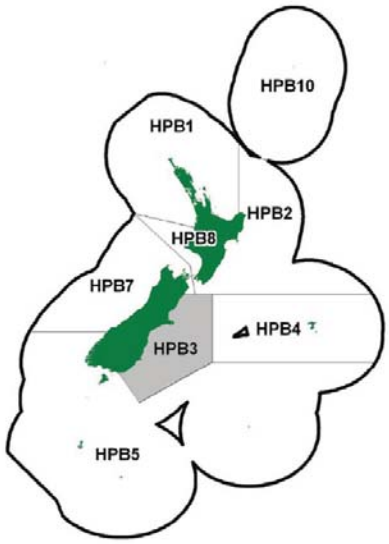
HAPUKA/BASS 3 (HPB 3)

Figure 1: Quota Management Areas (QMA) for HPB



Executive Summary

1 The Ministry of Fisheries (MFish) recommends that you set a Total Allowable Catch (TAC) for HPB 3 of 537.6 tonnes (t) for the start of the 2010/11 fishing year.

2 Landings over the past 10-15 years have been greater than the current TACC (335.1 t), with no apparent adverse changes to the performance of the fishery. The biology and life history of HPB suggests, however, that these species are susceptible to overfishing and will be slow to recover if over-exploited. There is also little fishery data to inform biomass trends.

3 MFish recommends that the TAC be allocated as follows:

- 1 t allowance for customary interests;
- 195 t allowance for recreational interests;
- 6.5 t allowance for other sources of fishing related mortality;
- TACC of 335.1 t.

4 MFish recommends that the interim and annual deemed value rates be increased to $2.30 per kg and $2.80 per kg, respectively. Increasing the deemed value rates would reduce profit margins on deemed fish and provide greater incentives to manage harvest to within Annual Catch Entitlements (ACE) holdings and consequently the TACC.

Background

5 HPB 3 entered the QMS in 1986 and, apart from Quota Appeal Authority decisions, the TACC has remained unchanged at 335.1 t. No TAC, allowances for non-commercial interests, or for other sources of fishing-related mortality have previously been set.

6 HPB 3 consists of two species, hapuku (*Polyprion oxegeneios*) and bass (*P. americanus*) along the east coast of the South Island. Reported catches do not

distinguish between species. The common term for both these species is groper which will be used as the collective term for these species in this paper.

7 HPB3 is being reviewed for the 2010/11 fishing year at the request of the fishing industry, and due to the potential for improved utilisation of this stock. MFish notes that deemed value charges for HPB 3 have exceeded $100,000 for three of the last five years and that this represents a significant cost on the fishery.

8 You are being asked to set a TAC for this stock under section 13 of the Act and to vary the TACC under section 21 of the Act. To assist you to make decisions this paper sets out:

- Background on biological characteristics of the stock, a description of the fishery and best available information on stock status;
- Analysis to inform your decision on varying the TAC, including points raised in submissions; and
- Analysis of matters to inform your decision on allocating the TAC, including points raised in submissions.

9 This paper also contains proposals to amend the deemed value regime for this stock.

Consultation

10 MFish released an IPP for public consultation on 21 June 2010, with submissions closing on 26 July 2010. The IPP was published on the consultation section of the MFish website and posted and emailed to persons and organisations with an interest in HPB 3.

Submissions received

11 MFish received 11 submissions on the IPP from:

- Ocean Fisheries Limited and Ocean Fisheries Quota Holding Company Ltd (Ocean Fisheries)
- Kaikoura Boating Club
- Tasman and Sounds Recreational Fishers' Association (Inc) (TASFISH)
- Soundfish
- Mr W. Hartley
- Ngai Tahu Seafood – (Ngai Tahu)
- Hokianga Accord, Option4, New Zealand Sport Fishing – (HOSF)
- NZ Federation of Commercial Fishermen (Inc) – (Federation)
- New Zealand Seafood Industry Council Limited – (SeaFIC)
- Te Ohu Kaimoana – (Te Ohu)
- NZ Recreational Fishing Council – (NZRFC)

12 Support for any particular option varied. Mr Hartley, the Kaikoura Boating Club, NZRFC and TASFISH supported Option 1. Soundfish did not support any particular option but advocated a precautionary approach to TAC setting. Ngai Tahu and Te Ohu generally supported Option 2. Ocean Fisheries supported Option 3. SeaFIC did not explicitly support any option but advocated generally for an increase in the TACC and this position was supported by the Federation. HOSF supported a TAC lower than the status quo.

13 Submissions are attached as Volume Two.

Biological Characteristics of HPB

14 HPB are widely distributed around New Zealand from the Kermadec Islands in the north to the Auckland Islands in the south, generally over rough ground, from the central shelf (about 100 m) to the shelf edge and down the upper slope.

15 Both HPB species are long-lived. HPB mature sexually between 10 and 13 years old and may live in excess of 60 years (Francis et al. 1999)2. Natural mortality (M) may be 0.1 or less (Francis et al. 1999)

16 Tagging studies have shown movement of HPB 3 into, and out of, Cook Strait. While migration patterns are little known or understood, they are probably related to spawning.

