Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR BLUENOSE (BNS 1, 2, 3, 7 AND 8)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

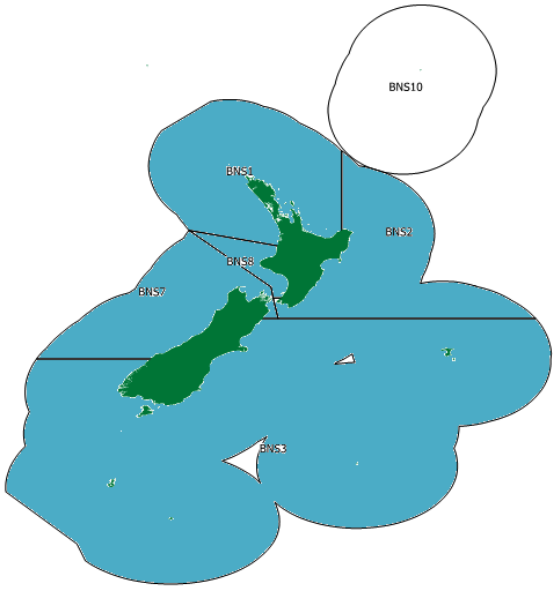


Figure 1.1: The Quota Management Area (QMA) boundaries for bluenose.

SUMMARY

7. The best available information suggests a single biological stock for bluenose. On this basis, the Ministry for Primary Industries (MPI) recommends that you reduce the combined total allowable catch (TAC) for BNS 1, 2, 3, 7 and 8 from 1685 tonnes (t) to 1194 t. To achieve this, MPI recommends that, from 1 October 2012, you:

    - reduce the TAC for BNS 1 from 600 t to 425 t
    - reduce the TAC for BNS 2 from 669 t to 474 t
    - reduce the TAC for BNS 3 from 273 t to 194 t
    - reduce the TAC for BNS 7 from 96 t to 69 t, and
    - reduce the TAC for BNS 8 from 47 t to 33 t (Option 2, see Table 1).

8. Within the new TACs, MPI recommends that you reduce the combined allowances for other sources of fishing related mortality from 33 t to 22 t, retain other allowances at existing levels and reduce the combined total allowable commercial catch (TACC) for BNS 1, 2, 3, 7 and 8 from 1580 t to 1100 t. To achieve this, MPI recommends that you:

    - retain the existing customary Maori and recreational allowances for BNS 1, 2, 3, 7 and 8
    - reduce the allowance for other sources of fishing-related mortality for BNS 1 to 8 t and the TACC to 400 t
    - reduce the allowance for other sources of fishing-related mortality for BNS 2 to 9 t and the TACC to 438 t

- reduce the allowance for other sources of fishing-related mortality for BNS 3 to 3 t and the TACC to 171 t
- reduce the allowance for other sources of fishing-related mortality for BNS 7 to 2 t and the TACC to 62 t, and
- reduce the allowance for other sources of fishing-related mortality for BNS 8 to 1 t and the TACC to 29 t.

Table 1.1: Final Proposals - TACs, TACCs and allowances for BNS 1, 2, 3, 7 and 8

Stock	Option	TAC (t)	Allowances			TACC (t)
			Recreational (t)	Māori customary (t)	Other sources of fishing related mortality (t)	
Combined	1 (Status quo)	1685	63	9	33	1580
	2 (MPI Preferred Option)	1194	63	9	22	1100
	3	704	63	9	12	620
BNS 1	1 (Status quo)	600	15	2	12	571
	2 (MPI Preferred Option)	425	15	2	8	400
	3	251	15	2	4	230
BNS 2	1 (Status quo)	669	25	2	13	629
	2 (MPI Preferred Option)	474	25	2	9	438
	3	279	25	2	5	247
BNS 3	1 (Status quo)	273	18	2	5	248
	2 (MPI Preferred Option)	194	18	2	3	171
	3	114	18	2	1	93
BNS 7	1 (Status quo)	96	3	2	2	89
	2 (MPI Preferred Option)	69	3	2	2	62
	3	40	3	2	1	34
BNS 8	1 (Status quo)	47	2	1	1	43
	2 (MPI Preferred Option)	33	2	1	1	29
	3	20	2	1	1	16

9. Information from a bluenose stock assessment in 2011 suggests that current abundance is low. MPI considers that the stocks need to be rebuilt to better provide for sustainable utilisation.

10. In 2011, the Minister of Fisheries and Aquaculture agreed to the first stage of a planned three-year phased reduction in bluenose catch limits. The phased reduction is part of a plan aimed at rebuilding bluenose stocks within a timeframe MPI considers suitable for stocks with biological characteristics like bluenose while mitigating short-term socio-economic costs. The rebuild plan is based on estimates from the stock assessment that combined TACs need to be reduced to between 547 t and 840 t.

11. Accordingly, on 1 October 2011, TACs and TACCs for BNS 1, 2 and 3, and customary allowances for all bluenose stocks were reduced. In addition, recreational bag limits for bluenose were reduced to five for all areas in May 2012.

12. Option 2 represents the second stage of the planned, phased reduction. MPI considers the phased reduction allows the stocks to rebuild within a suitable timeframe whilst mitigating the short-term socio-economic costs by giving fishers time to adjust to lower catch limits. Further cuts are planned for 2013

under Option 2 to reduce the combined TACs to 704 t (see Table 1.2, below). But, any further reductions will require a separate decision at that time.

13. Option 1 (the status quo) mitigates the short-term socio-economic impacts and allows more time for fishers to adjust to reduced limits. However, current catch limits are not within the range that would allow for a rebuild; they are inconsistent with maintaining bluenose stocks at or above, or moving them towards or above, levels that can produce the maximum sustainable yield (B_{MSY}). So, Option 1 would be contingent on reductions in the near future (very likely in 2013). Under Option 1, eventual reductions will likely need to be larger than under Option 2 or 3 to ensure a rebuild within a suitable timeframe. Any such reductions will also require a separate decision at that time.

14. Under Option 3, TACs would be reduced in one step, to the same level planned for 2013 under Option 2 (i.e. to 704 t). Option 3 would likely result in a faster rebuild than Option 2, but it has the highest short-term socio-economic costs. It does not allow further time for fishers to adjust to lower catch limits.

15. All commercial sector submissions and one customary commercial submission reference industry catch sampling aimed at improving information about bluenose to inform future management. Some also indicate a desire to await further information before any further changes to catch limits are made.

16. One commercial submitter does not support any of the options in the IPP, preferring the industry's five-year plan that was presented in 2011 but not accepted by the Minister of Fisheries and Aquaculture at that time. One commercial submitter advocates for reductions to other allowances. Some commercial submitters submit against reductions for specific stocks (BNS 3, 7 and 8).

17. Two recreational sector submitters and an environmental sector submitter are concerned about the sustainability of bluenose stocks and advocate for Option 3.

18. Note: Although discussion in this paper sometimes refers to combined TACs, TACCs and allowances, s 13 of the Fisheries Act 1996 (the Act) requires you to make separate decisions for each bluenose stock.

KEY CONSIDERATIONS

Need to Act

19. A bluenose stock assessment in 2011 indicated that the combined TACs for the five bluenose QMAs are unsustainable. The stock assessment provides the best available information on stock status and how future stock size is expected to change under different catch levels.[1] Based on the stock assessment, MPI considers current TACs are inconsistent with maintaining stocks at, or moving them towards, the level that can support the B_{MSY}.

[1] Model uncertainties (for example, the rate of natural mortality and the assumption of a single stock) are considered when determining appropriate management options

20. The stock assessment, which assumed a single New Zealand biological stock for bluenose, estimated current biomass to be between 14 and 27% of the virgin biomass (B_0 - the average biomass of the stock in the years before fishing started). This indicates current bluenose stock size ($B_{CURRENT}$) is below the proxy target[2] for B_{MSY} accepted by the Plenary (40% B_0). There is a 40-60% probability that $B_{CURRENT}$ is below the soft limit reference point (20% B_0).[3] A stock's soft limit is the biomass limit below which MPI considers the requirement for a formal, time-constrained rebuilding plan is triggered.

21. Model projections from the stock assessment indicated that the TACs prior to October 2010 would cause the stock to continue to decline and that it would fall below the hard limit.[4] A hard limit is the biomass limit below which MPI believes fisheries should be considered for closure.

Rebuild Plan

22. The Harvest Strategy Standard for New Zealand's Fisheries[5] (the Harvest Strategy Standard) provides for targets and limits to be set for fisheries and fish stocks. MPI plans to work with stakeholders to develop a harvest strategy for bluenose. This will confirm a minimum target reference level, and hard and soft limits. In the interim, A proxy for B_{MSY} – 40% B_0 – has been accepted by the Plenary (and MPI, pending further discussion with stakeholders) as the minimum target reference level. This is consistent with the Harvest Strategy Standard guidance on low productivity stocks, like bluenose.

23. According to the Harvest Strategy Standard, where a stock size is below the soft limit, a formal time-constrained rebuilding plan is required. The Draft Operational Guidelines for New Zealand's Harvest Strategy Standard[6] (the HSS Guidelines) set out the recommended timeframe for such rebuilding plans. This is expressed relative to the time that it would take the stock to return to the target level in the absence of fishing (T_{MIN}). The HSS Guidelines suggest the plan should allow stocks to be rebuilt to the target level between T_{MIN} and 2x T_{MIN}. MPI notes that you are not obliged to follow the Harvest Strategy Standard or the HSS Guidelines, but MPI considers they are consistent with your obligations under the Act.

24. The stock assessment in 2011 estimated that T_{MIN} for bluenose is between 10 and 13 years. It estimated the maximum combined catches (TACs) that would allow for a rebuild to 40% B_0 in 2x T_{MIN} (20 to 26 years) range between 574 and 840 t.

25. In 2011, the Minister of Fisheries and Aquaculture agreed to a plan, based on a single stock model, aimed at rebuilding bluenose stocks to the target[7] within 2x T_{MIN} (20-26 years). This involved a three-year phased reduction to catch limits (see Table 1.2) in order to mitigate short-term socio-economic costs.

[2] A proxy target is used as B_{MSY} is not known for any bluenose stock
[3] The *Harvest Strategy Standard* default soft limit for bluenose
[4] The Harvest Strategy Standard default hard limit for BNS is 10%B_0
[5] Ministry of Fisheries, 2008
[6] Ministry of Fisheries, 2008
[7] 40%B_0 - see below for further

Table 1.2: 2011 Rebuild Plan – TACs, TACCs and allowances, by year.

Year	Total Combined TAC (t)	Allowances			Total Combined TACC (t)
		Total Combined Customary Maori (t)	Total Combined Recreational (t)	Total Combined Other sources of fishing related mortality (t)	
2010/11	2477	42	63	47	2325
2011/12 *(Current Settings)*	1685	9	63	33	1580
2012/13	1194	9	63	22	1100
2013/14	704	9	63	12	620

26. The first stage of the rebuild plan has already been carried out, with reductions to TACs, TACCs, some allowances and recreational bag limits,[8] and increases to deemed values to incentivise fishers to balance catch with annual catch entitlement (ACE). However, the plan requires you to make separate decisions in regard to catch limits for 2012 (and again in 2013, if relevant to ensure the stocks rebuild within an appropriate timeframe).

Relevant Fishery Information

27. Bluenose is a long-lived species, with an estimated maximum age of 76 years, and has a low natural mortality.[9] These biological characteristics (high longevity and low natural mortality) indicate that bluenose is a low productivity stock.[10] Low productivity stocks are more likely to decline rapidly under fishing pressure and take a long time to rebuild from low levels of abundance. A more cautious approach to fisheries management is therefore desirable for low productivity stocks relative to more productive species.

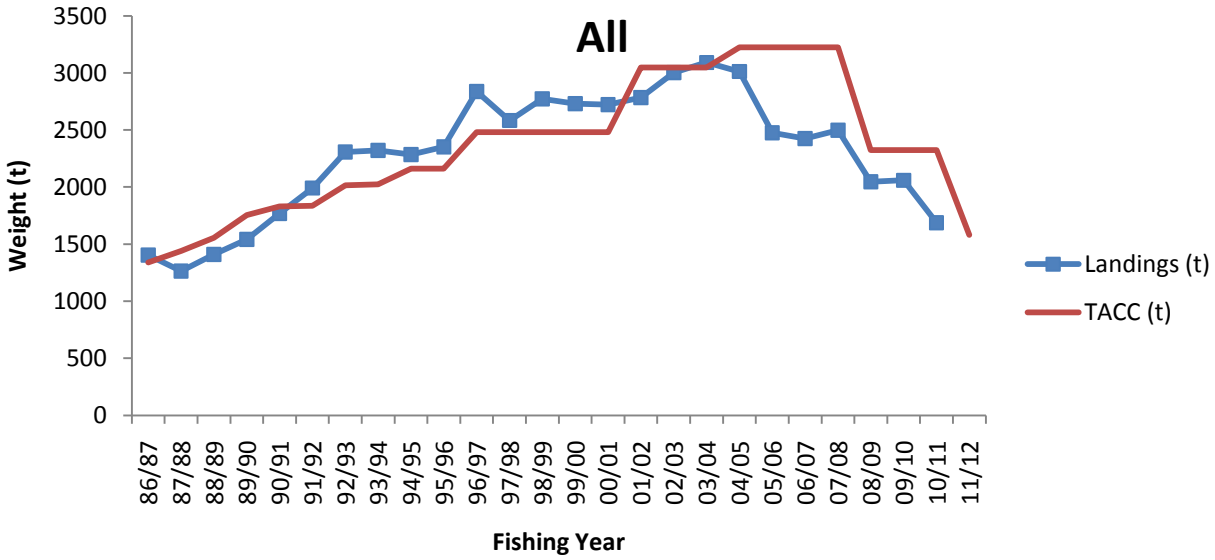
28. Biological stock boundaries are not known for New Zealand bluenose, but similarities in catch-per-unit-effort (CPUE) trends between each of the five bluenose QMAs suggests there may be just one biological stock across all these areas, or a strong relationship between the fish in these areas. Tagging studies have shown the species is capable of extensive migration, which suggests the single stock hypothesis is plausible. However, there is no conclusive information available to confirm this hypothesis or alternate hypotheses of stock relationships.

