fishing is not permitted within mātaītai reserves unless regulations state otherwise.</i>
Te Maunga o Mauao Mātaītai	Rapaki Bay Mātaītai	
Te Rae o Kohi Mātaītai	Koukourārata Mātaītai	
Raukokere Mātaītai	Wairewa Mātaītai	
Te Kopa o Rongokānapa Mātaītai	Te Kaio Mātaītai	
Te Tapui Mātaītai O Hakihea	Ōpihi Mātaītai	
Horokaka Mātaītai	Waitarakao Mātaītai	
Toka Tāmure Mātaītai	Te Ahi Tarakihi Mātaītai	
Te Hoe Mātaītai	Tuhawaiki Mātaītai	
Moremore Mātaītai	Waihao Mātaītai	
Te Waha o te Marangai Mātaītai	Moeraki Mātaītai	
Mangamaunu Mātaītai	Waikouaiti Mātaītai	
Kahutara Mātaītai	Ōtāhau Mātaītai	
Oaro Mātaītai	Puna-wai-Tōriki Mātaītai	
Tūtaeputaputa Mātaītai	Waikawa Harbour Mātaītai	
Waikare Inlet Taiāpure	Te Taumanu o Te Waka a Māui Taiāpure	Taiāpure <i>All types of fishing are permitted within a Taiāpure. The management committee can recommend that regulations be set for commercial, recreational and customary fishing.</i>
Maketu Taiāpure	Oaro-Haumuri Taiāpure	
Porangahau Taiāpure	Akaroa Harbour Taiāpure	
Palliser Bay Taiāpure	East Otago Taiāpure	

7 Environmental and Sustainability Considerations

160. The key environmental principles³⁷, that you must take account when considering sustainability measures for East Coast tarakihi, are as follows:

- (a) Associated or dependent species should be maintained above a level that ensures their long-term viability (in particular marine mammals, seabirds, fish and invertebrate bycatch);
- (b) Biological diversity of the aquatic environment should be maintained (in particular the benthic impacts from fishing); and
- (c) Habitats of particular significance for fisheries management should be protected.

161. FNZ notes that environmental factors, such as a decline in water quality (through temperature changes, reduced oxygen levels, pollution and sediment deposition from runoff) in enclosed bays and sheltered harbours, may be affecting tarakihi recruitment. FNZ does not have a direct role in managing these environmental impacts. Nonetheless, FNZ monitors these activities to the extent that data exists and advocates for approaches and practices that mitigate impacts on fish species and the habitats they depend on. The FNZ Coastal Planning Team provides engagement with the Resource Management Act 1991 (RMA) coastal planning processes to support marine management decisions that protect fisheries habitat.

³⁷ [Environmental principles](#). Section 9 of the Fisheries Act 1996.

7.1 Marine Mammals

162. The proposed changes to the TACs and TACCs for tarakihi may result in an overall reduction in trawl effort in some areas, therefore, impacts on marine mammals may be reduced.
163. East Coast tarakihi encompasses areas associated with multiple marine mammal species, including the Hector's dolphin (on the East Coast of the South Island). Marine mammal interactions are reported by fishers or on-board observers and are closely monitored by FNZ. In the 2020/21 fishing year there were four captures of marine mammals reported by vessels targeting tarakihi on the East Coast of New Zealand. The options proposed in this paper are unlikely to result in increased captures.
164. The Hector's and Māui dolphin Threat Management Plan (TMP) guides management approaches for addressing both non-fishing and fishing-related impacts on Hector's and Māui dolphins. For the east coast Hector's dolphin subpopulation, the residual risk of a fishing-related death from trawling and setnetting is estimated to be low enough for the fisheries objective set in the TMP to be achieved. This is largely due to the extensive trawl restrictions and setnet closures in place along the East Coast South Island.
165. In late 2021, FNZ consulted on additional measures to manage the risk of fishing-related mortality to Hector's dolphins in the South Island. This included a new management approach in areas not closed to setnet or trawl fishing that aims to encourage fishers to avoid all Hector's dolphin bycatch. You have made your decisions on further measures and will be notifying Cabinet of your decisions in August, with public announcements to follow shortly thereafter.

7.2 Seabirds

166. Management of seabird interactions with New Zealand's commercial fisheries is guided by the National Plan of Action – Seabirds 2020 (NPOA-Seabirds). The NPOA-Seabirds sets out the New Zealand government's commitment to reducing fishing-related captures and associated mortality of seabirds. The vision of the NPOA-Seabirds is that New Zealanders work towards zero fishing-related seabird mortalities.
167. Management actions and research under the NPOA-Seabirds are guided and prioritised based on the seabird risk assessment that breaks down the risks to seabird populations by fishery groups. The most recent seabird risk assessment was published in 2020³⁸.
168. The inshore trawl fishery, including tarakihi target fishing, is responsible for a substantial portion of risk, particularly to black petrels and flesh-footed shearwaters.
169. There are a range of initiatives in place to reduce the risk of seabird captures in inshore trawl fisheries. This includes work done by the Black Petrel Working Group and the development of Mitigation Standards to support fishers to identify the most effective mitigation techniques for their operations.
170. The proposed changes to the TAC and TACC for tarakihi are unlikely to result in any increase to seabird interactions with vessels.

7.3 Fish bycatch

171. Tarakihi are taken as a target and bycatch in a number of fisheries. Reductions in TACCs for tarakihi may lead to a shift in fishing effort to other species, such as red cod, barracouta and flatfish (in FMAs 3 and 7) or red gurnard, snapper and trevally (in FMA 2). However, catch of these species are sustainably managed through the TAC and TACC set for these individual stocks.

³⁸ [Assessment of the risk of commercial fisheries to New Zealand seabirds, 2006–07 to 2016–17.](#)

172. A shift in fishing behaviour to other species is of particular importance for SNA 1, as it is currently under rebuild due to low abundance. Snapper has a wide depth profile and is caught in combination with several other species, including tarakihi. While this is a relevant consideration, FNZ considers that this does not prevent sustainability measures being put in place for the East Coast tarakihi fishery. Active monitoring of SNA 1 is also occurring and will ensure any unintended consequences for this associated stock are managed.

7.4 Benthic impacts

173. Tarakihi are principally caught by bottom trawl, which can directly impact on the biological diversity of the benthic environment. However, the proposed changes are unlikely to increase trawl effort. Bottom trawling in this fishery is also typically confined to areas that have been consistently fished over time (rather than areas of relatively undisturbed biodiversity). It is important to note that inshore trawl effort may shift to other areas in an effort to avoid tarakihi, FNZ will continue to monitor all commercial fishing activity including any shifts in behaviour.
174. Research has characterised both New Zealand's benthic environment and the level of benthic impact from fishing activity, summarised in the Aquatic Environment and Biodiversity Annual Review³⁹. The environmental impacts of fishing are summarised annually by FNZ and who will continue to monitor the bottom trawl footprint of fisheries.
175. Tarakihi are also caught in a small setnet fishery, specifically in TAR 3 off Kaikōura. To what extent setnetting impacts the benthic habitat is not well studied.

7.5 Habitats of particular significance for fisheries management

176. The specific spawning behaviours and habitat attributes important for supporting tarakihi recruitment are not well understood. However, habitats used by tarakihi and of particular significance for fisheries management are likely to include spawning and nursery areas, as these habitats and their attributes might be critical for successful recruitment and maintaining stock productivity.
177. Female tarakihi mature at 6 years, after which they produce large numbers of pelagic (floating) eggs several times during each summer/autumn spawning season. Three main spawning grounds have been identified: Cape Runaway to East Cape, Cape Campbell to Pegasus Bay, and the west coast of the South Island near Jackson Bay. Spawning fish have also been sampled from the Bay of Plenty and east Northland and limited spawning probably occurs throughout the distributional range of tarakihi around New Zealand.
178. Following a 7-12 month pelagic phase, where the fertilised eggs, larvae and juvenile fish tend to remain in surface waters, East Coast tarakihi mainly settle in nursery grounds (generally in shallower inshore waters) off the East Coast of the South Island, primarily biogenic habitats⁴⁰ in the Canterbury Bight and Pegasus Bay. As they grow older, they move progressively further northward, with the highest proportions of older fish found off east Northland.
179. Bottom contact fishing activity is likely to have some impact on the nursery ground biogenic habitats highlighted above which are also likely to be subjected to land-based stressors such as pollution and sedimentation. This may impact the survival of juvenile tarakihi and hence recruitment to the East Coast tarakihi stocks.
180. FNZ notes that the entire East Coast South Island is subject to commercial setnet closures out to 4 nautical miles (nm) from shore. Additional setnet restrictions (extended to 12 nm) were implemented at Pegasus Bay and the Canterbury Bight to Timaru in 2020. These closures may reduce the level of benthic habitat impacts in these areas.

³⁹ [Aquatic environment and biodiversity annual review \(AEBAR\) – 2019/20](#)

⁴⁰ Biogenic habitats are defined as those formed by living species that create three-dimensional structures.

181. While not directly implemented to protect tarakihi habitats, there are 17 marine reserves that fall within the East Coast tarakihi area. These reserves are free from fishing activity that could potentially impact their respective habitats. Commercial and recreational take from these areas is prohibited.
182. FNZ considers that the options proposed are unlikely to pose a threat to the areas identified as potential habitats of significance (FNZ will continue to monitor fishing activity as discussed in section 7.4 'Benthic impacts', especially bottom trawl footprint). Table 11 summarises the available information on potential habitats of significance for East Coast tarakihi, the threats faced, and the existing protection in place.

Table 11: Summary of available information on potential habitats of particular significance for East Coast tarakihi (TAR 1, 2, 3, 7).

Fish Stocks	TAR 1, 2, 3, 7
Potential habitat of particular significance	<ul style="list-style-type: none"> Shallower (20-100m) inshore biogenic habitat – potential locations Canterbury Bight and Pegasus Bay.
Attributes of habitat	<ul style="list-style-type: none"> Likely to provide shelter, refuge from predation, and access to food for juveniles.
Reasons for particular significance	<ul style="list-style-type: none"> Potential juvenile nursery area Connectivity with spawning areas, Successful spawning and growth/survival of juveniles is critical to maintaining the productivity of the stocks.
Risks/Threats	<ul style="list-style-type: none"> Mobile bottom-contact fishing methods can impact biogenic habitats, however the specific habitat attributes important for tarakihi are not well understood. Inputs of pollutants and sediments from land-based sources.
Existing protection measures	<ul style="list-style-type: none"> Trawl restrictions are in place along the entire East Coast of the South Island, along with spatial and seasonal closures. Setnet restrictions are in place along the entire East Coast of the South Island. Including additional restrictions in Pegasus Bay and the Canterbury Bight to Timaru. The National Policy Statement on Freshwater Management and the National Environmental Standards for Freshwater, which came into effect on 3 September 2020, should lead to improved water quality in shallow harbours and estuaries and other shallower inshore waters. The FNZ Coastal Planning Team engages with the RMA coastal planning processes to support marine management decisions to manage land-based impacts on habitat of particular significance for fisheries management.

8 Relevant plans, strategies, statements and context

183. 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 a TAC). These include any effects of fishing on the stock and the aquatic environment, the natural variability of the stock concerned, and any relevant fisheries plans. A number of these matters are discussed in other sections of this document, but other relevant matters are discussed below.

8.1 Draft National Inshore Finfish Fisheries Plan

184. Section 11(2A)(b) of the Act requires you to take into account any relevant fisheries plans before setting or varying any sustainability measure. While no relevant fisheries plans have been approved under s 11A, the National Inshore Finfish Fisheries Plan (the Plan), currently

being finalised, provides guidance on management objectives and strategies for finfish species including tarakihi. The Plan will guide the operational management of inshore finfish fisheries for the next five years and is aimed at progressing New Zealand towards more ecosystem-based fisheries management.

185. Stocks are grouped within the Plan, with management approaches and objectives tailored accordingly for each group.
186. TAR 2 and 3 and the eastern portions of TAR 1 and TAR 7, all fall under Group 1, which recognises stocks that provide the greatest benefit and are highly desirable to all sectors. They are managed to provide for utilisation, while mitigating the increased risk to their sustainability as a consequence of high levels of fishing pressure. The status of Group 1 stocks is determined using fully quantitative stock assessments to provide high levels of information.

