Fisheries New Zealand
Tini a Tangaroa

Review of sustainability measures for blue cod (BCO 8) for 2025/26

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Guide to this discussion document and consultation

We are consulting on changes to the catch limits and allowances for blue cod in BCO 8 under the Fisheries Act 1996 (**the Act**). We welcome your feedback on the proposed options for this stock and any alternatives. Your feedback will be incorporated into our final advice to the Minister for Oceans and Fisheries and will help to inform their decisions on any changes.

Further information

If you are interested in the evidence used to develop the proposals, you can refer to the Fisheries Assessment Plenary. For more information about fisheries management in New Zealand, see our fisheries management webpage, and our webpage about the Quota Management System (QMS).

Sending us your views

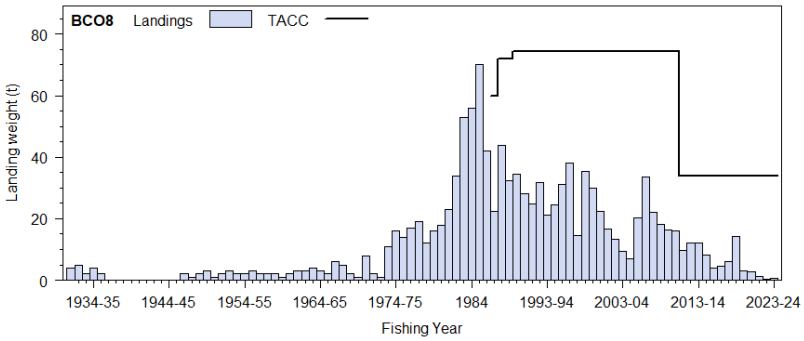
Submissions on these proposals will be received by Fisheries New Zealand through to **5pm on 23 July 2025**, by email to FMSubmissions@mpi.govt.nz. Submissions are public information and subject to the Official Information Act 1982.

More information about how to send us feedback is on page 9 of this document.

Blue cod (BCO 8) – Taranaki & the west coast of Wellington

Part 1: Overview

Blue cod / Rāwaru (*Parapercis colias*)



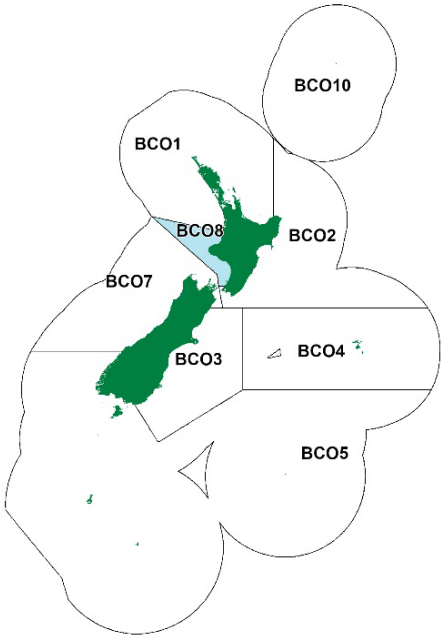


Figure 1: Quota Management Areas (QMAs) for blue cod, with BCO 8 highlighted. Left figure shows trends in commercial landings for BCO 8 since 1934, with a black line indicating the level of the TACC.

Rationale for review

1. Fisheries New Zealand (**FNZ**) is reviewing sustainability measures for blue cod in BCO 8 for the 1 October 2025 fishing year (Figure 1).
2. In recent years there have been several anecdotal reports of blue cod abundance decline within this QMA from fishers across different sectors.
3. BCO 8 is a Group 3 stock under the National Inshore Finfish Plan; annual commercial catch typically under 10 tonnes (BCO 8 only exceeded this once in the last decade, 14 tonnes in 2018). In light of limited available information Group 3 stocks are monitored against trends in catch over time.
4. Over the last decade BCO 8 commercial annual landings have followed a declining trend, averaging 4.5 tonnes against a 34 tonne Total Allowable Commercial Catch (**TACC**). Over the same period, the number of commercial vessels reporting blue cod catch from BCO 8 has declined from 35 to 16 vessels. The last five years have shown that BCO 8 commercial annual landings have continued to decline, averaging 1.6 tonnes annually.
5. Since 2011 there have been three iterations of the National Panel Survey of Marine Recreational Fishers (**NPS**), which has shown a declining trend in BCO 8 recreational catch[1]; from an estimated 50.82 tonnes in 2011 to 8.33 tonnes in 2022,[2] against a recreational allowance of 188 tonnes. As the 2011 harvest estimate was 27% of the recreational allowance and the 2022 harvest estimate was 4%, FNZ considers that the current recreational allowance is excessive. The National Panel Survey time series has shown that the number of recreational fishing trips taking place has declined in BCO 8; this follows a nationwide declining trend in fishing trips across New Zealand's recreational fisheries.
6. The 2022 (most recent) National Panel Survey found, across the whole of BCO 8, that 78% of fishing trips took five or fewer blue cod, while 53% of fishing trips took two or fewer. However, boat ramp survey data shows that this differs between different areas within BCO 8. The current recreational daily limit for BCO 8 is 10 blue cod per fisher per day.

[1] Wynne-Jones et al., 2014; Wynne-Jones et al., 2019; Heinemann and Gray, 2024.

[2] These BCO 8 recreational harvest estimates also include harvest estimates from amateur charter fishing vessels, whereas some BCO 8 recreational harvest estimates quoted later do not.

7. BCO 8 stock status is highly uncertain, and it is unknown if current catch levels are sustainable; that is maintaining the stock at or above, or moving the stock to, a level at or above B_{MSY}.[3] While there is a declining trend in catch, there has also been a decline in both recreational and commercial fishing activity. Therefore, it is uncertain if the decline in catch infers a sustainability concern or a change in fisher behaviour over time.

8. The National Blue Cod Strategy (published in 2018) states that during public consultation respondents recognised challenges with BCO 8 which includes; recreational daily limits, released fish mortality, concentrated effort on small areas, localised depletion, season open during spawning, lack of education on fishing rules, illegal take and habitat loss. As the stock status is uncertain, the Strategy's traffic light system (indicator of blue cod stock health) cannot be accurately applied to BCO 8, however, the proposed options can align to a green, orange and red rating. The current daily limit for BCO 8 of 10 blue cod aligns to an orange rating.

9. In light of anecdotal concerns and declining catch trends, FNZ is seeking feedback from stakeholders, tangata whenua, and the public on proposed changes to the catch limits, allowances, and recreational daily limit of BCO 8 (Tables 1 and 2).

10. A decision to vary the TAC of BCO 8 would be made by the Minister for Oceans and Fisheries under section 13(2A) of the Fisheries Act 1996 (**the Act**) and would apply from 1 October 2025 (the beginning of the next fishing year).

Table 1: Proposed management option (in tonnes) for BCO 8 from 1 October 2025.

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Status quo	226	34	2	188	2
Option A1	58 (↓ 168)	34	2	20 (↓ 168)	2
Option A2	16 (↓ 210)	5 (↓ 29)	2	8 (↓ 180)	1 (↓ 1)
Option A3	10 (↓ 216)	2 (↓ 32)	2	5 (↓ 183)	1 (↓ 1)

Table 2: Proposed recreational daily limit options (in number of blue cod) for BCO 8.

Option	Maximum blue cod daily limit
Option B1 *(current settings)*	10
Option B2	2 (↓ 8)
Option B3	1 (↓ 9)

11. FNZ welcomes feedback on these proposed options or any alternatives.

Deemed Value Rates

12. FNZ is satisfied that the current deemed value rates of BCO 8 provide sufficient incentives for fishers to balance their catch with ACE (consistent with section 75(2)(a) of the Act and the Deemed Value Guidelines). Therefore, no changes are proposed to the deemed value rates at this time. However, FNZ welcomes any feedback on these settings.

13. FNZ acknowledges that if the TACCs of these stocks are varied, subsequent changes in fishing behaviour and the ACE market may result in the need for deemed values to be re-evaluated in future.

[3] The average stock biomass that results from taking an average catch of the maximum sustainable yield (*MSY*).

Analysis of options

Status quo

TAC	226	TACC	34	Customary Māori	2	Recreational	188	Other mortality	2

14. The highest recreational BCO 8 harvest estimate, during the national panel survey time series, was 50.82 tonnes in 2011/12; in 2011 the current recreational allowance of 188 tonnes was set (discussed further under '*Fishery characteristics and settings*'). Based on the most recent national panel survey estimate in 2022/23 (8.33 ±2.17 tonnes), which is 4% of the current allowance, FNZ considers that maintaining the *status quo* is not appropriate and therefore is not proposed as an option.

Option A1 – 74% TAC decrease

TAC	53	TACC	34	Customary Māori	2	Recreational	20	Other mortality	2

15. This TAC addresses the excessively high recreational allowance (relative to recently estimated harvest levels) by setting it to the mean average estimated recreational catch of the 2017/18 survey and 2022/23 survey (19 tonnes). This option aligns to Option B1; maintaining the BCO 8 recreational daily limit at 10 blue cod per fisher per day.
16. This TAC maintains all other allowances and serves as a modified *status quo*.
17. This option assumes that BCO 8 has no sustainability concerns by allowing utilisation to continue at current levels.