17 Current HPB stock boundaries are based on Fishery Management Areas and are unlikely to reflect natural stock boundaries. While electrophoretic studies suggest that separate stocks of HPB could occur, the key points listed below suggest that either each stock is moderately mobile, or that, there is essentially only one stock (of each species) with some small geographic or temporal genetic differences:

- The genetic heterogeneity of Cook Strait HPB;
- Seasonal movements of HPB through the Cook Strait area;
- Moderately long-distance movements of some tagged HPB;
- The presence of both species on open ground; and
- The eventual recovery of heavily exploited reefs.

18 HPB species are long-lived, slow growing and, when mature, can show a strong degree of site fidelity. These features make HPB vulnerable to overfishing; cautious management is therefore advisable in the absence of robust monitoring information.

HPB 3 Fishery

19 The commercial HPB fishery takes both species, but in different proportions by region, depth, fishing method and season, and these have changed over time.

20 The fishery has both a target fishery (setnet, longline and dahn line) and a trawl bycatch component. Principal areas are the setnet fishery around Kaikoura, anecdotally intercepting migrating fish, and the by-catch trawl fishery which is principally in the Canterbury Bight. The fleet is composed largely of small to medium inshore craft.

21 Reported commercial landings have exceeded the TACC by an average of 10% for nine of the last ten years.

22 HPB is a popular target species for recreational fishers. HPB 3 has a recreational daily bag limit of five HPB. The fishery has two discrete parts defined by location and season. South of Pegasus Bay is a summer/autumn fishery largely catching “school” HPB at an average weight of around 7 kg. The fishery north of Pegasus Bay is more active during winter, and is focused around Kaikoura, where the narrowing shelf concentrates the seasonally migrating HPB. This allows for better fishing access and improved targeting of HPB. The average size is around 15 kg.

2 Francis MP., Mulligan KP., Davies NM., Beentjes MP. 1999. Age and growth estimates for New Zealand häpuku, *Polyprion oxygeneios*. Fishery Bulletin. 97(2): 227–242.

23 Available recreational survey estimates of HPB catch in HPB 3 are not robust. The maximum and minimum estimates across the surveys range from 10 t up to 293 t with co-efficients of variation (CVs - a measure of data variability) of 40 to 50%. While the 2009 MFish Plenary advises that the 1999/2000 harvest estimates are implausibly high for many important fisheries, it also advises that estimates should be evaluated with reference to the CV. In the case of HPB 3, this survey supplies a point estimate of 195 t with a CV of 50%.

24 HPB is known to be of importance to Maori. MFish does not have reliable quantitative information on the level of HPB3 Maori customary catch. Tangata Tiaki have been appointed for most of FMA 3 and they provide the permits for all customary take in the area. However, MFish notes that Tangata Tiaki have only recently been appointed in north Canterbury, and that this is an important area for HPB fishing. Since October 1998, five customary permits have been issued and reported for HPB 3 covering 345 fish plus another 55 kg. However, for the reasons given above, this information does not provide a reliable estimate of customary take as the reporting regime does not cover the entire fishery.

HPB 3 Stock Status

25 The Plenary does not comment specifically on the stock status of HPB 3. Estimates of current and reference biomass are not available.

26 The maximum constant yield (MCY) for all HPB stocks, excluding HPB 4 and HPB 5, is estimated to be 1330 t. MCY is the maximum sustainable yield that can be produced over the long-term by taking the same catch year after year, with little risk of stock collapse. However, there is not a great deal of confidence in the accuracy of catch information (particularly for the foreign fleet) over the period for which the MCY estimate was calculated, therefore, the MCY estimate is highly uncertain.

27 The East Coast South Island trawl surveys do not cover the entire habitat range and have moderate to high CVs (average over all years = 28.17; range 19-35), but may be monitoring relative abundance of settled juveniles in HPB 3. The series varies about the whole-of-series mean and error bars overlap (refer to Figure 2). The mean of the recent data series (2007-2009) is slightly higher than for the earlier series (1991-1996), however, the number of data points in the recent series is small.

