Fisheries New Zealand
Tini a Tangaroa

Review of Sustainability Measures for Hāpuku and Bass (HPB 7 & HPB 8) for 2022/23

Fisheries NZ Discussion Paper No: 2021/26

ISBN No: 978-1-99-101993-6 (online)
ISSN No: 2624-0165 (online)

December 2021

New Zealand Government

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1 Stocks being reviewed

Hāpuku and Bass (HPB 7, HPB 8) –West Coast and Top of the South Island, and Central (West) Coast North Island.

Hāpuku - *Polyprion oxygeneios,*
Groper, Wreckfish

Bass - *Polyprion americanus,*
Moeone, Groper

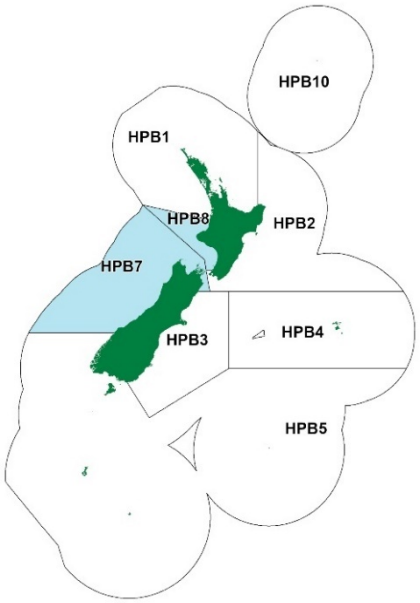


Figure 1: Quota Management Areas (QMAs) for **hāpuku and bass, with HPB 7 and HPB 8 highlighted**.

2 Summary

1. Fisheries New Zealand (FNZ) is reviewing the sustainability measures for hāpuku and bass in Quota Management Areas HPB 7 and HPB 8 for the 1 October 2022 fishing year (Figure 1).

2. Concern has been raised about the health of these stocks following declines in commercial landings and reports of localised depletion from some stakeholders. Biological vulnerability to overfishing, lack of scientific information available to guide management and the high value placed on these stocks by tāngata whenua and recreational and commercial fishers has prompted this review.

3. Despite research efforts, HPB stocks are low knowledge stocks with no reliable estimates of biomass or yield. Changes are underway that will improve scientific information. If research projects are successful, updated scientific information will be available at the end of 2023. However, FNZ considers that waiting on further research and delaying management action would be detrimental to stock sustainability.

4. To improve our understanding of these fisheries, we engaged Iwi Fisheries Forums and held multi-stakeholder meetings to gather on the water knowledge from tāngata whenua and commercial and recreational fishers. Sustainability concerns were voiced by tāngata whenua, recreational fishers, and some commercial fishers in HPB 7, whereas in HPB 8, most fishers reported that the fishery was in a good state on the whole with some reports of localised depletion. This feedback, along with differences in catch history and existing Total Allowable Commercial Catches (TACCs), has guided our approach to the Total Allowable Catch (TAC) proposals for both fishstocks.

5. FNZ is proposing to set a TAC for HPB 7 and HPB 8, noting that currently only a TACC is set in both fisheries. This will include the setting of allowances for customary and recreational fishers, as well as other sources of mortality caused by fishing.

6. As part of setting a TAC for HPB 7 and HPB 8, consideration is being given to whether:

a. A reduction to the TACC is warranted. HPB 7 and HPB 8 are both under-caught relative to the TACC which has not been reached since 2004/05 (in HPB 7) and 2010/11 (in HPB 8).
b. Changes to recreational daily limits are needed, including consideration of an accumulation limit. This would ensure recreational catch is maintained within the proposed allowance and recognises that management action should be shared across sectors to ensure the sustainability of these stocks.

7. FNZ is proposing two options for HPB 7 and HPB 8 as outlined in Table 1.

Table 1. Proposed management options (in tonnes) for HPB 7 and HPB 8 from 1 October 2022.

HPB 7							
Option	TAC	TACC	Allowances			Recreational Measures	
			Customary **Māori**	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	235.5	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
Option 1	164	110 ↓ (125.5 t)	20	6	28	2 per person	Remove from the combined daily limit of 5 with kingfish and: -Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3
Option 2	136	83 ↓ (152.5 t)	20	5	28		
HPB 8							
Option	TAC	TACC	Allowances			Recreational Measures	
			Customary **Māori**	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
Option 1	87	65 ↓ (15.1 t)	10	4	8	2 per person	Remove from the combined daily limit of 5 with kingfish and: -Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3
Option 2	76	55 ↓ (25.1 t)	10	3	8		

8. HPB 7 and HPB 8 share a border with HPB 2 in the Cook Strait and currently all three stocks have different deemed value rates. To disincentivise misreporting of catches, FNZ is also proposing to adjust the deemed value rates of HPB 7 and HPB 8 to align with the current deemed value rates for HPB 2.

9. FNZ welcomes feedback and submissions on the options proposed, or any other alternatives. It is noted that changes to catch settings will come into effect on 1 October 2022 with the exception of any change to the recreational limits. Subject to decisions made by the Minister for Oceans and Fisheries, a regulatory process to amend recreational limits would also need to follow.

3 About the stocks

3.1 Fishery characteristics

10. HPB 7 and HPB 8 are important shared fisheries that are highly valued by customary, commercial, and recreational fishers.

11. In the early 2000s, hāpuku and bass were mostly caught as bycatch in trawl fisheries targeting hoki and barracouta (in HPB 7) and tarakihi (in HPB 8). In the early 2010s, the proportion of

targeted catch increased to 50% in HPB 7 and 30% in HPB 8. More recently, the proportion of targeted catch has decreased in HPB 7 to approximately 15% in 2020/21 and increased in HPB 8 to approximately 45% in 2020/21.

12. Commercially, hāpuku and bass in HPB 7 and HPB 8 are mainly targeted via bottom longline and Dahn line (>95% targeted catch). In the last three fishing years, commercial fishers in both QMAs appear to have switched from using bottom longlines to using Dahn lines to target hāpuku and bass. This could be because Dahn lines pose very little risk to seabirds and do not require a streamer line[1].

13. Hāpuku and bass are caught as bycatch in commercial longline fisheries targeting school shark and bluenose (HPB 7 and HPB 8), ling (HPB 7) and in trawl fisheries targeting tarakihi (HPB 8).

3.2 Biology

14. Hāpuku (*Polyprion oxygeneios*) and bass (*Polyprion americanus*) are widely distributed around New Zealand, generally over rough ground, from the central shelf (100 m) to an estimated lower depth limit of 300 m for hāpuku and 500 m for bass.

15. Accounts exist that suggest that hāpuku were once more abundant in shallower coastal waters than the present day. As early as 1913, fishers reported poor catches of hāpuku at inshore fishing grounds but catches in deeper waters remained good[2]. Historically, hāpuku were caught by Māori close to the shore[3] and tāngata whenua have noted the absence of this taonga species.

16. Hāpuku mature between 10 and 13 years and may live in excess of 60 years. Estimates from southwest Australia indicate that bass are also long-lived, with males reaching a maximum age of 55 years and females a maximum age of 78 years[4]. Female bass mature at 14 years and male bass mature at 11 years.

17. Hāpuku aggregate around pinnacles, reefs, and ledges, and can be rapidly depleted from these areas by fishing with long recovery times suggesting a high level of site fidelity (except during the spawning season). Bass are known to associate with inshore and oceanic rocky reefs, pinnacles, cliffs and canyons, both individually and as loose aggregations.

18. For hāpuku, spawning occurs over winter months (May-August). Evidence from northerly migrations of pre-spawning hāpuku from Southland (and other observations from the Cook Strait hāpuku and bass fisheries) indicate that the Cook Strait may be a key spawning area for hāpuku (see Section 8.5), although the exact location is unknown.

19. Hāpuku and bass are upper trophic level predators that prey on a wide variety of fish and invertebrates. Hāpuku caught on the Chatham Rise and in Southland had stomachs dominated by fish, while cephalopods were of secondary importance. Of the 13 species of fish that could be identified, red cod was the most frequently observed (18%) followed by rough-head whiptail (3%) giant stargazer (2%) and silver conger (2%) (Stevens et al. 2011). Other feeding records from the Cook Strait have found that fish, squid and crustaceans, particularly the squat lobster, *Munida gregaria,* and natant (shrimp-like) decapods are important prey for hāpuku.

20. In the Cook Strait, hāpuku are preyed upon by sperm whales[5], although probably neither heavily nor selectively. Commercial fishers who attended the pre-consultation stakeholder meeting for HPB 8 noted that fishing activity on the shelf is sometimes interrupted by whales feeding on catch although the extent to which hāpuku contribute to the diet of large predators is unknown.

[1] https://www.gazette.govt.nz/notice/id/2021-go3770
[2] Johnson D, Haworth J (2004) Hooked: the story of the New Zealand fishing industry. Hazard Press, New Zealand
[3] Lockerbie, L (1940) Excavations at Kings Rock, Otago, with a discussion of the fish-hook barb as an ancient feature of Polynesian culture. The Journal of the Polynesian Society 49, No.195.
[4] Wakefield et al. (2013) Exceptional longevity, slow growth and late maturation infer high inherent vulnerability to exploitation for bass groper Polyprion americanus.
[5] Gomez-Villota, F. (2007) Sperm whale diet in New Zealand. Unpublished MAppSc thesis, Auckland University of Technology, 231 pp.