Commercial

29. The commercial fishing sector harvests the greatest portion of bluenose. The Plenary identified commercial harvest levels as a key driver of the decline in stock abundance. The Plenary noted other drivers such as recruitment and environmental factors may also have contributed. Total reported landings of bluenose by the commercial sector are shown below in Figure 1.2 (and by QMA in Appendix 1, Figure 1.3).

[8] The recreational bag limit reductions mean that limit is now 5 for all areas. The reductions came into effect in May 2012
[9] The Plenary considers natural mortality rate, M, is unlikely to be great than 0.1
[10] Based on the productivity characterisation in the Harvest Strategy Standard

Figure 1.2: Reported landings (t) of bluenose and total TACCs (t) from 1986–87 to 2010–11 for BNS 1, 2, 3, 7 and 8.



30. BNS 1 and BNS 2 are the largest of the five bluenose fisheries. BNS 2 is primarily taken by target bottom longline fishing. There is also a substantial target line fishery for bluenose in the Bay of Plenty and off Northland (BNS 1).

31. Target line fisheries for bluenose exist off the west coast of the South Island (BNS 7) and the central west coast of the North Island (BNS 8). Bluenose in BNS 7 is also taken as bycatch in the hoki trawl fishery.

32. In BNS 3, although historically a bycatch in ling and hāpuku target fisheries, target bluenose lining has predominated since 2003/04. There has been a consistent bycatch of bluenose in the alfonsino target bottom trawl fishery and bluenose has been targeted in a mid-water trawl fishery since the early 2000s. The bottom trawl fishery in BNS 3 has diminished.

33. Bluenose is often taken in conjunction with commercial fisheries such as midwater trawling for alfonsino and line fishing for ling, häpuku and bass. Over the ten years to 2011, reported bycatch of bluenose ranged from around 440 tonnes to 1200 tonnes. Industry has suggested that unavoidable bycatch of bluenose is most likely to be an issue for line fisheries targeting species that shoal with bluenose, such as häpuku and ling. In recent years, approximately 40% of reported bycatch came from line fishing for these species.

34. The proportions of catch and bycatch in BNS 1, 2, 3, 7 and 8 are shown in Appendix 1 (Figure 1.4).

Recreational

35. The total combined recreational allowances for all bluenose QMAs is 63 t. This allowance level is based on 2000/01 diary survey estimates of recreational catch. However, information on recreational catch of bluenose is uncertain.[11]

[11]The Recreational Technical Working Group has indicated its concerns with telephone/diary surveys. The following summarises that group's views on the estimates:

Anecdotal information from Recreational Fishing Forum members suggests recreational fisher interest in bluenose may have increased in recent years. As noted above, recreational daily bag limits for bluenose were reduced in May 2011.

Customary catch

36. Information on customary Māori catch of bluenose is incomplete and uncertain. For those tangata whenua groups operating under the customary fishing regulations,[12] Tangata Tiaki/Kaitiaki are required to provide MPI with information on customary harvest of fish. However, for those tangata whenua groups still operating under regulations 27 and 27A of the Fisheries (Amateur Fishing) Regulations 1986, reporting is not mandatory.

37. There was one reported authorisation for BNS 7 in the Cook Strait for the April-June 2011 quarter; the quantity approved was 30 (with no unit of measure) and no actual quantity harvested was declared. No other customary authorisations have been reported for bluenose in any QMA since 2007. This may indicate that tangata whenua use of customary Māori harvesting rights (as opposed to commercial or recreational) is low at this time.

38. Iwi fisheries forums, and the plans they develop, provide for iwi input and participation into fisheries planning processes. Bluenose stocks are part of various iwi fisheries management plans as follows:

- BNS 1 – is included in the Te Hiku o Te Ika Fisheries Management Plan (the Te Hiku Plan). The Te Hiku Plan was ratified in March 2012 by iwi representatives of the Te Hiku Fisheries Forum.[13] For Te Hiku o Te Ika, bluenose is identified as a taonga species.
- BNS 2 – There is currently no iwi forum plan that includes BNS 2. However, MPI invited local iwi to provide information or comments on the proposals in this paper.
- BNS 3 & 7 – are found in the area covered by the Te Waipounamu Iwi Forum Fisheries Plan developed by Te Waka a Maui me Ona Toka Forum.[14] Te Waka a Maui me Ona Toka regard all species as taonga species.[15]
- BNS 8 – Te Tai Hauauru Fisheries Forum[16] are in the process of finalising an iwi forum plan. BNS 8 fall within the area to be covered by that plan. Te Tai Hauauru regard all species as taonga species.

"*the harvest estimates from the diary surveys should be used only with the following qualifications: a) they may be very inaccurate; b) the 1996 and earlier surveys contain a methodological error; and, c) the 2000 and 2001 harvest estimates are implausibly high for many important fisheries*."

[12] Fisheries (Kaimoana Customary Fishing) Regulations 1998 and Fisheries (South Island Customary Fishing) Regulations 1999

[13] Te Hiku o Te Ika Fisheries Forum comprises mandated representatives from: Ngati Kuri Trust Board Inc., Te Urungi o Ngati Kuri Ltd, Te Runanga Nui o Te Aupouri Trust, Te Aupouri Fisheries Ltd, Nga Taonga o Ngai Takoto Trust, Ngai Takoto Holdings Lltd, Te Runanga o Te Rarawa and Te Waka Pupuri Putea Ltd

[14] Te Waka a Māui me Ōna Toka Forum includes representatives of Ngāti Toa, Te Atiawa, Ngāti Rarua, Ngāti Apa ki Te Ra To, Ngāti Kuia, Rangitane, Ngāti Koata, Ngāti Tama and Ngāi Tahu

[15] However, bluenose is not specifically identified as such in the Forum's plan.

[16] Te Tai Hauauru Fisheries Forum is made up of mandated iwi representatives from all of the iwi between the Mokau river and Waikanae. However, some iwi are not currently in a position to engage and have not signed the Forum's plan. Those members of the Forum who signed the Forum's plan on 27 June 2012 included: Ngati Mutunga, Te Ati Awa, Te Ati Haunui a Paparangi, Ngati Apa, Ngati Hauiti, Rangitaane o Manawatu, Muaupoko, Ngati Raukawa, Ati Awa Ki Whakarongotai.

Proposals Consulted On

39. An IPP was released on 05 July 2012. The options proposed in the IPP were the same as set out in Table 1.1 above.

40. Option 1 is the status quo; TACs, TACCs and allowances would remain unchanged. Available information suggests current TACs are unsustainable and do not allow for a rebuild of bluenose stocks. Therefore, Option 1 has the highest risk. However, Option 1 has the lowest short-term socio-economic costs, allowing further time for industry to adjust to lower catch limits. It also allows time for information to be gathered that might support an alternative approach to rebuilding bluenose stocks. MPI considers further, larger cuts would be necessary in the near future, to ensure bluenose stocks return to a level at or above B_{MSY}.

41. Under Options 2 and 3, the TACs, TACCs and allowances for other sources of fishing related mortality for all stocks (BNS 1, 2, 3, 7 and 8) would be reduced. Option 2 (MPI's preferred option) has medium short-term economic costs compared with Options 1 and 3. It seeks to balance short-term economic costs against ensuring sustainability and would require a further review of catch limits in 2013. Option 3 has the highest short-term economic cost, but this is balanced by ensuring the rebuild is initiated faster. No further review is anticipated under Option 3.

SUBMISSIONS AND INTITIAL CONSULTATION

42. MPI received ten submissions on the IPP from:

- Aotearoa Fisheries Limited (AFL)
- Area 2 Inshore Finfish Management Company Ltd (Area 2)
- Challenger Finfisheries Management Company Limited and South-East Finfish Management Co Ltd (Challenger & South-East)
- Egmont Seafoods Limited (Egmont)
- Forest and Bird Protection Society of New Zealand Inc (Forest & Bird)
- Bill Hartley
- New Zealand Recreational Fishing Council (NZRFC)
- Sanford Ltd (Sanford)
- Tasman and Sounds Recreational Fishers' Association Inc (TASFISH)
- Te Rünanga Nui o Te Aupöuri (TRNOTA)

43. In addition, during June 2012, MPI had preliminary discussions with tangata whenua and some stakeholder representatives. MPI sought their initial views on the options to be included in the IPP.

BNS 1

44. TRNOTA submits in support of Option 2. However, they state a proviso that, 'the reduction is not too dramatic', raising concerns about the impact on iwi finances.

45. During initial consultation, some FMA 1 Recreational Fishing Forum (FMA 1) and FMA 9 Recreational Fishing Forum (FMA 9) members supported Option 2 for BNS 1. However, that support was with the proviso that the third phase of the reduction is implemented next year and that there is no new information to suggest a rebuild will not occur in the estimated timeframes. Some members of FMA 1 and FMA 9 wanted a more precautionary approach, perhaps an option between Options 2 and 3.

46. The Te Hiku Forum provided input relating to BNS 1 and gave preliminary support for Option 2. The Forum requested further information on the science and rationale behind all of the options. This was provided to the Forum for their consideration but no submission was received from the Forum.

BNS 2

47. Area 2 does not support any option presented in the IPP. Instead, Area 2 supports the 5 year staged reduction submitted by industry during consultation in 2011. Area 2 submits that, consistent with that plan, 'the TACC for BNS 2 should remain at 629 t for 2012/13.'

48. Just as for BNS 1, TRONTA supports Option 2 for BNS 2.

49. During initial consultation, the FMA 2 Recreational Fishing Forum (FMA 2), and some members of the FMA 8 Recreational Fishing Forum (FMA 8), supported Option 3 for BNS 2 and 8. For BNS 2 in particular, FMA 2 and FMA 8 members were very concerned about the sustainability of the bluenose stock and noted increasingly smaller fish in the fishery. Members requested a significant reduction now to enable a quicker rebuild.

BNS 3, 7 & 8

50. Bill Hartley submits in regard to BNS 3. He indicates a preference for Option 3, but states that he supports Option 2 as he understands the need to consider 'commercial's position.'

51. TASFISH submits in regard to BNS 7 and supports Option 3. Although acknowledging the impact on commercial fishers, TASFISH submits that, 'the sustainability of the stock needs to be addressed now.'

52. During initial consultation, the FMA 3 & 5 Recreational Fishing Forum (FMA 3 & 5) and the FMA 7 Recreational Fishing Forum (FMA 7) supported Option 2 for BNS 3 and BNS 7, respectively. FMA 3 & 5 considered that, as the proposed TACCs are below current catches, they will constrain commercial catches and provide for bluenose stocks to rebuild. FMA 3 & 5 and FMA 7 also recognised the value of mitigating the impacts on the commercial sector by allowing them time to adjust by reducing TACCs in stages. FMA 7 supports no change to the

recreational allowance because the daily bag limit was reduced last year and this is likely to be constraining recreational harvest.

53. Challenger & South-East jointly submit in regard to BNS 3, 7 and 8, and support the status quo. Challenger & South-East advocate waiting a further year, until the industry catch sampling data can be presented to the inshore working groups before considering further cuts.

54. During initial consultation, a representative of Ngäti Kuia (Sharyn Smith) also indicated support for Option 1 (the status quo) for BNS 7. She argued that the catch-per-unit effort of auto liners and manual liners 'are inconsistent and do not give a true indication' of biomass. She also suggested the loss of experienced fishers has contributed to an increase in effort. She advocated for more monitoring and research into fishing methods.

Distribution of proposed reductions

55. Challenger & South-East note that BNS 3, 7 and 8 took the 'brunt' of the reductions in 2008 and state that the TACCs for these fisheries are 'minor in comparison to others and are now bycatch to other fisheries'. Challenger & South-East submit that catches in BNS 7 and 8 'do not reflect' declining bluenose abundance and state that these fisheries have not contributed to the decline. AFL states in its submission that it does not share Challenger Finfish's concerns (mentioned in the IPP) that there should be a disproportionate reduction across stocks.

56. Egmont submits in regard to BNS 8 and advocates for the TACC to remain unchanged. Egmont notes that BNS 8 is a bycatch fishery. Egmont submits that the small size of the fishery does not allow fishers to target it, and therefore it is 'not likely to have any impact on the overall BNS fishstock.' Egmont also supports the Challenger & South-East submission.

MPI Response

57. As MPI considers that bluenose is likely to be one biological stock, redistributing any reductions to catch limits should not change the outcome under Options 2 or 3 in terms of the rebuild. MPI also notes that redistributing proposed reductions to BNS 1 and 2 would not change the projected, potential losses in terms of overall export earnings. However, due to ACE and port price differentials (see Appendix 1), there could be greater losses overall than under a proportional reduction across all QMAs.

58. If the reductions proposed under Option 2 were redistributed, the total potential reductions to revenue in 2012-13 for quota owners and fishers would be higher by an estimated $111 000 (based on ACE price) and $237 000 (based on port price), respectively. This would be borne by BNS 1 and 2 quota owners and fishers. For export earnings, ACE revenue and port revenue, BNS 1 and 2 quota owners and fishers would also have to absorb the potential reductions in revenue currently projected for BNS 3, 7 and 8.

59. MPI recognises the potential for the availability of bluenose ACE to become limiting on target fisheries where bluenose is taken as bycatch, such as ling,

häpuku/bass and alfonsino. However, MPI is not able to quantify the impact lower ACE availability would have on target fisheries where bluenose is a bycatch.

60. A redistribution of the overall reduction proposed under Option 2 could impact the ACE available to cover bycatch of bluenose in BNS 1 and 2. However, based on recent bycatch levels, TACCs for BNS 1 and 2 should still remain above the level of bluenose bycatch for 2012-13.

61. MPI acknowledges that the proportional reductions proposed under Option 2 would bring the TACC for 2012-13 for BNS 3 close to that of recent bycatch levels in that QMA. However, for BNS 7 and 8, available information suggests bycatch levels will remain below the TACCs proposed under Option 2 for 2012-13. So, target fisheries where bluenose is a bycatch may not be impacted under Option 2 for either BNS 7 or 8.

62. For both BNS 3 and BNS 7, if the third phase reductions proposed under Option 2 for 2013-14 are also applied proportionally, the TACC would be close to or below recent bycatch levels. This is also the case for reductions proposed under Option 3 for 2012-13.