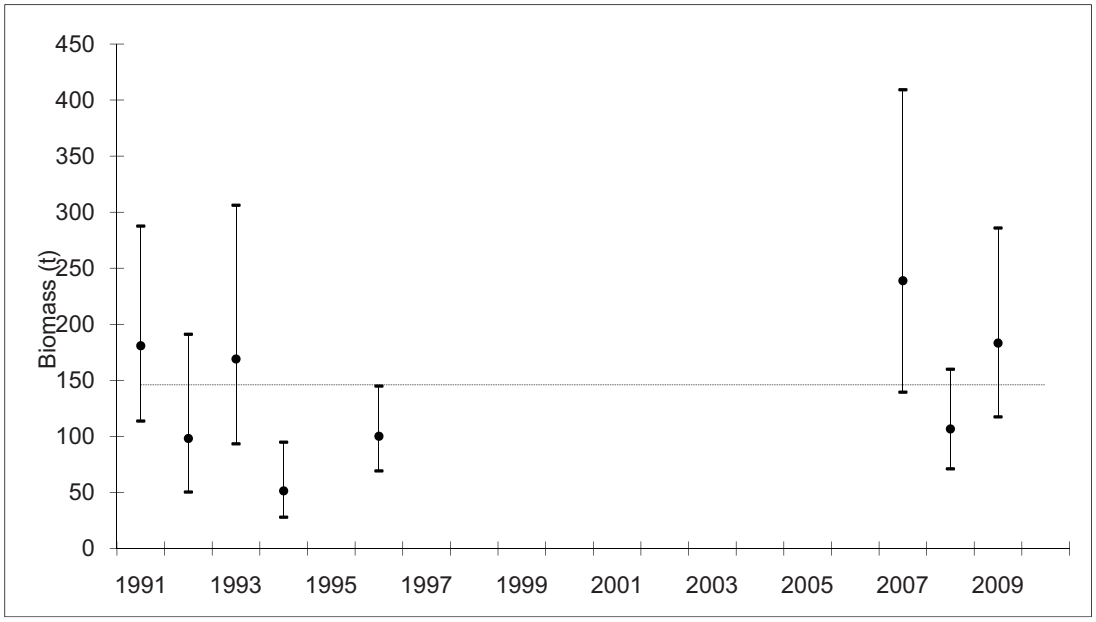


Figure 2: Biomass estimates ±95% CI (estimated from survey CVs assuming a lognormal distribution) and the time series mean (dotted line) from the East Coast South Island trawl survey

28 Based on this information, there is some indication the juvenile population, at least in the area covered by the trawl survey, is stable, however, it is not known how well the survey is sampling HPB 3, nor is there any effort data to inform this assumption.

29 Further, and most importantly, there is nothing known about the stock recruit relationship. If the trawl survey is monitoring juvenile abundance (and there is no certainty it is doing that) trends in juvenile abundance may not be an accurate indication of the state of the spawning biomass.

30 It is possible that both HPB 3 species are part of a single New Zealand-wide stock. While information on the status of other HPB stocks is largely absent, there is information from the HPB 5 fishery that indicates the percentage of mature fish (older than 10 years) has declined from 19% in the 1990s down to 8% currently. Whether this is a result of changes in fishing behaviour or abundance of adult fish is unknown. While the implications of this information are unknown, they are not positive indicators for the sustainability of HPB stocks, given the uncertainty in stock structure.

31 The level of the stock that can produce the maximum sustainable yield (BMSY) is unknown and is unable to be reliably estimated using the best available information.

Management Options

32 MFish proposed the following options in the IPP to set the TAC, TACCs and allowances for HPB 3:

Table 1: Management Options proposed in the IPP

Stock	Option	TAC	Maori customary allowance	Recreational allowance	Other sources of mortality	TACC
HPB 3	**1**	537.6	1	195	6.5	335.1
HPB 3	**2**	553	1	195	7.0	350
HPB 3	**3**	573.5	1	195	7.5	370

Total Allowable Catch

33 The current status of HPB 3 in relation to the level of the stock that can produce the maximum sustainable yield (BMSY) is unknown and is unable to be reliably estimated using the best available information. In such circumstances, you may set a TAC under s 13(2A) of the Fisheries Act.

34 Section 13(2A) requires you to have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stocks. It requires you to set a TAC –

- using the best available information; and
- that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, $_{BMSY}$.

35 You must not use the absence of or uncertainty in, the best available information as a reason for postponing or failing to set a TAC.

36 In considering the way in which and rate at which a stock is moved towards or above BMSY, you must have regard to such social, cultural, and economic factors as you consider relevant.

Analysis

37 For HPB 3, best available information to inform TAC setting is commercial catch history, trawl survey indices, HPB MCY estimates, recreational catch estimates, Maori customary permit reports and information on HPB biology and behaviour.

38 Anecdotal information from submissions from all sectors also informs the analysis of options in this paper.

39 There is no evidence that any of the options proposed are inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the MSY. The options correspond to either the current TACC, or average landings over the past 10 or 15 years. There is currently no evidence that landings at these levels have adversely affected performance of the fishery.

40 There is, however, a high level of uncertainty in the fisheries information currently available with which to inform TAC setting. The uncertainty includes uncertainty in the MCY estimate which stems from imprecise catch information, uncertainty about the

link between trawl indices, abundance of the spawning stock, and uncertainty about the behaviour of HPB and the structure of HPB stocks. In addition, the biology and life history of HPB suggests that these species are susceptible to overfishing and will be slow to recover if over-exploited.

41 Submissions on the proposed options varied with non-commercial stakeholders generally opposing, and commercial stakeholders supporting, higher TAC options.

42 SeaFIC does not agree with MFish's view that all information available to inform TAC setting has a "very high level of uncertainty". SeaFIC notes that commercial catch is well known, at least since 1986. SeaFIC considers the IPP adopts an overly cautious approach to the setting of a TAC for HPB 3 based on perceived vulnerability to over-fishing. It notes that MFish has placed strong emphasis on the biology and life history of the species.