3.3 Management background

21. Hāpuku and bass were introduced to the Quota Management System (QMS) in 1986 as a combined species (HPB) and have an October fishing year (1 October – 30 September). Hāpuku and bass were reported together until September 2021 when reporting requirements were amended to provide for species specific reporting of hāpuku (HAP) and bass (BAS). Historically, commercial reporting of catch has been at the combined species level, preventing species-specific estimated catch data and limiting scientific information.

22. Northern HPB stocks (HPB 1 & 2) have recently been the subject of a sustainability review which was initiated following widespread concern about the state of the stocks raised by tāngata whenua and stakeholders. In response to these concerns, the Minister decided to reduce average annual commercial catch by 50% in HPB 1 & 2, and to progress the regulatory process to change the recreational daily limit of five[6] to two hāpuku/bass per fisher with an accumulation limit of three hāpuku/bass[7].

23. This review of the sustainability measures for HPB 7 and HPB 8 was initiated because of similar downward trends in commercial landings observed in HPB 1 and HPB 2 (noting that there are stock specific differences in timescale and severity).

24. QMA boundaries in the Cook Strait separate hāpuku and bass into three stocks: HPB 2, HPB 7 and HPB 8 (Figure 1). Tagging studies have indicated considerable mixing of hāpuku between Otago, South Canterbury (HPB 3) and the Cook Strait (HPB 2, 7 & 8)[8] and current fish stock boundaries do not reflect biological stocks.

25. The reduction to catch limits in HPB 2 enacted on 1 October 2021 could have the effect of displacing fishing effort into HPB 7 and HPB 8 (where the TACCs are under-caught) leading to additional pressure on hāpuku and bass in these areas (unlike HPB 3 where the TACC is consistently reached). HPB 7 and HPB 8 have not been reviewed since being introduced into the QMS and neither stock has a TAC.

26. FNZ recently engaged Iwi Fisheries Forums and held multi-stakeholder meetings to gather on the water knowledge from tāngata whenua and commercial and recreational fishers regarding HPB 7 and HPB 8 and to listen to suggestions for improved management.

27. Feedback from Iwi Fisheries Forums and stakeholder meetings varied between HPB 7 and HPB 8. Sustainability concerns were voiced by tāngata whenua, recreational fishers, and some commercial fishers in HPB 7, whereas in HPB 8, most sectors reported that the fishery was in a good state on the whole, with some reports of localised depletion in inshore areas. There was widespread agreement amongst attendees that the current recreational daily limit is too high.

28. FNZ notes that an important first step is to set an appropriate TAC and allowances for HPB 7 and HPB 8. Differences in catch trends, existing TACCs (see Section 5 below) and feedback from pre consultation stakeholder meetings has guided our approach to both fish stocks.

29. Beyond TAC decisions, FNZ recognises that a wider suite of tools are required to improve the state of the stocks. The options proposed here are focused on action that can be taken almost immediately while future controls are also considered.

30. For more information about the QMS go to https://www.mpi.govt.nz/law-and-policy/legal-overviews/fisheries/quota-management-system/.

4 Status of the stocks

31. HPB stocks are low knowledge stocks with no reliable estimates of biomass or yield. For stocks in which Maximum Sustainable Yield (MSY) is not able to be reliably estimated using available information, section 13(2A) of the Act specifies that decisions to set or vary the TAC must not be inconsistent with the objective of moving the stock to a level at or above MSY.

[6] HPB is included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish.
[7] https://www.mpi.govt.nz/dmsdocument/47620-The-Decision-letter-Minister-for-Oceans-and-Fisheries
[8] Beentjes, M.P. and Francis, M. (1999). Movements of hāpuku (Polyprion oxygenios) determined from tagging. New Zealand Journal of Marine and Freshwater Research 33(1):1-12.

32. The 2021 Fisheries Assessment Plenary states that it is not known if current catches or the TACCs are sustainable or at levels that will allow the stocks to move towards a size that will support the maximum sustainable yield.

33. These stocks are currently monitored using trends in catch. Monitoring methods used for other species such as trawl surveys and catch per unit effort (CPUE) data have been unsuccessful in producing a series of relative abundance that can be used to assess the status of both species. This is due to difficulties gathering the data required to effectively manage these stocks; due to being combined as hāpuku and bass (HPB) and due to uncertainties regarding settlement habitat and movements from juvenile to maturity and spawning.

5 Catch information and current settings within the TAC

5.1 HPB 7 commercial catch[9]

34. Commercial catch history of HPB 7 is shown in Figure 2. Since the introduction of hāpuku and bass to the QMS, commercial landings increased throughout the 1990s to reach the TACC in the early 2000s. Landings remained relatively steady in the 2000s until a downwards trend began in 2012/13. Current commercial landings of HPB 7 are 109 tonnes, approximately 46% of the TACC (calculated as the average annual landings for the past five fishing years with the 2019/20 fishing year data excluded due to the effects of COVID-19 on fishing practices).

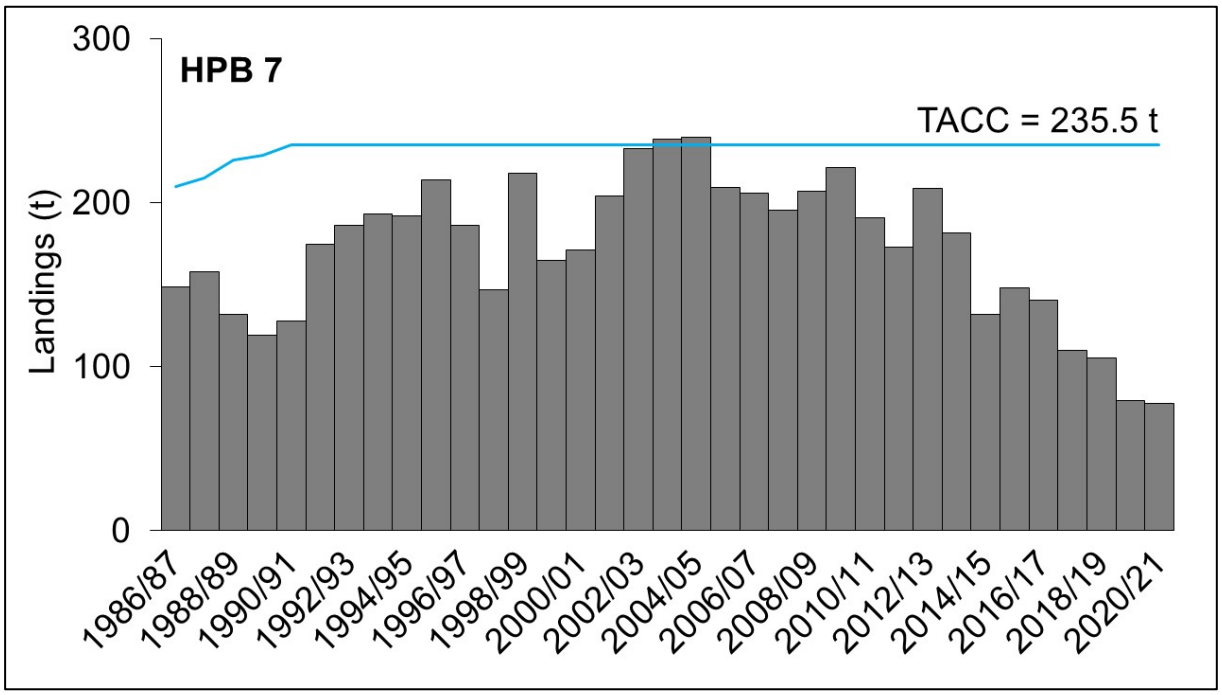


Figure 2: Annual commercial landings **(in tonnes) of hāpuku and bass from** 1986/87 to 2020/21 in HPB 7 with the current TACC of 235.5 tonnes indicated by the blue line.

35. There are various factors that can influence whether a TACC is fully utilised and fishers are not obliged to catch their entitlement in full. Lower commercial landings can be related to a change in abundance but also to market factors (e.g. ACE availability, market demand). The port price paid for HPB 7 has fluctuated between $3.30 and $4.70 over the past decade with a general increasing trend since 2014/15 (Section 10, Figure 11) indicating that port prices are unlikely to be contributing to the decline in landings.

36. There are some indications that the downwards trend in landings could be driven by decreased effort by commercial fishers targeting hāpuku and bass. The estimated catch of hāpuku and

[9] Commercial landings refers to the true weight of the landed catch. Estimated catch refers to an estimate of the catch taken at sea. It is an approximation and historically, due to a limit on the number of species that could be recorded, prone to underestimation. Catch history is the historical record of landed values.

bass caught as bycatch has fluctuated around 52 tonnes for the past decade but the estimated targeted catch of hāpuku and bass has decreased from a high of approximately 66 tonnes in 2015/16 to approximately 9 tonnes in 2020/21 (Figure 3). The number of hooks set in fishing events where hāpuku and bass were caught and recorded as the target species has also decreased over the same time period, from approximately 500,000 to 35,000 (Figure 4).