63. Redistributing the reductions would redistribute the impacts from BNS 3, 7 and 8 to BNS 1 and 2. In some cases, the overall impacts could be increased by doing so. In other cases, it is not clear what change would occur to overall impacts, including impacts on target fisheries taking bluenose as a bycatch. Therefore, MPI considers there is insufficient information to support a redistribution of proposed reductions for 2012-13. However, MPI notes that the issue of the appropriate proportion of bluenose catch for each QMA can be reconsidered in future if new information becomes available.

64. MPI notes that the proposed TACs and TACCs for all QMAs are consistent with the relative proportions established in 2011. At that time, catch limits for BNS 7 and 8 were not reduced.

All Stocks

65. AFL supports Option 2. Although initially reluctant, AFL states it is now committed to supporting the current rebuild plan. AFL hopes for a ‘more pragmatic’ target reference point for bluenose during development of a harvest strategy.

66. NZRFC and Forest & Bird support Option 3. NZRFC supports a quick rebuild of bluenose stocks and expresses concern about the low availability of bluenose for recreational fishers.

Current stock status

67. Forest & Bird is concerned about the sustainability of bluenose stocks and estimates that current biomass is around 15% of the un-fished biomass. Additionally, Forest & Bird submits that Option 3 would also reduce the amount of other species, such as ‘threatened seabirds and sharks’, killed as bycatch.

MPI Response

68. MPI notes that the stock assessment estimated BCURRENT at between 14 and 27% B_0. This is not inconsistent with Forest & Bird's estimate (15% B_0). Interactions with other species are discussed below under Assessment against Statutory Obligations.

Industry sampling programme

69. Sanford accepts that without new information that could lead to a re-assessment, 'any deviation from the status quo would be unlikely.' In this case, the 'status quo' is Option 2, the planned second stage of the three year staged reduction to bluenose catch limits. Sanford notes that industry is currently gathering catch sampling data.

MPI Response

70. MPI notes that the sampling programme aims to gather catch-at-age data to enable estimations of year class strength, so as to help monitor the status of bluenose stocks in future. However, information is not yet available from that programme to inform management options. MPI is also unsure whether sufficient information will be available from this programme to guide any review of bluenose catch limits in 2013-14.

Proportionality between sectors

71. Sanford does not state a preferred option, but submits that recreational and customary allowances should be reduced, to recognise 'that all stakeholders have responsibility for achieving the rebuild.' Sanford advocates for 'proportionally managing shared fisheries' and submits that, 'an unconstrained catch does not engender an attitude of care and stewardship towards the species.'

MPI Response

72. MPI notes that the Fisheries Act 1996 does not require you to take a proportional approach when varying TACCs or allowances. MPI also notes that allowances do not, in themselves, constrain customary Mäori or recreational take. However, MPI considers that the reductions made to customary allowances in 2011 have ensured that they more realistically reflect current customary Mäori take of bluenose. MPI has no information to suggest that the current recreational allowances for bluenose stocks are inappropriate. Therefore, MPI is not proposing further changes to allowances.

73. Recreational daily bag limits were reduced for all areas from May 2012. Recreational daily bag limits are now five for all areas. Prior to that, bag limits were either 30 or 20, depending on the area. This means that recreational fishers have had between a 75% to 83% reduction in their daily bag limits for bluenose. MPI does not consider that further cuts to bag limits or adjustments to allowances are necessary.

FINAL PROPOSALS

74. MPI is proposing the options set out in Table 1.1 (above) for BNS 1, 2, 3, 7 and 8 for your consideration. These options are unchanged from those consulted on in the IPP.

75. MPI believes adjusting the TACs is the most appropriate tool available to you to ensure sustainability for BNS 1, 2, 3, 7 and 8. Before you can set a TAC under s 13(2) of the Act, an assessment of $B_{CURRENT}$ and B_{MSY} is required. The available information on BNS 1, 2, 3, 7 and 8 is insufficient to enable estimates of $B_{CURRENT}$ or B_{MSY}.

76. Where estimates of $B_{CURRENT}$ or B_{MSY} cannot be reliably estimated, s 13(2A) of the Act enables you to use the best available information to set a TAC that is not inconsistent with maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

77. Best available information to inform TAC setting at this time is the 2011 stock assessment. The Plenary has agreed on, and MPI has accepted, $40\%B_0$ as a proxy minimum target reference level, in the absence of a reliable estimate of B_{MSY}. The stock assessment assumed a single biological stock and assessed bluenose as being below this level; the best estimate of bluenose biomass is 14-27% B_0.

78. As bluenose is managed as five separate stocks, MPI recommends that the TAC for each QMA should be reduced to a level that ensures that the combined TACs do not exceed the maximum estimated catch that will allow for a rebuild to $40\%B_0$ within 2 xT_{MIN} (20-26 years). MPI considers that this is consistent with s13 of the Act.

79. The final options present choices for you, about the way in which, and the rate at which, you move the bluenose stocks towards B_{MSY}. The different approaches give rise to different sustainability risks and different levels of socio-economic impacts.

80. The relative sustainability risk associated with each option is indicated by:

- How quickly stock size is returned to the target level, 40% B_0.
- A slower rebuild time means the stock spends longer in a more vulnerable state.
- The extent of any further decline in stock size.
- A further decline in stock size may reduce the capacity of the stock to rebuild.
- The amount of time stock size is below the soft limit reference point.

81. While the stock is below the soft limit, the stock is considered to be at an unacceptably low level. To ensure stock sustainability, it is recommended the stock be moved to above 20% B_0 (the soft limit reference point) as soon as possible.

82. For Options 2 and 3, MPI proposes the TAC cuts be borne by the commercial sector via reductions to TACCs. The commercial sector takes the greatest proportion of bluenose overall and has benefitted from TAC increases in the past. In addition, recreational fishers have already had significant cuts to their bluenose bag limits and customary allowances have also been reduced.

83. As bluenose is considered to be one biological stock, Options 2 and 3 propose that the cut is spread proportionally across the TACs (and TACCs) from all the QMAs. However, you could make another choice for how the cut is spread across QMAs.

Option 1 (status quo)

84. Under Option 1, the existing TAC would be retained for 2012/13. No submitters explicitly supported Option 1 for any stock. However, Challenger & South-East (for BNS 3, 7 and 8), Area 2 (BNS 2) and Egmont (BNS 8), submit in favour of no reductions for 2012-13.

85. Current catch limits are not within the range that would allow for a rebuild (i.e. are not consistent with rebuilding the stocks to 40% B_0). Additionally, stocks are expected to continue to decline under current catch limits. So, further reductions would be necessary in the short-term under this option.

86. The Act requires you to have regard to such social, cultural and economic factors as you consider relevant, when you are considering the way and rate at which a stock is moved towards or above B_{MSY} (s 13(3)). This means, you may delay further cuts (and potentially allow the stock to decline further in the interim) if you consider the short-term impacts on commercial fishers need to be mitigated, for example.

87. Option 1 would allow more time for commercial fishers to adjust to reduced catch limits. Though, MPI notes further reductions were signalled in 2011 for this year and fishers may have already made provisions for cuts, which could reduce any benefits from deferring cuts. Short-term economic costs would be least under this option. However, short-term gains may be at the expense of longer-term losses, as stocks will not rebuild as quickly, and are expected to decline further, if further reductions are delayed.

88. For 2012/13, Option 1 provides for fishers to land an additional 480 t compared to Option 2, or 960 t, compared to Option 3. Based on 2010/11 port prices, this would be worth approximately an additional $2.3 million or $4.6 million compared to Options 2 and 3, respectively. MPI notes that these figures may not be realised in reality because TACCs may not be fully caught under any option. However, they do provide a useful relative comparison between the options in terms of potential short-term economic costs and benefits. Further socio-economic information is provided in Appendix 2; including information for each of BNS 1, 2, 3, 7 and 8.

89. Previously, some in the commercial fishing industry disagreed about some of the assumptions used in the stock assessment. Option 1 allows time for more information to be gathered that could help to confirm or refute those

assumptions. For example, the Plenary notes alternative stock hypotheses (to the single stock hypothesis) have not been explored.

90. New information from the industry's catch sampling programme may also become available to help inform future catch limit setting. However, catch sampling has only recently begun (i.e. during the 2011-12 fishing year) and it is unclear if this will provide sufficient information in time to inform a 2013 review. Two submitters (Challenger & South-East and Egmont) referred to that programme and advocated for awaiting the results before making further changes to TACCs. However, under s 10 of the Act, absence of, or uncertainty in, any information should not be used as a reason for you postponing or failing to take any measure (including reducing TACs) to achieve the purpose of the Act.

91. Under Option 1, TACCs may eventually have to be reduced to lower levels than under Options 2 or 3 to ensure a rebuild within $2xT_{MIN}$. Lower catch limits would mean even less available annual catch entitlement (ACE) to cover bycatch compared to Options 2 and 3. This could exacerbate problems for fisheries where bluenose is taken as bycatch, such as hoki, ling, alfonsino and häpuku. This may result in reduced utilisation of those fisheries or in illegal discarding of bluenose.

92. The sustainability risks to the bluenose stocks are greatest under Option 1 as it would delay the rebuild and stocks will likely remain at low levels for longer. There may also be further declines in stock size, though no projections[17] were run for this option. Any rebuild would be contingent on further reductions in the short-term, the level and timing of which have yet to be determined. MPI would very likely seek to review bluenose stocks again in 2013 under this option.

Option 2 (MPI preferred option)

93. Option 2 proposes a continuation of the three year phased reductions begun in 2011, with the second of three[18] proposed consecutive cuts. Three submitters support Option 2: TRNOTA (BNS 1 and 2), Bill Hartley (BNS 3) and AFL (all stocks). Option 2 is also accepted by Sanford, at least until further information is available. During preliminary consultation, Option 2 was supported by the majority of MPI's recreational fishing forums: FMA 3 & 5 (BNS 3), FMA 7 (BNS 7) and at least some members of FMA 1 (BNS 1) and FMA 9 (BNS 1). Option 2 was also given initial support by the Te Hiku Forum.

94. The phased reduction under Option 2 is based on the maximum commercial catch predicted by the stock assessment model that would allow the stocks to rebuild to $40\%B_0$ within $2 \times T_{MIN}$.[19] Compared with Option 1(under which a rebuild is contingent on future reductions), the rebuild will likely be initiated sooner, further reductions in stock size are less likely, and the stocks remain at levels that may be below the soft limit for less time under Option 2.

[17] A projection is where data is used to predict future outcomes for a stock under a particular catch limit setting. As part of the stock assessment, various catch limit settings were modelled, but not for the current (2011-12) catch limits

[18] The third reduction to the combined TAC is planned to be to 704 t in 2013/14. This would require separate consideration based on information available at that time.

[19] Option 2 projects bluenose stocks to rebuild to B_{TGT} within $2 \times T_{MIN}$ – 15-29 years. This is based on taking the projections from the 2011 stock assessment of 16-30 years and deducting a year, as the first step in the phase reduction was taken in 2011. MPI considers the most likely actual rebuild timeframe from 2012 will be around 19-25 years.

95. Option 2 mitigates short-term social, cultural and economic impacts, particularly on the commercial sector, by providing time to adjust to lower catch limits. Option 2 was signalled in 2011, so is expected, and likely to be planned for, by industry. A phased reduction provides quota owners, fishing companies, and ACE holders time to adjust their budgets and activities, including their ACE distribution or harvesting plans. It also reduces the risk that TACCs will be over-caught, as management of bycatch is less likely to be an issue in the first few years and the phased approach provides time to plan for the change.

96. However, reducing the combined total TACC is likely to reduce target bluenose fishing in most areas and may impact bluenose bycatch fisheries in some areas. In recent years, for some bluenose stocks, bycatch levels were close to or exceeded the proposed TACCs under Option 2 (see Figure 1.3, above). This could mean target fisheries such as hoki, ling, alfonsino and häpuku are constrained. Alternatively, if bycatch exceeds the TACCs this could impact the timeframe required for rebuilding bluenose stocks.

97. The impact on target fisheries is one reason that Challenger & South-East give for arguing against further reductions to BNS 3 in particular. As noted, MPI considers there is insufficient information to guide an otherwise than proportional allocation of any reduction across the five bluenose QMAs. However, a different allocation could be considered during the review planned for 2013 under Option 2.

98. In 2011, the initial position paper noted the following in regard to potential impacts from bluenose TACC cuts on commercial fishers:

    - In 2009/10, 134 fishers landed bluenose. For the majority of these fishers (77%), bluenose made up less than 10% of their total landed catch weight. This suggests the majority of fishers currently taking bluenose are not overly dependent on bluenose landings and may be able to absorb the impact of the proposed reductions.

    - For some fishers, bluenose landings represent a significant proportion of their catch and income. The reduction in the availability of ACE is likely to force these fishers to either target other stocks or stop fishing altogether. In 2009/10, there were 15 fishers for whom bluenose represented over 30% of the weight of their total landed catch. The Seafood Industry Council (SeaFIC) has estimated that around 18 companies are financially dependent on target bluenose bottom-line fishing.

    - Many affected fishers may initially transfer effort to other long-line fisheries. SeaFIC noted that, with long-line catches of häpuku/bass and ling already being a high proportion of the TACCs in these fisheries, there is little capacity in those fisheries to absorb transfer of effort from the bluenose fishery.

99. As the current TACCs only came into effect in October 2011, and no new information was received through submissions on this year's IPP, MPI does not yet have data to assess the actual impacts on commercial fishers.

100. Under Option 2, fishers could be able to land 480 t more bluenose over the next year (worth approximately $2.3 million, based on 10/11 port prices), when compared to Option 3. However, compared with Option 1, Option 2 has higher short-term costs; an additional 480 t would be cut from the combined TACCs, also worth around $2.3 million.[20] Longer-term costs could be lower, if a rebuild is achieved sooner than under Option 1 (under which a rebuild is contingent on future reductions).

Option 3

101. Option 3 seeks to reduce catch to 704 t - the same level as the eventual TAC planned under the phased approach in Option 2 - but does so in one step rather than two (ie the target TAC is reached one year earlier). Three submitters support Option 3: TASFISH (for BNS 7), and NZRFC and Forest & Bird (for all stocks). During preliminary consultation, Option 3 was supported by FMA 2 (BNS 2) and some members of FMA 8 (BNS 8)

102. Projections are unavailable for Option 3, but MPI considers it would provide a rebuild within $2xT_{MIN}$ and will result in a faster rebuild than Option 2. However, it has the highest short-term impacts on the commercial sector.