8.2 Regional Plans

187. There are seven Regional Councils and three Unitary Authorities that have coastline within the boundaries of East Coast tarakihi. These are Northland, Auckland, Waikato, Gisborne, Hawkes Bay, Manawatu-Wanganui, Greater Wellington, Marlborough, Canterbury and Otago. Each of these regions have policy statements and plans to manage the coastal and freshwater environments, including terrestrial and coastal linkages, ecosystems and habitats.
188. 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 is nothing specific to the East Coast tarakihi stock. FNZ has reviewed these documents and the provisions that might be considered relevant are set out in Appendix 1.
189. FNZ considers that the proposed management options presented are consistent with the objectives of the relevant regional plans.
190. 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.

8.3 Hauraki Gulf Marine Park Act

191. Section 11(2)(c) of the Fisheries Act 1996 requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 when varying the TAC relating to stocks with boundaries intersecting with the Park.
192. Section 7 recognises the national significance of the Hauraki Gulf and section 8 sets out objectives for management of the Hauraki Gulf Marine Park. This is further elaborated in Table 12.
193. The boundaries of the Hauraki Gulf Marine Park also intersect with TAR 1, however, there is little commercial fishing for tarakihi within the park area. FNZ considers that the proposals to rebuild the biomass of the East Coast tarakihi stock are consistent with the objectives of the Hauraki Gulf Marine Park Act.

Table 12: Outline of the relevant sections of the Hauraki Gulf Marine Park Act 2000.

Section 7: Recognition of national significance of Hauraki Gulf	Section 8: Management of Hauraki Gulf
<p>(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.</p> <p>(2) The life-supporting capacity of the environment of the Gulf and its islands includes the capacity—</p> <p>(a) to provide for—</p> <p>(i) the historic, traditional, cultural, and spiritual relationship of the tangata whenua of the Gulf with the Gulf and its islands; and</p> <p>(ii) the social, economic, recreational, and cultural well-being of people and communities:</p> <p>(b) to use the resources of the Gulf by the people and communities of the Gulf and New Zealand for economic activities and recreation:</p> <p>(c) to maintain the soil, air, water, and ecosystems of the Gulf.</p>	<p>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—</p> <p>(a) the protection and, where appropriate, the enhancement of the life-supporting capacity of the environment of the Hauraki Gulf, its islands, and catchments:</p> <p>(b) the protection and, where appropriate, the enhancement of the natural, historic, and physical resources of the Hauraki Gulf, its islands, and catchments:</p> <p>(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 a historic, traditional, cultural, and spiritual relationship:</p> <p>(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:</p> <p>(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:</p> <p>(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.</p>

8.4 Te Mana o te Taiao (Aotearoa New Zealand Biodiversity Strategy)

194. Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy⁴¹ sets a strategic direction for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in Aotearoa New Zealand. The Strategy sets a number of objectives across three timeframes and is complemented with an implementation plan⁴² that identifies central and local government actions required to achieve these. The objectives most relevant to setting sustainability measures for the East Coast tarakihi stock are objectives 10 and 12:

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

Goals within objective 10 that have relevance are:

- **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.

⁴¹ [Te Mana o Te Taiao - Aotearoa New Zealand Biodiversity Strategy 2020](#). Department of Conservation.

⁴² [Te Mana o Te Taiao – Aotearoa New Zealand Biodiversity Strategy Implementation Plan](#). Department of Conservation.

Objective 12: Natural resources are managed sustainably.

Goals within objective 12 that have relevance are:

- **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.

195. The Ministry for Primary Industries (MPI) is undertaking work to support this strategy, as well as the requirement under the Fisheries Act to avoid, remedy or mitigate adverse effects on the aquatic environment. The Environmental and Sustainability Considerations section (section 7) in this paper provides information on relevant interactions with the wider aquatic environment for the East Coast tarakihi stock.

8.5 Considerations in respect to ACE shelving

196. You may, when adjusting the TAC and determining the way and rate of your decision (but not determining the rebuild period appropriate to the stock), take into account the effect that any ACE shelving is expected to have on the level of biomass, including whether the resulting reduction in the level of fishing will contribute to the biomass being restored to a level that will produce MSY.
197. Paragraph 123 discusses Industry's commitment to ACE shelving to date, and FINZ raise it in its proposed alternative option in section 10.5.1.
198. You must take into account any ACE shelving arrangements provided for in a fisheries plan, noting there is no fisheries plan for East Coast tarakihi at the present time.
199. FNZ notes that ACE shelving has been taken into account when setting a TAC in other fisheries (such as PAU 4 in 2019). However, FNZ notes that the adherence to any proposed ACE shelving plan cannot be enforced.

9 Submissions

200. Public consultation on East Coast tarakihi commenced on 7 June 2022.
201. FNZ notified Treaty partners and stakeholders that a consultation document was available and directed them to the relevant page on FNZ website. The consultation page had a link to the consultation paper, and an invitation to provide written submissions on any or all of the proposed changes.
202. Submissions officially closed on 12 July 2022, allowing a period of five working weeks for people to submit on the proposed changes.
203. Twenty-five submissions were received on the East Coast tarakihi proposal. Table 13 provides a summary of submitters and indicates the option preferences of each submitter. Should you wish to view any full submissions received on the proposal for East Coast tarakihi, a copy of the submissions has been provided to your office. (titled: "Public Submissions Received on East Coast tarakihi sustainability measures proposed for 1 October 2022").
204. All submitters supported a decrease, in some form, of the TAC and TACC for the East Coast tarakihi stock, with virtually all indicating that they recognise the importance of rebuilding the stock in their submissions. Six submitters supported Option 1 and seven submitters supported Option 2. Two submissions supported Option 3, and four of the Option 2 supporters specifically stated that they were not opposed to Option 3.
205. Ten submitters supported alternative options to be considered for this current review. Three submitters supported Option 1 with adjustments. Three submitters supported Option 2 with adjustments.

Table 13: Written submissions and responses received for East Coast tarakihi (in alphabetical order).

Submitter	Option Support				
	1	2	3	Other	
B. McGrath		✓			Supports option 2 but wants east/west QMA split removed.
D. Marra	✓				Proposed MLS set to 28 cm and the recreational daily bag limit reduced to 10 per fisher.
Environmental and Conservation Organisations of NZ Inc. (ECO)				✓	Support option 1. Submits that rebuild should start from 2018 (not 2022).
Fat Boy Charters				✓	Wants inshore trawling banned.
Fisheries Inshore New Zealand (FINZ)				✓	Support option 2 but with amendments, opposes option 1, supports Minister's discretion to adopt option 3.
Forest and Bird NZ				✓	Does not support any of the proposed options and proposes alternatives, with 2018 as the start year (not 2022).
Gisborne Fisheries				✓	Supports option 2 rebuild time frame but with FINZ's proposed amendments. Does not oppose option 3.
Hauraki Gulf Forum	✓				Supports option 1 as it is the fastest rebuild timeframe
I. Broekhals				✓	Wants greater MLS limit restrictions
Iwi Collective Partnership		✓			Supports option 2 and does not oppose option 3. Not in a position to comment on QMA split.
John McGrath		✓			Supports option 2 but wants east/west QMA split removed.
Jason McGrath		✓			Supports option 2 but wants east/west QMA split removed.
K. Hitchon				✓	States that the Fisheries Act is not fit for purpose.
L. Williamson	✓				Concerned about historical management of stock.
Nga Hapu o Ngāti Porou		✓			Supports Option 2 and does not oppose option 3.
Ngātiwai Trust Board	✓				Supports option 1 as it is the fastest rebuild timeframe.
Joint submission: NZ Sport Fishing Council (NZSFC), LegaSea, NZ Angling and Casting Association (NZACA) and NZ Underwater Association (NZUA).				✓	Support option 1, but with the rebuild starting from 2018 (not 2022), and regulatory east/west split of TAR 1.
R. Craig	✓				Supports option 1 as it is the fastest rebuild timeframe
Royal New Zealand Society for the Prevention of Cruelty to Animals Inc (SPCA)				✓	Supports the rebuild period of option 1 but encourages biomass target of 50% SB0, with a 70% probability of achievement, taking animal welfare into consideration. Wants bottom trawling banned. Supports 'One Welfare' approach.
Silverspray Fishing Ltd			✓		Supports option 3.
Southern Inshore Fisheries				✓	Supports option 2, but observes amendments proposed by FINZ. Supports continuing with East/West QMA split.
T. Mabbett	✓				Supports option 1 and wants longer term economic and aquatic environment forecasts included alongside short-term economic data.
Te Ohu Kaimoana		✓			Supports option 2 and does not oppose option 3.
Te Parawhau ki Korokota			✓		Supports way and rate and rebuild period proposed in option 3.
Western Bay Fishing Ltd		✓			Supports option 2 but wants east/west QMA split removed.

10 Options and analysis

206. FNZ proposes three options to rebuild East Coast tarakihi to the target stock size, all within a period appropriate to the stock. All options propose a single cut to the combined TACs and TACCs (Table 14). Figure 4 demonstrates the modelled projection of the East Coast tarakihi stock under each option (and current catch levels) to reach 40% SB_0 . The detailed aspects of these options in terms of how they relate to the TAC, TACC and allowances are shown in Table 1 and Table 2.

Table 14: Summary of proposed target, rebuild timeframe, and the associated way and rate of meeting those targets under proposed options.

	Option 1	Option 2	Option 3
Target biomass	40% SB_0 by 2032	40% SB_0 by 2037	40% SB_0 by 2042
Rebuild timeframe (years)	10 years = $2 * T_{min}$	15 years = $3 * T_{min}$	19.7 years = T_{min} plus one generation time
Rebuild way and rate	40 percent commercial catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 27 and 29 percent reduction in the TAC and TACC respectively, implemented in 2022/23.	15 percent commercial catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 12 and 13 percent reduction in the TAC and TACC respectively, implemented in 2022/23.	5 percent commercial catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 7 percent reduction in the TAC and TACC respectively, implemented in 2022/23.
Probability of achieving target within rebuild timeframe	55%	53%	56%

207. Projection analysis based on current and alternative catch levels, undertaken in March 2022, was used to determine the catch levels required under each option to achieve a rebuild to target stock size (40% SB_0) within a period appropriate to the stock with an acceptable probability. These projections were also used to determine the time projected to reach the soft limit of 20% SB_0 .
208. Based on the analysis of the appropriate period and probability discussed in section 4.2 'Rebuild Strategy', FNZ considers that each of the options would rebuild the stock within a period appropriate to the stock and with an acceptable probability.