37. Reasons for decreasing effort in the HPB 7 target fishery are likely complex. Some commercial fishers who attended the pre-consultation stakeholder meeting for HPB 7 reported low abundance and low returns as reasons for decreased targeting of hāpuku and bass, with some transferring their efforts to more lucrative stocks, such as rock lobster. The introduction of electronic reporting and stricter enforcement of maritime rules relating to the inshore skipper's certification were also noted as reasons for decreasing effort and changing fisher behaviour.

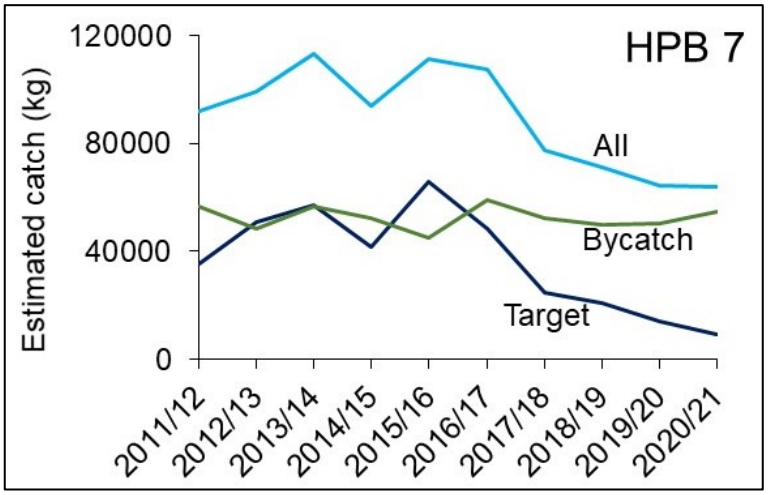


Figure 3: Estimated catch (kg) **of hāpuku and bass from** 2011/12 to 2020/21 in HPB 7 where **hāpuku and bass** were recorded as the target (dark blue line), as bycatch (green line) and the total estimated catch (light blue line).

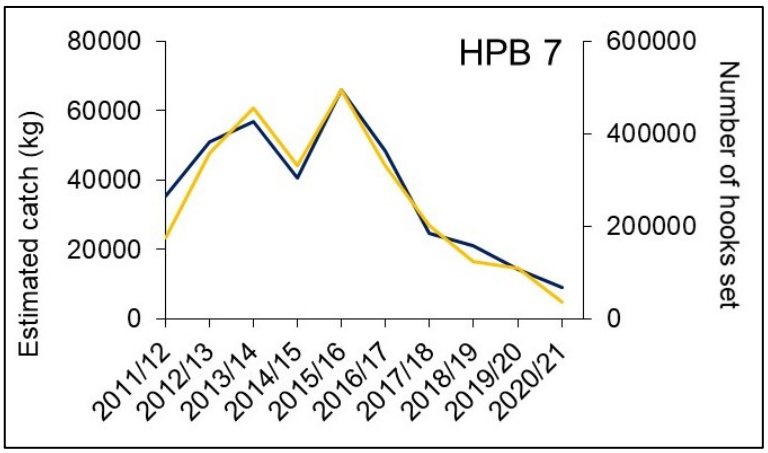


Figure 4: Estimated catch (kg) **of hāpuku and bass from** 2011/12 to 2020/21 in HPB 7 where **hāpuku and bass** were recorded as the target (dark blue line - left axis) and the total number of hooks set (yellow line – right axis).

5.2 HPB 8 commercial catch

38. Commercial catch history of HPB 8 is shown in Figure 5. Since the introduction of hāpuku and bass to the QMS, commercial landings increased to approximately the level of the TACC in the mid-90s. Landings remained relatively steady throughout the two decades that followed and long-term average landings[10] are approximately 62 tonnes or 75% of the TACC. In the last three

[10] Defined here as the average landings over the last 10 fishing years excluding the 2019/20 fishing year.

fishing years, landings have dropped to <50 tonnes and current commercial landings[11] of HPB 8 are 55 tonnes, approximately 69% of the TACC.

39. Similarly to HPB 7, port prices are unlikely to be contributing to the recent lower landings. The port price paid for HPB 8 has fluctuated between $4 and $6 for the past decade reaching a high of $6.32 in the 2020/21 fishing year (Section 10, Figure 11).

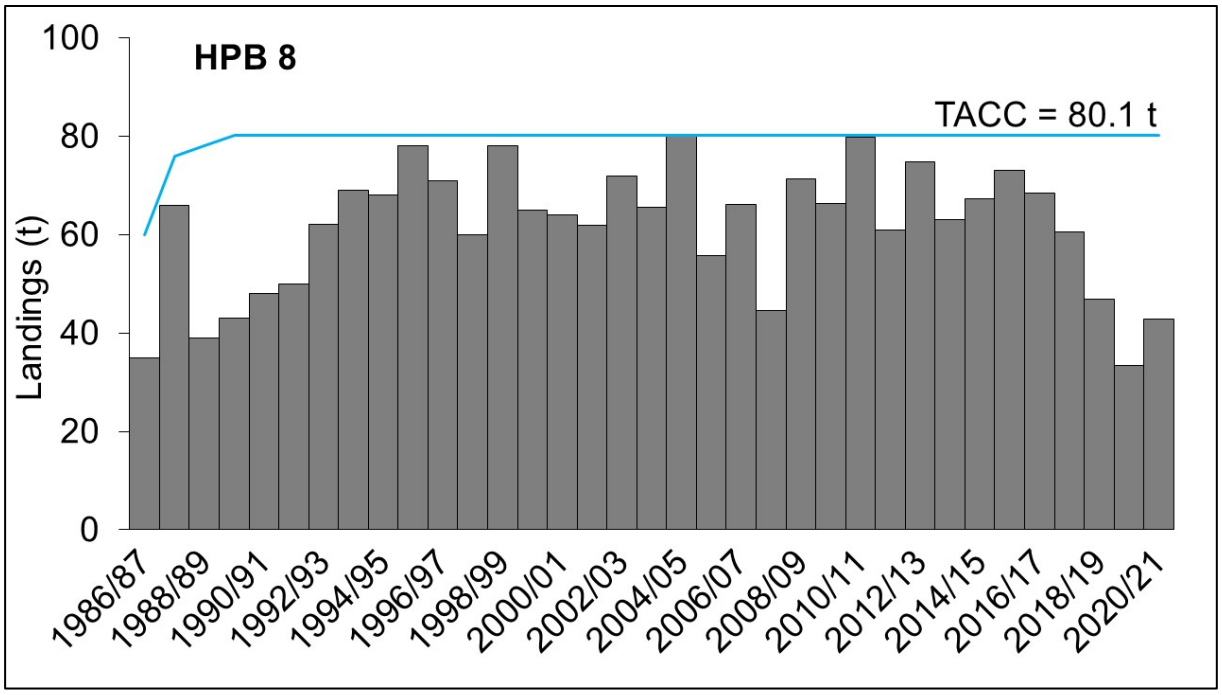


Figure 5: Annual commercial landings **(in tonnes) of hāpuku and bass from** 1986/87 to 2020/21 in HPB 8 with the current TACC of 80.1 tonnes indicated by the blue line.

40. In contrast to HPB 7, there are some indications that recent lower annual commercial landings of HPB 8 are the result of decreases in hāpuku and bass caught as bycatch. The estimated targeted catch has fluctuated between 10 and 20 tonnes over the past decade, averaging approximately 15 tonnes (Figure 6) whereas estimates of hāpuku and bass caught as bycatch have decreased from approximately 36 tonnes in 2016/17 to approximately 18 tonnes in 2020/21.

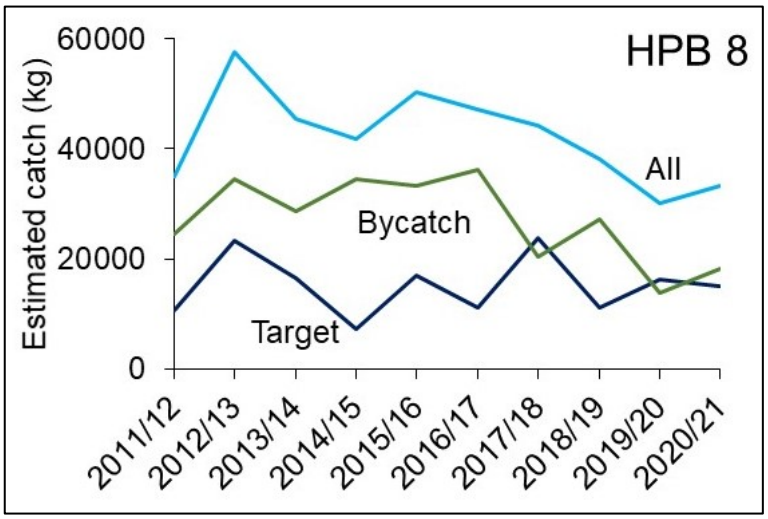


Figure 6: Estimated catch (kg) of hāpuku and bass from 2011/12 to 2020/21 in HPB 8 where hāpuku and bass were recorded as the target (dark blue line), as bycatch (green line) and the total estimated catch (light blue line).