Benefits

18. This option has the most consideration for utilisation by proposing the highest TAC.
19. Does not constrain recreational harvest, based on the recent national panel survey harvest estimate, so maintains the current utilisation potential for recreational fishers.
20. Maintains current commercial utilisation potential should fishers choose to increase blue cod harvest in future.

Risks

21. This option has the least consideration for anecdotal concerns regarding the decline of blue cod abundance in BCO 8.
22. Assumes fisher behaviour will not change in the immediate future.

Option A2 – 93% TAC decrease

TAC	16	TACC	5	Customary Māori	2	Recreational	8	Other mortality	1

23. This TAC sets the recreational allowance to a 15% reduction in the estimated recreational catch estimate from the 2022/23 national panel survey (8.33 tonnes). This option aligns to Option B2; reducing the BCO8 recreational daily limit to 2 blue cod per fisher per day, that is expected to constrain current levels of recreational harvest by 15%.
24. This option reduces the TACC by 85%. However, this allowance still allows current utilisation based on average commercial landings over the last ten years.
25. Provides a modest constraint on recreational harvest.
26. This option sets a nominal allowance of one tonne for 'Other sources of mortality caused by fishing' (discussed further under '*Fishery characteristics and settings*').

27. This option weighs some consideration to the anecdotal concerns regarding the decline of blue cod abundance in BCO 8 by proposing a large decrease to the TAC.

Benefits

28. While reducing TACC, this option still allows for commercial utilisation based on recent catch levels; the average five-year BCO 8 commercial annual landings is 32% of this allowance and the average ten-year BCO 8 commercial annual landings is 90% of this allowance.
29. Provides moderate consideration to addressing anecdotal concerns regarding the decline of blue cod abundance in BCO 8 by reducing commercial utilisation potential but allowing catch at current commercial levels.
30. Provides consideration to addressing anecdotal concerns regarding the decline of blue cod abundance in BCO 8 by reducing recreational utilisation.

Risks

31. Constrains current levels of recreational harvest.
32. Assumes fisher behaviour will not change in the immediate future.
33. While this option does not constrain current commercial harvest levels, the proposed deduction in TACC would make it difficult for fishers to balance their catch with available ACE.

Option A3 – 96% TAC decrease

TAC	10	TACC	2	Customary Māori	2	Recreational	5	Other mortality	1

34. This TAC sets the recreational allowance to a 39% reduction in the estimated recreational catch estimate from the 2022/23 national panel survey (8.33 tonnes). This option aligns to Option B3; reducing the BCO 8 recreational daily limit to 1 blue cod per fisher per day, that is expected to constrain current levels of recreational harvest by 39%.
35. This option reduces the TACC by 94%, the average five-year BCO 8 commercial annual landings is 80% of this allowance.
36. This option sets a nominal allowance of one tonne for 'Other sources of mortality caused by fishing' (discussed further under '*Fishery characteristics and settings*').
37. This option has the most consideration for the anecdotal reports of sustainability concerns within BCO 8 by proposing the largest decrease to the TAC.

Benefits

38. This option has the most consideration for anecdotal concerns regarding the decline of blue cod abundance in BCO 8. The TACC is effectively nominal and heavily constrains commercial harvest should fishing effort increase in future.

Risks

39. Provides the highest constraint on utilisation for both commercial and recreational fishers of the options proposed.
40. The proposed deduction in TACC would make it very difficult for fishers to balance their catch with available ACE.

Option B1 – Status quo

Maintaining BCO 8 daily limit at 10 blue cod per fisher per day.

41. This option aligns to Option A1.

42. This option considers that BCO 8 has no sustainability concerns by allowing recreational utilisation at current levels, as well as allowing further utilisation (utilisation potential above current recreational harvest levels) in future.

43. This option is not expected to have any effect on current levels of harvest.

44. This option aligns to a 'orange' rating under the National Blue Cod Strategy, i.e. would assume that BCO 8 is either declining from healthy levels or rebuilding to healthy levels.

Benefits

45. This option does not constrain recreational harvest, based on the recent national panel survey harvest estimate, so maintains current utilisation potential for recreational fishers.

Risks

46. This option has the least consideration for anecdotal concerns regarding the decline of blue cod abundance in BCO 8.

47. Assumes fisher behaviour will not change in the immediate future.

Option B2

Reducing BCO 8 daily limit to 2 blue cod per fisher per day.

48. This option aligns to Option A2, with constraint on harvest.

49. Based on current recreational harvest levels this option is expected to constrain overall harvest by 15% (this would constrain current estimated recreational harvest to 7.08 tonnes).

50. This option has high consideration for the anecdotal reports of sustainability concerns within BCO 8 by proposing an 80% reduction to the BCO 8 daily limit.

51. This option aligns to a 'red' rating under the National Blue Cod Strategy, i.e. assumes that BCO 8 is in trouble.

Benefits

52. This option has a strong consideration for anecdotal concerns regarding the decline of blue cod abundance in BCO 8 by constraining current recreational harvest levels and reducing utilisation potential in future.

53. This option aligns to the blue cod daily limit in the neighbouring Challenger fishing area (specifically part of BCO 7, Tasman – Farewell Spit to Clarence River). This goes some way towards removing compliance challenges in relation to recreational fishing vessels (that are domiciled in Marlborough and Wellington) that operate in the waters around The Brothers where BCO 8, BCO 7 and BCO 2 boundaries intersect and each QMA's daily limit currently differ. This currently creates a challenge in monitoring compliance with the daily limit by fishers operating in this area.[4]

Risks

54. Provides high constraint on BCO 8 utilisation for recreational fishers.

55. Assumes fisher behaviour will not change in the immediate future. Reducing the daily limit could incentivise recreational fishers to increase their fishing effort (though a daily limit of 2 reduces both the likelihood and potential impact of this compared to Option B1).

Option B3

Reducing BCO 8 daily limit to 1 blue cod per fisher per day.

56. This option aligns to Option A3.

[4] The daily limit for BCO 2 is currently 20 blue cod per fisher per day. FNZ is not aware of any sustainability concern that warrants a review of the BCO 2 daily limit. Therefore, reducing the BCO 8 daily limit to 2 alone will not completely eliminate this concern.

57.	Based on current recreational harvest levels this option is expected to constrain overall harvest by 39% (this would constrain current estimated harvest to 5.08 tonnes).
58.	This option has the highest consideration for the anecdotal reports of sustainability concerns within BCO 8 by proposing an 90% reduction to the BCO 8 daily limit.
59.	This option aligns to a 'red' rating under the National Blue Cod Strategy, i.e. assumes that BCO 8 is in trouble.
60.	FNZ notes that the daily limit of one, proposed under this option, is low compared to other blue cod stocks (noting that the Fiordland Marine Area has a blue cod daily limit of one). However, as blue cod are most common in the cooler waters south of Cook Strait, BCO 8 catch has declined in recent years and that there are cross-sector anecdotal concerns in respect to BCO 8, FNZ considers this is an appropriate minimum daily limit to be consulted on.
Benefits	
61.	This option has the most consideration for anecdotal concerns regarding the decline of blue cod abundance in BCO 8 by constraining current recreational harvest levels and significantly reducing utilisation potential in future.
Risks	
62.	Provides the highest constraint on BCO 8 utilisation for recreational fishers of the daily limit options proposed.
63.	Assumes fisher behaviour will not change in the immediate future. Reducing the daily limit could incentivise recreational fishers to increase their fishing effort (though a daily limit of 1 significantly reduces both the likelihood and potential impact of this occurring compared to Options B1 and B2.

Who will be affected by the proposed changes?

64. The BCO 8 fishery extends from Titahi Bay, Porirua, to Tirua Point, just south of Marokopa, aligning with the Fisheries Management Area 8. BCO 8 is a shared fishery with harvesting by customary, recreational, and commercial fishers.

65. Commercial interests in this stock include quota owners, vessel owner-operators, contract fishers in the catching sector and Licensed Fish Receivers (**LFRs**). The interests of these groups are represented through organisations such as Seafood New Zealand. Over the last three years there has been an average of 39 quota owners of BCO 8, with 10% of quota being settlement quota. Over this period 17 permit holders, across 17 vessels, have landed BCO 8 to 11 LFRs.

66. BCO 8 is a relatively popular fishery for recreational fishers who reside throughout the QMA. This includes amateur charter vessels and private boat owners, some of whom come from outside the QMA (top of the South Island).

67. Tāngata whenua have both commercial and customary interests in BCO 8. There are many iwi and hapu distributed across the BCO 8 area. The BCO 8 QMA also overlaps with the lower part of the rohe of Ngā Hapū o Te Uru o Tainui (West coast of Waikato).

Input and participation of tangata whenua

68. During previous engagement with the Ngā Hapū o Te Uru o Tainui Iwi Fisheries Forum, members of the forum expressed concerns about BCO 8 and the sustainability of the fishery. This review partly responds to these concerns.

69. FNZ has circulated a summary of the stocks proposed for review (including BCO 8) by email to representatives of mandated iwi organisations in the BCO 8 area and invited feedback.

70. The Ngā Hapū o Te Uru o Tainui Iwi Fisheries Forum held a hui on 13 May 2025. No feedback was received on the review of BCO 8 during the hui. FNZ will engage further with iwi representatives during

consultation to provide an opportunity for input into this review. FNZ also welcomes any input from tāngata whenua outside of this planned engagement.

Fishery characteristics and settings

Table 3: Fishery characteristics and settings for BCO 8.