103. After the decision in 2011, many fishers may have planned for a further reduction, but only to the level set out in Option 2. Option 3 may, therefore, disadvantage fishers who have already planned changes in accordance with the approach signalled in 2011. Option 3 will not give the commercial sector the planned additional time to further adjust their businesses in line with the reductions.

104. Compared with Option 2, similar numbers of fishers are likely to be impacted by Option 3. Impacts of the same kind discussed under Option 2 on commercial industry can be expected under Option 3 (though more severe in 2012); including the possibility that fishers have to change their businesses or leave the industry due to the economic impact and effects on their target fisheries.

105. As for Option 2, there is a risk that, as the stock begins to rebuild, the amount of bluenose taken as bycatch may exceed proposed TACCs in some QMAs. This is most likely to occur where the level of bycatch is very close to the TACC, as would be the case in BNS 2, 3 and 7 based on levels from recent years (see Appendix 1, Figure 4). As noted under Option 2, this could constrain target fisheries (hoki, ling, alfonsino and häpuku). Alternatively, if bycatch exceeds the TACCs this could impact the timeframe required for rebuilding bluenose stocks.

106. The short-term economic costs of Option 3 are higher than for Options 1 or 2. Compared to Option 2, this is only marginal; the target TAC level is the same and the full costs are only realised a year earlier. However, in 2012/13, Option 3 could mean up to 960 t less catch could be taken compared to Option 1 and

[20] These figures should be taken as comparative only, as TACCs may not be fully caught

up to 480 t less compared to Option 2 (worth $4.6 and $2.3 million, respectively, based on 2010/11 port price).[21]

107. Reducing stock size to very low levels can have irreversible effects on the stock, the ecosystem and other species. The main benefit of Option 3 is to avoid or mitigate any such risk; the risks are lowest under this option. This is because the rebuild will be initiated faster and stock levels remain at a lower, more vulnerable stock size for less time than under Options 1 or 2. It is also least likely under Option 3 that there will be further declines in stock levels. It would mean the rebuild could be initiated sooner.

108. International markets are becoming increasingly sensitive to sustainable management practices. Over the last six years, an average of 1100 t of bluenose has been exported annually to Australia and the US, with an approximate annual value of $12.6 million. As Option 3 is the most cautious option, it may be viewed the most favourable by our markets.

109. In addition, longer-term, the economic benefits from a faster, more certain rebuild under Option 3 may outweigh the immediate short-term economic benefits from Option 1. This is less likely to be so compared with Option 2 as the difference is only one more year to reach the same target TAC level.

ADDITIONAL MANAGEMENT CONTROLS

110. MPI is concurrently providing you with advice on a proposal to include bluenose from all areas in catch reporting requirements for charter vessels providing services to recreational fishers.[22] Any such change would come into effect on 1 October 2012. Information from catch reporting could be a potential opportunity for monitoring the recovery of bluenose.[23]

111. As noted above, a harvest strategy is to be confirmed for bluenose, in consultation with stakeholders. This will confirm a target reference level and hard and soft reference points.

112. Deemed value[24] rates were increased and recreational daily bag limits were decreased, as a result of decisions made by the Minister of Fisheries and Aquaculture in 2011. MPI does not propose any changes to deemed value rates for 2012/13. MPI does not propose any other management measures at present.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

113. MPI considers that Options 2 and 3 satisfy your obligations under s 8 of the Act in that they provide for utilisation of bluenose stocks while ensuring

[21] These figures should be taken as comparative only, as TACCs may not be fully caught
[22] Charter vessel operator catch reporting–additional fish stocks FAP
[23] The FMA 2 Recreational Fishing Forum requested bluenose be included in amateur charter vessel reporting
[24] Deemed values apply to commercial fishers that do not hold sufficient annual catch entitlement (ACE) to cover their catches. Deemed value rates are generally set at levels intended to incentivise fishers to balance catch with ACE

sustainability. Both management options are intended to ensure the long term sustainability of the stock.

114. Option 2 balances the short-term impacts on current levels of utilisation against the need to ensure sustainability by phasing in the necessary reductions to catch limits over two years. Option 2 would also require a further review of catch limits in 2013 to ensure sustainability. Option 3 is the most cautious in terms of ensuring sustainability but has the greatest short-term impact on utilisation.

115. Under Option 1, sustainability would only be ensured by a future review of catch limits (very likely) in 2013. So, Option 1 is the highest risk in terms of sustainability, but also has the least short-term impacts on utilisation.

116. In making your decisions about setting TACs, TACCs and allowances, you must act in a manner consistent with New Zealand's international obligations and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

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

118. MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5(b)).

TAC

119. Before you can set a TAC under s 13(2) of the Act, an assessment of $B_{CURRENT}$ and B_{MSY} is required. The available information on BNS 1, BNS 2, BNS 3, BNS 7 and BNS 8 is insufficient to enable estimates of $B_{CURRENT}$ or B_{MSY}.

120. Where $B_{CURRENT}$ or B_{MSY} cannot be reliably estimated, s 13(2A) of the Act enables you to use the best available information to set a TAC that is not inconsistent with maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

121. Best available information to inform TAC setting at this time is the 2011 stock assessment. The Plenary has agreed on, and MPI has accepted, $40\%B_0$ as a proxy minimum target reference level, in the absence of a reliable estimate of B_{MSY}. The stock assessment assumed a single biological stock and assessed bluenose as being below this level; the best estimate of bluenose biomass is 14-27% B_0. MPI considers that setting TACs for BNS 1, 2, 3, 7 and 8 at levels that will allow the stocks to rebuild to 40%B0 is consistent with s 13 of the Act.

122. MPI considers that all options presented in this paper satisfy your obligations under s 13 of the Act. Options 2 and 3 move the biomass towards B_{MSY} (or in this case, the target stock size of 40% B_0) and ensure the long term sustainability of the stock. Option 1 does not immediately do that and relies on

another review in the near future to ensure bluenose biomass is moved towards B_{MSY}.

123. Option 1 is open to you if you consider that you need to mitigate the short-term economic impacts on fishers by giving them more time to adjust to lower catch limits. This is because s13(3) requires you to have regard to such social, cultural, and economic factors as you consider relevant, in considering the way in which and rate at which a stock is moved towards or above B_{MSY}.

124. The Options provided in this paper provide you with a choice about the 'way and the rate' bluenose stocks are moved towards or above B_{MSY}. While Options 1 and 2 give industry more time to adjust, Option 3 provides for the fastest rebuild but at greater short-term economic costs.

125. Option 1 also gives industry more time to gather information that might inform alternative management approaches. However, you must not use the absence of or uncertainty in, information as a reason for postponing or failing to set a TAC for a stock (s 13(2A)(a) and s 10(d)).

126. In making a TAC decision, you must have regard to interdependence of stocks, the stock's biological characteristics and any environmental conditions affecting the stock.

127. Setting a TACC below likely bycatch levels is expected to result in negative economic consequences on ACE fishers targeting ling, häpuku and alfonsino. Bluenose bycatch is likely to be unavoidable in these fisheries like ling and häpuku as bluenose are known to shoal with these species.

128. MPI cannot quantify the impact on target fisheries for these and other species where bluenose is taken as bycatch. However, the amount of bycatch has been trending down as bluenose abundance has declined. So, any impact is more likely to be noticed as bluenose stocks begin rebuilding.

129. Bluenose is considered a low productivity species and is likely to take a relatively long time to recover from a low biomass. Under zero fishing pressure, bluenose would take 10-13 years to reach 40% B_0.

130. Seabirds are a known bycatch of longline fisheries targeting bluenose. However, all options proposed will either reduce fishing effort (Options 2 and 3), and thus reduce the risk to seabirds, or will have a neutral effect (Option 1).

131. MPI is unaware of any environmental conditions affecting bluenose stocks that are of relevance to your decisions.

Input and Participation

132. MPI has an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). MPI sought input from and provided an opportunity for participation for tangata whenua through MPI's Iwi Forums (see discussion under Customary catch, above). Input from and an opportunity for participation was also provided to iwi listed under Schedule 3 of the Maori Fisheries Act 2004 and tangata whenua groups with a Fisheries

Protocol. This opportunity was provided via meetings or in writing prior to the development of the IPP. Input received has been incorporated into this paper.

Environmental Principles

133. Section 9 of the Act requires that adverse effects of fishing should be avoided remedied or mitigated. More specifically, you are required to take into account that:

- associated and dependent species should be maintained at or above a level that ensures their long-term viability
- the biological diversity of the aquatic environment should be maintained, and
- habitat of particular significance for fisheries management should be protected.

134. Bluenose is preyed upon by other fish species, such as broadbill swordfish. The significant decline in bluenose biomass may have an impact on predator species like broadbill swordfish, subject to the availability of alternative food sources. A decline in abundance may also affect other complex interactions within the ecosystem. For example, bluenose is likely to be an important predator, feeding on tunicates, fish, squid and crustaceans. A change in predation pressure may alter competitive interactions between these species. MPI cannot quantify the scale of the impact of low abundance of bluenose on species interactions, but rebuilding bluenose stocks should improve any existing imbalance.

Information Principles

135. Section 10 requires that you take specified information principles into account when making your decisions. These are:

    - your decisions should be based on the best available information
    - you should consider any uncertainty in the information available in any case
    - you should be cautious when information is uncertain, unreliable or inadequate, and
    - you should not use the absence of, or any uncertainty in, any information as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

136. The options and analysis presented in this paper reflect the best available information on bluenose and outlines the uncertainty in the information available where it is relevant to your decision making.

Section 11 Considerations

137. In making your decision on setting or varying any sustainability measures for BNS 1, 2, 3, 7 and 8, you must satisfy the requirements of s 11 of the Act as follows:

a) Section 11(1)(a): You must take into account any effects of fishing on any stock and the aquatic environment. Bluenose is a bycatch in commercial bottom and mid-trawl fisheries targeting alfonsino, and also in longline fisheries targeting häpuku and ling. As the TAC proposals do not exceed historical landings of bluenose bycatch, the proposed TAC (and TACC) reductions under Options 2 and 3 may result in a change to these fishing operations. Therefore, it is anticipated that there may be an impact on the harvest of other stocks under Options 2 and 3. This impact will be greatest in the short-term under Option 3.

b) Section 11(1)(b): You must take into account any existing controls under the Act that apply to the stocks or areas concerned. Standard management controls apply to the BNS 1, 2, 3, 7 and 8 fisheries, for example deemed value rates, recreational bag limits and general fishing method constraints. The proposed changes to the TACs do not affect these measures.

c) Section 11(1)(c): You must take into account the natural variability of the stock. Bluenose stocks are not known to be highly variable.

d) Sections 11(2)(a) and (b): You must have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that applies to the coastal marine area and you consider relevant. MPI is not aware of any provisions, management plans or strategies that apply to the coastal marine area that you might consider relevant to any bluenose stock.

e) Section 11(2)(c): You must have regard to the provisions of sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000. Section 7 recognises the national significance of the Hauraki Gulf, including its capacity to provide for the relationship of tangata whenua with the Gulf and the social, economic, recreational and cultural well-being of people and communities. Section 8 sets out objectives for the management of the Hauraki Gulf. Objectives of relevance include; the protection and enhancement of the natural, historic, and physical resources of the Hauraki Gulf; the protection and enhancement of those resources of the Hauraki Gulf with which tangata whenua have an historic, traditional, cultural and spiritual relationship; and the maintenance and enhancement of the contribution of the resources of the Hauraki Gulf to the social and economic well-being of the people and communities of the Hauraki Gulf and New Zealand. Resources of the Hauraki Gulf would include bluenose, specifically BNS 1. So, rebuilding bluenose stocks is consistent with these objectives.

f) Section 11(2)(d): You must take into account any planning documents lodged by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. MPI is unaware of any customary planning documents which would apply to the quota management area for BNS 1, 2, 3 7 or 8.

g) Section 11(2A)(b): You must take account of any relevant and approved fisheries plans. There is no approved fisheries plan in place for any bluenose stock at this time.

h) Sections 11(2A)(a) and (c): You must take into account any conservation or fisheries services, and any decision not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for BNS 1, 2, 3, 7 and 8. MPI has noted (above) the industry programme aimed at gathering further information about bluenose stocks, but that information is not yet available. MPI has not made any decision not to require a service in these fisheries at this time.

Setting Allowances

138. Section 21 of the Act 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. 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.

139. Customary Maori allowances and recreational bag limits have already been reduced as a result of decisions made by the Minister of Fisheries and Aquaculture in 2011. MPI has no information that suggests further changes are needed for the customary Maori or recreational sectors, either to allowances or bag limits. MPI considers that the new bag limit (of 5 for all QMAs) will constrain recreational take within the existing allowances.

140. Section 21(4) requires that any mätaitai reserve or closures/restrictions under s 186A to facilitate customary Mäori fishing be taken into account. MPI is aware there are mätaitai reserves within BNS 1, 2, 3, 7 and 8. There are also s186A closures in some areas. MPI notes that the proposals in this paper will not impact on, or be impacted by, the mätaitai reserves or s186A closures.

141. Quantitative estimates of other sources of fishing-related mortality are not available for bluenose. The allowance for other sources of fishing related mortality is currently set at 33 t; around 2% of the TACC. The proposed decreases in allowances for other sources of fishing-related mortality approximately retain this proportion.

142. This allowance covers such things as incidental mortality caused by fishing methods and unreported discarding of unwanted catch. MPI has no information to suggest that the current level (2% of the TACC) needs to be changed.

CONCLUSIONS

143. The combined TACs for bluenose stocks are considered to be unsustainable. When assessed as a single biological stock, $B_{CURRENT}$ is below 40% B_0 and likely to continue to decline under current TACs.

144. MPI's preferred option is Option 2; to proceed with the planned second step of the three-year phased reduction on catch limits that was begun in 2011. MPI considers the phased reduction provides a balance between ensuring stocks

rebuild (within 2 x T_{MIN}) and mitigating the impacts on the commercial fishing industry by allowing time to adjust to reduced catch levels.