[11]Current commercial landings are calculated as the average annual landings for the past five fishing years with the 2019/20 fishing year data excluded due to the unknown effects of COVID-19 on fishing practices.

41. Hāpuku and bass in HPB 8 are mainly caught as bycatch in bottom longline fisheries targeting school shark, bluenose and ling. Commercial fishers who attended pre-consultation stakeholder meetings noted that there has been a decrease in school shark availability in recent years and there is some indication that effort in associated fisheries has decreased, contributing to the decrease in HPB caught as bycatch (Figure 7a). HPB 8 bycatch in trawl fisheries has also decreased concurrently with the number of fishing events (Figure 7b).

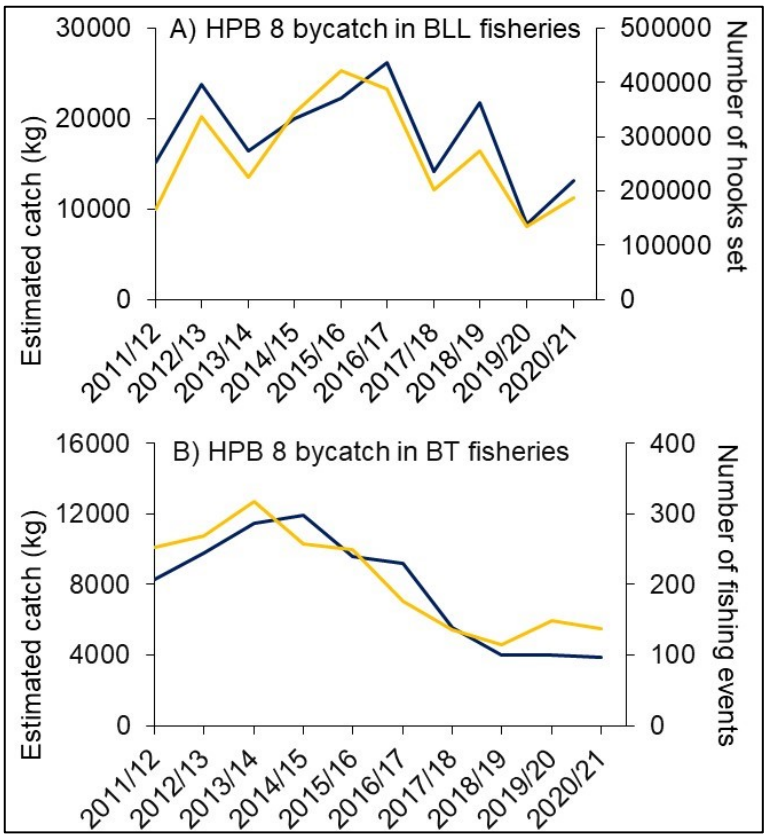


Figure 7: **Estimated catch (kg) of hāpuku and bass** caught as bycatch in (a) bottom longline (BLL) fisheries and (b) bottom trawl (BT) fisheries from 2011/12 to 2020/21. The dark blue line is estimated HPB greenweight (kg) and the yellow line is (a) number of hooks in BLL fishery and (b) number of fishing events in BT fishery.

5.3 Customary Māori

42. There is currently no customary Māori allowance set for HPB 7 or HPB 8 and customary catch information for these stocks is highly uncertain. Information supplied from customary fishing permit authorisations indicates that since 1999:

    a. Seven permits have been issued for customary use in HPB 7 none of these permits recorded what was harvested.
    b. No permits have been issued for HPB 8.

43. FNZ recognises that this information is incomplete and unlikely to reflect current customary use. The small amount of customary reporting may reflect that tāngata whenua are using recreational fishing regulations for their harvest. Also, tāngata whenua north of Kahurangi Point and in the Marlborough Sounds and Tasman/Golden Bays area (HPB 7) and in areas of Taranaki and the Kapiti Coast (HPB 8) are still operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013, which do not require that customary permits or catches be reported.

44. Given uncertainty regarding the customary harvest of hāpuku and bass, FNZ seeks input from tāngata whenua to inform advice on the provision of an allowance for customary Māori fishing.

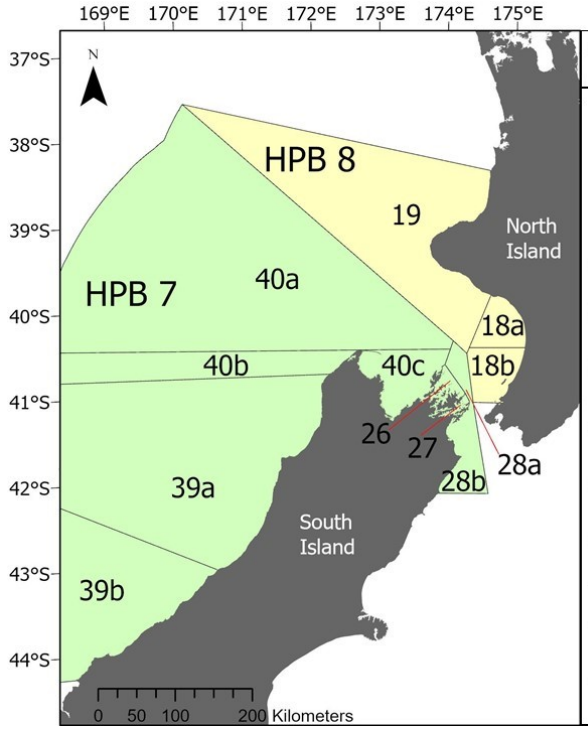
5.4 Recreational

45. Hāpuku and bass are popular recreational species typically taken by rod and line from trailer boats and large vessels. Technological improvements in fishing gear and access to larger boats has allowed recreational fishers to access hāpuku and bass in deep waters that were once only accessible to commercial vessels.

46. There is currently no recreational allowance set for HPB 7 or HPB 8. However, under the Fisheries (Amateur Fishing) Regulations 2013 hāpuku and bass are included in a combined daily limit of five with kingfish. Within this combined daily limit, a fisher may only take a maximum of three kingfish but could take up to five hāpuku/bass if no kingfish are taken.

47. The best available information on current recreational catch is from the 2017/18 National Panel Survey of Marine Recreational Fishers (NPS). The 2017/18 NPS estimated the recreational harvest of hāpuku/bass was 35.4 tonnes (CV = 0.35) in HPB 7 and 6.2 tonnes (CV = 0.49) in HPB 8. Approximately 90% of daily bag sizes in HPB 7 were three or fewer hāpuku/bass and approximately 90% of daily bag sizes in HPB 8 were two or fewer hāpuku/bass.

48. Quota management areas in the NPS are stratified into survey areas (Figure 8). The majority of HPB 7 recreational catch is taken in 28b (Tory Channel to Clarence River) and 40c (Golden Bay and Tasman Bay), and the majority of HPB 8 recreational catch is taken in 18b (Manawatū River to Tītahi Bay). Although there is substantial variation around these estimates.



Zone	Survey area description	Harvest in tonnes (CV)
18a	Waitōtara river to Manawatū River	2.29 (1.00)
18b	Manawatū River to Tītahi Bay	3.64 (0.55)
19	Waitōtara river to Tirua Point	0.31 (1.00)
26	Marlborough Sounds	6.54 (0.58)
27	Queen Charlotte Sound & Tory Channel	4.29 (0.40)
28a	Stephen Island to Tory Channel excl. sounds	2.24 (0.76)
28b	Tory Channel to Clarence River	10.42 (0.87)
39a	North West of the South Island	1.58 (1.00)
39b	West of the South Island	1.97 (0.59)
40a	North of the South Island	0
40b	Cape Farewell to Kahurangi Point	0
40c	Golden Bay and Tasman Bay	8.37 (0.84)

Figure 8: Recreational fishing areas surveyed as part of the National Panel Survey 2017/18. HPB 8 (yellow area) and HPB 7 (green area).

49. The NPS estimates do not include recreational harvest taken under s111 general approvals. The average take under s111 over the last five fishing years (excluding the 2019/20 fishing year) is 212 kg in HPB 7 and 83 kg in HPB 8.

50. The 2017/18 NPS estimates of recreational harvest include amateur charter vessel (ACV) catch, but FNZ also has separate information for ACV catch from ACV returns. ACV returns record the number of fish caught and how many were retained and have been reported since 2010/11.

51. Figure 9 provides 10 years of estimated ACV catch data. Annual ACV catch was estimated using the mean weight per HPB of 5.96 kg (taken from the 2017/18 NPS) multiplied by the

number of fish caught per year. FNZ estimates annual ACV catch[12] as 4.5 tonnes in HPB 7 and 0.7 tonnes in HPB 8, representing 13% and 11% of total recreational catch estimates in HPB 7 and HPB 8 respectfully.