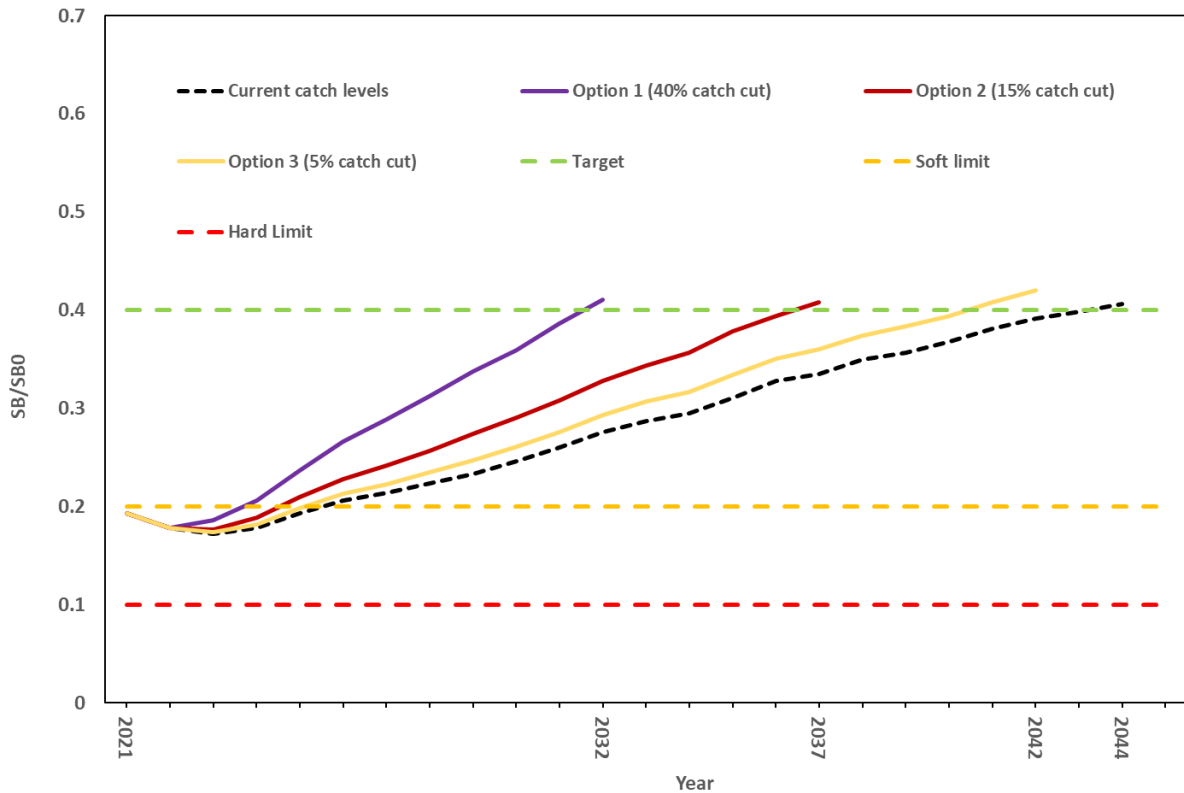


Figure 4: The East coast tarakihi stock modelled for each of the proposed options (and current catch levels) for the 2022/23 review, projected from 2022 forward.

10.1 Rebuild strategy objectives

209. The following sections outline the submissions in relation to the key rebuild objectives, and the associated relevant considerations.

10.1.1 Target

210. The SPCA supports the stock being managed to a 40% SB_0 target as an appropriate minimum and submits that it should be managed at 50% SB_0 to promote a more resilient ecosystem. The organisation supports further research into the identification of a species-specific target for the stock.
211. The joint NZSFC, LegaSea, NZACA and NZUA submission supports East Coast tarakihi being managed to 40% SB_0 as an interim target. However, they submit that in the longer term the stocks should be managed to at least 50% SB_0 , and the hard limit for the stock changed from 10% SB_0 to 20% SB_0 (the current soft limit). The joint submitters consider this is a precautionary approach that aligns with ecosystem-based fisheries management and refer to other jurisdictions which aspire to manage their stocks to 60% SB_0 . They assert that the moderate loss in tonnage taken would be offset by selling only premium product to the most discerning markets.
212. ECO stated that it considers the management target should be reviewed so that an ecosystem approach is developed requiring high stock sizes. It mentions that larger stock sizes have been recommended for resilience to climate change, increased "blue" carbon sequestration, and reducing the carbon footprint of the fishing industry.
213. Forest and Bird NZ supports a 40% SB_0 target as a minimum, noting that this represents the best available information as required under s 10(a), and is consistent with the HSS guidance

on low productivity stocks. Forest and Bird NZ support increasing the biomass target, stating this will help transition to ecosystem-based fisheries management that aligns with Te Mana o te Taiao.

214. FINZ stated that when the stock was at a higher spawning biomass (pre-1975) it was likely experiencing very different environmental conditions, with different fishing vessels involved. It questions whether attempting to return to a virgin biomass related target is rational and submit that it raises the question whether New Zealand should start transitioning to a management model that reflects environmental change (such as climate change and terrestrial impacts).
215. Western Bay Fishing Ltd highlight that the stock assessments show that the stock has not been above 27% SB_0 since 1975, and question that if it has been below this level for over 40 years then why set the rebuild target to 40% SB_0 .
216. FNZ considers a biomass target of 40% SB_0 robust and that it constitutes best available information. An alternative, species-specific target may be considered if scientifically robust and peer-reviewed information suggest such an alternative is an appropriate MSY compatible reference point for the stock. However, there is no such alternative for East Coast tarakihi at this time.

10.1.2 Rebuild Period

217. Section 13(2)(b)(ii) of the Act requires you to set a TAC that enables the level of any stock, whose current level is below that which can produce MSY, to be altered within a period appropriate to the stock, having regard to the biological characteristics of the stock and any environmental conditions affecting the stock.
218. In June 2021 the High Court found that a “*period appropriate to the stock*” should be assessed before deciding the way and rate a fish stock is rebuilt to its management target. Social, cultural, and economic factors are only relevant when considering the way and rate of rebuild. They are not relevant factors when determining the period appropriate to the stock.
219. The HSS recommends that a rebuilding plan should aim to restore the stock to, at least, the target level of biomass within a timeframe of between T_{min} (minimum time to achieve rebuild to target in the absence of fishing) and $2^* T_{min}$ (twice the minimum time). For East Coast tarakihi T_{min} equals five years. Applying the default approach of the HSS would suggest a rebuilding period of between five and ten years.
220. Taking into consideration the low productivity of tarakihi and the high inter-annual variability in recruitment, FNZ considers that the use of T_{min} plus one generation time is appropriate as the upper limit to the rebuild period, and that any period in the range of 5-19.7 years would be appropriate for rebuilding the East Coast tarakihi stock (refer to section 4.2.2 ‘Appropriate period’).
221. Option 1 proposes a rebuild period of 10 years. FNZ considers this timeframe to be appropriate than a shorter period as it applies the default approach of $2^* T_{min}$ as recommended by the HSS. A shorter rebuild time closer to five years (T_{min}) would be more appropriate for a stock that is near or below the hard limit. FNZ does not think a shorter rebuild time is necessary as the stock is above the hard limit and projected to increase under current catch levels.
222. Option 2 proposes a rebuild period of 15 years ($3^* T_{min}$). It is more precautionary than the upper range of the appropriate period identified and will result in the benefits of a fully rebuilt stock accruing sooner.
223. Option 3 proposes a rebuild period of 19.7 years. FNZ notes that 19.7 years is almost double that of $2^* T_{min}$ and is at the upper range of the appropriate rebuild period identified. This option accounts for unpredictable fluctuations in recruitment and environmental conditions, while ensuring the stock is rebuilt to the target within an appropriate timeframe with an acceptable probability.

224. FNZ notes that under current commercial catch levels, the stock is expected to be above the soft limit with a greater than 50% probability in 2026 (4 years), and to be above 40% SB_0 with a greater than 50% probability by 2044 (22 years), as demonstrated in Figure 2.
225. The joint NZSFC, LegaSea, NZACA and NZUA submission, who support Option 1, submitted that the base year must be from 2018, not 2022. The submitters consider that start of the rebuild based on the Minister's 2018 decision and that starting from 2022 shifts the baseline of the year that the rebuild starts from.
226. ECO supported the rebuild period of 10 years ($2 * T_{min}$) but calculated from 2018.
227. Forest and Bird NZ also submitted that the rebuild period time frames should have 2018 as the start year, and believe it is an error of law for the rebuild period to be calculated from 2022. It states that the rebuild was initiated in 2018 and the options rebuild periods should reflect this as this accounts for the last 4 years. Because of this it considers all options proposed by FNZ are incorrect.
228. However, you are not being asked to reconsider or remake the 2018 or 2019 decisions. The High Court has directed you to review the TAC and TACC settings for the East Coast tarakihi, having regard to the findings within its 2021 judgment. In particular, you are required to set a TAC to commence on 1 October 2022 that enables the level of the stock to be altered to a level at or above B_{MSY} within a period appropriate to the stock, having regard to its biological characteristics and the environmental conditions it now faces. Your decision must be based on the best available information. FNZ does not consider that you are required to set a TAC to give effect to the Minister's 2018 decision (which did not make an assessment of the kind envisaged by the 2021 judgment), or that uses 2018 as the base year for any rebuild.
229. Forest and Bird NZ disputed $2 * T_{min}$ as the minimum time for the rebuild period being considered during consultation. It disagrees with FNZ's view that a shorter rebuild time closer to 5 years (T_{min}) would be more appropriate for a stock which is below the hard limit.
230. Forest and Bird NZ also disputed the use of generation time in determining the appropriate period, stating "*generation time to calculate T_{max} is inappropriate and does not align with the HSS or international best practice protocols*" and do not accept FNZ's analysis of international best practice. It submits, through its own analysis, that an appropriate period for the rebuild of East Coast tarakihi is a time frame between T_{min} and $3 * T_{min}$, equating between 5 and 15 years.
231. FINZ submit that all options proposed by FNZ are consistent with the High Court decision in defining a period appropriate to the stock, as they have been determined based on biological characteristics and environmental conditions, through the use of generation time and T_{min} . It specifically supported the rebuild timeframe that underpins Option 2 as this is consistent with its commitment to rebuild the East Coast tarakihi fishery by 2038, but with amendments to the way and rate.
232. Gisborne Fisheries concurred with FINZ's position on the rebuild period and amended way and rate.
233. In FNZ's view, the use of generation time in setting a rebuild period and defining a rebuild period between T_{min} and T_{min} plus generation time (5 to 19.7 years) is appropriate. There is compelling rationale to deviate from the approach of $T_{min} - 2 * T_{min}$ recommended by the HSS and adopt strategies outlined in other jurisdictions, including the use of generation time (discussed in section 4.2.2 'Appropriate period'). FNZ considers each rebuild time frame proposed in all options is within a period appropriate to the stock.

10.1.3 Acceptable Probability

234. The HSS recommends that stocks that have fallen below the soft limit should be rebuilt back to at least the target level, in a timeframe with an acceptable probability.

235. FNZ considers a 50% probability or greater is acceptable to measure progress towards achieving the rebuild target at the outset. This approach recognises the current status of the East Coast tarakihi stock, the size of the rebuild required, natural variation caused by fluctuations in recruitment and environmental conditions, and associated uncertainties.
236. The HSS Operational Guidelines provide that “*the minimum standard for a rebuilding plan is that 70% of the projected trajectories will result in the achievement of a target based on MSY-compatible reference points or better within the timeframe of T_{min} to $2 * T_{min}$* ”. According to the HSS, a probability of 70% may be needed to ensure that not only the biomass, but also the age structure is fully rebuilt. This will be able to be ascertained as the stock approaches the rebuilding target in the future and is only a probability to ensure that rebuilding has been fully-achieved, rather than an aim for a rebuilding strategy.
237. SPCA submitted that a 70% probability should be used, stating that the stock is likely to have a distorted age structure due to being below the soft limit. It also submits that the HSS and HSS Operational Guidelines are mandatory considerations.
238. FINZ supports the use of 50% probability and notes that this is consistent with international practice. FINZ also notes that the rationale provided for the use of 70% probability in the HSS is in relation to stocks that have been severely depleted and likely to have a distorted age structure, and there has been no information provided to indicate a distorted age structure in the East Coast tarakihi stock. Furthermore, in its submission it highlights the unclear use of probability within the HSS.
239. Forest and Bird NZ submits that acceptable probabilities are based on the mandatory relevant consideration of the HSS and HSS Operational Guidelines. Forest and Bird NZ’s options put forward include a 70% and 50% probability of achieving the target (40% *SB₀*) within the timeframe $2 * T_{min}$ to $3 * T_{min}$ (10 to 15 years). However, it considers 70% to be more appropriate and that this should be reflected in all options considered.
240. FNZ notes that in setting the TAC, you must have regard to what the HSS says about probability and while to “*have regard to*” is not the same as to “*give effect to*”, you must give the matter “*genuine attention and thought*”.
241. FNZ suggests (refer to section 4.4.3 ‘Probability’) that basing a rebuilding strategy on projections using a probability of 50% of having achieved the target may be considered reasonable for East Coast tarakihi given the current status of the stock, the size of the rebuild required and due to natural variation caused by fluctuations in recruitment, environmental conditions and international best practice. This can be revised in the later years of the rebuild if deemed appropriate.