Commercial (TACC)	
71.	BCO 8 was introduced into the Quota Management System (**QMS**) in 1986, with catch settings last modified in 2011 when a TAC of 226 tonnes was set. The current TACC is 34 tonnes.
72.	Since the introduction of BCO 8 into the QMS, the maximum annual commercial landing was 44 tonnes in 1987/88 (61% of the TACC at the time). Annual commercial landings have averaged 4.5 tonnes (13% of the current TACC) over the last decade and 1.6 tonnes (5% of the current TACC) over the last five years. In the 2023/24 fishing year, 0.6 tonnes of blue cod was commercially landed from BCO 8.
73.	BCO 8 is caught both targeted and incidentally. Over the last five years the main fisheries in this QMA are handline targeting blue cod (52% of estimated BCO 8 catch), bottom trawl targeting red gurnard (15% of BCO 8 estimated catch), targeted blue cod potting (9% of estimated catch) and the bottom longline targeting school shark (5% of estimated catch).
74.	Over the last decade, the number of vessels reporting blue cod catch from BCO 8 has declined from 35 to 16 vessels. Over the same period, the number of vessels targeting blue cod has varied between one and three annually.
75.	In 2022 a major BCO 8 target fisher exited the fishery. For the 2023/24 fishing year cod potting, targeting blue cod, accounted for approximately half of the total annual catch, with the rest predominantly as bycatch from the bottom trawl, bottom longline and rock lobster potting fisheries (see Figure 2).
76.	Across BCO 8, blue cod catch is not evenly distributed spatially. Over the last five years, statistical area 40 (the inshore area starting at Whanganui and terminating at New Plymouth) was responsible for 65% of the estimated BCO 8 catch, followed by statistical area 41 (starting at New Plymouth and, for BCO 8, terminating at Tirua Point) at 17% of estimated catch (see Figure 3).
Customary Māori	
77.	The current customary allowance in BCO 8 is 2 tonnes.
78.	FNZ records show that there have been no customary authorisations within BCO 8 over the last decade.
79.	We seek input from tāngata whenua on an appropriate allowance to account for current and future customary interests.
Recreational	
80.	The current allowance for recreational fishing in BCO 8 is 188 tonnes. This allowance was set in 2011 and was based on the point estimate from the 1999/2000 national diary survey of recreational fishers, that noted “the estimate was highly uncertain”.
81.	In light of the 2011 National Panel Survey estimating BCO 8 recreational harvest at 50.82 tonnes (±17.79 tonnes), and the most recent survey (2022)[5] estimating this to be 8.33 tonnes (±2.17 tonnes),[6] FNZ considers it is likely that this allowance did not align to actual catch in 2011 and does not now.

[5] Wynne-Jones et al. 2014; Wynne-Jones et al. 2019; Heinemann and Gray 2024.
[6] This also includes harvest estimates from amateur charter fishing vessels.

82. Virtually all BCO 8 recreational catch is taken by rod or line while on watercraft. There is a small amount of recreational BCO 8 catch that is taken by either longline/kontiki[7] or by spearfishing, with some recreational catch taken whilst 'off land' (beach, rocks or jetty).

83. Within BCO 8, over the last five years commercial fish landed by an approval under section 111 of the Act totals to just under half a tonne over that time (averaging approximately 90kg annually).

84. The National Panel Survey divides BCO 8 into three recreational fishing areas; 19 (Waitotara River to Tirua Point), 18a (Waitotara River to Manawatu River) and 18b (Manawatu River to Titahi Bay). See Figure 4.

85. While the National Panel Survey estimate of BCO 8 recreational harvest has declined over the time series (falling from an estimated 50.82 tonnes in 2011-12 to 8.33 tonnes in 2022-23) the spatial distribution of BCO 8 harvest over this time has remained relatively stable, with 58-66% (mean 63%) taken from recreational fishing area 19, 16-26 % (mean 23%) from recreational fishing area 18a and 8-21% (mean 14%) from recreational fishing area 18b (see Table 9).

86. Recent National Panel Survey data estimates nearly two-thirds of BCO 8 recreational catch comes from recreational fishing area 19. However, boat ramp interview data shows that two-thirds of fishing trips landed only one blue cod per trip, and 99% of trips were landing four blue cod or less. In recreational fishing area 18a, the range of catch bag sizes is far wider, with only a third of fishers landing one blue cod on a trip, and 83% landing four blue cod or less per trip. Bag sizes in recreational fishing area 18b are more similar to recreational fishing area 19, with 55% of fishers landing one blue cod per trip, and 95% of fishers landing four blue cod or less per trip (see Figure 6).

Other sources of mortality caused by fishing

87. The current allowance for other sources of mortality caused by fishing in BCO 8 is 2 tonnes.

88. Lining and potting are responsible for nearly three-quarters of commercial BCO 8 catch over the last five years, while bottom trawl is responsible for 17% of catch. Therefore, cryptic fishing mortality is likely to be low.

89. Reviewing landing and discard data across BCO 8 over the last five years suggests 33 kg of subminimum legal size blue cod have been returned (i.e. Y code classed discards for blue cod less than 33 cm in length, that are legally required to be returned). FNZ is of the view that the amount of Y code discards is potentially under reported.

90. A study, using cod pots as a control test of line caught subminimum legal size blue cod survival, split this control group into two treatments; half were handled without care and the other half were handled using optimal handling methods. After holding the blue cod for two weeks at 20 m depth, there was 100% survival for both treatments.[8] In respect to BCO 8, FNZ does not have data for cod pot setting depth. An FNZ workshop formed a consensus view that post release blue cod survival potential, from cod potting, decreases with increasing depth and soak time.[9]

91. In respect to line caught blue cod, the same FNZ workshop formed the consensus view that relevant survival factors for post release blue cod included depth caught, hook type/hooked location and post release predation. In depths less than 50 m, blue cod were estimated to have up to 100% survival while at depths greater than 100 m, the estimated survival for both immediate and post-release was 25–75%. Responses indicated hook location played a crucial role, with gut-hooked blue cod showing the lowest estimated survival (0–25%). Though predation was highlighted as a key factor, many of the responses showed that low numbers of blue cod were taken by predators (0–25%).[10]

92. No quantitative data on the levels of illegal blue cod catch are available.

[7] Kontiki fishing is beach launched longlining, using a small raft or float to pull hooks (attached to the longline) out to deeper water.
[8] Carbines 1999.
[9] McKenzie et al. 2023.
[10] McKenzie at al. 2023.

93. As estimated recreational catch is greater than commercial catch, incidental mortality through recreational fishing needs to be considered, especially as recreational fishers are also required to release blue cod less than 33 cm. As most BCO 8 recreational catch is through lining, then post-release survival considerations (discussed above) are relevant.

94. FNZ has limited information on recreationally fished subminimum legal sized blue cod discards. However, anecdotal feedback suggests that catching subminimum legal size blue cod in BCO 8 is common. Furthermore, released fish mortality in BCO 8 was identified by respondents in the National Blue Cod Strategy.

95. In light of limited information on illegal fishing and cryptic mortality, and that the prominent fishing methods within BCO 8 are considered to be highly selective, FNZ proposes maintaining this allowance at 2 tonnes for Option A1 and having a nominal allowance of 1 tonne for Options A2 and A3.

96. FNZ welcomes feedback on this allowance.

Supporting information and legal context

97. In Parts 2 and 3 below there is additional information to support the above analysis and proposed options. Part 2 outlines our initial assessment of the proposed changes against provisions of the Fisheries Act 1996. Part 3 provides additional figures, and more detailed science and management information which informed our analysis in Parts 1 and 2.

98. In Part 2, the proposals have been assessed against sections 9, 10, 11, and 13 of the Act. There is also information on mātaitai reserves and other customary management tools which are relevant to the Minister's decision making under section 21(4).

99. For information on how the proposed changes meet the requirements of sections 5 (Application of international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992), and 8 (Purpose) of the Act, as well as detail on the statutory considerations relevant to TAC decisions, see the Legal Appendix on our consultation webpage.

How to have your say

100. We welcome your views on these proposals. Please provide detailed information and sources to support your views where possible.

- Which option do you support for revising the TAC and allowances? Why?
- Which option do you support for the recreational daily limit? Why?
- If you do not support any of the options listed, what alternative(s) should be considered? Why?
- Are the allowances for customary Māori, recreational and other sources of mortality appropriate? Why?
- Do you think these options adequately provide for social, economic, and cultural wellbeing?
- Do you have any concerns about potential impacts of the proposed options on the environment?
- Do you have any concerns about potential impacts of climate change on BCO 8?
- Do you think there are other considerations for BCO 8 that have not been covered in this discussion?
- Do you think undersize fish, that are returned, have a reasonable likelihood of survival?
- Do you consider both the BCO 2 TAC and recreational daily limit settings to be sustainable? Why?

101. FNZ invites you to make a submission on the proposals set out in this discussion document. Consultation closes at **5pm on 23 July 2025.**

102. Please see the FNZ sustainability consultation webpage for related information, a helpful submissions template, and information on how to submit your feedback. If you cannot access the webpage or require hard copies of documents or any other information, please email FMSubmissions@mpi.govt.nz.

Part 2: Initial assessment against relevant legal provisions

Overview

103. The sections below outline FNZ's initial assessment of the proposed changes against sections 9, 10, 11, and 13 of the Act. Information to support this assessment can be found in Part 3 (Supporting information). Information on kaitiakitanga and mātaitai reserves and other customary management tools has also been provided – this is relevant to the Minister's decision making under sections 12(1)(b) and 21(4).