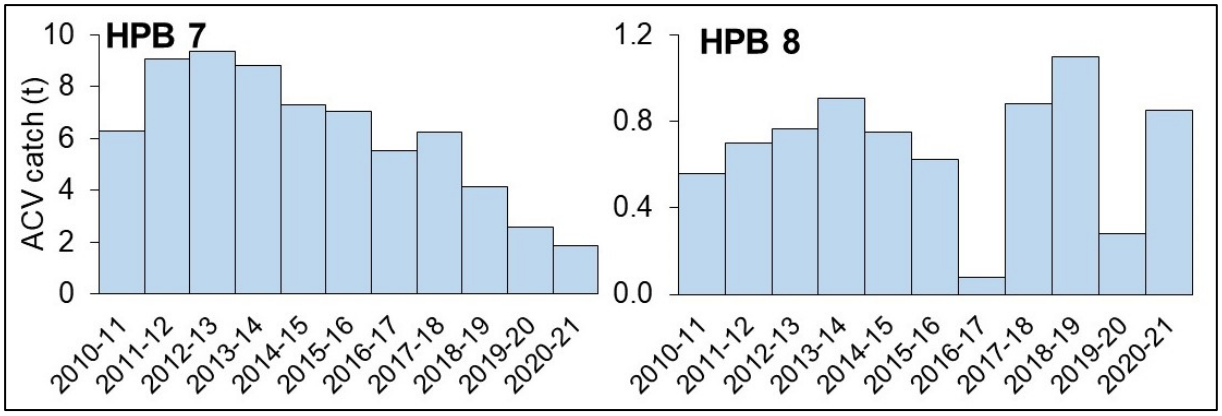


Figure 9: Annual ACV catch (in tonnes) of h**āpuku** and bass from 2010/11 to 2019/20 in HPB 7 (left) and HPB 8 (right). Note the different scaling on the X axes of both graphs.

5.5 Other sources of mortality caused by fishing

52. The other sources of fishing mortality allowance accounts for any mortality that occurs due to fishing activity that is not otherwise accounted for in the TAC. There is currently no allowance set for all other mortality caused by fishing for HPB 7 or HPB 8.

53. Potential sources for other mortality for HPB 7 and HPB 8 could include, unreported and illegal catch, mortality associated with injury from contact with (but not capture by) fishing gear, and mortality associated with the accidental loss or damage of fishing gear and orca or shark depredation.

54. Low observer coverage in HPB 7 (3.3% average for the past 5 fishing years) and in HPB 8 (0.92% average for the past 5 fishing years) lends uncertainty to estimates of other sources of mortality caused by fishing. However, the main fishing methods being bottom longline and Dahn line, are more selective and less likely to create unknown mortality events in comparison with trawl caught fish.

6 Treaty of Waitangi obligations

6.1 Input and participation of **tāngata** whenua

55. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries Forum can develop an Iwi Forum Fisheries Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interest in fisheries. Particular regard must be given to kaitiakitanga when making sustainability decisions. Iwi Fisheries Forums may also be used as entities to consult iwi with an interest in fisheries.

56. The Te Tai Hauāuru Forum (Taranaki to Kāpiti) covers the area that makes up HPB 8. It includes: Te Rūnanga o Ngāti Tama, Te Rūnanga o Ngāti Mutunga, Te Ātiawa Settlements Trust, Taranaki Iwi Trust, Nga Hapū o Ngāruahine Incorporated, Te Rūnanga o Ngāti Ruanui Trust, Te Kaahui o Rauru (Ngā Rauru), Te Rūnanga o Ngāti Apa (North Island), Te Ātihaunui a Pāpārangi, Ati Awa ki Whakarongotai Charitable Trust, Muaupoko Tribal Authority Inc, Raukawa ki te Tonga Trust/Te Rūnanga o Raukawa, Te Patiki Holdings Trust Board (Ngāti Hauiti), Tanenuiarangi Manawatu Incorporated (Rangitaane o Manawatu).

[12] Annual ACV catch is calculated as the average annual catch for the past five fishing years with the 2019/20 fishing year data excluded due to the unknown effects of COVID-19 on fishing practices.

57. The latest Te Tai Hauāuru Forum hui was held on 15 October where FNZ discussed the sustainability round but did not receive any feedback specific to HPB 8.

58. Te Waka a Māui me Ōna Toka Iwi Forum is the Te Wai Pounamu (South Island) Iwi fisheries forum — it includes all nine tāngata whenua Iwi of Te Wai Pounamu: Ngāti Apa ki Ratō, Ngāti Kōata, Ngāti Kuia, Ngāti Rarua, Ngāti Tama, Ngāti Tōarangatira, Rangitāne ō Wairau, Te Ati Awa and Ngai Tahu.

59. At the 10 November 2021 Te Waka a Māui me Ōna Toka forum hui, FNZ discussed the sustainability round. The forum members were very concerned about the state of the HPB stocks and the downward trend in commercial landings and increasing recreational pressure. The forum expressed support for a decrease to the TACC and a recreational daily limit of one HPB per fisher. They suggested this daily limit be implemented across the South Island and not just in HPB 7. They advised a customary allowance of 20 tonnes for HPB 7 would accommodate customary harvest.

60. Ngati Toa also has an interest in HPB 8 and would support customary and recreational catch reporting.

6.2 Kaitiakitanga

61. Te Waka a Māui me Ōna Toka Iwi Forum has an Iwi Forum Fisheries Plan titled The Te Wai pounamu Iwi Forum Fisheries Plan that identifies hāpuku as a taonga species. The Forum Fisheries Plan contains objectives to support and provide for the interests of South Island iwi.

62. The Te Tai Hauāuru Forum does not specifically identify taonga species in its Iwi Forum Fisheries Plan, however it should be noted that iwi may still consider hāpuku and bass taonga species.

63. FNZ considers that the proposed management options are in keeping with the objectives of the Iwi Forum Fisheries Plans which generally relate to active engagement with iwi and the maintenance of healthy and sustainable fisheries.

64. Customary tools utilised under the Fisheries (Kaimoana Customary Fishing) Regulations 1998 and the Fisheries Act 1996, provide for tāngata whenua to manage local fisheries in ways that best fits local customary practices in the form of mātaitai, taiāpure and temporary closures.

65. There are a number of customary fisheries management areas within HPB 7 and HPB 8. These include eight mātaitai reserves and one taiāpure (Table 2). It is not anticipated that the options proposed would negatively impact the availability of hāpuku and bass in these areas, however any positive impacts are unknown.

Table 2: Customary fisheries management areas in HPB 7 and HPB 8.

QMA	Customary Area	Management type
HPB 7	Whakapuaka (Delaware Bay)	**Taiāpure** *All types of fishing are permitted within a Taiāpure. The management committee can recommend regulations for commercial, recreational and customary fishing.*
HPB 7	Okuru/Mussel Point Tauperikaka Mahitahi/Bruce Bay Manakaiaua/Hunts Beach Okarito Lagoon Te Tai Tapu (Anatori) Te Tai Tapu (Kaihoka)	**Mātaitai Reserve** *Commercial fishing is not permitted within mātaitai reserves unless regulations state otherwise.*
HPB 8	Marokopa	

7 Current and proposed settings within the TAC

66. Two options for HPB 7 and HPB 8 are proposed for the TAC, TACC and allowances for customary Māori, recreational and all other sources of mortality caused by fishing.

67. Given that only a TACC is set for HPB 7 and HPB 8 at present, the status quo is not proposed as an option. All TAC options proposed for both fish stocks involve a decrease to existing catch limits due to uncertainty around whether current catches are sustainable, the lack of scientific information available to guide management and the biological vulnerability of hāpuku and bass to overfishing. Differences in catch history, existing TACCs and feedback from pre consultation stakeholder meetings, has guided our approach to the TAC proposals for both fishstocks.

68. These options are proposed as a package of changes for both recreational and commercial sectors. Subject to the Minister's decision, a regulatory change process will commence to reduce the recreational daily limits and maintain the recreational harvest within the proposed allowance.

7.1 Options for setting the TAC for HPB 7

HPB 7							
Option	TAC	TACC	Allowances			Recreational Measures	
			Customary **Māori**	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	235.5	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
Option 1	164	110 ↓ (125.5 t)	20	6	28	2 per person	Remove from the combined daily limit of 5 with kingfish and: -Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3
Option 2	136	83 ↓ (152.5 t)	20	5	28		

69. FNZ is proposing two options for the TAC, both of which are lower than the existing TACC of 235.5 tonnes. There is limited information available to inform what a sustainable TAC would be for HPB 7 and in such circumstances s 13(2A) of the Fisheries Act 1996 applies. Catch history shows that commercial landings equal to the TACC have not been reached in well over a decade and the Plenary states that it is unknown whether the current TACC is sustainable. This information, coupled with the biological vulnerability of hāpuku and bass, has lead FNZ to consider that a TAC below the existing TACC would be appropriate.

70. Option 1 proposes to set a TAC for HPB 7 of 164 tonnes and includes allowances for customary fishing, recreational fishing and other sources of mortality caused by fishing. The TACC under Option 1 would be reduced from 235.5 tonnes to 110 tonnes, a level consistent with current commercial landings.

71. Option 2 proposes to set a TAC for HPB 7 of 136 tonnes and includes allowances for customary fishing, recreational fishing and other sources of mortality caused by fishing. The TACC under Option 2 would be reduced from 235.5 tonnes to 83 tonnes, a 25% decrease to current commercial landings.

72. Both options propose a decrease to current catch levels and are considered consistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield. Option 1 provides for a level of utilisation that is slightly lower than existing levels and removes some of the risk to the stock that could result from an expansion in catch. Option 2 adopts a more cautious approach based on the biological vulnerability of the stock and gives greater certainty of a positive impact on stock biomass.