145. The Ministry considers all three options are consistent with your statutory obligations.

146. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

SUMMARY OF RECOMMENDATIONS

For Bluenose 1, 2, 3, 7, 8 (BNS 1, 2, 3, 7, 8): MPI recommends that a consistent option be chosen across the QMAs listed below (BNS 1, 2, 3, 7 and 8).

MPI recommends that for the BNS 1 fishery, you choose either

Option 1 **AGREED / NOT AGREED**

A. **Agree to** retain the existing TAC, TACC and allowances for BNS 1 as follows:

(i) **retain** the existing TAC at 600 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 12 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 15 tonnes
(v) **retain** the existing TACC at 571 tonnes

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

B. **Agree to** vary the TAC, TACC and allowances for BNS 1 as follows:

(i) **set** the TAC at 425 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 8 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 15 tonnes
(v) **set** the TACC at 400 tonnes.

OR

Option 3 **AGREED / NOT AGREED**

C. **Agree to** vary the TAC, TACC and allowances for BNS 1 as follows:

(i) **set** the TAC at 251 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 4 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 15 tonnes
(v) **set** the TACC at 230 tonnes

MPI recommends that for the BNS 2 fishery, you choose either

Option 1 **AGREED / NOT AGREED**

D. **Agree to** retain the existing TAC, TACC and allowances for BNS 2 as follows:

(i) **retain** the existing TAC at 669 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 13 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 25 tonnes
(v) **retain** the existing TACC at 629 tonnes

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

E. **Agree to** vary the TAC, TACC and allowances for BNS 2 as follows:

(i) **set** the TAC at 474 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 9 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 25 tonnes
(v) **set** the TACC at 438 tonnes.

OR

Option 3 **AGREED / NOT AGREED**

F. **Agree to** vary the TAC, TACC and allowances for BNS 2 as follows:

(i) **set** the TAC at 279 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 5 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 25 tonnes
(v) **set** the TACC at 247 tonnes.

MPI recommends that for the BNS 3 fishery, you choose either

Option 1 **AGREED / NOT AGREED**

G. **Agree to** retain the existing TAC, TACC and allowances for BNS 3 as follows:

(i) **retain** the existing TAC at 273 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 5 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 18 tonnes
(v) **retain** the existing TACC at 248 tonnes

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

H. **Agree to** vary the TAC, TACC and allowances for BNS 3 as follows:

(i) **set** the TAC at 194 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 3 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 18 tonnes
(v) **set** the TACC at 171 tonnes

OR

Option 3 **AGREED / NOT AGREED**

I. **Agree to** vary the TAC, TACC and allowances for BNS 3 as follows:

(i) **set** the TAC at 114 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 1 tonne
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 18 tonnes
(v) **set** the TACC at 93 tonnes

MPI recommends that for the BNS 7 fishery, you choose either

Option 1 **AGREED / NOT AGREED**

J. **Agree to** retain the existing TAC, TACC and allowances for BNS 7 as follows:

(i) **retain** the existing TAC at 96 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 2 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 3 tonnes
(v) **retain** the existing TACC at 89 tonnes

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

K. **Agree to** vary the TAC, TACC and allowances for BNS 7 as follows:

(i) **set** the TAC at 69 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 2 tonnes
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 3 tonnes
(v) **set** the TACC at 62 tonnes

OR

Option 3 **AGREED / NOT AGREED**

L. **Agree to** vary the TAC, TACC and allowances for BNS 7 as follows:

(i) **set** the TAC at 40 tonnes
(ii) **set** the allowance for other sources of fishing-related mortality at 1 tonne
(iii) **retain** the allowance for Mäori customary fishing at 2 tonnes
(iv) **retain** the allowance for recreational fishing at 3 tonnes
(v) **set** the TACC at 34 tonnes

MPI recommends that for the BNS 8 fishery, you choose either

Option 1 **AGREED / NOT AGREED**

M. **Agree to** retain the existing TAC, TACC and allowances for BNS 8 as follows:

(i) **retain** the existing TAC at 47 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 1 tonne
(iii) **retain** the allowance for Mäori customary fishing at 1 tonne
(iv) **retain** the allowance for recreational fishing at 2 tonnes
(v) **retain** the existing TACC at 43 tonnes

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

N. **Agree to** vary the TAC, TACC and allowances for BNS 8 as follows:

(i) **set** the TAC at 33 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at1 tonne
(iii) **retain** the allowance for Mäori customary fishing at 1 tonne
(iv) **retain** the allowance for recreational fishing at 2 tonnes
(v) **set** the TACC at 29 tonnes

OR

Option 3 **AGREED / NOT AGREED**

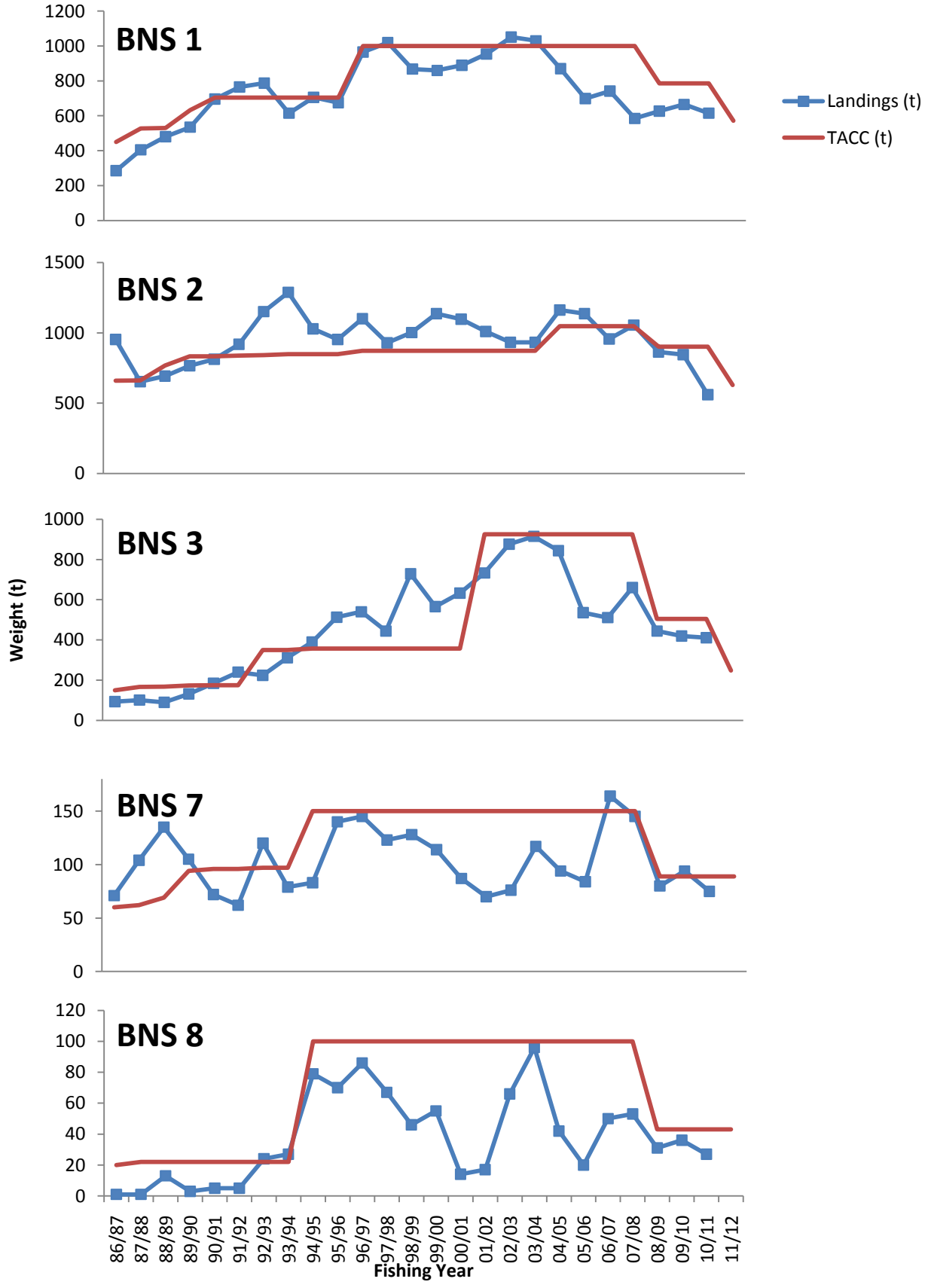
O. **Agree to** vary the TAC, TACC and allowances for BNS 8 as follows:

(i) **set** the TAC at 20 tonnes
(ii) **retain** the allowance for other sources of fishing-related mortality at 1 tonne
(iii) **retain** the allowance for Mäori customary fishing at 1 tonne
(iv) **retain** the allowance for recreational fishing at 2 tonnes
(v) **set** the TACC at 16 tonnes

APPENDIX 1 – CATCH INFORMATION

Figure 1.3: Reported landings (t) of bluenose and total TACCs (t) from 1986–87 to 2010–11 for BNS 1, 2, 3, 7 and 8, by QMA.

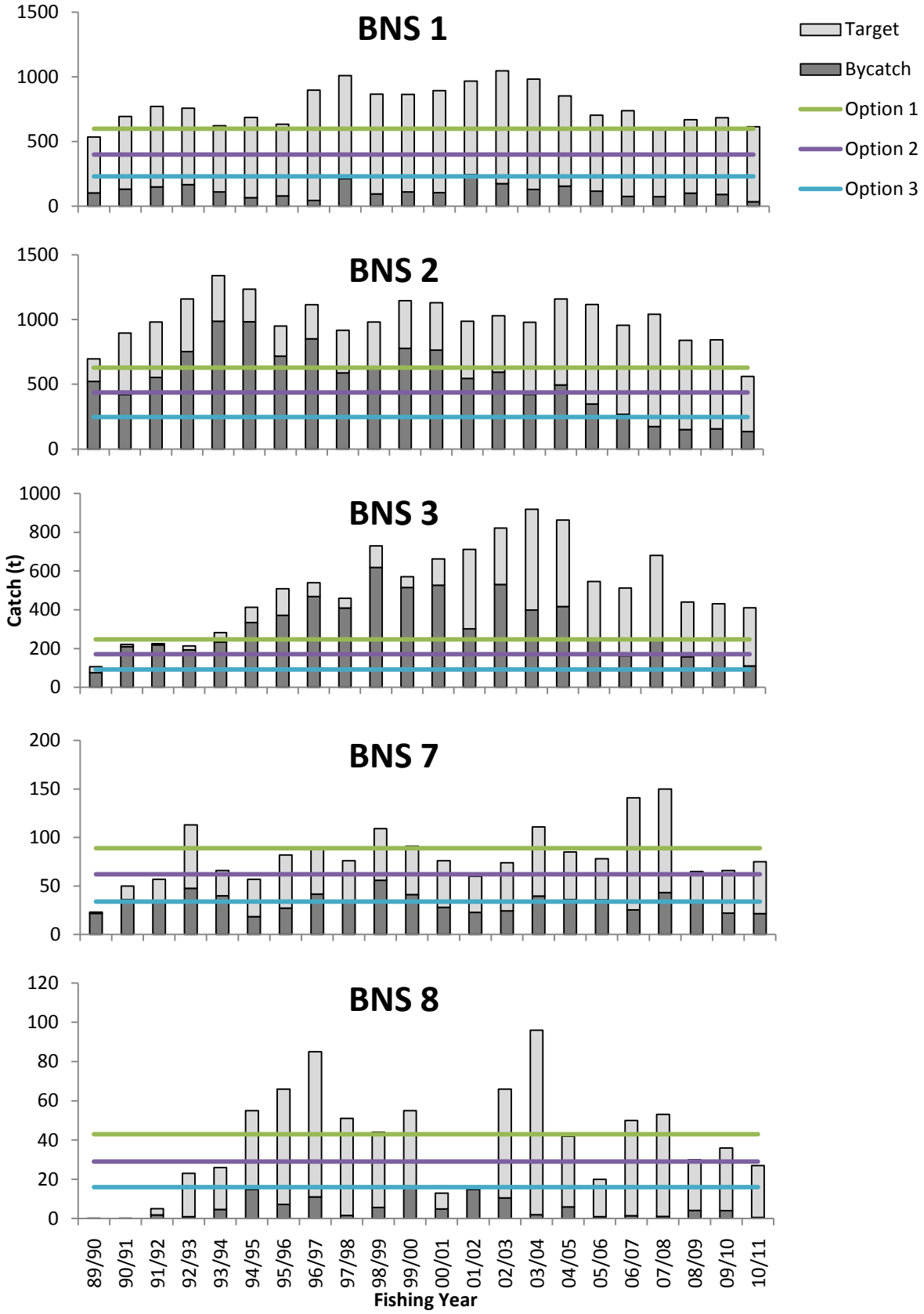
147.



148. Between 1992 and 2009, all bluenose fishstocks were included, for at least some of the time, in Adaptive Management Programmes (AMPs). The goal of the AMP was to increase commercial utilisation in low knowledge stocks while providing a cost-effective way of obtaining more information on stock size.

149. Under AMPs, the bluenose combined TACCs increased by over 1000 t to 3223 t. In response to information suggesting declines in abundance in BNS 1, 2, 3, 7 and 8, TACCs were reduced in 2008 to a combined TACC of 2480 t and additional research was initiated. This included the stock assessment, which forms the basis of the management response and rebuild plan.

Figure 1.4: Commercial bluenose bycatch and target catch (t), overlaid by the TACC proposed for each option, by QMA[25]



[25] Bycatch data used in the stock specific figures has been extracted from the bluenose characterisation report accepted by the Stock Assessment Working Group and updated with 2010-11 information

APPENDIX 2 – SOCIO-ECONOMIC INFORMATION

150. The nature of the economic impact to each BNS fishery can be examined by looking at the current indicators of the value of the fishery (Table 1.5).