10.1.4 Way and Rate

242. To ensure catch reductions directly support the rebuild, it is important they are targeted to the East Coast portions of TAR 1 and TAR 7, while not affecting the West Coast portions which the rebuild objectives do not apply to. This approach is reflected in all options proposed.
243. Without voluntary catch splitting arrangements, alternative solutions may need to be found for achieving this objective. This could include making greater catch reductions across the entire QMAs (so also reducing the TACC in the western portions) to ensure a corresponding reduction in the east coast portion; or consideration for altering QMAs through other mechanisms under the Act.
244. FINZ reaffirm its commitment to the Industry Rebuild Plan and the monitoring and management plans associated with it, including the voluntary catch splitting arrangements. It proposes a rebuild time frame aligned with Option 2 ($3 * T_{min}$), but with an amended implementation and apportionment approach that includes industry shelving.
245. FNZ recommends the continued support and implementation of the Industry Rebuild Plan (noting, as above, that it cannot be taken into account in assessing the period of rebuild

appropriate to the stock). FNZ intends to continue to monitor the effectiveness of the measures that are in place to allow the fishery to be proactively managed throughout the rebuild timeframe.

246. Te Ohu Kaimoana submit that while Option 1 is within the appropriate period of the rebuild, the way and rate is not appropriate as it would discount socio-economic and cultural factors. It states that Option 2 is most consistent with its previous responses to reviews of the sustainability measures of the stock, that this option enables it to meet its commitments to the Industry Rebuild Plan and that it is within the period appropriate to the stock while accounting for socio-economic factors. It does not oppose Option 3 as it gives more weight to socio-economic factors.
247. Forest and Bird NZ submitted that the way and rate can be altered during the rebuild but must be within the defined rebuild period of the stock.
248. FNZ considers the way and rate proposed in all options, as elaborated in section 4.2.4 'Way and rate', as appropriate.

10.2 Option 1

Target	40% SB_0 by 2032
Rebuild timeframe (years)	10 years or $2 * T_{min}$
Way and rate	40 percent catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 27 and 29 percent reduction in the combined TAC and TACC respectively, implemented in 2022/23.
Probability of achieving target within rebuild timeframe	55%

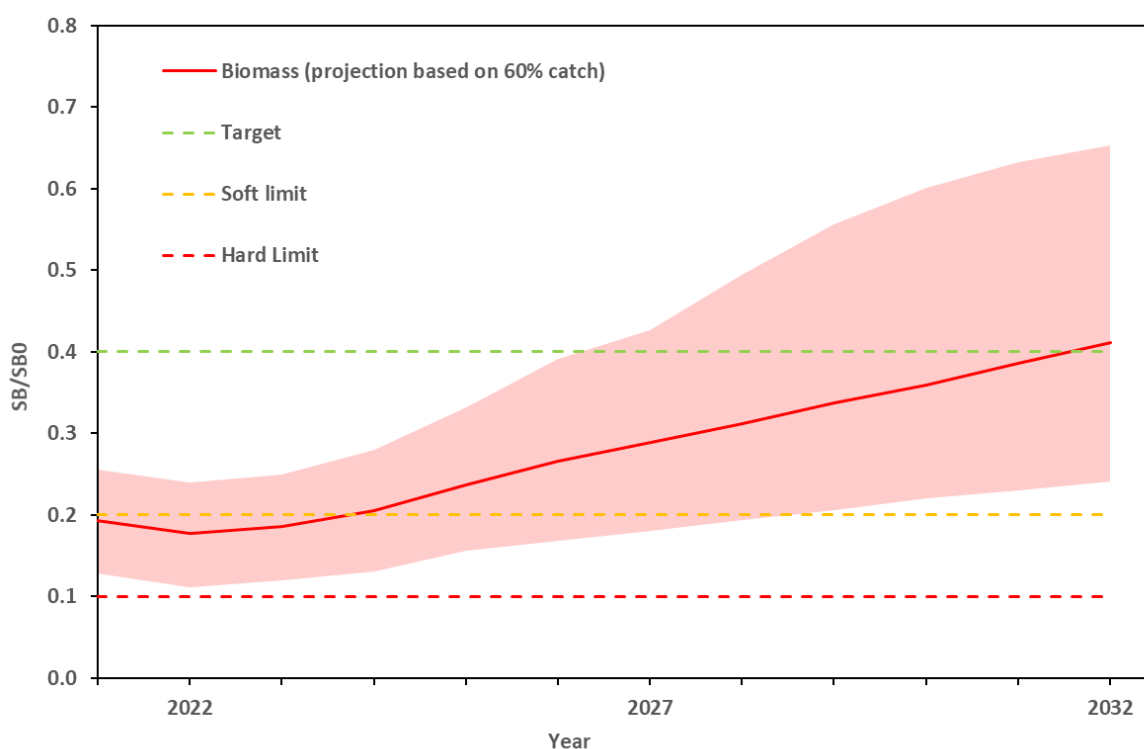


Figure 5: Option 1 East coast tarakihi stock projection from 2022 forward (modelling at 60% catch), with confidence intervals (red shading) reflecting uncertainty in recent and future spawning success and subsequent recruitment.

249. Option 1 proposes to reduce the combined TACs, TACCs and allowances for other sources of mortality caused by fishing, as follows:

- A reduction in the combined TACs by 27% from 5,205 tonnes to 3,803 tonnes;
- A reduction in the combined TACCs by 29% from 4,355 tonnes to 3,081 tonnes; and
- A reduction in the combined allowances for other sources of mortality caused by fishing from 436 tonnes to 308 tonnes (equivalent to 10% of the TACC of each QMA).

250. The allowances for customary fishing are proposed to remain at current levels. The proposed allowances are considered likely to provide for current and aspirational use by customary fishers.
251. Recreational allowances make up less than 5% of the East Coast tarakihi TAC. The recreational harvest of East Coast tarakihi is estimated to be lower than that of the combined recreational allowance (approximately 90%).
252. Given the uncertainties associated with harvest estimates, and that recreational harvest varies year to year, FNZ is not proposing to change the current allowances for recreational catch at this time.
253. Information to set the allowance for all other mortality caused by fishing is limited. The previous Minister had a preference that this should be equivalent to 10% of TACC for inshore stocks that are predominantly taken by trawl. Additionally, a 2018 Science Working Group also used 10% of the commercial catch for estimating other mortality in the tarakihi assessment. As such FNZ is proposing the allowances for all other sources of mortality caused by fishing reflect this (refer to section 5.4 'Other sources of mortality caused by fishing').
254. Option 1 proposes a single cut based on the current projections, that would allow the stocks to rebuild to 40% SB_0 within 10 years, which is $2^* T_{min}$, with a probability of 55% (see Figure 5). Under this option, the stock is expected to be above the soft limit by 2024 with a probability of 57%.
255. FNZ notes that, due to below average recruitment in 2017 and 2018 (discussed in paragraph 65), under this option the stock is expected to decrease to 17.8% SB_0 this year, before increasing in 2023.
256. FNZ considers Option 1 has the following benefits:
- Stock rebuild likely to be initiated sooner.
 - Stock will be rebuilt in the fastest time.
 - Further reductions in catch during the rebuild are not anticipated.
 - Higher probability of stock increasing above soft limit in a shorter period of time.
257. FNZ considers Option 1 has the lowest sustainability risk of the three options. However, the way and rate proposed in this option poses higher immediate social, cultural and economic impacts and does not allow further time for fishers to adjust to lower catch limits.
258. This option was supported by 6 submitters, most of whom advocated that rebuilding the stock should be first priority and sustainability should be ensured. Submitters raised that the stock has been below the soft limit for some time and that a shorter rebuild period will provide more certainty that the stock will rebuild to the target and sooner than the other options.

10.3 Option 2 – Fisheries New Zealand’s Preferred Option

Target	40% SB_0 by 2037
Rebuild timeframe (years)	15 years or $3 * T_{min}$
Way and rate	15 percent catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 12 and 13 percent reduction in the combined TAC and TACC respectively, implemented in 2022/23.
Probability of achieving target within rebuild timeframe	53%

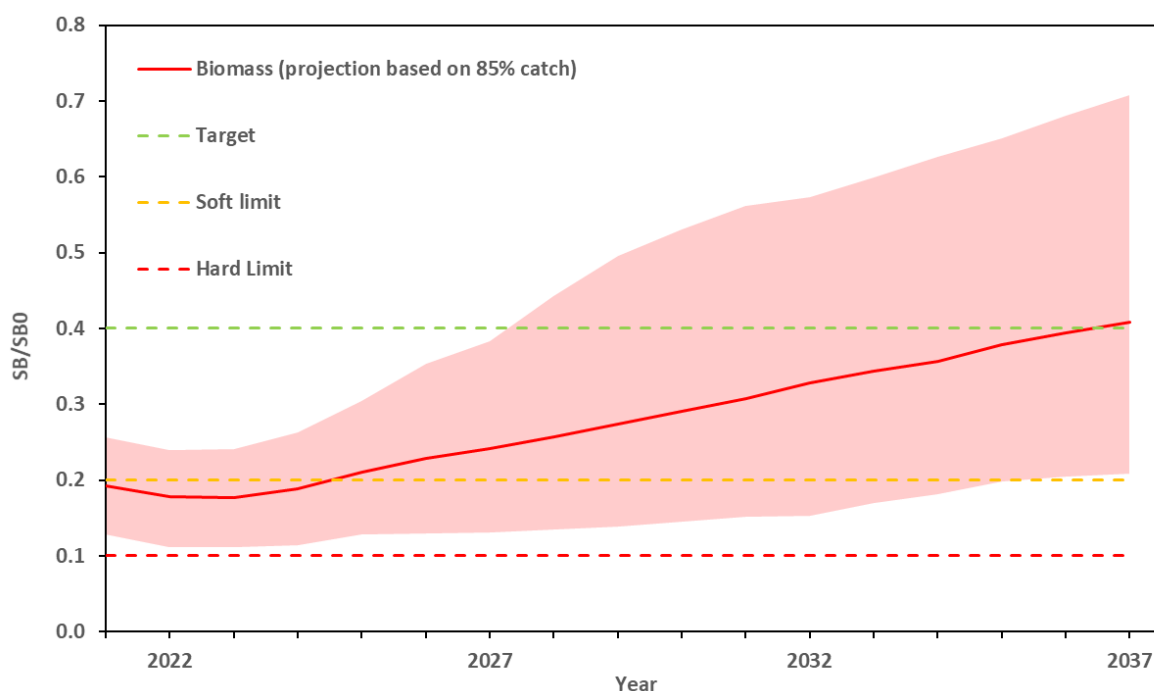


Figure 6: Option 2 East coast tarakihi stock projection from 2022 forward (modelling at 85% catch), with confidence intervals (red shading) reflecting uncertainty in recent and future spawning success and subsequent recruitment.

259. Option 2 proposes a single cut reduction to the combined TACs, TACCs and allowances for other sources of mortality caused by fishing, as follows:

- A reduction in the combined TACs by 12% from 5,205 tonnes to 4,561 tonnes;
- A reduction in the combined TACCs by 13% from 4,355 tonnes to 3,770 tonnes; and
- A reduction in the combined allowances for other sources of mortality caused by fishing from 436 tonnes to 377 tonnes.

260. As with other proposed options, no changes are proposed to the allowances for customary and recreational fishing under Option 2. The proposed allowance for other sources of mortality caused by fishing applies the same approach for all options (equivalent to 10% of the TACC of each QMA).
261. Option 2 proposes a single cut based on the projections that would allow the stock to rebuild to 40% SB_0 within 15 years, which is $3 * T_{min}$, with a probability of 53% (see Figure 6). Under this option, the stock is expected to be above the soft limit by 2025 with a probability of 60%.
262. FNZ notes that, due to below average recruitment in 2017 and 2018 (discussed in paragraph 65), under this option the stock is expected to decrease to 17.7% SB_0 in 2023, before increasing in 2024.
263. FNZ considers Option 2 has the following benefits:
- a) Stock rebuild likely to be initiated soon and completed within an appropriate time frame.
 - b) Acceptable probability of stock increasing above the soft limit within an appropriate time frame.
 - c) The proposal of a 15 year time period with a probability greater than 50% is more precautionary than the upper range of the appropriate periods identified (option 3) and will result in the benefits of a fully rebuilt stock accruing sooner.
 - d) Further reductions in catch during the rebuild period are not anticipated.
264. FNZ considers that the way and rate proposed in Option 2 results in lower immediate social, cultural and economic impacts than Option 1, while ensuring the sustainability of the stock within a rebuild period appropriate to the stock.
265. This option was supported by 7 submitters.