Customary Māori allowance

73. There is little information available to guide the setting of the customary Māori allowance in HPB 7. The small amount of customary reporting may reflect that tāngata whenua in some areas of HPB 7 are still operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013, which do not require that customary permits or catches be reported.

74. Following input and participation with Te Waka a Māui me Ōna Toka Iwi Forum, a customary Māori allowance of 20 tonnes is proposed under all options to accommodate customary harvest.

Recreational allowance

75. Under both options, FNZ is proposing a recreational allowance of 28 tonnes. Best available information suggests that the majority of bag sizes in HPB 7 consist of three or fewer fish and the existing recreational harvest is 35 tonnes. If recreational fishers began taking the maximum hāpuku/bass allowed under existing recreational daily limits (five hāpuku/bass in the combined daily bag alongside kingfish), then the recreational harvest would increase and this could pose a risk to any management measures taken to ensure sustainability.

76. To ensure recreational harvest remains within the proposed allowance, which is lower than current recreational harvest estimates, FNZ proposes decoupling hāpuku/bass from the combined daily limit with kingfish and introducing a daily limit of two hāpuku/bass per fisher. This would decrease the current recreational harvest of 35 tonnes by approximately 7 tonnes, representing a 20% decrease to current recreational catch.

77. Decreasing the current recreational catch recognises the increased recreational pressure on the fishery and pre-consultation engagement with tāngata whenua and commercial and recreational stakeholders that indicated that a recreational daily limit of two hāpuku/bass per fisher would be widely supported. Some recreational fishing clubs have already adopted a voluntary daily limit of two hāpuku/bass per fisher. Decreasing the daily limit for all recreational fishers supports these efforts and extends them across the recreational community.

78. To further manage recreational catch to better align with the recreational allowance, FNZ also proposes introducing an accumulation limit which is the maximum number of hāpuku/bass that a person can accumulate and possess over a period of more than one day. An accumulation limit of three hāpuku/bass per person is proposed under both options.

Other sources of fishing mortality allowance

79. The main fishing methods for HPB 7 are bottom longline and Dahn line. These methods are more selective and less likely to create unknown mortality events in comparison with trawl caught fish.

80. For inshore stocks predominantly taken by trawl, FNZ often suggests the other sources of fishing mortality allowance be set at a level equal to 10 percent of the TACC. Given the more selective methods used in HPB 7 an other sources of fishing mortality allowance equal to 5 percent is considered appropriate. This is also consistent with the settings in HPB 1 and HPB 2 which have recently been reviewed. Therefore, under Option 1, an allowance of 6 tonnes is proposed and under Option 2, an allowance of 5 tonnes is proposed.

Total allowable commercial catch

81. Both options propose a reduction to the current TACC recognising that commercial landings of HPB 7 have been lower than the TACC for more than a decade and the assessment within the Plenary which indicates that it is unknown whether the current TACCs are sustainable.

82. Option 1 proposes to reduce the TACC from 235.5 tonnes to 110 tonnes, a level consistent with current commercial landings. Option 2 proposes to reduce the TACC from 235.5 tonnes to 83 tonnes, a 25% decrease to current commercial landings.

83. The economic impacts associated with Option 1 are likely to be minimal as TACCs have not been fully utilised for over a decade. FNZ acknowledges that the current TACC provides an opportunity for further utilisation and economic growth, and this may be important to some

commercial fishers. Under Option 2, based on the current commercial landings of HPB 7 (110 t) and the current port price ($4.36) the present estimated commercial revenue of $479,600 would decrease by $117,720.

84. Reducing the TACC constitutes a reduction in the overall supply of Annual Catch Entitlement (ACE). This in turn may increase the price of ACE on the open market. A fisher dependent on the revenue from their current catch levels generated by their quota package may need to source new ACE to maintain their current throughput.

7.2 Options for setting the TAC for HPB 8

HPB 8							
Option	TAC	TACC	Allowances			Recreational Measures	
			Customary **Māori**	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
Option 1	87	65 ↓ (15.1 t)	10	4	8	2 per person	Remove from the combined daily limit of 5 with kingfish and: -Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3
Option 2	76	55 ↓ (25.1 t)	10	3	8		

85. FNZ is proposing two options for the HPB 8 TAC, both of which involve a decrease to current catch limits. As with HPB 7, there is limited information available to inform what a sustainable TAC would be for HPB 8 and in such circumstances s 13(2A) of the Fisheries Act 1996 applies. Catch history has declined in more recent years and the Plenary states that it is unknown whether the current TACC is sustainable. This information coupled with the biological vulnerability of hāpuku and bass has lead FNZ to consider reviewing catch settings for HPB 8.

86. Option 1 proposes to set a TAC for HPB 8 of 87 tonnes and includes allowances for customary fishing, recreational fishing and other sources of mortality caused by fishing. The TACC under Option 1 would be reduced from 80.1 tonnes to 65 tonnes, a level consistent with long-term average commercial landings.

87. Option 2 proposes to set a TAC for HPB 8 of 76 tonnes and includes allowances for customary fishing, recreational fishing and other sources of mortality caused by fishing. The TACC under Option 2 would be reduced from 80.1 tonnes to 55 tonnes, a level consistent with current commercial landings.

88. Option 1 proposes a decrease to current catch limits but sets the TAC slightly above the existing TACC of 80.1 tonnes recognising that the existing TACC is already conservative in comparison to other HPB stocks. This option provides for a level of utilisation consistent with long term removals acknowledging that lower commercial landings recorded in recent fishing years may be driven by a decrease in effort in associated fisheries where hāpuku and bass are caught as bycatch. It also recognises feedback from pre-consultation stakeholder meetings in which general satisfaction with the performance of the fishery was communicated by fishers from all sectors.

89. Option 2 proposes a decrease to current catch limits but sets the TAC slightly below the existing TACC of 80.1 tonnes. Option 2 provides for a level of utilisation comparable to more recent catch trends and would prevent further increases catch. This option places more weight on an assumption that recent declines in commercial landings are abundance driven and adopts a cautious approach based on the biological vulnerability of hāpuku and bass.

Customary Māori allowance

90. There is little information available to guide the setting of the customary Māori allowance in HPB 8. It is possible that customary harvest of HPB 8 has been covered by recreational catch with the existing daily limits. A customary Māori allowance of 10 tonnes is proposed under both options to accommodate customary harvest.

Recreational allowance

91. Under both options, FNZ is proposing a recreational allowance of 8 tonnes. Best available information suggests that the majority of bag sizes in HPB 8 are made up of two or fewer fish and the 2017/18 NPS estimates that the recreational harvest of hāpuku and bass in HPB 8 is 6.2 tonnes. FNZ considers that this figure likely underestimates recreational catch (noting that the associated CV is very wide) and considers that 10 tonnes is more likely to reflect current recreational harvest. If recreational fishers began taking the maximum hāpuku/bass allowed under existing recreational daily limits[13], then the recreational harvest would increase and this could pose a risk to any management measures taken to ensure sustainability.

92. To ensure recreational harvest remains within the proposed allowance, FNZ proposes decoupling hāpuku/bass from the combined daily bag limit with kingfish and introducing a daily limit of two hāpuku/bass per fisher. This would decrease the current recreational harvest of 10 tonnes by approximately 2 tonnes, representing a 20% decrease to current recreational catch.

93. Decreasing the current recreational catch recognises pre-consultation engagement with tāngata whenua and stakeholders that indicated that a recreational daily limit of two hāpuku/bass per fisher would be widely supported. Some recreational fishing clubs have already adopted a voluntary daily limit of two (or in some cases one) hāpuku/bass per fisher. Decreasing the daily bag limit for all recreational fishers supports these efforts and extends them across the recreational community.

94. To further manage recreational catch to better align with the recreational allowance, FNZ also proposes introducing an accumulation limit which is the maximum number of hāpuku/bass that a person can accumulate and possess over a period of more than one day. An accumulation limit of three hāpuku/bass per person is proposed under both options.

Other sources of fishing mortality allowance

95. The main fishing methods for HPB 8 are bottom longline and Dahn line. As explained above for HPB 7 (Section 7.1), these methods are less likely to create unknown mortality events in comparison with trawl caught fish and an allowance for other sources of fishing mortality equal to 5 percent of the TACC is considered appropriate. Therefore, under Option 1, an allowance of 4 tonnes is proposed and under Option 2, an allowance of 3 tonnes is proposed.

Total allowable commercial catch

96. Both options propose a reduction to the current TACC recognising that commercial landings of HPB 8 have been lower than the TACC for more than a decade and the assessment within the Plenary which indicates that it is unknown whether the current TACCs are sustainable.

97. Option 1 proposes to reduce the TACC from 80.1 tonnes to 65 tonnes, a level consistent with the long-term average commercial landings. Option 2 proposes to reduce the TACC from 80.1 tonnes to 55 tonnes, a level consistent with current commercial landings.

98. The economic impacts associated with these options are difficult to calculate when the TACC has not been fully utilised in recent years. Under Option 1, there is some potential for expansion from current catch levels but the overall decrease to the TACC will reduce the overall utilisation potential for the industry, albeit to a lesser extent than Option 2. FNZ acknowledges that the current TACC provides an opportunity for further utilisation and economic growth, and this may be important to some fishers who are considering changing fishing behaviour, such as to offset losses caused by the Hector's and Māui dolphin Threat Management Plan (TMP) decisions.