43 SeaFIC also submits that the biomass estimate from the East Coast South Island trawl survey, which may be an index of juvenile abundance, is stable and possibly increasing in the period 1991 to 2009. This, together with the anecdotal information from commercial fishers (for example, Ocean Fisheries submit that anecdotally this fishery appears in very good health), is evidence that recent catches are not compromising recruitment. SeaFIC submits that to constrain TAC setting to the lowest levels to ensure the lowest sustainability risks does not provide an appropriate balance for utilisation.

44 MFish notes that catch data without information on effort does not provide any information about fish abundance. MFish does not agree that the recommended option is based on an unjustifiably cautious approach. The sustainability risk of options is set out in both the IPP and this paper, as is the value of proposed TACC increases.

45 In addition, the 10-year period of catches exceeding the TACC is equal to/less than the number of years required for hapuku to reach maturity (10-13 years). Because of recruitment lag, adverse impacts of recent catch levels in excess of the TACC, if occurring, would potentially not be observable in catch information over this period.

46 The Southern Inshore Working Group has not reviewed the trawl survey results for HPB 3 in detail, nor has an assessment been made as to what portion of the HPB stock, if any, is being monitored by the survey. The uncertainty in available information and that the biology and life history of HPB are taken into account in the proposed TAC options.

47 SeaFIC also considers there is additional information from un-standardised catch rates of HPB showing an increasing trend in the Kaikoura mixed set net and tarakihi set net fisheries over the last decade. SeaFIC submits that this supports the anecdotal information from the fishers. MFish notes this study cautioned that the CPUE of HPB 3 was unlikely to be informative with respect to abundance trends in that area.

48 SeaFIC submit that given the possibility that the HPB biological stocks may be wide ranging, or possibly single New Zealand-wide stocks, and that yield estimates have only been calculated on aggregate, it is unclear why the catch and TACC of HPB 3 is not set in the wider New Zealand context of HPB catches. At the New Zealand scale, catches have been sustained at 1000-2000 t since the 1930s. Although HPB 3 has been consistently over-caught since 1998/99, under-catch in other HPB stocks means that current catches are comparable to the available yield estimates.

49 MFish notes that no consistent change in effort for the domestic fleet, apart from the war and post-war effect, is known. The foreign fleet effort has varied but the extent of

this variation is unknown. As the extent of this variation is unknown, the MCY estimates need to be viewed with caution. Despite the issues with MCY, the estimates for this wider stock were calculated at 1330 t and the current reported landing for the areas assessed was 1337 t. So if the landings are viewed on a New Zealand EEZ basis, the current TACCs are correct and should not be changed. The total of the TACCs for the areas covered by this MCY estimate 1407 t.

50 Non commercial submitters (HOSF, NZRFC and TASFISH) oppose any TAC that would provide a TACC increase for HPB 3, and submit that catch in excess of the TACC is being used as justification for increasing the TAC without any data on trends in abundance to support it. They submit that the biomass of HPB 3 fish stocks should be increased to achieve greater value and better meet the purpose of the Fisheries Act. They submit that the approach adopted in the IPP incentivises commercial fishers to over-catch as a way of achieving increased catch allocations.

51 MFish accepts that deemed values may not have acted to constrain catch in the past, and acknowledges this as a factor behind recent over-catch. The information MFish is relying on to inform TAC setting is not limited to commercial catch history, but also includes trawl survey indices, HPB MCY estimates, recreational catch estimates, Maori customary permit reports and information on HPB biology and behaviour.

52 TASFISH and NZRFC submit that current HPB boundaries are unlikely to reflect natural stock boundaries and that the stocks in HPB 3 are part of the same stock as HPB 7. Any increase of TACC in HPB 3 will, therefore, negatively impact on the HPB 7 stock.

53 TASFISH and NZRFC submit the current status of the HPB 3 stock in relation to the level of stock that can produce the maximum sustainable yield is unknown and, furthermore, is unable to be reliably estimated using the best available information. They submit that on this basis alone, no increase in the TACC should even be considered.

54 Kaikoura Boating Club submits that they believe HPB 3 to be massively over-fished, with few mature fish remaining in the area. They submit that while reasonable numbers of juveniles pass through the area, the combination of commercial and recreational fishing pressure results in few staying in the area, and those that do stay do not seem to survive long. In addition, they submit that in the past HPB were abundant around Kaikoura, that large HPB could be caught from the shore and that catching HPB has become increasingly difficult in recent years. Mfish notes this anecdotal information and has taken it into account in the proposed options.

55 Mr Hartley, recreational fisher from Kaikoura, emphasises that “groper” is a very important fishery for recreational fishers and must be looked after well.

56 HOSF submit that current biomass, abundance and availability of HPB 3 is not providing for all, and propose an allocation of 200 t to allow for recreational fishing. HOSF are concerned about the level of abundance of HPB 3 and, therefore, the availability of HPB 3 to recreational fishers. They submit that collapsing catch rates indicate a biomass below the level that will deliver the greatest value, and is causing significant loss of social and cultural well-being.