10.4 Option 3

Target	40% SB_0 by 2042
Rebuild timeframe (years)	19.7 years or T_{min} plus one generation time
Way and rate	5 percent catch reductions in TAR 2 and TAR 3, and the eastern portions of TAR 1 and TAR 7 implemented in 2022/23. In practice, this amounts to a 7 percent reduction in the combined TAC and TACC respectively, implemented in 2022/23.
Probability of achieving target within rebuild timeframe	56%

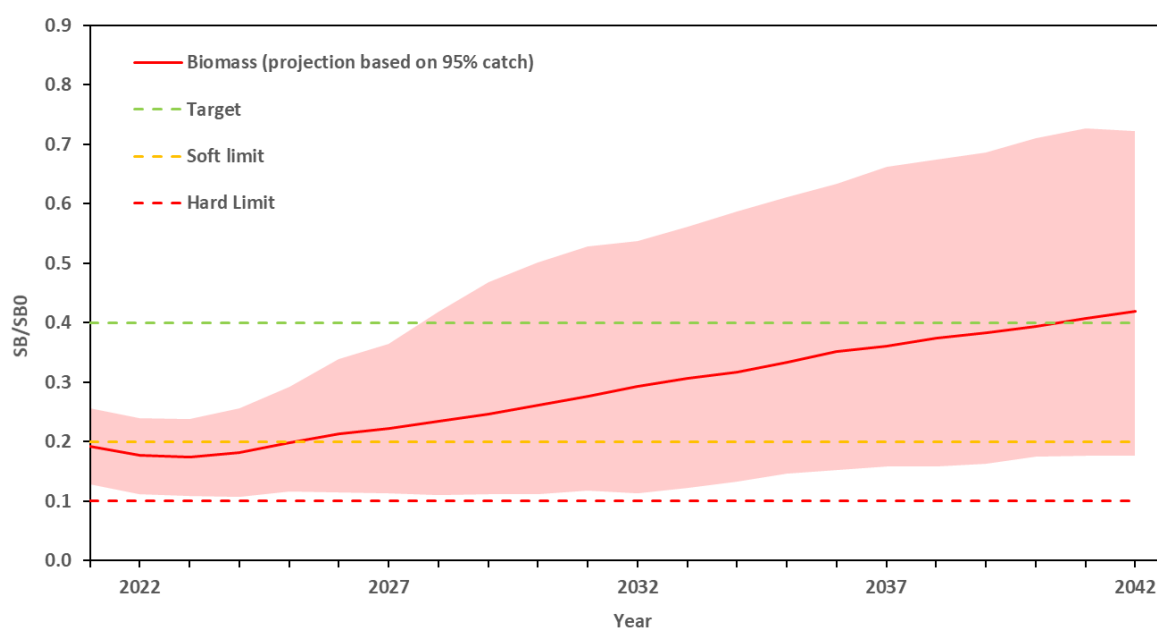


Figure 7: Option 3 East coast tarakihi stock projection from 2022 forward (modelling at 95% catch), with confidence intervals (red shading) reflecting uncertainty in recent and future spawning success and subsequent recruitment.

266. Option 3 proposes to reduce the combined TACs, TACCs and allowances for other sources of mortality caused by fishing, as follows:
- A reduction in the combined TACs by 7% from 5,205 tonnes to 4,864 tonnes;
 - A reduction in the combined TACCs by 7% from 4,355 tonnes to 4,045 tonnes; and
 - A reduction in the combined allowances for other sources of mortality caused by fishing from 436 tonnes to 405 tonnes.
267. As with other proposed options, no changes are proposed to the allowances for customary and recreational fishing under Option 3. The proposed allowance for other sources of mortality caused by fishing applies the same approach for all options (equal to 10% of the TACC of each QMA).

268. Option 3 proposes a single cut based on the projections that would allow the stock to rebuild to 40% SB_0 within 19.7 years, which is T_{min} plus one generation time, with a probability of 56% (see Figure 7). Under this option, the stock is expected to be above the soft limit by 2026 with a probability of 60%.
269. FNZ notes that, due to below average recruitment in 2017 and 2018 (discussed in paragraph 65), under this option the stock is expected to decrease to 17.4% SB_0 in 2023, before increasing in 2024.
270. FNZ considers that the rebuild period proposed under Option 3 is appropriate for the stock as it is the upper range of what is considered appropriate (with T_{min} plus one generation time equalling 19.7 years).
271. Option 3 reduces the TACCs less than Option 1 and 2, and thus has lower short term annual economic costs, noting that the costs associated with the overall rebuild period are also spread out over a longer timeframe.
272. FNZ considers Option 3 has the following benefits:
- a) Accounts for unpredictable fluctuations in recruitment and environmental conditions, while ensuring the stock is rebuilt to the target within an appropriate timeframe.
 - b) Acceptable probability of stock increasing above the soft limit within an appropriate time frame.
 - c) Further reductions in catch during the rebuild period are not anticipated.
 - d) Provides the best opportunity for industry to manage the flow-on effects (social and financial) of reduced TACCs.
273. FNZ considers that the way and rate proposed in Option 3 will result, in the short term, lower social, cultural and economic impacts than Options 1 and 2, while ensuring the sustainability of the stock within a period appropriate to the stock.
274. This option was supported by 2 submitters with another 4 submitters specifically stating that they were not opposed to this option.

10.5 Other options proposed by submitters

10.5.1 Fisheries Inshore New Zealand (FINZ)

275. FINZ supported the rebuild period that determined Option 2 and the commercial catch reduction of 585 tonnes proposed by FNZ. However, it submitted a different way and rate based on an alternative methodology, and apportionment of catch limits across the QMAs. It proposes to cut the East Coast tarakihi TACC by 310 tonnes and then incorporate its shelving commitment of 275 tonnes. This is demonstrated in Table 15.
276. This alternative option is proposed in conjunction with industry shelving (discussed in paragraph 123), FINZ's ongoing commitment to the Industry Rebuild Plan and associated voluntary measures, including the voluntary catch splitting arrangements within TAR 1 and TAR 7.

Table 15: Summary of FINZ proposed option based on option 2's rebuild period with alternative way and rate (all figures in tonnes unless otherwise stated).

	TAR 1	TAR 2	TAR 3	TAR 7	Total
Current TACC	1045	1350	936	1024	4355
FINZ Proposed TACC	1001 (↓ 44)	1202 (↓ 148)	833 (↓ 103)	1009 (↓ 15)	4045 (↓ 310)
FINZ proposed shelving	0	154	106	15	275
Proposed TACCs with industry shelving included	1001	1048	727	994	3770
Total reduction	↓ 44 (4%)	↓ 302 (22%)	↓ 209 (22%)	↓ 30 (3%)	↓ 585 (13%)

277. Southern Inshore Fisheries and Gisborne Fisheries supported FINZ's option.
278. FINZ submit that FNZ calculated TACs are based on projected catches that overstate the amount caught in the 2020/2021 fishing year.
279. It is important that you note that the March 2022 stock projections, that are used to inform FNZ proposed options, are underpinned by the models and projections used in the November 2021 East Coast tarakihi stock assessment. The stock assessment uses catch data up to the 2019/20 fishing year. This stock assessment was accepted by the Fisheries Assessment Plenary in late 2021 and FNZ considers this the best information to inform you for your 2022/23 decision. Specifically, FNZ deems it appropriate that your decision is based on science that has been accepted by the Plenary.
280. FINZ highlight that apportionment of catch across the four areas of the east coast TAR fishery has always been set by the industry acting collectively and state its proposed option is an equitable and pragmatic solution, highlighting that other examples of sub-QMA management have operated successfully.
281. It is important that you note FNZ's approach used to determine catches, especially the East Coast portions of TAR 1 and TAR 7 for the projection analysis. In FNZ's projection analysis, where tarakihi catches overlap boundaries of QMAs and sub-QMAs, catches are allocated to

the statistical area where the catch event started. FNZ considers this likely differs from FINZ's approach to allocating TACC across the QMAs in its proposed option.

282. FINZ's option also incorporates industry shelving, where FINZ and its industry partners have committed to shelving approximately 10% of the stock's ACE (see paragraph 123).
283. ECO stated in its submission that it did not support the shelving of quota, stating that it goes against the fundamental direction of the quota management system and the setting of catch limits.
284. As discussed in section 8.5 'Considerations in respect to ACE shelving', when adjusting the TAC you can use your discretion to take into account the effect that any ACE shelving is expected to have on the level of biomass of the stock. However, given that the East Coast tarakihi stock is presently below the soft limit and subject to a time constrained rebuild plan, FNZ considers that setting a TAC and TACC that incorporates ACE shelving is not appropriate at this time.

10.5.2 Forest and Bird NZ

285. Forest and Bird NZ propose six alternative options for consideration (Table 16). All options have a target of 40% SB_0 with rebuild periods that range between 10 and 15 years ($2 * T_{min}$ and $3 * T_{min}$). It submits that all options commence the rebuild from 2018. The options differ in respect to the probability sought for achieving the rebuild, using both 70% and 50% probability (noting 55% probability for Option 3a).

Table 16: Summary of Forest and Bird NZ's proposed options.

	Option 1a	Option 1b	Option 2a	Option 2b	Option 3a	Option 3b
Target biomass	40% SB_0 by 2027/28	40% SB_0 by 2027/28	40% SB_0 by 2029/30	40% SB_0 by 2029/30	40% SB_0 by 2032/33	40% SB_0 by 2032/33
Rebuild timeframe (years)	10 years or $2 * T_{min}$	10 years or $2 * T_{min}$	12 years or $2.5 * T_{min}$	12 years or $2.5 * T_{min}$	15 years or $3 * T_{min}$	15 years or $3 * T_{min}$
Rebuild way and rate	To be determined by FNZ based on s13(2)(b)(i). No model projections available to estimate what catch reductions would be required				40% catch reduction in TAR 2 and TAR 3 and eastern portions of TAR 1 and 7, implemented	To be determined by FNZ
Probability of achieving target within rebuild timeframe	50%	70%	50%	70%	55%	70%

286. Forest and Bird NZ highlight that the rebuild of the eastern tarakihi stock was initiated via the Minister's decision in 2018, and therefore contend that in assessing the period appropriate to

the stock in this decision round, the start of the rebuild period should be from 2018, not this year.

287. Forest and Bird NZ submit, through its own analysis, that international best practice rebuild protocols use $2 * T_{min}$ as T_{max} , and that while $3 * T_{min}$ is less common as T_{max} , it should be considered. It rejects the use of generation time in setting a rebuild period for the stock.
288. As outlined in paragraph 228 FNZ considers it is appropriate that the rebuild period be applied from the date of this decision (October 2022). FNZ does not consider that starting the rebuild period from 2018 is required by the 2021 High Court judgment.
289. FNZ refers you to section 4.2 'Rebuild Strategy' and section 10.1 'Rebuild strategy objectives' where the deviation from T_{min} to $2 * T_{min}$ is outlined and why a probability of 50% is considered appropriate.

10.6 Economic considerations

290. Assessment of national and regional economic impacts associated with proposed options relating to the 2019 review of sustainability measures for the East Coast tarakihi stock was published in August 2019⁴³.
291. It is important to note that economic impacts highlighted in that report are based on the 2019 decision and do not include further economic impacts due to TAC reductions outlined in this paper (Table 17). Potential changes in revenue have been calculated from the proposed TACC changes and the respective port prices⁴⁴ within tarakihi QMAs for the 2020/2021 fishing year. The potential impacts on revenue range between \$0.957 million and \$3.989 million per annum.
292. It is important to note that the indicative costs are a very basic analysis of potential economic impacts and do not take into account regional socio-economic or flow on impacts. Additionally, there is the possibility that financial and socio-economic impacts will reduce over time as fishers adapt their behaviour, respond to fishing technology and strive for greater fishing precision.