[13] Five hāpuku/bass in the combined daily bag alongside kingfish.

8 Environmental interactions

99. The key environmental interactions with this fishery, which must be taken into account when considering sustainability measures, concern marine mammals, seabirds, fish and invertebrate bycatch, benthic impacts and habitats of particular significance for fisheries management.

100. It is important to note in some cases FNZ has made assumptions about environmental interactions based on fisher reported data that may not have been independently verified (for example, by an on-board FNZ Observer). Observer coverage of the HPB 7 and HPB 8 fisheries in recent years has been less than 5%.

8.1 Marine Mammals

101. HPB 8 extends from Porirua Bay to the North Taranaki Bight on the west coast of the North Island, an area associated with the critically endangered Māui dolphin and HPB 7 is home to several subpopulations of Hector's dolphins. The Hector's and Māui Dolphins Threat Management Plan (TMP) guides management approaches for addressing both non-fishing and fishing-related impacts on Hector's and Māui dolphins.

102. Bottom longline and Dahn line fisheries pose a low risk of dolphin capture. Since the 2008/09 fishing year to the present day, there have been no reported interactions with marine mammals (including dolphins) in HPB 7 and HPB 8 target fisheries, but low observer coverage of bottom longline fisheries makes the frequency of interactions uncertain.

103. As the options proposed involve lowering the TACCs of both fish stocks, they are not expected lead to an increase in marine mammal interactions.

8.2 Seabirds

104. The management of seabird interactions with New Zealand's commercial fisheries is guided by the National Plan of Action to Reduce the Incidental Captures of Seabirds in New Zealand Fisheries (NPOA-Seabirds).

105. Since the 2008/09 fishing year to the present day, there have been 21 seabird captures reported in HPB 7 and HPB 8 target fisheries with five of those captures identified as sooty shearwaters. Although low observer coverage (less than 5% in recent years) lends uncertainty to this estimate.

106. In the last three fishing years, commercial fishers in HPB 7 and HPB 8 appear to have switched from using bottom longlines to using Dahn lines to target hāpuku and bass. Dahn lines pose very little risk to seabirds as baited hooks are placed close to the weight and therefore rapidly sink out of the reach of seabirds. If this transfer of methods from bottom longlines to Dahn lines continues, it may result in fewer seabird captures in hāpuku and bass target fisheries in the future.

107. As the options proposed involve lowering the TACCs of both fish stocks, they are not expected to increase seabird captures.

8.3 Fish bycatch

108. The species most commonly caught alongside hāpuku and bass as bycatch in HPB 7 and HPB 8 bottom longline and Dahn line target fisheries are school shark, ling, spiny dogfish, northern spiny dogfish and to a lesser extent, bluenose.

109. For most of these listed stocks there are no specific sustainability concerns, however, bluenose stocks nationwide are currently being rebuilt due to low abundance. Options proposed present a low risk to the rebuild of bluenose stocks as the options are unlikely to result in increased fishing effort that could lead to increased bycatch of these stocks.

8.4 Benthic impacts

110. Bottom longline and Dahn line methods generally pose a low risk to the benthic environment with approximately 66 kg of coral, sponges and bryozoans reported as bycatch across all HPB fisheries since 2008/09 to the present day.

111. As the options proposed involve lowering the TACCs of both fish stocks, they are not expected to increase benthic impacts.

8.5 Habitats of particular significance for fisheries management

112. FNZ considers that habitats of particular significance for fisheries management (HPSFM) are areas of critical importance in supporting the productivity of harvested species.

113. There is no available information on egg and larval transport for hāpuku. Juvenile hāpuku have a long pelagic phase lasting over 2 years, and potentially school in association with drifting seaweed. The long pelagic phase may allow hāpuku to migrate large distances although trans-oceanic dispersal is unknown. At 40 – 50 cm (3-4 years), they settle on the benthos and occupy water <200 m (Francis et al. 1999; Hurst et al. 2000), although specific juvenile habitats are unknown. In interviews with fishers' small juveniles were reported from most regions but often localised in extent (Paul, 2005; Morrison et al. 2014).

114. The Cook Strait has been suggested as a hotspot for spawning hāpuku (Figure 10), justified by observations reported by Beentjes & Francis (1999) of northerly migrations of pre-spawning hāpuku from Southland (and other observations from the Cook Strait hāpuku fishery) (Paul, 2005). Although the exact location is unknown, it is thought to be south of Brothers Islands (Johnston 1983). The attributes of this habitat are not thought to be under threat from any development activities and are unlikely to be threatened by fishing (Table 3).

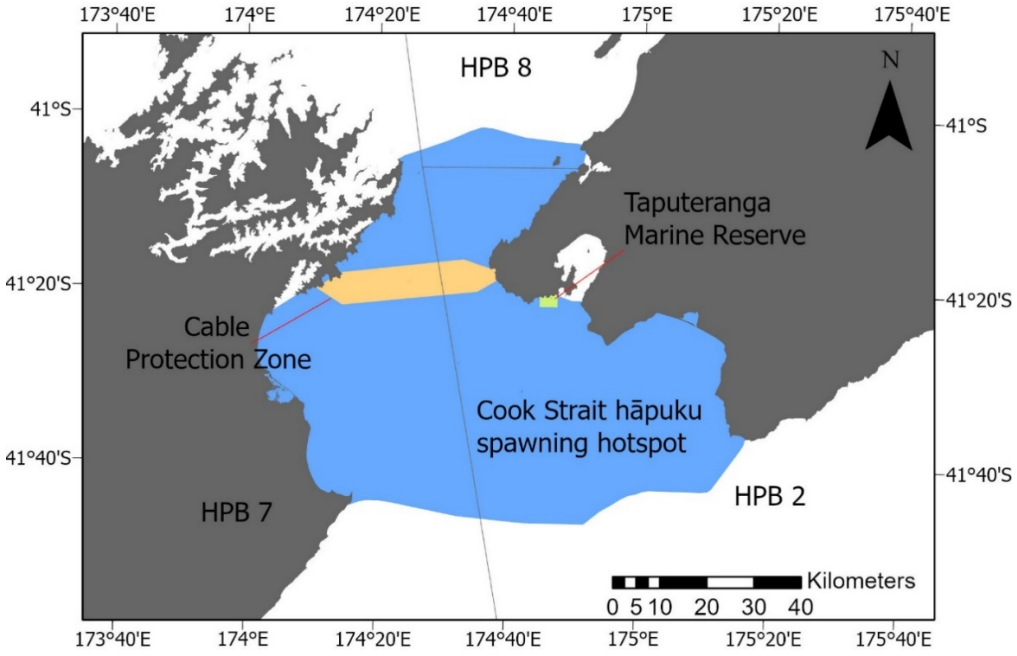


Figure 10: Estimated distribution of Cook Strait spawning **hāpuku**[14] (blue area on map) covering three HPB QMAs (HPB 2, 7 and 8).

115. Current environmental protection in the Cook Strait which could be relevant to this habitat includes the Cook Strait Submarine Protection Zone (CPZ), which extends from Oteranga Bay (North Island) to Fighting Bay (South Island). Within this zone, all fishing and anchoring is illegal except for some fishing activities that are permitted within 200 m of the shore. The Taputeranga Marine Reserve on Wellington's south coast may also be relevant to this habitat. The reserve is

[14] Annual distribution of spawning hāpuku estimated from scientific observed records, research bottom trawl records and literature sources. Feature layer by MPI Geospatial Management. Credits: Michael Manning, NIWA.

protected under the Marine Reserves Act 1971 and fishing or gathering of marine life of any kind is prohibited.

116. As the options proposed involve lowering the TACCs of both fish stocks, they are not expected to increase the impact on any habitats of particular significance in HPB 7 and HPB 8.

Table 3: Attributes, reasons for significance and risks/threats to the Cook Strait **hāpuku** spawning area.

Stocks	HPB 7 and HPB 8
Habitat	Water column in an area of the Cook Strait (exact location unknown) but thought to be south of Brothers Islands.
Attributes of habitat	• Key spawning area (May - August). • Likely due to current/ circulation patterns and oceanographic features. • The stock is data deficient and the exact location is unknown.
Reasons for particular significance	• Spawning is of critical importance in supporting the productivity of a harvested species. • This is the only identified spawning ground for hāpuku in New Zealand waters to date. • Spawning site fidelity is unknown for hāpuku, but this site could be used by hāpuku from three or possibly four management areas (HPB 2, 8, 7 and potentially 3). • Effects of damage to spawning habitat might not be apparent in the population for many years due to the species being long-lived.
Risks/Threats	• No known development activities are happening or planned. • Oceanographic features could be impacted by extractive processes e.g. mining but these activities are unlikely in this area due to exceptionally fast tidal flows and strong unpredictable currents. • Oceanographic features could be impacted by cable laying but there is an existing cable protection zone therefore it is unlikely cable laying will occur. • Oceanographic features and current/circulation patterns could be impacted by future development of tidal power which would affect flow regimes in the area. A recent Sustainable Seas project investigated the viability of generating electricity from the strong tidal currents within Cook Strait. • Long term - current/circulation patterns could be impacted by climate change (ocean warming, changes to wind patterns).