Table 1.5: Current indicators of the economic value of the BNS fisheries

QMA	2011/12 Port Price ($/kg)	2011/12 Export Price ($/kg)*	2011/12 ACE Price ($/kg)**	2001/12 Quota Price ($/kg)***
BNS1	$5.57	$9.54	$2.08	$27.48
BNS2	$5.16	$9.54	$2.40	$28.34
BNS3	$3.05	$9.54	$1.28	$9.94
BNS7	$3.46	$9.54	$1.41	$13.92
BNS8	$4.79	$9.54	$1.19	N/A****

* Greenweight export price for H&G BNS from October 2011 to April 2012
** Average price from October 2011 to April 2012
*** Average price from October 2001 to April 2012. Note they has been virtually no quota trades since 2009
**** Not enough quota trades of BNS 8 to determine a valid quota price

151. Port price is the price that fishers are paid when landing their fish to a Licensed Fish Receiver (LFR). Port prices are calculated by surveying Licensed Fish Receivers (LFRs) annually to see what they are paying for each species of fish landed to them. However, the following limitations are known about port prices:

- Survey replies may be skewed because industry know they are used to set cost recovery levies
- Does not differentiate harvest method – fish caught by one method over another may command a price premium
- Ownership structure can influence port price – port prices change depending on whether the LFR is catching and landing the fish themselves, using contract fishers or taking fish from an independent fisher.
- Does not reflect price differential for different grades of fish – fishers receive different landed prices depending on the size of the fish caught

152. The 2011/12 port prices were based on a survey carried out during the 2010/11 fishing year so the port prices are out of date by a year. Therefore MPI has included the greenweight export price for headed and gutted (H&G) BNS to provide a picture of what price LFRs are getting from exporting BNS. MPI believes the true landed value of BNS lies somewhere between these two figures so both will be used in the analysis of potential changes to landings revenue from the proposed options.

153. The projected potential changes in landings revenue in 2012/13 is summarised below in Table 6. The values have been calculated based on:

- changes in landings between average catches over the fishing years from 2008-09 to 2010/11 compared with TACCs proposed for each option, and

- The 2011/12 port price[26] and the 2011/12 export price

Table 1.6: Summary of potential changes to landings revenue in 2012/13

	Option 1		Option 2		Option 3	
QMA	Port Price	Export Price	Port Price	Export Price	Port Price	Export Price
BNS 1	$0	$0	-$952,470	-$1,631,340	-$1,899,370	-$3,253,140
BNS 2	$0	$0	-$985,560	-$1,822,140	-$1,971,120	-$3,644,280
BNS 3	$0	$0	-$234,850	-$734,580	-$472,750	-$1,478,700
BNS 7	$0	$0	-$93,420	-$257,580	-$190,300	-$524,700
BNS 8	$0	$0	-$67,060	-$133,560	-$129,330	-$257,580
TOTAL	$0	$0	-$2,333,360	-$4,579,200	-$4,662,870	-$9,158,400

154. Options 2 and 3 will have an impact on fishers who land BNS. The severity of the impact will depend on the option implemented but the impact will be felt the hardest in BNS 1 and BNS 2 and 3.

155. MPI has calculated the potential impact on ACE holders and traders from the options in this paper (Table 1.7). Some quota holders do not fish their own ACE and generate revenue by selling their ACE to other parties. Any changes to the TACC level for these BNS fisheries will have an impact on the revenue these quota holders can generate from selling their ACE. It should be noted that ACE prices will likely increase due to lower supply of ACE, but MPI does not believe this will offset the loss from the reduction in ACE generated by their quota holdings.

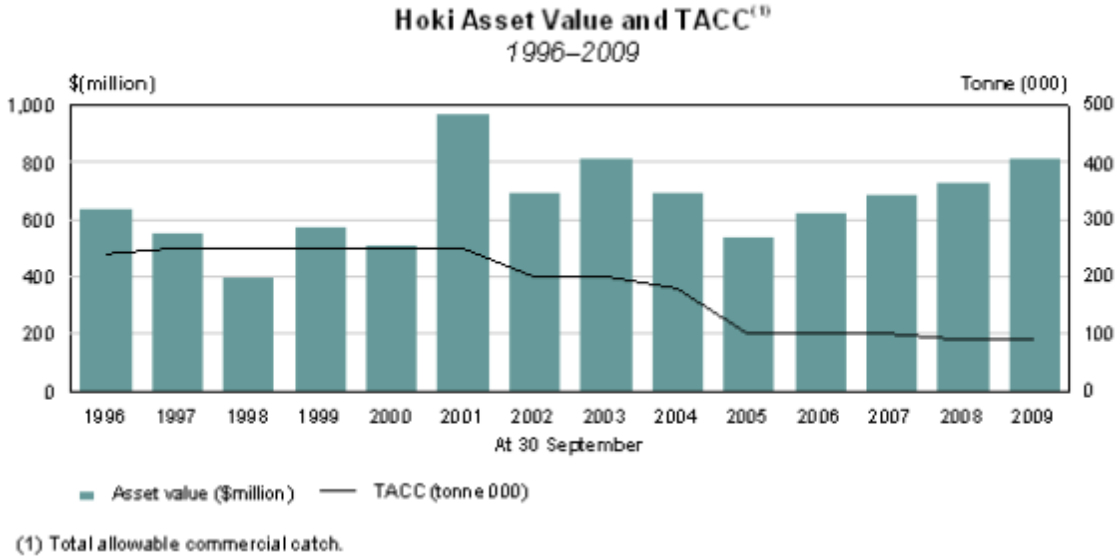
Table 1.7: Summary of loss of ACE revenue in 2012/13 – based on 2011/12 ACE price

QMA	Option 1	Option 2	Option 3
BNS1	$0	-$356,484	-$710,883
BNS2	0$	-$457,579	-$915,157
BNS3	$0	-$98,830	-$198,943
BNS7	$0	-$38,183	-$77,781
BNS8	$0	-$16,660	-$32,130
TOTAL	$0	-$967,735	-$1,934,894

156. The impact on quota values will be harder to predict. The TACC reductions proposed in Options 2 and 3 will lower the overall quota value of the BNS fisheries in the short term. However, if the management strategy is viewed as positive and likely to lead to better catches in the future (and possible TACC increases), then quota prices may increase over the medium to long term. This happened in the hoki fishery where TACCs were reduced to protect the sustainability of the fishery. The short term loss in quota value was recovered over time even though the TACC was reduced further (see Figure 1.5 below). The quota value in 2009 was comparable to that in 2003 when the TACC was double what it used to be (180,000 tonnes in 2003 compared to 90,000 tonnes in 2009).

[26] Port price is the surveyed average price paid by licensed fish receivers ('LFRs') to independent fishers for fish landed to those LFRs, as set or updated by rule 12 of the Fisheries (Cost Recovery) Rules 2001 (see rule 3: Interpretation). It has not yet been set for 2012/13

Figure 1.5: Hoki Asset Value and TACC 1996 to 2009



Source: Fish Monetary Stock Account 2009 (Statistics New Zealand)

157. There are some significant biological differences between hoki and bluenose so it is unlikely that the BNS asset value (quota value) will bounce back as quickly as the hoki asset value (quota value). Unfortunately the Fish Monetary Stock Account has not been updated since 2009 so MPI cannot show the increase in asset value from the TACC increases in the hoki fishery since the start of the 2009/10 fishing year.

158. The obvious trade off in any fisheries management decision involving potential TACC reductions is trading short term losses in term of forgone catch and ACE revenue for longer term gains in catch and possible TACC increases. Quota value is the best tool to examine this trade off as quota value reflects the net present value of future earnings from ACE. If fishers believe that the TACC reductions will work, quota trading and quota prices would not be expected to increase over the medium term. This would mean there will be little quota trading and quota prices available for analysis.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR ELEPHANT FISH (ELE 5)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

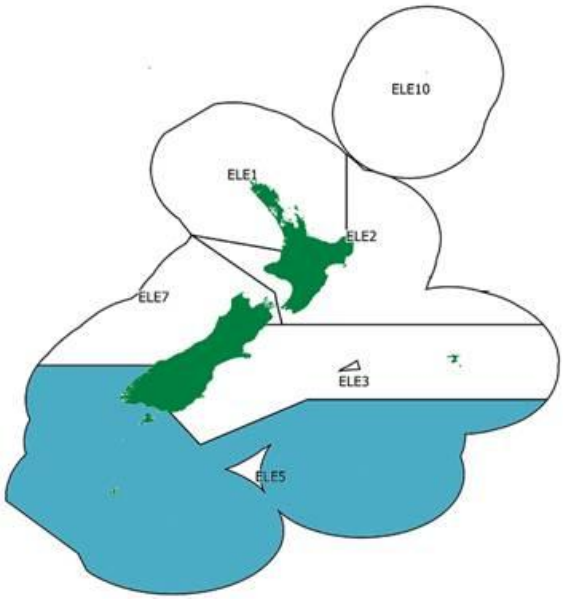


Figure 2.1: Quota Management Area (QMA) boundaries for Elephant Fish

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for elephant fish in ELE 5 from 157 tonnes to 188.5 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 5 t for recreational fishing, 5 t for customary Maori fishing, 8.5 t for other sources of fishing related mortality and a Total Allowable Commercial Catch (TACC) of 170 t. This would increase the TAC by 20%.

Table 2.1: Proposed TAC, TACC and allowances for ELE 5

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	157	5	5	7	140
Option 2 (MPI preferred Option)	188.5	5	5	8.5	170
Option 3	230.5	5	5	10.5	210

8. The best available information to inform TAC setting for ELE 5 is the standardised Catch per unit effort (CPUE) index. The proposed increases to the ELE 5 TAC (Options 2 and 3) are based on increases in the standardised CPUE index and increases in reported landings. The TACC has been exceeded for several years and the CPUE index has also been increasing, or appears to be stable at the level of current reported landings. The proposed TAC increase options are consistent with reported landings over the last seven years.

9. Option 1 is the status quo and the existing TAC would be retained at 157 t. This option reflects a cautious approach to sustainability. As all indicators show ELE 5 abundance is higher than it has ever been, there is potential for increased utilisation that will not be realised under Option 1.

10. MPI recommends Option 2, which would result in an increase in the TAC to 188.5 t and the TACC to 170 t (an average of the actual catch over the last seven years). Option 2 would provide the commercial sector with an opportunity to increase utilisation. Based on the 2012 port price of $2.31 per kilogram, additional commercial catch of 30 t would be worth approximately $69, 300 annually.

11. Option 3 would see the TAC increased to 230.5 t. Compared to Options 1 and 2, Option 3 presents the highest risk to long-term sustainability. However, Option 3 enables higher utilisation than either Option 1 or 2. Based on a 2011/2012 port price of $2.31 per kilogram, additional commercial catch would generate an additional $161, 700 of revenue.

12. All three options retain the current Mäori customary and recreational allowances. Catch from these sectors makes up a relatively small component of overall catch.

13. MPI received seven submissions that responded to the proposals for ELE 5 in the Initial Position Paper (IPP).

14. Aotearoa Fisheries Ltd (AFL), South East Finfish Management Company Ltd (South East Finfish) and Bill Hartley support MPI's recommendation to increase the TAC and TACC.

15. Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird), the New Zealand Recreational Fishing Council (NZRFC), and the New Zealand Sport Fishing Council (NZSFC) support the retention of the status quo.

16. Sanford Limited (Sanford) proposes alternative option of a TACC at 200 t, an amount between Options 2 and 3.

KEY CONSIDERATIONS

Need to Act

17. The current catch-per-unit-effort (CPUE) and annual catch in ELE 5 are both increasing, suggesting that stock abundance is increasing. Despite three TACC increases since 2001, commercial landings from ELE 5 have consistently exceeded the TACC since the 1995-96 fishing year. MPI considers that catch at recent levels (2004/05 to 2010/11) is unlikely to cause the stock to decline. The average catch over this period (167 t) is higher than the current TACC, and an opportunity exists to sustainably increase the catch which in turn will increase benefits obtained from the stock.

18. The TAC for ELE 5 is set by you under section 13 of the Fisheries Act 1996 (the Act). Section 13 requires you, as the Minister for Primary Industries[27] (the Minister), to set a TAC that enables the stock to be maintained at, or moved towards or above, a level that will produce the maximum sustainable yield (B_{MSY}). Where the current level of a stock ($B_{CURRENT}$) or B_{MSY} are not able to be reliably estimated, s 13(2A) requires the Minister to set a TAC at a level that is not inconsistent with this objective.

19. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13(2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

20. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

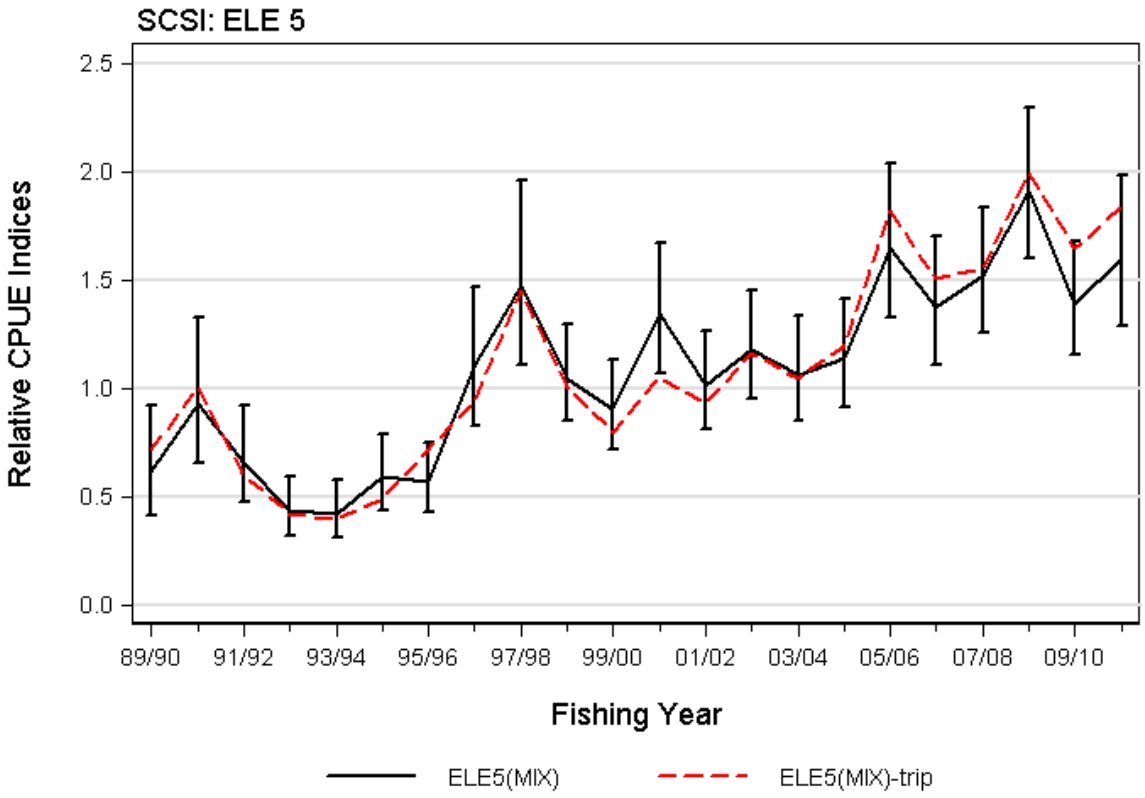
21. There is no current biomass estimate for ELE 5. It is not known what stock size would produce the maximum sustainable yield (B_{MSY}).