104. For information on how the proposed changes meet the requirements of sections 5 (Application of international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992), and 8 (Purpose of the Act), as well as detail on the statutory considerations relevant to TAC decisions, see the Legal Appendix on our consultation webpage.

Initial assessment of the proposals against section 13 of the Act

105. Table 4 below outlines FNZ's initial assessment of the proposed options for BCO 8 against section 13(2A) of the Act. This assessment has been informed by the best available information on the status of the stock (summarised under '*rationale for review*' in Part 1).

Table 4: Initial assessment under section 13(2A) of the Act for BCO 8.

Section 13(2A)	106. The biomass of BCO 8 cannot be reliably estimated in relation to B_{MSY} using the best available information, so section 13(2A) applies when setting or varying the TAC. Under this section, the Minister must set a TAC using the best available information that is not inconsistent with the objective of maintaining the stock at or above a level that supports *MSY*, or moving the stocks towards or above a level that can produce *MSY*, while having regard to the interdependence of stocks, the biological characteristics of the stocks, and any environmental conditions affecting the stocks. 107. While stock status in relation to B_{MSY} cannot be reliably estimated, commercial landings have declined over the past decade, as has estimated recreational catch over the National Panel Survey time series (starting in 2011). 108. FNZ's initial view is that all options presented for BCO 8 would not be inconsistent with the objective of maintaining the stock at or above B_{MSY}.
Section 13(2A)(b) Interdependence of stocks	109. Blue cod is an opportunistic carnivore which feeds on a wide variety of benthic invertebrates and fish, with Cook Strait blue cod reported to have a diet dominated by pelagic fish (pilchards and sprats).[11] 110. There is limited information regarding predators of blue cod. 111. The proposed decreases to the TAC of BCO 8 may well have beneficial effects for the ecosystem as blue cod are key predators that contribute to the balance of the ecosystem, noted as a predominant fish predator in southern waters.[12] However, the specific impacts are uncertain, and their extent cannot be quantified based on the information available.
Section 13(2A)(b) Biological characteristics of the stock	112. Blue cod is a bottom-dwelling species endemic to New Zealand. It can be caught from a few metres' depth to about 150 m across a range of habitats including reef edges, shingle/gravel, biogenic reefs, or sandy bottoms close to rocky outcrops. It is most common in the cooler waters south of Cook Strait. 113. Blue cod is categorised as a low productivity species.

[11] Rapson 1956.
[12] Doheny et al. 2023.

	114. Generally, blue cod exhibit a constrained home range and are therefore susceptible to localised depletion. Blue cod is relatively long lived with a maximum age of 32 years and is a protogynous hermaphrodite (individuals can change sex from female to male). This life history strategy makes a population's sex ratios particularly vulnerable to fishing impacts as large males are more likely to be fished. In turn, overfishing may then cause females to change sex, resulting in more small male fish and fewer large females. This leads to a less productive population, as observed in the Marlborough Sounds.[13] 115. Blue cod spawn from late winter to spring. Eggs are pelagic for about five days after spawning, and the larvae are pelagic for about five more days before settling onto the seabed. 116. These characteristics make blue cod less resilient to fishing pressure and localised depletion. This means a higher level of caution is warranted when setting the TAC for blue cod stocks.
Section 13(2A)(b) Environmental conditions	117. FNZ considers that environmental conditions (such as elevated ocean temperatures and marine heatwaves) are likely to be having some effect on physiology and habitat, and thus, the resilience of BCO 8 to fishing pressure, however, identifying specific impacts is difficult, and their extent cannot be quantified based on the information available. However, elevated temperatures are known to affect distribution, abundance and reproduction of blue cod and in turn is a species expected to suffer under warmer temperatures.[14] 118. There have been significant positive trends in the number of marine heatwave days, events, and intensity across New Zealand since 1981.[15] Elevated temperatures may have had effects on blue cod distribution, spawning, and recruitment. 119. Studies on blue cod from the east coast of the South Island suggest there may be a strong negative association between blue cod abundance and sex ratio along with the impacts of detritus and increasing sea surface temperature. Juvenile blue cod in particular are likely to be negatively impacted by the effects of sedimentation as they are known to inhabit shallow inshore reef margins associated with turfing algae and sponges that are exposed to land-based inputs.[16] 120. Elevated temperatures may also have an indirect impact via kelp die-off as cod depend on kelp for shelter and food.[17] A chemical tracer diet study of several New Zealand fish species, including blue cod, suggests that the historical decline of kelp forests has resulted in a less connected and more simplistic food web, and an increased energetic cost (reliance of fished stocks on higher trophic level foods) of fisheries productivity.[18] 121. Within FMA 8,[19] observed sea surface temperature trends (approximately 0.225°C per decade) has been around the national average. The observed marine heat wave intensity (approximately 0.07°C per decade) and annual marine heat wave days (approximately 11 days per decade) trends have been around the national average. The future marine heat wave intensity for FMA 8 is projected to be above the national average.[20]

[13] Kolodzey and Wing, 2022.
[14] Fisheries New Zealand 2024.
[15] Montie et al. 2023; Salinger et al. 2023.
[16] Brough et al. 2023.
[17] Wade, 2020; Cummings et al. 2021; Cook et al. 2025.
[18] Wing et al. 2022.
[19] Fisheries Management Area 8 (FMA 8) superimposes the BCO 8 QMA.
[20] Behrens et al. 2025.

Section 13(3) Factors to have regard to in considering the way and rate the stock is moved towards or above B_{MSY}	122. Section 13(3) is considered relevant to the proposed TAC changes for BCO 8 because the options aim to enable the stock to move toward or above a level that can produce *MSY*. Forward projections are not available to help FNZ determine what way and rate these options would move the stock in relation to B_{MSY}. However, logically, a larger reduction in the TAC will move the stock toward a level that supports *MSY* faster than a small reduction or no change. In considering the way and rate at which the stock is moved, the Minister must have regard to relevant social, cultural, and economic factors. Information on these factors can be found under the headings '*Who will be affected by the proposed changes?*' and '*Input and participation of tangata whenua*'. 123. In general, a TAC reduction under any of the options proposed (besides *status quo*), if below current catch levels, will have a short to medium term negative socio-economic effect on those involved in the recreational and commercial fishery. Reduced allowances may have a negative effect on the customary and recreational fishers who value the species as a food source or for sport. The economic and cultural value of the stock is likely to benefit in the longer term, however, from a higher biomass that is expected as a result of a TAC reduction.

Harvest Strategy Standard (HSS)

124. The Harvest Strategy Standard (**HSS**) is a policy statement of best practice in relation to the setting of fishery and stock targets and limits for fish stocks in New Zealand's Quota Management System (**QMS**). The HSS outlines FNZ's approach to relevant sections of the Act and, as such, forms a core input to FNZ's proposals on the management of fisheries, particularly the setting of TACs under section 13.

125. The HSS assists us to decide when a review of sustainability and related settings for a stock may be warranted, by establishing reference points and guidance for the fisheries management responses when stocks are at those reference points.

126. The default HSS management target of 40% B_0 (unfished biomass) applies to BCO 8, in addition to a soft limit of 20% B_0 and a hard limit of 10% B_0. However, there is insufficient information to estimate the status of BCO 8 in relation to these reference points.

Kaitiakitanga

127. Tāngata whenua can provide information on how they exercise kaitiakitanga, and on their values, goals, and objectives for fisheries, through Iwi Fisheries Forums and through Iwi Fisheries Plans, which set out iwi views on the management of fisheries resources and fish stocks. Table 5 below outlines relevant management outcomes and objectives from plans developed by Ngā Hapū o Te Uru o Tainui and Te Tai Hauāuru (iwi from Taranaki to Titahi Bay).

Table 5: Summary of management outcome areas and objectives from Iwi Fisheries Plans, which are relevant to the review of BCO 8.

Iwi Fisheries Plan	Relevant Management Objectives contained in plan
Ngā Hapū o Te Uru o Tainui Forum Regional Customary Fisheries Management Plan (Waikato)	Outcome Area 1: Ngaa Hapuu o Te Uru kaitiaki are able to participate in and influence fisheries decision-making. Outcome Area 2: Relationships and partnerships with key stakeholders, managers and agencies are established and maintained. • The forum generally considers all fish and shellfish species to be taonga (treasures).
Te Tai Hauāuru Iwi Fisheries Plan (Taranaki to Titahi Bay)	1. Our customary non-commercial fisheries are healthy, sustainable and supports the cultural wellbeing of Te Tai Hauāuru iwi. 2. Our commercial fisheries are sustainable and support the economic wellbeing of Te Tai Hauāuru iwi.

	3. Mana and rangatiratanga over our fisheries is restored, preserved and protected for future generations. 4. Iwi collaborate in fisheries and environmental resource management to achieve iwi driven objectives.

128. Ngā Hapū o Te Uru o Tainui's plan does not specifically reference rāwaru (blue cod) on the Forum's taonga species list, however, it is an important species to the Forum as all fish and shellfish species are acknowledged as taonga in the plan.

129. FNZ considers the proposed options are consistent with the objectives of these plans, which focus on supporting fisheries sustainability and active engagement with iwi. FNZ welcomes feedback from tāngata whenua on this view.