9 Relevant plans, strategies, statements and context

9.1 Draft National Inshore Finfish Fisheries Plan

117. Hāpuku and bass will be managed under the National Inshore Finfish Fisheries Plan (the Plan) once finalised. The Plan outlines the management objectives and strategies for finfish fisheries for the next five years and was consulted on in early 2020.

118. The Plan is aimed at progressing New Zealand towards ecosystem-based fisheries management. Stocks are grouped within the Plan, with management approaches and objectives tailored accordingly for each group.

119. Hāpuku and bass fall under Group 2, which recognises that FNZ intend to manage these stocks to provide for moderate levels of use with moderate levels of information to monitor stock status. Currently, HPB stocks are monitored using trends in catch (Section 4 discusses how this information has been used to inform the proposed options). However, improvements to scientific information including species specific catch reporting and research to delineate biological reference points are underway. These improvements will provide more robust data to inform future research and management.

9.2 Regional Plans

120. There are seven Regional Councils that have coastline within HPB 7 and HPB 8 boundaries respectively. Each of these regional councils have multiple plans to manage the coastal and freshwater environments, including terrestrial and coastal linkages, ecosystems and habitats.

121. FNZ considers that the proposed management options presented are in keeping with the objectives of relevant regional plans, which generally relate to the maintenance of healthy and sustainable ecosystems to provide for the needs of current and future generations.

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

122. Te Mana o te Taiao – the Aotearoa New Zealand Biodiversity Strategy 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. The most relevant to setting sustainability measures for HPB 7 and HPB 8 are objectives 10 and 12:

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

Objective 12: Natural resources are managed sustainably.

123. The Ministry for Primary Industries (MPI) is undertaking work to define specific terms used in the Strategy (e.g. 'environmental limits') but is required by the Fisheries Act to manage fisheries to balance use and sustainability, including the requirement to avoid, remedy or mitigate adverse effects on the aquatic environment. The Environmental Interactions section in this paper provides information on relevant interactions with the wider aquatic environment for this stock.

10 Deemed values

124. Deemed values are the price paid by 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.

125. 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.

126. The current deemed value rates for HPB 7 and HPB 8 are shown in Table 4. The deemed value rates for all HPB stocks have remained unchanged since 2015.

Table 4: Current deemed value rates ($/kg) for HPB 7 and HPB 8.

			Differential rates ($/kg) of excess catch (% of ACE)				
Stock	Interim	Annual 100-120%	120-140%	140-160%	160-180%	180-200	200%+
HPB 7	2.55	2.83	3.396	3.962	4.528	5.094	5.66
HPB 8	1.96	2.18	2.616	3.052	3.488	3.924	4.36

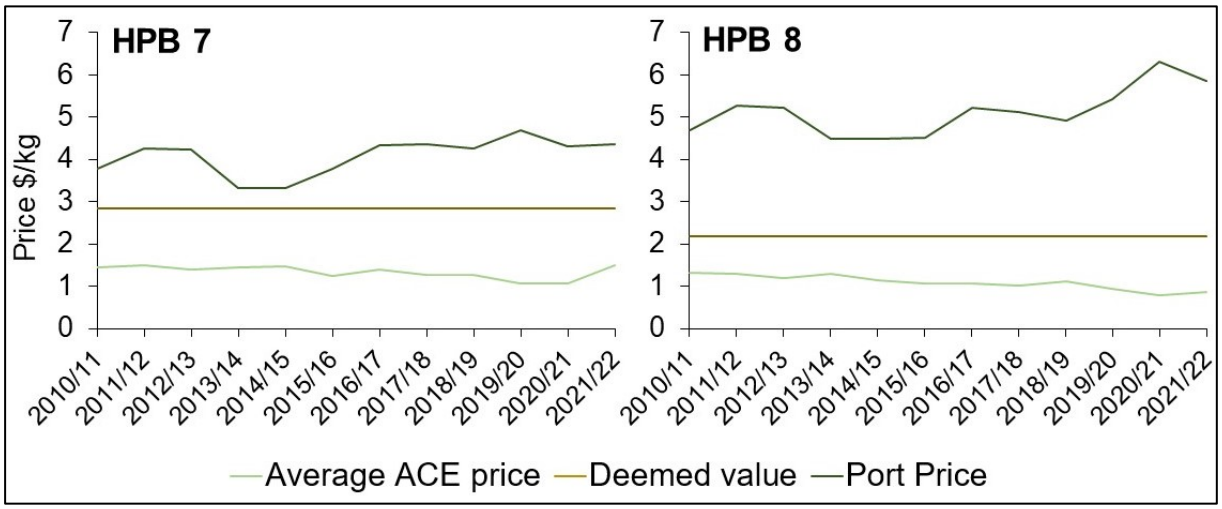


Figure 11: Average ACE price, average port price and deemed values ($/kg) for HPB 7 and HPB 8 from 2010/11 to the current fishing year.

127. The port price index and average ACE prices for both stocks are shown in Figure 11. Since the 2010/11 fishing year, the average ACE price has remained relatively constant. The port prices for HPB 7 and HPB 8 have been increasing slightly since the mid-2010s.

128. The current port prices for HPB 7 and HPB 8 are $4.36 and $5.84 respectively. The average price paid by fishers for ACE for the past five fishing years, was $1.23 kg in HPB 7 and $0.94 kg in HPB 8.

129. Figure 11 shows that the current annual deemed value rates of HPB 7 and HPB 8 are currently set above their average ACE prices. However, FNZ recognises that the options presented in this paper involve TACC reductions, which could lead to subsequent changes in fishing behaviour and the ACE market.

130. FNZ also acknowledges fishing frequently occurs over the boundaries between HPB 2, HPB 7 and HPB 8, and each of these QMAs currently have slightly different deemed value schedules. While these differences have not posed an issue in recent years given that the stocks have been under-caught (generally not incurring deemed value payments), there is a potential risk that if the catch limits of HPB 7 and HPB 8 are constrained, the differences in these deemed value schedules could lead to 'trucking' behaviour or misreporting of catches.

131. Based on this potential risk, FNZ is proposing to bring the deemed value rates of HPB 7 and HPB 8 in line with the current deemed value rates for HPB 2 (Table 5). These proposed adjustments would keep the annual deemed value rates of HPB 7 and HPB 8 above their respective average ACE prices, which is consistent with the objective to incentivise fishers to balance catch against ACE.

Table 5: Proposed deemed value rates ($/kg) for HPB 7 and HPB 8.

			Differential rates ($/kg) of excess catch (% of ACE)				
Stock	Interim	Annual 100-120%	120-140%	140-160%	160-180%	180-200	200%+
HPB 2	2.27	2.52	3.02	3.53	4.03	4.54	5.04
HPB 7	2.27	2.52	3.02	3.53	4.03	4.54	5.04
HPB 8	2.27	2.52	3.02	3.53	4.03	4.54	5.04

132. We welcome any feedback from submitters regarding the deemed value rates of these stocks.

11 Preferential allocation rights (28N Rights)

133. FNZ notes that there are 1.3 tonnes of preferential allocation rights (28N rights) in HPB 7. Preferential allocation rights were granted to permit holders under section 28N of the Fisheries

Act 1983 who elected to take administrative rather than compensated reductions to their catch allocations.

134. When the TACC is increased for a stock that has 28N rights associated with it, the quota shares of owners who do not have 28N rights are reduced and redistributed to the holders of 28N rights. As the options in this paper suggest reducing the TACC, 28N rights for HPB 7 are not expected to be triggered as a result of this sustainability round.

12 Uncertainties and risks

135. When setting a TAC, the requirement is to set it a level that maintains the stock at, or above a level that can produce the maximum sustainable yield. Due to the limited science information on HPB 7 and HPB 8, there is uncertainty regarding the sustainability of current management settings. In turn, it is uncertain whether the proposed options will also meet this requirement. The options proposed respond to on the water concern for the stock and catch information, which indicates there is a potential sustainability concern.

136. Under all options, FNZ will continue to monitor catch for any signals of future sustainability risks and look for opportunities to gather better information on these stocks.

13 Questions for submitters

- Which option do you support for revising the TAC and allowances? 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?
- What are your views on the proposed changes for recreational fishers, including a reduction to the daily limit and the introduction of an accumulation limit?
- 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 aquatic environment?

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

14 How to get more information and have your say

138. Fisheries New Zealand invites you to make a submission on the proposals set out in this discussion document. Consultation closes at 5pm on 8 February 2022.

139. Please see the Fisheries New Zealand sustainability consultation webpage (https://www.mpi.govt.nz/consultations/review-of-sustainability-measures-2022-april-round) for related information, a helpful submissions template, and information on how to submit your feedback. If you cannot access to the webpage or require hard copies of documents or any other information, please email FMSubmissions@mpi.govt.nz.

15 Legal basis for managing fisheries in New Zealand

140. The Fisheries Act 1996 provides the legal basis for managing fisheries in New Zealand, including the Minister's responsibilities for setting and varying sustainability measures. See the

separate document *Overview of legislative requirements and other considerations* at https://www.mpi.govt.nz/dmsdocument/48880 for more information.

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