22. The Southern Inshore Fisheries Assessment Working Group (the Working Group) agrees that a standardised mixed target species bottom trawl standardised CPUE index (ELE5 – BT(MIX)-lognormal) is currently the most appropriate index with which to measure abundance of elephant fish in ELE 5. Both this CPUE index and annual catches in ELE 5 are increasing. It is considered likely that ELE 5 abundance is also increasing (see Figures 2.2 and 2.3).

23. This year, the Working Group reviewed ELE 5 and concluded that catch at recent levels (2004/05 to 2010/11) is unlikely to cause the stock to decline. Due to the continuously increasing trend in CPUE, the Working Group could not establish an agreed target CPUE level for ELE 5. Abundance would need to stabilise before a suitable target could be established.

[27] The Minister for Primary Industries now exercises the powers and duties of the Minister of Fisheries under the Act.

Figure 2.2: Standardised CPUE indices for mixed target species ELE 5 bottom trawl fisheries plotted along with the annual sum of catches from the series statistical areas plus target species. Both series have been normalised to a geometric mean =1.0. Error bars show ±97.5% confidence intervals.



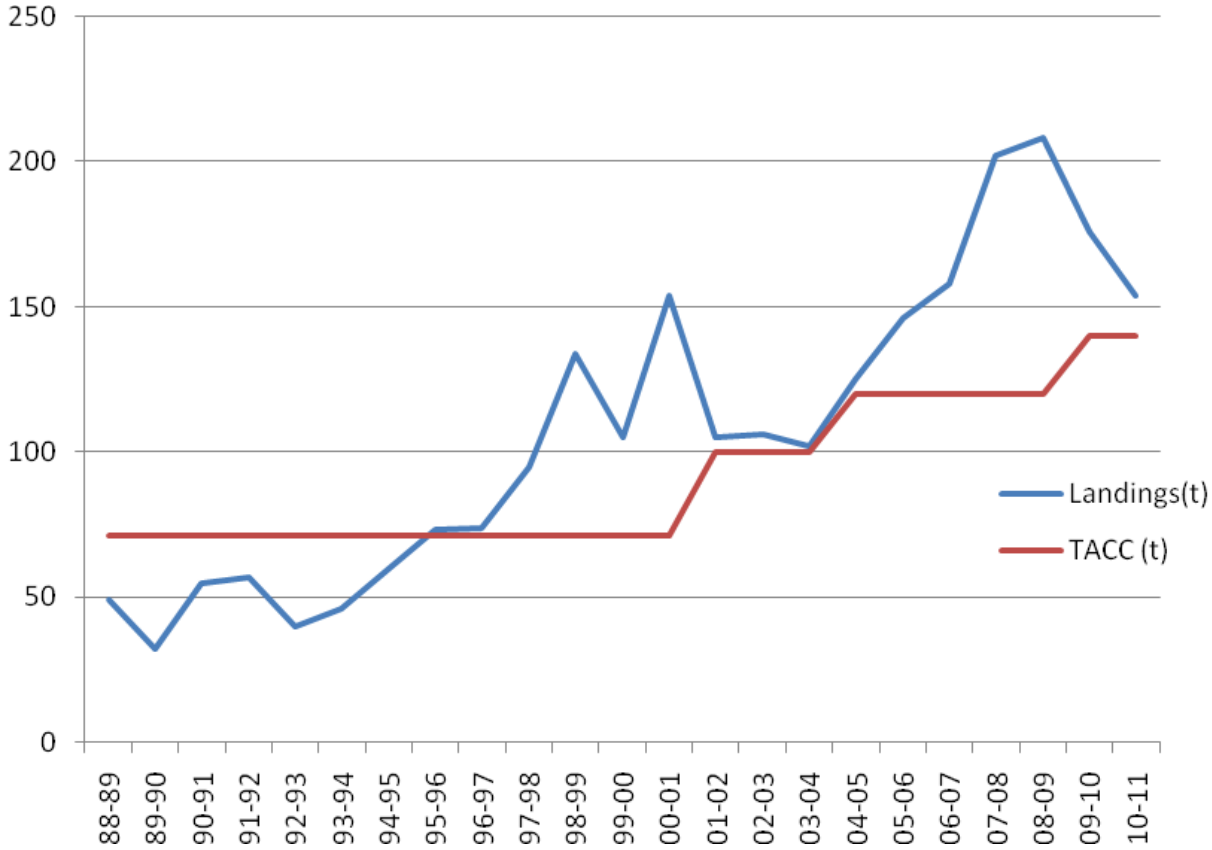
24. Some caution should be applied as the CPUE index is based on a relatively small dataset and, consequently, contains some uncertainty (as can be seen by the large confidence intervals in Figure 2.2). It is also likely that discarding and management changes in this fishery have biased the CPUE trends for this fishery. In particular, it is likely that actual catch is higher than reported. If discarding practices have changed with changes in stock abundance or market trends, the real CPUE trend may be different. However, MPI is not able to quantify the extent of this bias.

Relevant Fishery Information

25. ELE 5 is mainly taken as bycatch of the flatfish (FLA 3) and giant stargazer (STA 5) trawl fisheries (87%) and, to a lesser extent, the rig (SPO 3) and school shark (SCH 5) set net fisheries.

26. Anecdotal information from active fishers suggests that, in many areas where traditionally no elephant fish were caught, they are now being caught in high numbers. This may be due to a change in the population structure, perhaps influenced by environmental changes. This expansion of areas where ELE 5 is caught is supported by the strong declining trend in the proportion of zero catches detected during the CPUE analysis (from 60% no catch in 1989-90 to about 30% in 2010-12).

Figure 2.3: Reported Catch Landings and TACC (t) for ELE 5 from 1988/89 to the 2010/11 fishing year



27. Available information is not sufficient to provide an estimate of recreational catch for ELE 5.

28. Customary catch data available for most of the ELE 5 QMA does not show any significant catch of ELE 5. Anecdotal information suggests that customary catch is occurring within the recreational daily bag limit of five elephant fish.

CONSULTATION

29. An IPP was released on 05 July 2012. The options proposed in the IPP were the same as set out in Table 2.1. MPI consulted with tangata whenua and stakeholders on the options outlined in Table 2.1. The options considered in the IPP are unchanged from the final proposals.

Submissions

30. MPI received 7 submissions on the IPP from:

- Aotearoa Fisheries Ltd (AFL)
- Bill Hartley, a recreational fisher
- Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird)

- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Sanford Limited (Sanford)
- South East Finfish Management Company Ltd (South East Finfish)

31. AFL, South East Finfish and Bill Hartley support Option 2 – increase the TAC to 188.5 t and increase the TACC by 21%.

32. AFL submits that it is encouraged that the current CPUE is improving; suggesting the stock abundance in ELE 5 is increasing. AFL is concerned that without a TACC increase, discarding and high grading will continue to negatively bias the CPUE. Given that the commercial landings have constantly exceeded the TACC the past several years, AFL considers the current catch limit is inappropriate.

33. South East Finfish welcomes the increase and notes that it agrees with MPI that the TACC should be set conservatively in the first instance rather than at the highest recorded catch of 210 t. South-East Finfish will be seeking to programme research and monitoring of this stock on a rolling two to three year basis, or as deemed appropriate.

34. Bill Hartley supports Option 2 but on condition that the recreational bag limits is increased from five to ten elephant fish per day.

35. MPI agrees with AFL and South-East Finfish that the CPUE data is indicating an abundant fishery and the best available information suggests that catches at current levels would be unlikely to cause the stock to decline. MPI also strongly endorses the continued research and monitoring as this will pick up any changes in abundance.

36. The maximum daily recreational bag limit is five elephant fish (as part of the combined finfish daily bag limit of thirty) in the ELE 5 QMA. MPI has no information to suggest that the current bag limit is causing a widespread problem, as it does not appear to be constraining recreational fishers unnecessarily. Therefore, at this stage MPI is not proposing any adjustment to the bag limit or allowance.

37. Forest & Bird, NZRFC, and NZSFC all submit in support of retaining the status quo (Option 1). Forest & Bird, NZRFC and NZSFC state that there is no estimate of current stock biomass or that the stock biomass would support maximum sustainable yield. They note that the CPUE has not increased in the last six years. But, they do acknowledge that commercial catch rates can track abundance, however caution should be applied when making this assumption. Failure to carry out a full stock assessment of ELE 5 is seen as a failure for MPI. The question of elephant fish being investigated for inclusion on schedule 6 of the Act is also raised. The low fecundity of the species is highlighted, and that juvenile fish are being caught in shallow water and being discarded due to low commercial value. NZRFC recommends an ecosystem approach to the setting of catch levels.

38. MPI considers all the options proposed are consistent with the objective of maintaining the ELE 5 stock at or above the level that can produce the maximum sustainable yield in the short-term. MPI agrees with caution being applied as the CPUE index is based on a relatively small dataset and, consequently, contains some uncertainty, as can be seen by the large confidence intervals (in Figure 2.2). It is also likely that discarding and management changes in this fishery have biased the CPUE trends. In particular, it is likely that actual catch is higher than reported. Given this uncertainty, and the biological characteristics of the stock, Options 2 and 3 involve a slightly higher risk to the sustainability of the stock. But this should be seen in the context that abundance is currently higher than it has been since the start of the CPUE time series, but caution is exercised due to any potential bias.

39. Sanford proposes an alternative option of a TACC of 200 t. They submit that the TACC has been regularly over caught.

40. MPI acknowledge that the TACC has regularly been over caught, and at the level proposed by Sanford there would be greater utilisation. As ELE 5 has had the benefit of long term CPUE analysis under the Adaptive Management Program, it was agreed by the Working Group that CPUE was a better way to analyse abundance than solely relying on catch levels. It was agreed that catches at current levels would be unlikely to cause the stock to decline. However, the Sanford option presents a higher risk to the long-term sustainability of the ELE 5 stock relative to the MPI preferred Option 2 , which is a more measured approach to the current levels of abundance.

41. Prior to developing the proposals for consultation, Te Waka a Mäui me Öna Toka iwi forum was approached for their collective view on ELE 5. No collective view was provided by Te Waka a Mäui me Öna Toka.

FINAL PROPOSALS

42. The final proposals for ELE 5 remain unchanged following consultation and consideration of submissions. The options proposed are presented in Table 2.1.

Option 1

43. Option 1, the status quo, proposes no changes to the TAC, TACCs or allowances for customary Māori, recreational or other sources of fishing related mortality. The existing TAC would be retained for ELE 5. Based on the best available information, Option 1 presents a more cautious approach to sustainability as all indicators show ELE 5 abundance is higher than it has ever been.

44. MPI considers that retaining the current TAC and TACC may result in a lost utilisation opportunity for the commercial sector. Option 1 does not reflect commercial utilisation trends of the last seven years that have averaged 167 t. Option 1 also necessitates the on-going cost to fishers of covering over-catch of ELE 5 with deemed value payments.In the case of this stock there is no ACE to cover overcatch, it is a fully allocated fishery.

45. The current TACC for ELE 5 could be constraining both the elephant fish fishery and associated target fisheries. In mixed fisheries, fishers have to change fishing practices and behaviours as they manage annual catch entitlement (ACE) constraints in bycatch species, such as elephant fish. In some cases this will mean stopping fishing for other target species, which would limit utilisation of other species in the QMA.

Option 2 (MPI Preferred Option)

46. Option 2 would result in an increase in the TAC to188.5 t and a 30 t increase in the TACC, to 170 t. The allowance for other sources of fishing related mortality would be increased from 7 t to 8.5 t (maintaining its level at 5% of the TACC), and no changes to customary Maori or recreational allowances.

47. This option proposes a TACC that would be at the level of the seven year average landings of 167 t. The best available information suggests that catches at current levels would be unlikely to cause the stock to decline. Option 2 presents a higher risk to the long-term sustainability of the ELE 5 stock relative to Option 1 (and a lower level compared to Option 3), However, MPI considers this risk is still low and Option 2 provides for some growth opportunities.

48. Increasing the TACC would provide the commercial sector with an opportunity to increase utilisation during a period of abundance. Based on the 2012 port price of $2.31 per kilogram, an additional 30 t would be worth approximately $69 300 annually.

49. A 30 t increase in the TACC is a measured response to the current high level of abundance in ELE 5. With continued monitoring and analysis of the CPUE, it will be possible for MPI to respond swiftly to changes in stock abundance.

Option 3

50. Option 3 would increase the TAC to 230.5 t and increase the TACC from 140 t to 210 t. The allowance for other sources of fishing related mortality would be increased from 7 t to 10.5 t (maintaining its level at 5% of the TACC). No changes are proposed to customary Māori or recreational allowances.

51. This would provide greater utilisation and economic growth opportunities than Option 2. A 70 t increase in commercial catch would be worth approximately $161 700 annually.

52. Although Option 3 enables the highest utilisation, it may carry higher risk to the longer term sustainability of ELE 5. Continued monitoring of the stock would be required to identify any potential decline in stock abundance and enable an appropriate management response. More robust information and more accurate CPUE analysis from better catch information may enable ELE 5 to be managed in a more dynamic way, with regular reviews of the TACC. Essential to this option would be the collection of additional data on age classes within the population to assist assessing the productivity of this fishery. Observers would be the best people to collect this age class information.