Mātaitai reserves and other customary management tools

130. Section 21(4) of the Act requires that, when allowing for Māori customary non-commercial interests, the Minister must take into account any mātaitai reserve in that is declared by notice in the Gazette under regulations made for the purpose under section 186, and any area closure or any fishing method restriction or prohibition imposed under section 186A or 186B.

Table 6: Mātaitai reserves and other customary management tools that apply to BCO 8.

Customary area	Management type
Marokopa Mātaitai (straddles across BCO 8 and BCO 1)	**Mātaitai reserve** Commercial fishing is not permitted within mātaitai reserves unless regulations state otherwise.
Western Taranaki Temporary Closure – within BCO 8 but does not apply	**Temporary closures** Western Taranaki closed in respect of all shellfish (except rock lobster), all seaweed (except beach cast seaweed), all sea anemones, all stingrays, and conger eel species.

131. As the proposed options intend to either maintain or decrease fishing effort in BCO 8, it is not anticipated that the options proposed would negatively impact the availability of blue cod within these areas. There could be some positive effect of reductions on blue cod abundance, but this is uncertain.

Initial assessment of the proposals against section 9 of the Act

132. Table 7 below outlines FNZ's assessment of the proposed options for BCO 8 against the environmental principles in section 9 of the Act, which the Minister must take into account when considering the TAC.

Table 7: Initial assessment of the proposed changes for BCO 8 under section 9 of the Act.

Associated or dependent species should be maintained above a level that ensures their long-term viability - Section 9(a) of the Act	133. In the BCO 8 target fishery, the target fishing methods are handline and cod potting (see '*Fishery characteristics and settings*'). These methods are considered to have minimal protected species interactions. In the last five fishing years there were no reported protected species interactions associated with these methods targeting BCO 8. However, it should be noted that there has been little to no observer or camera coverage in the fishery to verify reporting accuracy; since 2021, of the fishing events with BCO 8 catch, 0% were monitored by an observer and 13% were monitored by cameras. 134. Potting fisheries can interact with marine mammals by entangling species such as humpback whales and orcas. However, these events are rare. There have been no protected species interactions reported in the BCO 8 target fishery over the previous five years.

	135. BCO 8 is also bycaught in small amounts in bottom trawl (17% of total estimated catch over the last five years), bottom longline (12%) and setnet fisheries (8%), targeting various species, and these fisheries can interact with protected species. However, bycatch of blue cod makes up a very small component of the catch in those fisheries and so it is highly unlikely that TAC changes for BCO 8 would impact effort or interactions with associated or dependent species in those fisheries. 136. Several QMS and non-QMS species can be incidentally caught in the fisheries targeting BCO 8; primarily snapper, with a variety of other species, including hāpuku/bass, conger eels and carpet shark reported in minimal quantities. There are no known sustainability concerns for these species. 137. Based on the information on interactions summarised above, it is highly unlikely that the proposed TAC options for BCO 8 would impact the long-term viability of any associated or dependent species. In recent years catch of BCO 8 has been negligible relative to the TAC and the options proposed to reduce the TAC will not constrain catch below these recent levels. However, a lower TAC would limit potential effort for BCO 8, which may in turn limit potential interactions with associated and dependent species in the fishery in the future. 138. Some of the options proposed to reduce the recreational daily limit could reduce recreational effort in the BCO 8 fishery. However, the risk of associated and dependent species interactions in the recreational fishery is likely to be low based on the primary method used (rod and line).
Biological diversity of the aquatic environment should be maintained - Section 9(b) of the Act	139. Cod potting is a prominent method for targeting BCO 8. Previous studies have shown that potting is likely to have very little direct effect on non-target species. However, one study that reviewed the impact of crustacean potting on benthic assemblages noted that while these potted areas were characterised by species indicative of a healthy reef system, it did note there was a potential concern of potting damage on long-lived, slow growing taxa.[21] Any change of fishing effort as a result of the proposed TAC options is considered unlikely and therefore to have a direct impact on the biological diversity of the aquatic environment, however, caution may be required when considering benthic environments that could be sensitive to potting damage. 140. While responsible for a small amount of BCO 8 catch, bottom trawling can damage or remove animals living on the surface of the seabed within the trawl path. Seafloor communities can be altered, with reduced abundances of long-lived species, and lower species richness and diversity. However, as BCO 8 is not targeted by trawling, the proposed options are not expected to lead to changes in trawl footprint[22] or frequency.[23] The vast majority of trawl caught BCO 8 is in the red gurnard target fishery, where red gurnard are commonly found on sandy and muddy substrates at 20 m to 180 m depth, i.e. sites not associated with high sensitivity. 141. Blue cod is an opportunistic carnivore which feeds on a wide variety of benthic invertebrates and fish. There is limited information regarding predators of blue cod. As a top predator, blue cod may play an important role in maintaining the balance of species in coastal food webs, including in the complex habitat and reef edge habitat they prefer. They are a predator of kina on southern reefs and may play an important role in preventing the development of urchin barrens,[24] however, to what extent this applies to northern reefs is uncertain.

[21] Gall et al., 2020.
[22] The trawl footprint is the total area of the seabed that has or may have been contacted by fishing gear.
[23] Trawl frequency is the interval between trawling events for an area.
[24] Doheny et al. 2023.

	142. A decrease in the BCO 8 TAC is likely to improve blue cod abundance with positive implications for biological diversity and maintenance of the ecosystems balance. The prominent fishing methods in the BCO 8 target fishery (potting, handline and bottom longline) are understood to have minimal impacts on the benthic environment. However, blue cod are predators that are considered to have an important ecosystem function, and there could be indirect effects from changes in blue cod abundance. Specifically, if blue cod numbers decline, this may have top-down effects for other species, which could impact biological diversity and the maintenance of the ecosystem's balance. For example, the development of urchin barrens. However, all proposed options are not expected to lead to a reduction of BCO 8 abundance. 143. Some of the options proposed to reduce the recreational daily limit could reduce recreational effort in the BCO 8 fishery. However, the risk to the biological diversity of the aquatic environment in the recreational fishery is likely to be low based on the primary method used (rod and line).
Habitat of particular significance for fisheries management should be protected - Section 9(c) of the Act	144. Using the best available information, FNZ has identified a potential habitat of particular significance for fisheries management in BCO 8; Pātea Shoals (Rolling grounds) in the South Taranaki Bight. A description of this area and sensitivities, why it is considered particularly significant, and the current measures in place that restrict fishing in this area can be found in Table 12. 145. The Pātea Shoals habitat is mainly seaweed (*Ecklonia*) and sponges on rock outcrops. The main methods for targeting BCO 8 are potting, hand lining and bottom long lining. These methods are considered to have low levels of potential to impact benthic impact compared to setnet and trawl. Cod potting is a prominent method for targeting BCO 8, with previous studies showing potting is likely to have very little direct effect on non-target species. 146. In respect to trawling, there are no regulated prohibitions or restrictions within the Pātea Shoals. However, Geospatial Position Reporting (**GPR**) data from inshore trawl vessels indicates that over the last five years that trawl events catching blue cod within the vicinity of the Pātea Shoals has been minimal, presumedly to avoid trawl gear getting damaged on the reefs. 147. The proposed options are not expected to change fisher behaviour and therefore any change in fishing effort within the Pātea Shoals (and therefore potential impact), as a result of the proposed TAC options, is considered unlikely. 148. The proposed options are to either maintain the *status quo* or decrease the TAC, with neither option expected to lead to changes in fisher behaviour. Therefore, FNZ considers that the risk of adverse effects for this habitat will either stay the same, or reduce, through the TAC options being consulted on. 149. Some of the options proposed to reduce the recreational daily limit could reduce recreational effort in the BCO 8 fishery. However, the risk to Pātea Shoals (Rolling grounds) in the recreational fishery is likely to be low based on the primary method used (rod and line).

Initial assessment of the proposals against section 11 of the Act

150. Section 11 of the Act sets out various matters that the Minister must take into account (sections 11(1) and 11(2A)) or have regard to (section 11(2)) when setting or varying sustainability measures such as the proposed TAC changes. The matters relevant to this review under section 11 are set out below.

Table 8: Initial assessment of the proposed changes under section 11 of the Act.

The Minister must take into account:

Effects of fishing on any stock and the aquatic environment – section 11(1)(a)	151. The effects of fishing for BCO 8, associated species, and the environment, could be influenced by changes in the TAC, and the Minister should take this into account in their TAC decision. 152. Cod potting has minimal effects on other stocks or the aquatic environment. Contact with the seabed from the deployment of cod pots is unlikely to cause any significant damage to benthic invertebrates.
Existing controls that apply to the stock or area – section 11(1)(b)	153. All of BCO 8 is subject to a recreational daily limit of 10 fish per fisher per day. 154. The minimum legal size for both recreational and commercial fishing is 33 cm. 155. Several areas within the shallower inshore waters are closed to mobile bottom-contacting fishing methods, such as Danish seining 3 nautical miles out along the BCO 8 coast[25] and trawl and set net restrictions along the North Island West Coast.[26] 156. Restricted areas around Taranaki, to protect petroleum installations, prohibits fishing in these areas.[27]
The natural variability of the stock – section 11(1)(c)	157. There is little information available about natural variability of blue cod stocks. Based on the maximum age of blue cod, FNZ considers it likely there is low natural variability in unfished populations of blue cod.
Fisheries plans, and conservation and fisheries services – section 11(2A)	158. National Inshore Finfish Fisheries Plan: BCO 8 is managed as a Group 3 stock under this Plan. Group 1 stocks provide higher levels of benefit and are highly desirable to all sectors. Group 3 stocks provide lower overall levels of benefit and use, which differ between sectors and regions. Management provides for lower levels of use, with lower levels of information to monitor their status. This group includes QMS stocks that typically have annual commercial catches under 10 tonnes. Stocks are monitored against trends in catch over time, and any other relevant information. 159. National Blue Cod Strategy: Published in 2018, this sets out the strategic direction for blue cod stocks including BCO 8. The Strategy document identifies the following issues for BCO 8 in order of perceived threat (with 1 the highest): 1. Recreational daily limits. 2. Released fish mortality. 3. Concentrated effort within small areas. 4. Localised depletion. 5. Season open during spawning. 6. Lack of education on fishing rules. 7. Illegal take. 8. Habitat loss. 160. As the stock status is uncertain, the Strategy's traffic light system (indicator of blue cod stock health) cannot be accurately applied to BCO 8. However, the proposed options can align to a green, orange and red rating. **Fisheries and conservation services** 161. Fisheries and conservation services of significance have been described throughout this paper where relevant.