⁴³ [Economic impacts of 2019 Review of Sustainability Measures – East Coast Tarakihi. A Computable General Equilibrium analysis and forecast model](#). NZIER report to Fisheries New Zealand. August 2019.

⁴⁴ The port prices used for consultation were from the 2020/21 fishing year and have since been updated for the 2022/23 fishing year (included here). Using the 2020/21 port prices, the consultation paper stated that the potential impacts on revenue would range between \$0.991 million and \$4.162 million per annum.

Table 17: indicative revenue loss of options from the proposed TACCs reductions.

Option	Stock	TACC	Change (t)	Indicative revenue change (\$ p.a.)
Option 1	TAR 1	867	178	551,800
	TAR 2	779	571	1,958,530
	TAR 3	490	446	1,280,020
	TAR 7	945	79	198,290
	TOTAL	3081	1274	3,988,640
Option 2	TAR 1	978	67	207,700
	TAR 2	1104	246	843,780
	TAR 3	694	242	694,540
	TAR 7	994	30	75,300
	TOTAL	3770	585	1,821,320
Option 3	TAR 1	1023	22	68,200
	TAR 2	1233	117	401,310
	TAR 3	775	161	462,070
	TAR 7	1014	10	25,100
	TOTAL	4045	310	956,680

293. T. Mabbett questioned why the consultation document did not include longer term economic forecasts, noting that economic gains are likely to increase over time with a rebuilt stock.
294. FINZ notes that FNZ's economic analysis of potential economic impacts is very basic. It submits that it is misleading and that a more thorough economic analysis should have been presented during consultation. Specifically, it states that such an analysis should factor in financial stress operators and companies are under, financial impact of COVID-19, increased operating costs particularly fuel costs and the inability of fishers to target other stocks as a substitute for not being able to target tarakihi. FINZ goes onto say it will be the regional fishers that will bear the brunt of TACC reductions, stating "the socio-economic realities of the FNZ options are that it will be regional family-owned businesses and labour that are most severely impacted".
295. FINZ mention that it is not easy to switch target species, stating SNA 2 has been fully caught in recent times, that TRE 1 and TRE 2 require a review and that gemfish management settings are constraining.
296. Te Ohu Kaimoana submitted it acknowledges the increased impacts on socio-economic and cultural factors since the last review.
297. Gisborne Fisheries highlighted in its submission that industry is facing unprecedented costs at the moment, with fuel, general inflation, and the raised cost of the minimum wage. It stated all options will have significant socio-economic consequences.
298. FNZ notes there are potential longer-term socio-economic benefits of a rebuilt stock, as discussed in paragraph 103.
299. FNZ acknowledges that the scope provided for analysis of indicative economic impacts of the options proposed is limited.

10.7 Other matters

10.7.1 Voluntary QMA split

300. FINZ affirmed its continued support of the voluntary QMA split, in conjunction with the Industry Rebuild Plan. It notes that operators who have implemented the TAR 1 split are subject to more financial stress through ACE constraints associated with increasing SNA 8 abundance, so have been unable to utilise their TAR 1 (West) catch limit.
301. Four industry operators advocated for the removal of the QMA split, advising a concern with displaced fishing effort occurring in the western portion of TAR 1 as a result of this split. FNZ notes that the available ACE in the western portion of TAR 1 has been under caught (see Table 7 and section 4.2.4 'Way and rate') since the voluntary split arrangement for East Coast tarakihi came into place.
302. Te Ohu Kaimoana did not provide a position on the apportioning of the TAC and TACC reduction within QMAs, noting that as long as the reductions occur on the East Coast portions of TAR1 and TAR7. It said it is aware that apportioning of the TACC decrease across QMAs may affect the ability for operators to continue to implement the current arrangement, and it considers that the operators themselves are best placed to comment on this.
303. Southern Inshore Fisheries stated it agrees with the continuation of the current East/West split of TAR 7.
304. The joint NZSFC, LegaSea, NZACA and NZUA submission recommended that TAR 1 is separated into two QMAs.
305. Forest and Bird NZ noted that the East Coast tarakihi stock does not align with the QMAs TAR 1 and TAR 7, and that the current voluntary split is unenforceable. It submits that, given the long-term nature of the rebuild plan, FNZ should put forward a regulatory change to adjust the QMAs to reflect the stock.
306. FNZ notes that precedents exist for voluntary catch-spreading agreements, including hoki and orange roughy fisheries, which have operated successfully for a number of years.
307. FNZ considers that the voluntary catch-splitting arrangement for East Coast tarakihi has been successful to date and supports its continuation at this time. If this approach does not have the desired effect, FNZ would seek to use a regulatory approach to split the QMAs. However, this would require the necessary considerations within the Act being met, including seeking the input and participation of Treaty partners, quota owners and stakeholders before this scenario could be enacted.
308. FNZ notes that should a regulatory approach be taken for splitting the QMAs, there could be a significant turnaround time to implement this. Therefore, in order to ensure the rebuild of the East Coast tarakihi stock remained on track, it is likely further cuts to the TACC would be required should the current voluntary QMA split be deemed ineffective.

10.7.2 Ecosystem Management and Climate Change

309. NZSFC, LegaSea, NZACA and NZUA submitted that they support the Government's Ocean Vision commitment to more Ecosystem Based Fisheries Management, and they support ecosystem-based fisheries management based on setting stock abundance targets of 50% unfished biomass.
310. The SPCA advocated for higher biomass target of the stock in the longer term, stating that this would promote a more resilient ecosystem.
311. The Hauraki Gulf Forum submitted it is important to recognise tarakihi's importance from an ecosystem perspective.

- 312. ECO submitted you should consider the effect of climate change and ocean acidification on long-term sustainability.
- 313. T. Mabbett also advocated that the consultation document should have included longer term aquatic environment forecasts associated with the FNZ options proposed.
- 314. ECO stated it was concerned that the economic analysis only looked at the impact on fishers and not on the wider ecosystem, highlighting non-market economic values to be considered.
- 315. Forest and Bird NZ support increasing the biomass target, stating this will help transition to a precautionary ecosystem-based fisheries management that aligns with Te Mana o te Taiao. It also stated that any proposed TAC should also take into account any consequential ecosystem effects of altering those interactions.
- 316. FNZ notes that the environmental and sustainability considerations have been reviewed in section 7 'Environmental and Sustainability Considerations'.

10.7.3 Tarakihi Spawning and Nursery Grounds

- 317. The joint NZSFC, LegaSea, NZACA and NZUA submission requests that you designate two areas on the east coast as habitats of significance for fisheries management under the Fisheries Act, specifically Cape Runaway to East Cape and Cape Campbell to Pegasus Bay. They go on to say that these areas must be closed to fishing methods that can disrupt spawning behaviour.
- 318. Forest and Bird NZ requested that FNZ consults on gear restriction spatial closures to protect all three known nursery grounds while the East Coast tarakihi stock rebuilds to the target of 40% SB_0 , focusing areas within TAR 3 as a priority.
- 319. ECO submitted that voluntary closures are not an adequate consideration as they are voluntary and if not adhered to there is no method of enforcement to protect these areas. FNZ notes that over the last fishing year areas subject to voluntary trawl closures within TAR 2 had 99.5% adherence by signatories of the Industry Rebuild Plan.
- 320. FNZ notes submission feedback received regarding habitats of significance, and gear restriction spatial closures, in respect to East Coast tarakihi. FNZ will continue to collect data to identify habitats of significance, with a view to assessing any controls that may be needed to provide protection (discussed in section 7 'Environmental and Sustainability Considerations').

10.7.4 Recreational allowance

- 321. D. Marra advocated for an increase in the tarakihi MLS to 28cm and that bag limits in TAR 2 should be reduced to 10 tarakihi per fisher per day, making reference to how much charter boats can take in a single trip.
- 322. Forest and Bird NZ stated that the status quo for recreational allowance is appropriate.
- 323. FINZ raise that recreational catch is shown to increase in relation to abundance (this point is also highlighted by FNZ in section 5.3 'Recreational'), and state that the focus for recreational catches should be on the equity of catch allocations. It goes on to say that the Ministry must ensure that any increased recreational catch does not jeopardise the rebuild.
- 324. FINZ go further on this point and recommend that the National Panel Survey (NPS) should be increased in frequency, support the review of recreational allowances of the East Coast tarakihi stock after the planned NPS for the 2022/2023 fishing year and review the position of amateur charter vessels as recreational vessels (including their level of reporting).
- 325. FNZ recognises that while the NPS for 2017-18 estimated that the TAR 2 recreational allowance was 51% over caught that year (110 tonnes caught for a 73 tonne allowance), overall the estimated combined recreational harvest of East Coast tarakihi was lower than that

of the combined recreational allowance, specifically 90% of the allowance. However, FNZ notes there may be a case for modifying the allowances across the QMAs to reflect estimated catch.

326. FNZ recognises that as the East Coast tarakihi rebuild progresses, the recreational sector is likely to experience the benefits of increasing abundance in the fishery through increased catch. As discussed in section 5.3 'Recreational', FNZ is not proposing to modify the recreational allowance at this time. However, FNZ recognises the importance of ongoing monitoring of recreational catch as the stock rebuilds, and modifying recreational allowances and bag limits when appropriate.
327. FNZ may consider reviewing the recreational allowances for East Coast tarakihi after the planned NPS for the 2022/2023 fishing year, which may inform such a review.

10.7.5 Other Sources of Fishing Mortality

328. FNZ is proposing that for all options proposed the other sources of mortality caused by fishing is set at 10% of the TACC, as explained in section 5.4 'Other sources of mortality caused by fishing'.
329. ECO noted that the 10% figure is a default which needs to consider seen and unseen mortality especially given the impact of bottom trawling, and that it looks forward to a review of other mortality in inshore fisheries.
330. FINZ submit that given the low level of sub-MLS tarakihi reported caught, there is an ability now to adjust the allowance to 5% as a precautionary level and then adjust that using verification of catch coming through the future camera programme subsequently.
331. Fishers have been reporting sub-MLS tarakihi since 2018, and this has been an important component of the Industry Rebuild Plan (and reported on quarterly, as discussed in paragraph 121). FNZ notes that the overall level of sub-MLS tarakihi caught against legal size tarakihi has been low (less than 1% across all of the stock).
332. FNZ also notes that since early 2021 twelve vessels targeting tarakihi across TAR 2 and TAR 3 have voluntarily installed cameras on board in line with the Industry Rebuild Plan to verify catch reporting.
333. However, sub-MLS tarakihi mortality is only one component of the other sources of fishing related mortality of tarakihi. Other components can include other forms of incidental mortality whilst fishing, ghost fishing through abandoned gear, and illegal fishing. For reasons outlined in section 5.4 'Other sources of mortality caused by fishing', FNZ does not consider it appropriate to modify the percentage applied to calculate the Other Sources of Fishing Mortality allowance at this time.
334. The Fisheries Amendment Bill⁴⁵, currently before Select Committee, and your recent announcement on the nationwide rollout of cameras on commercial fishing vessels⁴⁶, are expected to change fishing practices and enhance fisheries data. FNZ expects this will lead to an opportunity in future to review the allowance set for other sources of fishing mortality for the East Coast tarakihi stock.

10.7.6 The Harvest Strategy Standard

335. ECO submitted that the HSS is nearly 10 years past its review date (making note that the HSS documents says it will be reviewed within 5 years of its publication), and it does not consider broader ecosystem and environmental factors. ECO also state stock thresholds used by the HSS do not meet international best practice.

⁴⁵ [Fisheries Amendment Bill](#). Ministry for Primary Industries

⁴⁶ [Rollout of cameras on fishing vessels to begin](#). Honourable David Parker, Minister for Oceans and Fisheries.