57 Generally, submitters from the recreational sector identified that HPB 3 is a very important fishery to their sector and identified that access has declined as a result of decreasing abundance.

58 Relevant matters for you to take into account in setting or varying a TAC include:

- Any effects of fishing on any stock and the aquatic environment;
- Any existing management controls under the Fisheries Act that apply to the stock or area concerned; and
- The natural variability of the stock.

59 You must also take into account the following environmental principles:

- Associated or dependent species should be maintained above a level that ensures their long-term viability;
- Biological diversity of the aquatic environment should be maintained; and
- Habitat of particular significance for fisheries management should be protected.

60 As the TAC proposals do not exceed the actual recorded landings of HPB 3, it is not anticipated that the proposed TAC (and TACC) options will result in an increase in fishing activity. Therefore, it is not anticipated there will be an increase in impacts on the marine environment or on current measures to mitigate adverse impacts on sea birds and marine mammals.

61 In addition to the existing TACC, a range of management controls apply to the HPB 3 fishery, including commercial reporting requirements, a recreational daily bag limit of five fish per person and a limit of two longlines per recreational boat. The proposed changes to TAC are unlikely to affect these measures.

62 As both the HPB species are long lived and high on the trophic scale there is limited natural variability in this fishery. The most likely source of population variability is fishing mortality.

63 MFish is not aware of any provisions in any statement or plans under the Resource Management Act 1991 that are specifically relevant to setting a TAC for this stock.

64 MFish is not aware of anything in the provisions of management strategies or plans for relevant Conservancies that are relevant to these proposals.

65 HPB 3 does not intersect with the Hauraki Gulf Marine Park. Therefore, there are no relevant considerations under the Hauraki Marine Park Act 2000.

66 MFish is not aware of any fisheries or conservation services, or any decisions not to require fisheries or conservation services, which are relevant to setting a TAC for this fish stock.

67 There is no relevant Fisheries Plan that has objectives that would impact on setting a TAC for HPB 3.

68 In setting or varying sustainability measures, you must also act in a manner consistent with New Zealand's international obligations to fishing and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

69 A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a)). MFish considers that the management options for HPB 3 are consistent with these international obligations.

70 MFish also considers that the proposed management options are consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b)). Ongoing work is being done within the area covered by HPB 3 to promote policies that help to recognise customary use and management practices.

Options

Option 1 – TAC of 546.6 tonnes based on TACC and current non-commercial catch

71 Under Option 1, a TAC of 537.6 t would be established based on the current TACC (335.1 t), estimates of current catches (including customary and recreational), and other sources of fishing related mortality.

72 Option 1 is the most cautious option; it does not provide for any increased utilisation.

73 This option places greatest weight on the uncertainties regarding the status of the stock and considering the biology and life history of the HPB species. Both species are long lived, slow growing and, when mature, can show a strong degree of site fidelity. All these features make HPB vulnerable to over-fishing. For these reasons, this option is MFish's preferred option.

74 TASFISH, NZRFC, Mr Hartley, and the Kaikoura Boating Club, all representing recreational fishing interests, support Option 1. They submit that:

- Groper is a highly valued recreational fishery and that access to the groper fishery has been significantly constrained by decreasing abundance.
- Any increase to the TACC will only exacerbate access difficulties.
- There is insufficient information to support any increase in fishing pressure and the information that is available is uncertain.
- A cautious approach to TAC setting should be taken.

75 Soundfish are concerned that there is a strong relationship between HPB 3 and HPB 7, which contains Cooks Strait and the Marlborough Sounds and that any management measures in HPB 3 will have flow on effect and impact on stock abundance in HPB 7. While Soundfish do not strongly favour any Option, they recommend a precautionary approach be taken.

Option 2 – TAC of 562 tonnes based on catch information

76 Option 2 proposes setting a TAC of 553 t based on the average commercial landings over the last fifteen years, estimates of current catches (including customary and recreational), and other sources of fishing related mortality. This option would provide opportunity for an additional 15 tonnes to be taken from the fishery when compared to option one.

77 MFish notes that average catch in the commercial fishery has already exceeded the TACC by more than 15 t in three of the last four years, and that trawl survey indices suggest juvenile resident HPB abundance may be stable at existing catch levels. However, there is a high degree of uncertainty around this conclusion. The trawl indices have yet to be classified as reliable for HPB 3. MFish considers this option is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the MSY. However, the uncertainty and risks associated with this option are higher than for Option 1.

78 MFish notes that the biology of HPB species means that should the stock be over-fished, recovery will be slow.

79 Ngai Tahu and Te Ohu support this Option.

Option 3 – TAC of 582.5 tonnes based on recent catch information

80 Option 3 proposes a TAC of 573.5 t based on the average commercial catch over the past ten years, estimates of catch for recreational fishers, customary fishers and other sources of fishing related mortality.