[25] Fisheries (Central Area Commercial Fishing) Regulations 1986. SR 1986/217.
[26] Hector's and Māui dolphin Threat Management Plan, and North Island fisheries measures, 1 October 2020.
[27] FNZ notes that these closures are outside of the Act, but are relevant existing controls.

	162. Services of relevance to BCO 8 include observer and camera coverage (see Table 7), and the tools used to enforce compliance with management settings.
The Minister must have regard to:	
Relevant statements, plans, strategies, provisions, and documents - section 11(2)	**Regional plans:** 163. There are four regional councils within the boundaries of BCO 8; Greater Wellington Regional Council, Horizons Regional Council (Manawatū-Whanganui), Taranaki Regional Council and Waikato Regional Council. 164. These regions have policy statements and plans to manage the coastal and freshwater environments, including terrestrial and coastal linkages, ecosystems, and habitats. The provisions of these various documents are, for the most part, of a general nature and focus mostly on land-based stressors on the marine environment. There are no provisions specific to BCO 8. 165. FNZ has reviewed the documents and the provisions that might be considered relevant. A summary of these can be found on our website here. FNZ considers the options in this paper are all consistent with the objectives of these relevant plans.
Non-mandatory relevant considerations	
Other plans and strategies	Te Mana o te Taiao (Aotearoa New Zealand Biodiversity Strategy) 166. FNZ considers that the sustainability measures proposed for BCO 8 are generally consistent with relevant objectives of Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy. This includes Objective 10, which is to ensure that ecosystems are protected, restored, resilient and connected from mountain tops to ocean depths; and Objective 12, which is to manage natural resources sustainably.

Information principles: section 10 of the Act

167. The best available information relevant to this review of BCO 8 is presented throughout this paper, and uncertainties in the information have been highlighted where relevant. The table below provides an additional summary of the best available information and key areas of uncertainty, unreliability, or inadequacy in information. As per section 10(c) of the Act, caution is required in decision making where information is uncertain, unreliable, or inadequate. However, as per section 10(d) of the Act, the absence of, or any uncertainty in, any information must also not be used as a reason for postponing or failing to make a decision.

Table 9: Best available information and key areas of uncertainty for BCO 8.

Best available information	Key areas of uncertainty, unreliability, or inadequacy
Customary, recreational, and illegal fishing estimates: The best available information on BCO 8 customary, recreational, and illegal fishing is presented under '*Fishery characteristics and settings*'. Recreational catch information relies heavily on the three National Panel Surveys, and boat ramp surveys.	The National Panel Surveys provide some spatial information but do not provide detailed spatial data on the distribution of recreational fishing across BCO 8. Uncertainty from boat ramp sampling has been incorporated with uncertainty in the annual harvest estimates from the National Panel Survey 2024 publication for BCO 8. There is uncertainty in the magnitude and distribution of customary, recreational, and illegal fishing occurring throughout BCO 8.

Best available information	Key areas of uncertainty, unreliability, or inadequacy
	The information on authorised customary harvest in BCO 8 is considered incomplete.
Environmental impacts	Best available information has been assessed to identify potential habitats of particular significance for fisheries management. Given their distribution in relation to blue cod target fishing and their ecological characteristics, FNZ does not consider direct or indirect effects of the options proposed are likely.

Additional figures

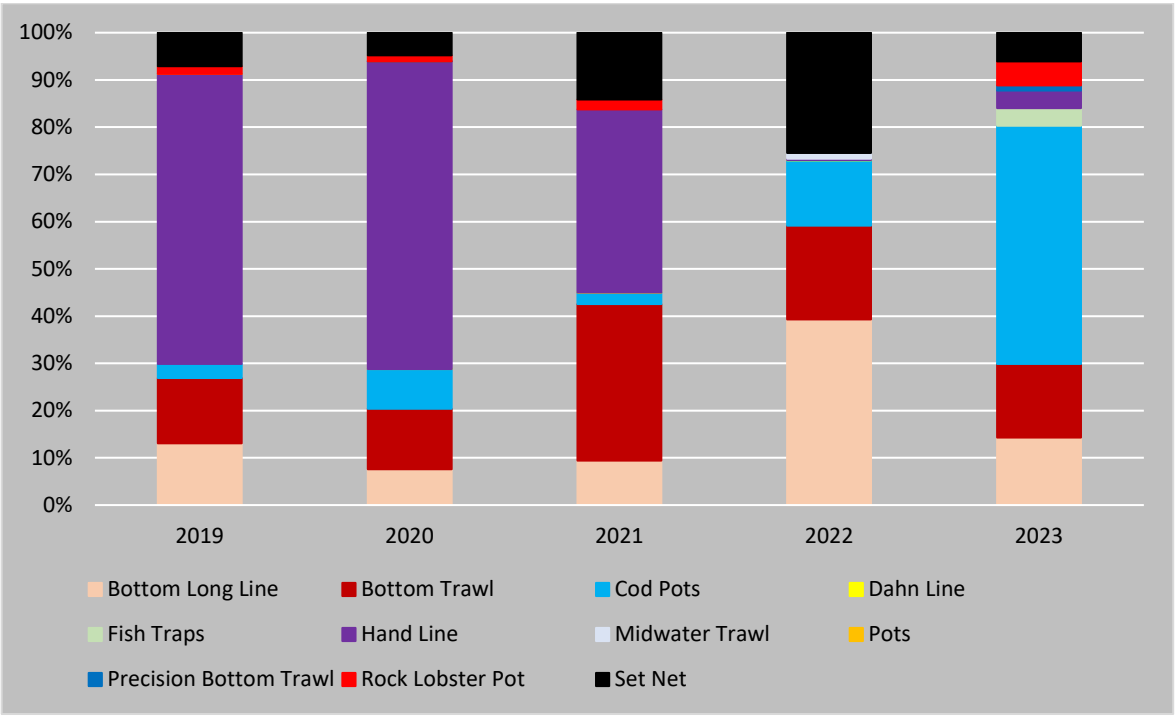


Figure 2: Proportion of estimated BCO 8 commercial catches by fishing method over the last 5 fishing years (2019/20 to 2023/24).