336. FINZ submit that HSS needs a review, highlighting errors in calculating probability (paragraph 88), the deviation from the HSS when forming FNZ's options (see section 4.2 'Rebuild Strategy' and section 10.1 'Rebuild strategy objectives') and that the HSS does not reflect environmental change nor mixed species considerations.
337. A number of submitters (as highlighted in section 10.1.1 'Target') have advocated for a more ecosystem-based management approach when setting a TAC for a stock.
338. FNZ notes that the 2021 High Court judgment found the HSS to be a mandatory consideration when setting a TAC for a stock. FNZ is in the process of reviewing the HSS, which will also consider any relevant findings of the Court of Appeal judgment when it is delivered.

10.7.7 Observer Coverage and On-board cameras

339. ECO stated it looks forward to a wider commitment to install cameras on all vessels so that there is a robust system of verification in the current reporting regime. It goes onto say that coverage should enable statistically robust estimates of bycatch, with a 20% coefficient of variation on the estimates, and at least 20% of fishing effort should be monitored.
340. The SPCA submitted it strongly supports the rollout of on-board cameras, and that on-board cameras will support the East Coast tarakihi rebuild. It advocates for a more rapid rollout.
341. Forest and Bird NZ submitted observer coverage should be 100% of all fisheries through a combination of at sea observers and the use of on-board cameras. It supports the current rollout of on-board cameras.
342. FNZ notes your recent announcement of the nationwide rollout of cameras on commercial fishing vessels, which is expected to support the reputation of New Zealand's fishing industry, the sustainability of New Zealand's fisheries and provide for more confident management decisions.

10.7.8 Fisher Wellbeing

343. As highlighted when discussing economic considerations (section 10.6 'Economic considerations'), several submitters have discussed the financial difficulties commercial fishers are currently experiencing.
344. FINZ noted that with COVID-19 and the broader significant changes occurring in the industry (Fisheries Amendment Bill and the nationwide rollout of cameras on commercial vessels) there are mental health and wellbeing implications to be considered. FINZ highlight that fishers exiting the fishery will be unable to provide for their families and service debt, or successfully sell their vessels. It goes onto say it will be regional family-owned businesses and labour that are most severely impacted.
345. FINZ also said that "*given this government's focus on wellbeing and the establishment of First Mate⁴⁷, it would be concerning if unnecessary harm and suffering was imposed in a situation where alternative management options are available to offset these socio-economic impacts*".
346. FNZ considers it important to highlight the ongoing challenges faced by participants in the commercial fishing industry, and the importance of reflecting on wellbeing when considering the way and rate of your decision.

10.7.9 Fisheries Plan

347. FINZ submitted that it recommends a section 11A fisheries plan be developed for the East Coast tarakihi stock, and as part of this a multi-stakeholder working group develop a research plan to address future monitoring and management plans.

⁴⁷ An FNZ supported initiative to support the health and wellbeing of participants in the commercial seafood sector.

348. FNZ notes the National Inshore Finfish Fisheries Plan that is currently being finalised (section 8.1 ‘Draft National Inshore Finfish Fisheries Plan’). Specifically, it will provide guidance on management objectives and strategies for finfish species including tarakihi. FNZ does not suggest a section 11A fisheries plan be developed specifically for the East Coast tarakihi stock at this time.

10.7.10 Preferential allocation rights (28N rights)

349. There are 1.915 tonnes of preferential allocation rights (28N rights) in TAR 2.

350. As the options in this paper suggest reducing the TACC, 28N rights for TAR 2 are not expected to be triggered by this sustainability round. However, if the TACCs for these stocks are increased in future, the distribution of their 28N rights will be triggered (28N rights holders will gain the first right to the increase).

10.8 Deemed values

351. The Deemed Value Guidelines set out the operational policy FNZ uses to inform the development of advice to the Minister on the setting of deemed values.

352. Deemed values are the fees charged to fishers for each kilogram of unprocessed fish landed in excess of a fisher’s ACE holdings. The purpose of the deemed values regime is to provide incentives for individual fishers to acquire or maintain sufficient ACE to cover catch taken over the course of the year, while allowing flexibility in the timing of balancing, promoting efficiency, and encouraging accurate catch reporting.

353. The current deemed value rates for East Coast tarakihi stocks are shown in Table 18.

Table 18: Deemed value rates for East Coast tarakihi.

Stock	Interim	Differential rates (\$/kg) for excess catch (% of ACE)		
		100-110%	110-120%	120%+
TAR 1	3.1500	3.5000	4.2500	5.7500
TAR 2	3.1500	3.5000	4.2500	5.7500
TAR 3	2.2500	2.5000	4.0000	5.5000
TAR 7	2.2500	2.5000	4.0000	5.5000

354. FNZ considers the deemed values are set at a level appropriate for rebuilding stocks and does not propose any changes.

355. According to data from 2020/21, the current annual deemed value rates⁴⁸ of East Coast tarakihi are either near to or exceed both the average ACE prices (TAR 1 \$1.23/kg, TAR 2 \$1.55/kg, TAR 3 \$0.53/kg and TAR 7 \$0.81/kg) and the average port prices (TAR 1 \$3.10/kg, TAR 2 \$3.43/kg, TAR 3 \$2.87/kg and TAR 7 \$2.51/kg) for East Coast tarakihi stocks. These stocks also have stringent differential deemed values applied which provide greater incentives to fishers to ensure they fish within their individual entitlements.

356. FNZ acknowledges that if the TACCs are reduced, subsequent changes in fishing behaviour and the ACE market may result in the need for the deemed value to be re-evaluated in the future.

⁴⁸ The annual deemed value rate being the \$/kg paid for excess catch at 100-110% of ACE.

11 Conclusions and recommendations

357. The 2021 High Court judgement has directed you to review the Total Allowable Catch (TAC) and TACC settings for East Coast tarakihi, having regard to findings in the judgment.
358. The 2021 stock assessment has indicated that East Coast tarakihi has been below the soft limit (20% SB_0) since the early 2000s, and had an overall downward trend for approximately 30 years, reaching its lowest point around 2014. The East Coast tarakihi stock was most recently (2021) estimated to be at 19.3% SB_0 .
359. The 2021 stock assessment noted that while fishing mortality rates declined considerably in 2019 and 2020, following reductions in TACCs, overfishing is deemed to still be occurring.
360. While over the long-term the stock is projected to increase under current catch levels, over the next two years the stock is forecast to decrease (17.2% SB_0 by 2023) due to below average recruitment in 2017 and 2018.
361. FNZ recommends that you decrease the TAC and TACC for the stocks that make up East Coast tarakihi. FNZ's preferred option being Option 2. Regardless of which option is selected FNZ is committed to regular monitoring and review of the East Coast tarakihi fishery to ensure the rebuild of the stock.
362. Since 2018 there have been two reviews of East Coast tarakihi each resulting in reductions to the TACs and TACCs. The reductions outlined in all FNZ proposed options are based on current catch levels and are therefore intended to be in addition to previous reductions.
363. All stock rebuild periods, for the FNZ options proposed, start from 2022 and FNZ does not consider that you are required to set a TAC to give effect to the Minister's 2018 decision.
364. Option 2 has a rebuild timeframe of $3 * T_{min}$ (15 years). FNZ considers that any time period in the range of 5-19.7 years is appropriate for rebuilding the East Coast tarakihi stock. FNZ recognise that this is a departure from $T_{min} - 2 * T_{min}$ timeframe that is recommended by the HSS, however there is compelling rationale to deviate from this approach and adopt strategies outlined in other jurisdictions, including the use of generation time.
365. FNZ considers all options proposed are within a period appropriate to the stock.
366. FNZ considers the probability associated with Option 2 is appropriate. FNZ recognise that this is a departure from the HSS, however the probability of 50% is consistent with the calculation of T_{min} and also the use of probability in other jurisdictions.
367. Given that the East Coast tarakihi stock is presently below the soft limit and subject to a time constrained rebuild plan FNZ considers that setting a TAC and TACC that incorporates ACE shelving is not appropriate at this time.
368. In setting the other allowances for recreational, customary and other mortality, FNZ considers that values proposed through Option 2 (and consistent with other options) reflect best estimates while recognising the uncertainties associated with these estimates.

12 Decision for East Coast tarakihi

Option 1

Agree to vary the TAC for TAR 1, TAR 2, TAR 3 and TAR 7 and within the TAC, vary the TACC and allowances as outlined in the table below; and

- i. Retain the allowances for Māori customary non-commercial fishing interests at current levels;
- ii. Retain the allowances for recreational fishing interests at current levels;

Option 1	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
TAR 1	1137 ↓ (196 t)	867 ↓ (178 t)	73	110	87 ↓ (18 t)
TAR 2	1030 ↓ (628 t)	779 ↓ (571 t)	100	73	78 ↓ (57 t)
TAR 3	569 ↓ (491 t)	490 ↓ (446 t)	15	15	49 ↓ (45 t)
TAR 7	1068 ↓ (86 t)	945 ↓ (79 t)	5	23	95 ↓ (7 t)

Agreed / Agreed as Amended / Not Agreed

OR

Option 2 (Fisheries New Zealand preferred option)

Agree to vary the TAC for TAR 1, TAR 2, TAR 3 and TAR 7 and within the TAC, vary the TACC and allowances as outlined in the table below; and

- i. Retain the allowances for Māori customary non-commercial fishing interests at current levels;
- ii. Retain the allowances for recreational fishing interests at current levels;

Option 2	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
TAR 1	1259 ↓ (74 t)	978 ↓ (67 t)	73	110	98 ↓ (7 t)
TAR 2	1387 ↓ (271 t)	1104 ↓ (246 t)	100	73	110 ↓ (25 t)
TAR 3	793 ↓ (267 t)	694 ↓ (242 t)	15	15	69 ↓ (25 t)
TAR 7	1121 ↓ (33 t)	994 ↓ (30 t)	5	23	99 ↓ (3 t)

Agreed / Agreed as Amended / Not Agreed

OR

Option 3

Agree to vary the TAC for TAR 1, TAR 2, TAR 3 and TAR 7 and within the TAC, vary the TACC and allowances as outlined in the table below; and

- i. Retain the allowances for Māori customary non-commercial fishing interests at current levels;
- ii. Retain the allowances for recreational fishing interests at current levels;

Option 3	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
TAR 1	1308 ↓ (25 t)	1023 ↓ (22 t)	73	110	102 ↓ (3 t)
TAR 2	1529 ↓ (129 t)	1233 ↓ (117 t)	100	73	123 ↓ (12 t)
TAR 3	883 ↓ (177 t)	775 ↓ (161 t)	15	15	78 ↓ (16 t)
TAR 7	1143 ↓ (11 t)	1014 ↓ (10 t)	5	23	101 ↓ (1 t)

Agreed / Agreed as Amended / Not Agreed



Hon David Parker
Minister for Oceans and Fisheries

12 19 2022

Appendix 1

This appendix follows section 8.2 'Regional Plans' where FNZ has reviewed regional policy statements and regional plans that are within the boundary of the East Coast tarakihi stock. 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 is nothing specific to the East Coast tarakihi stock but provisions that might be considered relevant are listed below.

Regional Council	Regional plan	Section / Excerpt
Northland	Regional Policy Statement for Northland	2.2 Indigenous ecosystems and biodiversity The key pressures on Northland's indigenous terrestrial, freshwater, and coastal marine ecosystems and species are: (d) Fragmentation, loss and isolation of populations and communities of indigenous species due to habitat loss, land use changes and vegetation clearance.
		4.5.1 1 Policy – Identification of the coastal environment, outstanding natural features and outstanding natural landscapes and high and outstanding natural character This policy assists in the implementation of s6. Resource Management Act and the New Zealand Coastal Policy Statement 2010 (NZCPS) by: <ul style="list-style-type: none"> • Identifying the coastal environment; • Identifying high and outstanding natural character areas (in the coastal environment); and • Identifying outstanding natural features and landscapes
	Proposed Regional Plan for Northland	Section D.2 General <i>D.2.18 Managing adverse effects on indigenous biodiversity 1a) avoiding adverse effects on:</i> <ol style="list-style-type: none"> <i>i. indigenous taxa that are listed as Threatened or At Risk in the New Zealand Threat Classification System lists, and</i> <i>ii. the values and characteristics of areas of indigenous vegetation and habitats of indigenous fauna that are assessed as significant using the assessment criteria in Appendix 5 of the Regional Policy Statement, and</i> <i>iii. areas set aside for full or partial protection of indigenous biodiversity under other legislation,</i>
		Section D.2 General <i>D.2.18 Managing adverse effects on indigenous biodiversity 1b) avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects on:</i> <ol style="list-style-type: none"> <i>i. areas of predominantly indigenous vegetation, and</i> <i>ii. habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes, and</i>

		<p>iii. <i>indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, spawning and nursery areas and saltmarsh</i></p>
Auckland	Auckland Council Regional Policy Statement	<p>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.</p> <p>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.</p> <p>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.</p>
		<p>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.</p> <p>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: (b) 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; (j) 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.</p>
	Auckland Unitary Plan	<p>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;</p>

- (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.
- (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

- (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.