81 Of the three options, Option 3 provides the highest utilisation benefits in the short term. Although catches have recently been at this level, the uncertainty and risk of long term stock decline associated with such catches is higher than for the other options. Given this, the fact that HPB are susceptible to overfishing, and it will be slow to recover if over-exploited, this option is least preferred.

82 Ocean Fisheries support Option 3. It is also presumed from the tenor of the submissions that SeaFIC and the Federation also support this Option. These parties generally submit that MFish has taken a cautious approach without appropriate consideration of utilization benefits. They also submit that anecdotal information from experienced commercial fishers concludes that the abundance of HPB has increased in recent years and justifies an increase in the TAC. SeaFIC contends that the data from the East Coast South Island trawl survey shows a stable or slightly improving abundance of juvenile HPB in the northern half of HPB 3.

Allocation of the TAC

83 When setting any TAC, you must apportion that TAC between the relevant sectors and interests set out under the provisions of s 21 of the Act. Section 21 requires you to allow for Maori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, when setting or varying the TACC

84 The Act does not provide an explicit statutory mechanism to apportion available catch between sector groups either in terms of a quantitative measure or prioritisation of allocation. Accordingly, you have the discretion to make allowances for various sectors based on the best available information.

85 When setting any TAC, you must apportion that TAC between the relevant sectors and interests set out under the provisions of s 21 of the Act. Section 21 requires you to allow for Maori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, when setting or varying the TACC.

86 The Act does not provide an explicit statutory mechanism to apportion available catch between sector groups either in terms of a quantitative measure or prioritisation of allocation. Accordingly, you have the discretion to make allowances for various sectors based on the best available information.

Maori Customary Non-Commercial Interests

87 Based on information from customary permits, MFish proposed that 1 t be used as the estimate for Maori non-commercial customary catch but invited further information from tangata whenua and stakeholders to ensure an allowance that appropriately reflects Maori customary fishing under customary regulations is set.

88 Ngai Tahu recommend an increase in the allowance for customary fishing of 10 t as this would enable MFish and Ngai Tahu to more effectively manage and measure non-commercial catch rates for HPB 3.

89 Te Ohu submit that the current level of reporting should not be interpreted as the total customary take, or a reflection of actual customary need. In addition, Te Ohu submit

that in order to progress the proposals in the absence of more robust information, Te Ohu supports the customary allowance of 10 t proposed in the submission by Ngai Tahu.

90 HOSF submit that non-commercial customary interests in HPB 3 encompass far more than the fish recorded on the permit system and those assumed to be taken under the amateur fishing regulations. HOSF submit that a 1 t allowance is meaningless if those fish are not available for catching or being left in the water. Abundance and availability needs to improve in order to provide for customary needs. HOSF also support a customary allowance of 10 t. Soundfish submit that 1 t is likely to be underestimating actual Maori customary catches.

91 HOSF note you are required to have particular regard to Kaitiakitanga and you must allow for non-commercial customary interests, not just fishing. In this regard, Ngai Tahu, the Iwi with Rohe Moana over the area of HPB 3, have identified an allowance of 10 t would meet this situation.

92 MFish notes these comments and acknowledges the limitations in information on customary take. MFish understands that HPB 3 is an important stock for customary fishers. However, MFish does not have reliable quantitative information to suggest a level of customary catch higher than 1 t. MFish will review this allowance as new quantitative information becomes available.

93 Section 21(4) requires that any Mataitai Reserve or closures/restrictions under s 186A to facilitate Maori customary fishing be taken into account. There are four Mataitai reserves, two Taiapure, and one s 186B Rahui within HPB 3. MFish does not consider that these closures have a material effect on allocation of recreational allowance for HPB 3.

Recreational Interests

94 As a basis for consultation and using the best available information, MFish proposed an allowance for recreational take of 195 t, acknowledging that it could vary greatly.

95 Ocean Fisheries submit that, for access reasons, the 195 t for recreational interests seems overstated and they do not believe this figure is accurate.

96 SeaFIC queries use of the point estimate from this survey, given that the Plenary stated that the 1999/2000 harvest estimate "should be evaluated with reference to the coefficient of variation". SeaFIC also notes that:

- The Plenary advised that these estimates were implausibly high for many important fisheries.
- In some fisheries, such as rock lobster fisheries, this data has been dismissed totally from fisheries management decision making.
- A range of plausible options for recreational harvest should have been provided and qualified.

97 Te Ohu proposes that the allowance be reduced. Te Ohu notes the recreational allowance is set at 36.3% of the TAC, but based on information that is "not robust".

98 TASFISH and NZRFC submit that a recreational allowance of 195 t is too low as it would only equate to 0.925 of a HPB per recreational fisher in HPB 3, per annum.

99 Soundfish submit that acknowledged unreliable information on recreational and customary catch corresponds strongly with anecdotal information they have gathered, that indicates respective catch allowances of 195 and 1 t are likely to be under estimating actual catches.

100 Submitters from the recreational sector considered that the recreational allowance was too low, whilst submitters from the commercial sector submitted that an allowance of 195 t was excessive, beyond recreational fishers ability to access and carries a great deal of uncertainty.