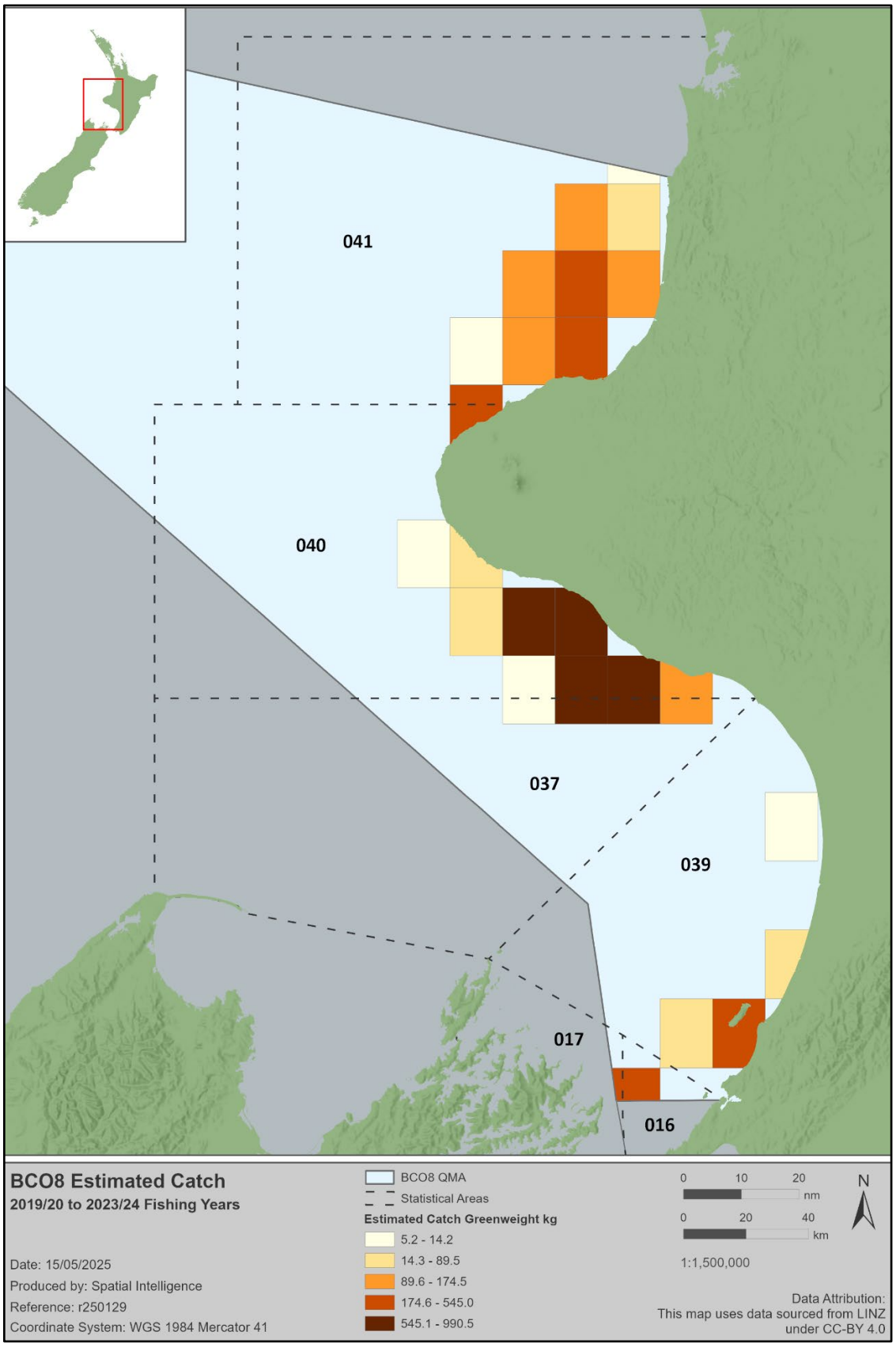


Figure 3: Estimated blue cod commercial catch over the last 5 fishing years across the BCO 8 QMA (12 nautical mile resolution). Note this excludes grid data where less than 3 fishers are represented.

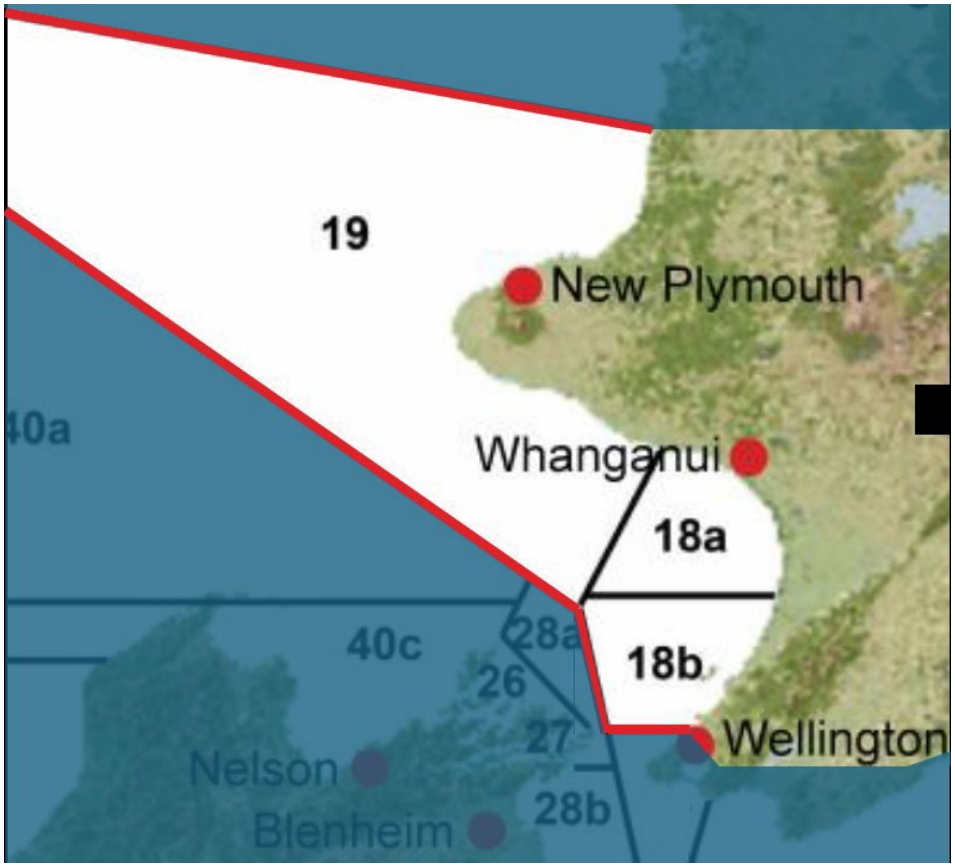


Figure 4: BCO 8 Recreational Fishing Areas; 19 (Waitotara River to Tirua Point), 18a (Waitotara River to Manawatu) and 18b (Manawatu River to Titahi Bay).

Table 10: National Panel Survey BCO 8 harvest estimate by reporting area and total QMA. Estimates exclude amateur charter fishing vessel, customary and s 111 catch (National Panel Survey published estimates include catch from amateur charter fishing vessels).

Year	BCO 8 Recreational Fishing Area	Fishers surveyed	Trips surveyed	Mean blue cod weight (kg)	Estimated Harvest Weight (tonnes)	Coefficient of Variation	Relative total BCO 8 harvest (%)
2011-12	18a	16	48	0.54	12.28	0.37	26%
	18b	20	31	0.54	3.88	0.3	8%
	19	39	99	0.54	31.45	0.53	66%
	Combined	74	178	0.54	47.62	0.37	
2017-18	18a	17	38	0.48	5.91	0.34	20%
	18b	22	43	0.49	6.1	0.3	21%
	19	30	72	0.49	16.89	0.3	58%
	Combined	64	153	0.49	28.9	0.21	
2022-23	18a	7	8	0.41	1.23	0.54	16%
	18b	10	12	0.41	1.41	0.54	18%
	19	16	29	0.44	5.17	0.34	66%
	Combined	32	49	0.43	7.81	0.26	

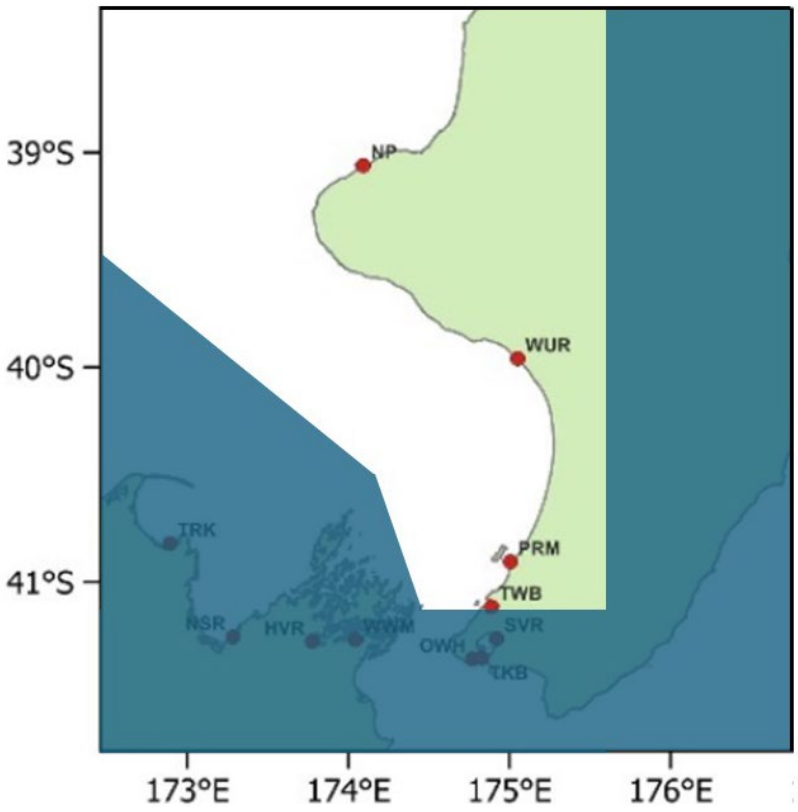


Figure 5: BCO 8 boat ramp sites for monitoring and additional sampling for mean weight data (associated with National Panel Survey): NP = New Plymouth (recreational fishing area 19), WUR = Whanganui (recreational fishing area 18a), PRM = Paraparaumu (recreational fishing area 18b), TWB = Twin Bridges / Mana (recreational fishing area 18b).

Table 11: Annual count of recreational BCO 8 landings from boat ramp monitoring. Monitoring started in New Plymouth in 1990/91 and was intermittent until 2014/15 when it became an annual survey. In recent years the other ramps have only been monitored in years when the National Panel Survey was conducted.