		<p>(19) Promote economic development opportunities that complement the unique values of the islands and the Hauraki Gulf.</p> <p>Section B8.6 summarises the reasons of adopting the proposed policies, including:</p> <ul style="list-style-type: none"> • 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. <p>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:</p> <ol style="list-style-type: none"> (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	<p>3.7 Coastal environment The coastal environment is managed in an integrated way that:</p> <ol style="list-style-type: none"> 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. <p>15.4.4 Coastal marine area</p>

		(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.
		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;

		<p>(d) Enabling the exercise of kaitiakitanga;</p> <p>(e) Planning for and managing:</p> <ul style="list-style-type: none"> i. cumulative effects; and ii. the effects of climate change; and <p>(f) Promoting the sustainable management of the Bay of Plenty coastal fisheries.</p>
		<p>Part 5 Methods, 1.2 Natural Heritage</p> <p>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.</p> <p>Method 19AA: Council will partner with tangata whenua for additional spatial mechanisms for the coastal marine area that identify and protect:</p> <ul style="list-style-type: none"> (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.
Gisborne	Gisborne District Council – The Tairāwhiti Resource Management Plan	<p>Section C3.6 – Tangata Whenua</p> <p>Under Policy 7, the Plan notes that:</p> <p>The RMA does not address Fisheries issues which are dealt with under the Fisheries Act or the Marine Reserves Act. Council may, however, advocate for the protection of special areas in the Coastal Marine Area that support traditional fishing or food gathering areas to the responsible agencies on behalf of or in conjunction with Iwi or hapu authorities,</p> <p>This policy is designed to recognise this advocacy role and supports Objective C3.6.2(3), which is to “maintain the integrity of the relationship of Māori with their culture, traditions, ancestral lands, and other resources.”</p>
Hawke’s Bay	Hawke’s Bay Regional Council Coastal Environmental Plan	<p>Section 4 – Indigenous species and habitats</p> <p>The Hawke’s Bay Regional Council Coastal Environmental Plan includes a policy to “ensure adverse effects on ecological systems (including natural movement of biota, natural biodiversity, productivity and biotic patterns) are avoided, including adverse effects on:</p> <ul style="list-style-type: none"> (a) fishing grounds; (b) shell fish areas; (c) fish spawning and nursery areas; (d) bird breeding and nursery areas; (e) fish and bird migration; (f) feeding patterns; (g) habitats’ importance to the continued survival of any indigenous species; (h) wildlife and indigenous marine biota;

		<p>(i) dune systems; and</p> <p>(j) the intrinsic values of ecosystems.”</p>
Manawatu-Wanganui	Regional Policy Statement	<p>Policy 8-4: Appropriate use and development</p> <p>Any use or development in the CMA must:</p> <p>(a) avoid, as far as reasonably practicable, any adverse effects on the following important values:</p> <p>iii. the landscape and seascape elements that contribute to the natural character of the CMA</p> <p>iv. areas of significant indigenous vegetation and significant habitats of indigenous fauna, and the maintenance of indigenous biological diversity</p> <p>v. the intrinsic values of ecosystems</p>
	Horizons Regional Council One Plan <i>(The Horizons One Plan includes the Regional Coastal Plan for the Manawatu-Wanganui region)</i>	<p>Section 1.3 – Our Region’s Challenges – the “Big Four”</p> <p>Issue 4: Threatened Indigenous Biological Diversity</p> <p>The Regional Council will be the lead agency for indigenous biodiversity management for the Region by controlling activities in rare habitats, threatened habitats and at-risk habitats, and working with landowners to protect and enhance these habitats.</p>
		<p>Section 18 of the plan details activities in the coastal marine area. Specifically, it covers;</p> <ul style="list-style-type: none"> • Occupation; • Structures; • Reclamations and Drainage; • Disturbances, Removal and Deposition; • Water Takes, Uses, Damming and Diversions; • Discharges; • Noise and Discharges into Air; • Exotic and Introduced Plants; and • Other Rules
Greater Wellington Region	Regional Policy Statement for the Wellington region	<p>3.2 Coastal environment</p> <p>Objective 3</p> <p>Habitats and features in the coastal environment that have significant indigenous biodiversity values are protected; and Habitats and features in the coastal environment that have recreational, cultural, historical or landscape values that are significant are protected from inappropriate subdivision, use and development</p>
	Regional Coastal Plan For The Wellington Region	<p>Section 4 – General Objectives and Policies</p> <p>The Regional Coastal Plan for the Wellington Region contains the following Environmental Objectives:</p> <ol style="list-style-type: none"> 1) The intrinsic values of the coastal marine area and its components are preserved and protected from inappropriate use and development; 2) People and communities are able to undertake appropriate uses and developments in the coastal marine area which satisfy the environmental protection policies in the plan, including activities which:

		<ol style="list-style-type: none"> a. rely on natural and physical resources of the coastal marine area; or b. require a coastal marine area location; or c. provide essential public services; or d. avoid adverse effects on the environment; or e. have minor adverse effects on the environment, either singly or in combination with other users; or f. remedy or mitigate adverse effects on the environment and provide a net benefit to the environment; <ol style="list-style-type: none"> 3) The adverse effects that new activities may have on existing legitimate activities in the coastal marine area are avoided, remedied or mitigated as far as is practicable; 4) Land, water and air in the coastal marine area retains its life supporting capacity; 5) The natural character of the coastal marine area is preserved and protected from inappropriate use and development; 6) Important ecosystems and other natural and physical resources in and adjacent to the coastal marine area are protected from inappropriate use and development; 7) Public health is not endangered through the effects of previous, present or future activities in the coastal marine area; 8) Public access along and within the coastal marine area is maintained and enhanced; 9) Amenity values in the coastal marine area are maintained and enhanced.
		<p>Section 16 – Principal reasons for Objectives, Policies and Methods</p> <p>Section 16 of the Plan states that:</p> <p>The objectives and policies acknowledge the need to protect important characteristics and values of the coastal marine area. They also recognise that the coastal marine area is an important location for many activities, some of which are dependent on this particular location. These activities are important for the economic well-being of the Wellington Region, and to enable people to fulfil their social desires to use the coastal marine area.</p>
		<p>Appendix 2 – Areas of Significant Conservation Value</p> <ul style="list-style-type: none"> • Castlepoint is identified in the Plan as an Area of Significant Conservation Value in the Plan, due to: Scientific, wildlife, geological, scenic, natural and conservation values; • Naturally vegetated and fragile coastal vegetation containing rare plant species (including <i>Brachyglottis compacta</i>); • A habitat for sea mammals and breeding ground for bird species. An internationally significant crayfish (<i>Jasus edwardsi</i>) larvae (puerulus) population; and • Outstanding scenic values and an important physical and geological landscape.
Marlborough Region	Regional Policy Statement	5.3.10 Objective – Coastal Marine Habitat The natural species diversity and integrity of marine habitats be maintained or enhanced.
	Appeals Version Of The Proposed	Volume 1 2. Background - Other strategies and plans

	Marlborough Environment Plan	<p>Strategies and plans may also be prepared under the Fisheries Act and Council will have regard to these where relevant, such as protecting significant habitats of indigenous fauna in the marine environment.</p> <p>Volume 1 8. Indigenous Biodiversity - Policy 8.3.8 Within vulnerable ecologically significant marine sites, activities that disturb the seabed must be avoided. Some activities use techniques or practices that result in disturbance of the seabed. Depending where this occurs, there is the potential for adverse effects on marine biodiversity. The policy seeks to specifically avoid activities that disturb the seabed to ensure areas identified as having significant biodiversity value in the coastal marine area and which are identified as being vulnerable to such disturbance are protected. This will help to give effect to Policy 11 of the NZCPS. Ecologically Significant Marine Sites evaluated to be vulnerable to seabed disturbance are identified in Appendix 27 of the plan.</p> <p>Volume 2 16.6. Discretionary Activities - Application must be made for a Discretionary Activity for the following... 16.6.6 Any dredging, bottom trawling, or deposition within the buffer for any Ecologically Significant Marine Site specified in Appendix 27 of the plan.</p>
Canterbury	Canterbury Regional Policy Statement	<p>8.2.4 Preservation, protection and enhancement of the coastal environment In relation to the coastal environment:</p> <ol style="list-style-type: none"> 1. Its natural character is preserved and protected from inappropriate subdivision, use and development; and 2. Its natural, ecological, cultural, amenity, recreational and historic heritage values are restored or enhanced.
	Regional Coastal Environment Plan For The Canterbury Region	<p>1.2 Plan Purpose The purpose of this Plan is to promote the sustainable management of the natural and physical resources of the Coastal Marine Area and the coastal environment and to promote the integrated management of that environment. In particular, the Plan sets out the issues relating to:</p> <ol style="list-style-type: none"> i. protection and enhancement of the coast; ii. water quality; iii. controls on activities and structures; and iv. coastal hazards
Otago	Otago Regional Policy Statement	<p>Policy 3.1.9 Ecosystems and indigenous biological diversity Manage ecosystems and indigenous biological diversity in terrestrial, freshwater and marine environments to: Maintain or enhance:</p> <ol style="list-style-type: none"> a) Ecosystem health and indigenous biological diversity including habitats of indigenous <ol style="list-style-type: none"> i. fauna; ii. Biological diversity where the presence of exotic flora and fauna supports indigenous biological diversity; iii. biological diversity; b) Maintain or enhance as far as practicable: <ol style="list-style-type: none"> i. Areas of predominantly indigenous vegetation;

		<ul style="list-style-type: none"> ii. Habitats of trout and salmon unless detrimental to indigenous biological diversity; iii. Areas buffering or linking ecosystems
		<p>Policy 5.4.9 Activities in the Coastal Marine Area</p> <p>In the coastal marine area minimise adverse effects from activities by all of the following:</p> <ul style="list-style-type: none"> a) Avoiding activities that do not have a functional need to locate in the coastal marine area; b) When an activity has a functional need to locate in the coastal marine area, giving preference c) to avoiding its location in: <ul style="list-style-type: none"> i. Areas of significant indigenous vegetation and significant habitats of indigenous fauna; ii. Outstanding natural features, landscapes and seascapes; iii. Areas of outstanding natural character; iv. Places or areas containing historic heritage of regional or national significance; v. Areas subject to significant natural hazard risk; d) Where it is not practicable to avoid locating in the areas listed in b) above, because of the functional needs of that activity: <ul style="list-style-type: none"> i. Avoid adverse effects on the values that contribute to the significant or outstanding nature of b)i.-iii; ii. Avoid significant adverse effects on natural character in all other areas of the coastal environment; iii. Avoid, remedy or mitigate adverse effects on values as necessary to preserve historic heritage of regional or national significance; iv. Minimise any increase in natural hazard risk through mitigation measures; v. Avoiding, remedying, or mitigating adverse effects on other values;
	<p>Regional Plan: Coast For Otago (Section 1.1: <i>Purpose of the Plan. The purpose of this Plan is to provide a framework for the integrated and sustainable management of Otago's coastal marine area</i>)</p>	<p>Section 2.10.2: Fisheries Act 1983</p> <p>This Regional Plan: Coast for Otago does not contain any provisions relating to the management or allocation of the fishery resource within Otago's coastal marine area.</p> <p>Objective 5.3.1</p> <p>To provide for the use and development of Otago's coastal marine area while maintaining or enhancing its natural character, outstanding natural features and landscapes, and its ecosystem, amenity, cultural and historical values.</p>