101 Whilst MFish acknowledges that the range of uncertainty in the recreational fishing estimate data is 97 to 293 t, without better and less contradictory information, MFish considers the point estimate of 195 t remains the best available information on which to base your decisions on an appropriate allowance for recreational fishers.

Allowance for other sources of fishing-related mortality

102 MFish proposed to include an estimate of 2% of the proposed TACCs to allow for other sources of fishing-related mortality for HPB 3. No allowance is currently set, but there are various potential sources of fishing-related mortality in HPB 3, including:

- Damage to discarded fish caught in line and setnet gear
- Loss of fish while landing to the boat, and loss of small and damaged fish
- The extent of any illegal catch of HPB for commercial sale is unknown but considered possible to occur.

103 SeaFIC submit that some allowance for other sources of fishing related mortality is reasonable for the reasons given. However, SeaFIC further submit that the 2% figure is largely arbitrary and should be justified. SeaFIC suggest a generic framework for these allowances that takes account of the type of fish and types of fisheries would assist. However, no alternative figure was supplied. Therefore, until a generic framework for establishing these allowances is available, MFish believes that the largely arbitrary estimate of 2% of the TACC is considered a reasonable allowance for other sources of fishing related mortality when compared to allowances for other fisheries with similar profiles.

Total Allowable Commercial Catch (TACC)

104 MFish proposed 3 options for the TACC in the IPP as follows:

- Option 1 - 335.1 tonnes based on a TAC of 528.6 tonnes;
- Option 2 - 350 tonnes based on a TAC of 544 tonnes; and
- Option 3 - 370 tonnes based on a TAC of 564.5 tonnes.

105 Ocean Fisheries support Option 3. They also submit they catch 23 tonnes of HPB 3 (average of the last five years) while only holding quota for 1100 kg. They, therefore, are constantly active in trying to purchase ACE for what they consider is generally an unavoidable by-catch. They submit that it is not economic for commercial trawlers to target HPB 3 as bulk landings significantly reduce the price payable to the boat.

106 Te Ohu supports a TACC of 350 t under option 2 but could support 370 t under Option 3 if the recreational allowance is reduced.

107 TASFISH and NZRFC submit the options to increase the TACC should be shelved until allocation to recreational fishers is addressed. They submit adjustments of TACCs

upwards in important shared fisheries should never be looked at in isolation given the negative impact of TACC increases on the ability of other sectors to catch their allocation.

108 Soundfish note reported commercial landings have exceeded the TACC for ten years and ask whether this is as a result of increased abundance causing incidental by-catches to exceed available ACE, poor ACE management not retaining ACE to cover later by-catch, or because deemed values are not set high enough providing an economic margin for fishers after paying deemed values. Soundfish also submit that they have information of port prices for HPB of up to $8.00 green weight per kg.

109 Kaikoura Boating Club submit that the economic value derived by recreational fishers ($/kg) appears to be far in excess of any commercial return.

110 The increase in value from the fishery from the various TACC options is set out in Table 2. Values shown are based on the species average port price supplied in submissions of $4.39 per kg.

111 MFish notes that deemed value charges for HPB 3 have exceeded $100,000 for three of the last five years and that this represents a significant cost on the fishery.

Table 2: Proposed TACCs (t) and corresponding change in annual economic return ($) for HPB 3

Option	Proposed TACC	Potential additional revenue over status quo
1	335.1	nil
2	350	$65,850
3	370	$153,650

Other management measures

Deemed values

112 MFish proposes you increase the deemed value rates for HPB 3 to an annual deemed value rate of $2.80, and an Interim Deemed value of $2.30.

113 Under s 75(1) of the Act, you are required to set interim and annual deemed value rates for each quota management stock. Section 75(2A) requires you, when setting deemed value rates, to take into account the need to provide an incentive for every commercial fisher to acquire and hold sufficient annual catch entitlement (ACE) in respect of each fishing year that is not less than the total catch of that stock taken by the commercial fisher.

114 MFish developed a Deemed Value Standard in 2007 to set out a process for managing the setting, reviewing and amendment of deemed value rates. This standard is available to view on the MFish Infosite website3.

115 The approach adopted in the Deemed Value Standard is to set deemed values for a fish stock between the ACE price and landed price. This approach creates an economic incentive for fishers to act appropriately and balance any over-catch against ACE, if ACE is available. Alternatively, if ACE is not available, this approach creates an economic incentive to land and record any over-caught fish rather than discard them at sea.

116 To some extent, the current recorded landings in excess of the TACC are a reflection of the deemed value regime in place for HPB 3. To protect the TACC, the HPB 3 deemed values regime needs to be modified. There are three courses of action available. Increase the deemed value; lower the point for the onset of ramping (the standard ramping rate applies to HPB 3); or, increase the interim deemed value to 90% of the annual deemed value. It should be noted that any of these actions may encourage less accurate reporting if HPB is an unavoidable by-catch species and there are barriers to the flow of ACE from fishers targeting HPB species and fishers taking HPB as by-catch.