Year	New Plymouth	Whanganui	Paraparaumu	Twin Bridges
Recreational Fishing Area	19	18a	18b	18b
1990/91	27	0	0	0
1995/96	12	0	0	0
1999/00	45	0	0	0
2005/06	124	0	124	0
2006/07	68	0	198	0
2011/12	0	163	91	0
2014/15	36	0	48	81
2015/16	9	0	133	70
2016/17	41	0	0	86
2017/18	62	137	64	45
2018/19	80	0	0	37
2019/20	60	0	0	8
2020/21	44	0	0	0
2021/22	40	0	0	0
2022/23	7	116	19	116
2023/24	45	0	0	0

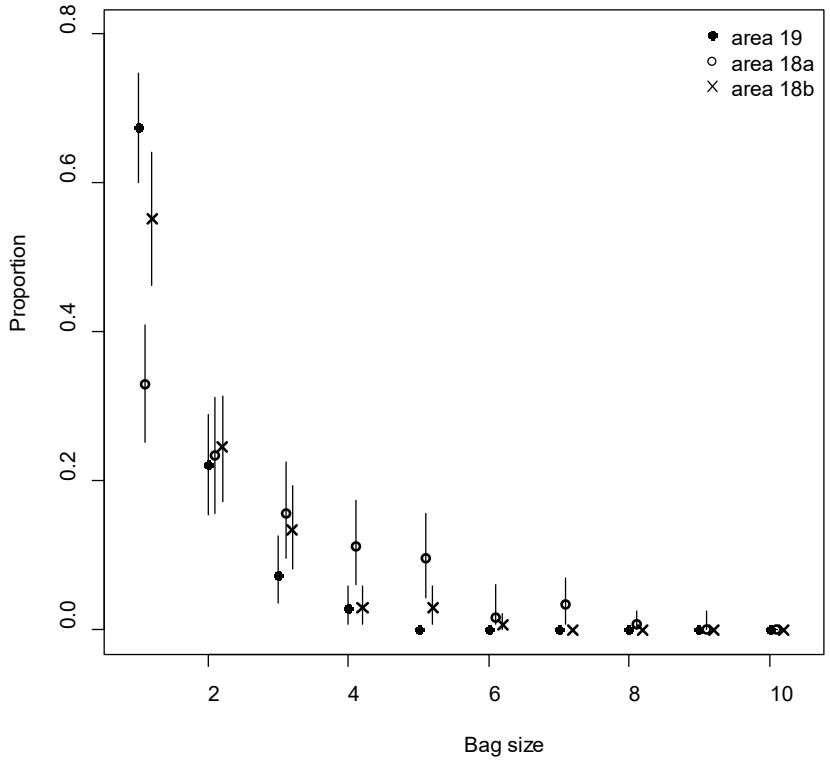


Figure 6: Median (with 95% confidence intervals) of proportional frequency of bag sizes by recreational fishing area survey (from 1000 resamples with replacement within each survey). A small number of bag sizes greater than 10 have been excluded.

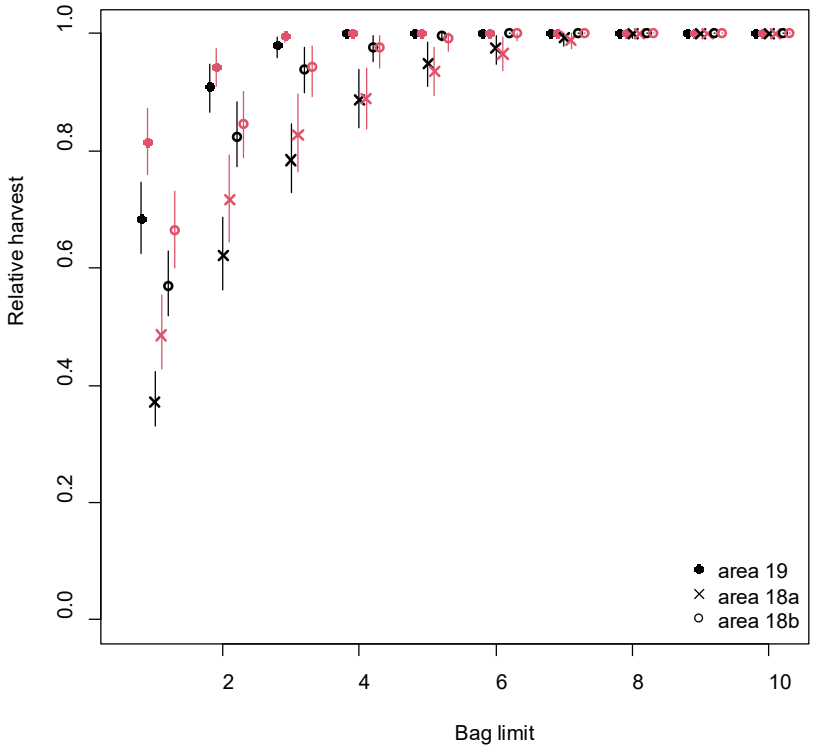


Figure 7: Proportional effect on harvest (median with 95% confidence intervals) of reducing bag limit from 10, on the basis of assumed bag frequencies from different survey areas; with catch sharing (red)[28] and without catch sharing (black). Based on 2022/23 boat ramp survey catch data.

[28] Catch sharing is where a group of fishers on the same fishing trip (i.e. on the same boat) report sharing catch between themselves, in turn this reduces a fishers share of the catch. This reduces the constraint a daily limit reduction will have on overall recreational harvest.

Table 12: Estimate of proportional reduction (median with 95% confidence intervals) in blue cod recreational harvest, relative to a current daily limit of 10, for reducing daily limit for assumed bag frequencies for each reporting area, and combined catch bags (based on 2022/23 boat ramp survey catch data).

Daily limit	Area 19	Area 18a	Area 18b	BCO 8
1	0.31 (0.25 - 0.37)	0.63 (0.58 - 0.67)	0.43 (0.37 - 0.49)	0.39 (0.34 - 0.42)
2	0.09 (0.05 - 0.13)	0.38 (0.32 - 0.43)	0.18 (0.13 - 0.23)	0.15 (0.12 - 0.18)
3	0.02 (0.01 - 0.04)	0.22 (0.16 - 0.27)	0.06 (0.03 - 0.1)	0.06 (0.04 - 0.08)
4	0 (0 - 0)	0.11 (0.06 - 0.16)	0.02 (0 - 0.05)	0.02 (0.01 - 0.03)
5	0 (0 - 0)	0.05 (0.02 - 0.09)	0 (0 - 0.01)	0.01 (0 - 0.02)
6	0 (0 - 0)	0.02 (0 - 0.05)	0 (0 - 0)	0 (0 - 0.01)
7	0 (0 - 0)	0.01 (0 - 0.02)	0 (0 - 0)	0 (0 - 0)
8	0 (0 - 0)	0 (0 - 0.01)	0 (0 - 0)	0 (0 - 0)
9	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)
10	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)	0 (0 - 0)

Potential habitat of particular significance for fisheries management

168. Using the best available information, FNZ have identified one potential habitat of particular significance for fisheries management in BCO 8. A description of this area and its sensitivities, why it is considered to be potentially particularly significant, and the current measures in place that restrict fishing in this area can be found in Table 13.

Table 13: Potential habitat of particular significance for fisheries management relevant to BCO 8.

Potential habitat of particular significance	169. Pātea Shoals (Rolling grounds) in the South Taranaki Bight.
Attributes of habitat	170. *Ecklonia* (brown algae) and patchy sponge garden on large rocky reefs interspersed with dog cockles on soft sediment. 171. Four sites were identified as being important juvenile (nursery) habitat for blue cod: • Site D: Rocky reef terrace with sponges and other sessile species. • Site K: Project Reef site, mentioned in Taranaki Regional Council coastal plan. Low mixed reef stack composed of low terrace rock, irregular mixed cobbles, and coarser soft sediments with *Ecklonia*. • Site U: Rocky reefs/ reef complexes with algal assemblages and finger sponges. • Site V: Rock platforms and outcrops, sponge, low-density *Ecklonia*.
Reasons for particular significance	172. The deepest site (30-33 m) held high densities of juvenile blue cod, consistent with it providing important nursery habitat for this species. Several other smaller nursery habitat areas were discovered on the edges of some reefs. Juvenile blue

	cod were strongly associated with sponge assemblages on rock tells and small patch reefs off the main reef. 173. Of the four sites were identified as being important juvenile habitat for blue cod: • Site D: 18% of the 218 were 0+ juveniles. Juvenile leatherjacket were also present. • Site K: 21 of 115 blue cod present were 0+ juveniles. • Site U: 25% of the 256 blue cod present were 0+ juveniles. • Site V: Blue cod were dominant at this site; 59% of the 391 individuals were 0+ juveniles.
Risks/Threats	Fishing impacts 174. Cod potting, handline and bottom longline can potentially interact with biogenic habitats, however there is no setnet or trawl fishery that targets blue cod within BCO 8 (methods considered to have the highest impact potential). 175. The vast majority of trawl caught BCO 8 is in the red gurnard target fishery. There are no regulated trawl prohibitions or restrictions within the Pātea Shoals. However, Geospatial Position Reporting (**GPR**) data from inshore trawl vessels indicates that over the last five years that trawl events catching blue cod within the vicinity of the Pātea Shoals has been minimal, presumedly to avoid trawl gear getting damaged on the reefs. Non-fishing impacts 176. Vessels anchoring over sensitive benthic habitat. 177. Sedimentation can smother biogenic habitats. 178. Eutrophication from land-based practices and finfish farming. 179. Nutrient enrichment and chemical pollutants from land-based practices.
Existing protection measures	180. Trawl and set net restrictions along the North Island West Coast to protect Maui dolphin. 181. Prohibition of Danish seining around the lower North Island within 3 nautical miles seaward of the mean high-water mark. 182. Restricted areas around Taranaki to protect petroleum installations, prohibits fishing in these areas.
Evidence	Morrison et al., 2022.

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