Table 3: Current ACE Price, Port Price and Deemed Value ($) for HPB 3

Stock	ACE Price	Port Price	Deemed Value
HPB 3	$1.24	$3.07	$2.30

117 Table 3 lists the MFish held ACE price and port price, however, these values fluctuate significantly depending on a range of factors including how the fish is caught and/or how it is marketed. MFish proposed the deemed value options shown in Table 4. For all options, MFish recommends retaining standard ramping provisions.

Table 4: Proposed Interim and Annual Deemed Value ($) for HPB 3 from IPP

Option	Interim Deemed Value	Annual Deemed Value
A (*status quo*)	$1.15	$2.30
B	$2.00	$2.50
C	$2.30	$2.80

3 http://fs.fish.govt.nz/Page.aspx?pk=119

118 TASFISH and NZRFC note that the Minister is required to set deemed value rates that will provide incentive for every commercial fisher to acquire and hold sufficient ACE that it is not less than the total catch of that stock taken by the commercial fisher.

119 TASFISH and NZRFC submit that the policy of having a deemed value rate of somewhere between the ACE and the port price has not worked in HPB 3 as, since 1998-99 fishing year, the TACC has been exceeded in 10 of the 11 years.

120 To further ensure ACE is not exceeded, TASFISH and NZRFC submit that all deemed values should be set at a minimum of three times the port price.

121 TASFISH and NZRFC submit that even when the deemed value rate provides this incentive, TACCs continue to be exceeded. Furthermore, the fish receiver or processor, who in most cases is the quota owner, processes the catch, adds value to it and still makes a profit from it.

122 SeaFIC note that the MFish 2010 port price for the stock is $3.47 per kg, significantly lower than the species average of $4.39 per kg. Applying the Ministry's principle of pricing deemed values off ACE and port price, the range would be between $1.35 and $2.78 per kg. The upper end of the range sits below some other HPB stocks. Whilst it cannot be proven that the current deemed value relative to the port price is resulting in the over-catch, it is likely that the current deemed value is not impacting on profitability to constrain catch.

123 SeaFIC submit they can support $2.80 per kg as proposed if the TACC is increased as this should act to deter over-catch. However, if the TACC is not increased as proposed, the current regime should prevail on the basis that there is no evidence to not support a TACC increase and the increased deemed value serves only to increase the revenue to Government.

124 Ocean Fisheries strongly support retaining the existing interim and annual deemed values. Ocean Fisheries do not believe an increase in deemed values is justified as HPB 3 is caught significantly as a by-catch and that, therefore, deemed values does not play a big role in reducing the amount of HPB 3 caught or landed. They consider that in their case HPB 3 is seen as an unavoidable by-catch and, therefore, an operational overhead. Ocean Fisheries submit that an increase in deemed value will only increase the negative feelings towards the system, and make dumping of good fish a more realistic option to those fishermen who are already averse to paying deemed value.

125 Ngai Tahu also support an increase in the interim and annual deemed value rates for HPB 3 to $2.00 per kg and $2.50 per kg, being Option 2 of the deemed value options.

126 Te Ohu do not support an increase in deemed values unless the TACC is increased to 370 t.

127 Setting a deemed value regime for HPB 3 is problematic, as it is evident that a variety of prices are available in the market, and while the newly revised MFish Port Price is $3.47 per kg, prices of between $4.39 and $8.00 per kg have been cited by submitters. Anecdotally, MFish is aware that some markets may pay more than these values on the day. This situation does create an incentive to fish on deemed values for fishers able to obtain higher value for their catch.

128 Given the prices supplied by submitters, it is clear that even at the highest option available, $2.80 per kg, the proposed deemed values regime will only be partially effective in encouraging fishing under ACE, while will encourage landing of by-catch.

Recommendation

129 MFish recommends that, for the HPB 3 fishery, for the fishing year commencing on 1 October 2010, you:

EITHER

a) **Agree** to set a TAC of 537.6 t (MFish preferred option) and within this:

i) **set** an allowance for customary fishing of 1 t;

ii) **set** an allowance for recreational fishing of 195 t;

iii) **set** an other sources of fishing-related mortality at 6.5 t; and

iv) **retain** a TACC of 335.1 t.

OR

b) **Agree** to set a TAC of 553 t and within this:

v) **set** an allowance for customary fishing of 1 t;

vi) **set** an allowance for recreational fishing of 195 t;

vii) **set** an other sources of fishing-related mortality at 7 t; and

viii) **increase** the TACC from 335.1 t to 350 t.

OR

c) **Agree** to set a TAC of 573.5 t and within this:

ix) **set** an allowance for customary fishing of 1 t;

x) **set** an allowance for recreational fishing of 195 t;

xi) **set** an other sources of fishing-related mortality at 7.5 t; and

xii) **increase** the TACC from 335.1 to 370 t.

AND

d) **Agree** to increase the interim deemed value rate from $1.15 to $2.30

AND

e) **Agree** to increase the annual deemed value rate from $2.30 to $2.80