ADDITIONAL MANAGEMENT CONTROLS

53. MPI does not propose to review any other management controls for ELE 5 at this time.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

54. MPI considers that all options presented in this paper satisfy your obligations under s 8 of the Act in that they provide for utilisation in the ELE 5 fishery while ensuring sustainability. Each management option proposed will ensure the long term sustainability of the stock. Option 1 is more cautious but is likely to limit utilisation opportunities. In contrast, increasing the TACC to 170 t under Option 2 (MPI preferred option) or 210 t under Option 3 will allow for increased utilisation.

55. 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.

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

57. MPI also considers the proposed management options to be 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 ELE 5 to promote policies that help to recognise customary use and management practices.

58. There is also an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). Te Waka a Māui me Ona Toka iwi forum was approached for their collective view on ELE 5. No collective view was provided by Te Waka a Mäui me Öna Toka.

Information principles

59. Under section 10 of the Act you must take into account the information principles in of the Act these being that:

- decisions should be based on the best available information;
- decision makers should take into account any uncertainty in the available information;
- decision makers should be cautious when information is uncertain, unreliable or inadequate, and;

- the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

TAC

60. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at or above, or moving the stock to a level at or above BMSY, in a way and rate considered appropriate for the stock. In doing so you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. 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.

61. ELE 5 is a bycatch of the East Coast South Island bottom trawl and set net fisheries, which primarily target flatfish (trawl), or school shark (set net). There are a number of other species caught in these fisheries, for example red cod, barracouta, stargazer, tarakihi, and rig.

62. Elephant fish (*Callorhinchus milii*) mature between three and five years of age. Maximum age is not able to be reliably estimated but appears to be between nine and fifteen years. Mature elephant fish migrate to shallow inshore waters in spring to spawn.

63. Females are known to spawn multiple times per season laying two eggs on each occasion. This relatively low fecundity, that is common to all elasmobranches, makes elephant fish prone to over-fishing.

64. In considering the way in which and rate at which a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors as you consider relevant. There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

65. The TAC options presented in this final advice take into account the requirements listed in s 13 of the Act, and offer differing approaches to managing the potential risk to sustainability of the fishery that reflect the uncertainty in available information.

Environmental Considerations

66. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, s 9 requires you to take into account that associated or dependent species be maintained at or above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

67. Key environmental issues associated with the ELE 5 fishery and how they will be affected by an increase to the TAC are discussed below:

- There are measures in place in the ELE 5 fishery to mitigate the impacts of fishing on Hector's dolphins. Any TAC and TACC increase for ELE 5 will not affect these measures and they will continue to be just as effective. However, there remains a risk of incidental capture of Hector's dolphins under all three options.
- Incidental captures of seabirds do occur in this fishery. The number of such seabird captures has not been quantified. However, MPI considers the number of incidental seabird captures is unlikely to increase under any of the options because we do not expect the amount of trawling to increase significantly.
- ELE 5 is mainly a bycatch of the ECSI bottom trawl fishery. Increasing the TACC of ELE 5 will not necessarily increase the amount of bottom trawling undertaken because the increase in abundance of the ELE 5 stock has meant an increase in catch per unit effort. Option 2 (the MPI preferred option) would only increase the TACC to the level of current catch. Option 3 may cause an increase in trawling effort.

Section 11 Considerations

68. In making your decisions on sustainability measures for ELE 5, you must also have regard to the requirements of s 11 of the Act as follows:

    a) Section 11(1)(a): Before setting or varying any sustainability measure for any stock, you must take into account any effects of fishing on any stock and the aquatic environment. The majority of ELE 5 commercial take is as bycatch in bottom-trawl fisheries targeting flatfish and the set net fishery targeting school shark. As the TAC proposals do not affect catch limits for the key species targeted when ELE 5 is taken, it is not anticipated that the proposed TAC (and TACC) options would result in a significant change to fishing operations. Therefore, it is not anticipated there will be an increase in impacts on the marine environment or on the harvest of other stocks.

    b) Section 11(1)(b): Before setting or varying any sustainability measure for any stock, you must take into account any existing controls under the Act that apply to the stock or area concerned. Standard management controls apply to the ELE 5 fishery, for example deemed values, amateur bag limits, amateur minimum size limits, and fishing method constraints. The proposed changes to the TAC do not affect these measures.

    c) Section 11(1)(c): Before setting or varying any sustainability measure for this stock, you must take into account the natural variability of the stock. This has been discussed above in relation to the biological characteristics of ELE 5.

    d) Sections 11(2)(a) and (b): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the

coastal marine area and you consider relevant. MPI considers that all three options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the ELE 5 stock.

e) Section 11(2)(c): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of s 7 and s 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Park boundaries.

f) Section 11(2A)(b): Before setting or varying any sustainability measure for any stock, you must take account of any relevant and approved fisheries plans. There is no approved fisheries plan that would be effected by these changes.

g) Sections 11(2A)(a) and (c): Before setting or varying any sustainability measure for any stock, you must take into account any conservation or fisheries services, or any decision not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for this stock. No decision has been made to not require a service in this fishery at this time.

Setting Allowances

69. Section 21 of the Act requires you to allow for Mäori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, when setting or varying the TACC. 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.

70. There is no proposal to increase either the customary or recreational allowances for ELE 5. The ELE 5 TAC was last reviewed in 2009, when allowances for Mäori customary and recreational were also unchanged. Information on Mäori customary catch and recreational catch is uncertain. However, MPI considers that neither Mäori customary nor recreational catch have changed significantly over the last three years.

71. Section 21(4) requires you to take into account any mätaitai reserve or closures/restrictions under s 186A to facilitate customary Mäori fishing. There are 6 mätaitai reserves in the ELE 5 FMA at Oreti, Waikawa Harbour, Te Whaka a Te Werea, Horomamae, Pikomamaku, and Kaihuka mätaitai. The proposals in this paper will not impact on, or be impacted by, these mätaitai reserves.

CONCLUSIONS

72. The MPI preferred option is Option 2 – increasing the TAC of ELE 5 to 188.5 t, increasing the TACC to 170 t, and increasing the allowance for other sources of fishing-related mortality to 8.5 t.

73. ELE 5 is experiencing a period of high abundance. The information available supports an increase in catch to this level (the average catch over the last seven years) for the short term. Ongoing monitoring via the existing CPUE analysis, with a view to review the TAC again in two to three years, will ensure that the catch remains sustainable over the longer term.

74. A TACC of 170 t would enable increased utilisation and economic benefit for the commercial sector.

75. The Ministry considers all three options are consistent with your statutory obligations.

76. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that, for the ELE 5 fishery, you choose either

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for ELE 5 as follows:

(i) **retain** the existing TAC at 157 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 5 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **retain** the other sources of fishing-related mortality allowance at 7 tonnes,
(v) **retain** the existing TACC at 140 tonnes.

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for ELE 5 as follows:

(i) **set** the TAC at 188.5 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 5 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 8.5 tonnes,
(v) **set** the TACC at 170 tonnes.

OR

Option 3 **AGREED/ NOT AGREED**

Agree to vary the TAC, TACC and allowances for ELE 5 as follows:

(i) **set** the TAC at 230.5 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 5 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 10.5 tonnes,
(v) **set** the TACC at 210 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR DARK GHOST SHARK 2 (GSH 2)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR DARK GHOST SHARK (GSH 2)

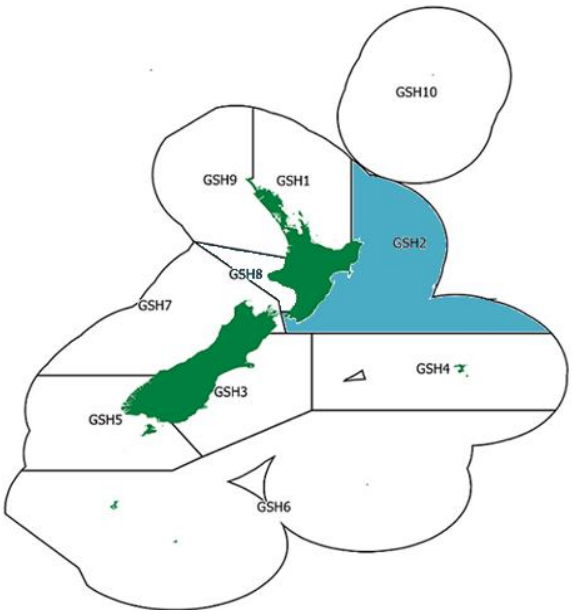


Figure 3.1: Quota Management Area (QMA) boundaries for Dark Ghost Shark

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for dark ghost shark in GSH 2 from 66 tonnes to 100 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 1 t for recreational fishing, 10 t for other sources of fishing-related mortality and a Total Allowable Commercial Catch (TACC) of 89 t. This would increase the TACC by 35%.

Table 3.1: Proposed TACs, TACCs and allowances for GSH 2

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	66	0	0	N/A	66
Option 2 (MPI preferred Option)	100	0	1	10	89

8. Reliable estimates of the current level of the GSH 2 stock ($B_{CURRENT}$) or the level of the stock that can produce the maximum sustainable yield (B_{MSY}) are not available. The best available information on stock status for GSH 2 is trends in catch.

9. The TAC and TACC for GSH 2 were last reviewed in 2006, and were increased from 33 t to 66 t based on reported landings up to 1 October 2005. Since then landings have exceeded the TAC and TACC of 66 t on three occasions.

10. Option 1 is the status quo and the existing TAC would be retained at 66 t. This option reflects a cautious approach and may result in opportunity loss for the commercial sector.

11. MPI recommends increasing the TAC to the highest level of reported landings (Option 2). Given low volumes of catch in the past, and the likelihood that GSH 2 is part of a larger biological stock, MPI considers a TAC increase from 66 t to 100 t is not, in the medium term, inconsistent with the objective of maintaining the GSH 2 stock at or above B_{MSY} or moving the stock towards or above B_{MSY}.

12. If you decide to adjust the TAC, MPI recommends that the current 0 t allowance for recreational fishing be increased to 1 t. While there is no quantitative information on the current level of recreational fishing of dark ghost shark, both the New Zealand Recreational Fishing Council (NZRFC) and the New Zealand Sport fishing Council (NZSFC) have submitted that recreational catch of dark ghost shark is likely to be occurring in GSH 2. It is likely that the proposed allowance will likely cover the existing level of recreational dark ghost shark catch in GSH 2.

13. No change to the 0 t customary allowance is proposed.

14. A relatively high allowance of 10 t for other sources of fishing-related mortality is recommended as GSH 2 is taken by trawl with other higher value species and wastage and under-reporting of catch is considered likely.

15. An 89 t TACC will provide more Annual Catch Entitlement (ACE) for commercial fishers to balance current levels of catch. It is unlikely to result in increased targeting and fishing effort as dark ghost shark is largely a bycatch species. Therefore it is unlikely to result in an increase in associated impacts on other species or the environment.

16. MPI received six submissions in response to the proposals for GSH 2 in the Initial Position Paper (IPP).

17. Sanford Limited (Sanford), Area 2 Inshore Finfish Management Company (Area 2), Aotearoa Fisheries Limited (AFL) and NZRFC support MPI's recommendation to increase the TAC and TACC.

18. NZSFC and the Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird) support the retention of the status quo.

KEY CONSIDERATIONS

Need to Act

19. The TAC and TACC for GSH 2 were last reviewed in 2006, and were increased from 33 t to 66 t based on reported landings up to 1 October 2005. Māori customary and recreational allowances were retained at 0 t and no allowance was made for other sources of fishing-related mortality. Since then landings have exceeded the TAC and TACC of 66 t on three occasions.

20. The TAC for GSH 2 is set by you under section 13 of the Fisheries Act 1996 (the Act). Section 13 requires you to set a TAC for GSH 2 that enables the stock to be maintained at, or moved towards or above, a level that will produce the maximum sustainable yield (BMSY).

21. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13 (2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards of above B_{MSY}.

22. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

23. MPI considers that in circumstances where a TAC has been set primarily using information from reported landings, and landings then exceed the TACC on multiple occasions, it is important to review up-to-date information and consider management adjustments that would address emerging concerns or opportunities. This approach has been supported by industry submissions in the context of this paper.

24. Dark ghost shark require timely processing at sea to maintain their value and there is likely to be some wastage and misreporting occurring in the fishery. The inability of some fishers to cover all their catch with ACE and the cost of making deemed value payments may also be creating disincentives to land the catch. Despite this landings exceeding the TACC have been reported.

25. Highest landings were reported in the 2007/08 fishing year and totalled approximately 100 t (exceeding the TACC by approximately 50%). The deemed value charges in that year were approximately $11,500. The TACC was also exceeded in 2008/09 (deemed value charges of $2 000) and 2010/11 (deemed value charges of $17 000) but landings so far this year have been relatively lower (Figure 3.2).

26. Given GSH 2 is likely to be part of a much larger biological stock and the relatively low volume of catch in GSH 2 in the past (reported fishing-year landings have not exceeded 100 t in the thirty years that reliable records have been available) MPI considers there to be an opportunity for you to provide for increased utilisation over the medium term.

Biological characteristics of dark ghost shark

27. Little is known about the growth and age characteristics of dark ghost shark (*Hydrolagus novaezealandiae*), but productivity is considered likely to be low.

28. The species is distributed widely in New Zealand fisheries waters in depths from 30 to 850 metres, but is more abundant in the south. It has been proposed that there are three biological stocks; east coast New Zealand (Fishery Management Areas (FMAs) 1 - 4), Stewart-Snares shelf and Campbell Plateau (FMAs 5 and 6), and west coast New Zealand (FMAs 7, 8, and 9) but there is also a possibility that these areas could all be linked. The current GSH 2 QMA is therefore likely to cover only part of a larger biological stock.

Stock status

29. Reliable estimates of $B_{CURRENT}$ and B_{MSY} are not available for any of the dark ghost shark stocks. The best available information on stock status for GSH 2 is

trends in catch. The highest reported catch prior to introduction into the QMS on 1 October 1998 was 62 t, since then reported landings have ranged from 50 t to 100 t.

30. GSH 2 (95 t landed in 2010/11) is likely to be part of the same biological stock as GSH 3 (640 t landed in 2010/11) and GSH 4 (311 t landed in 2010/11). GSH 3 catches have declined since introduction into the QMS but have been relatively stable over the last six years, although well below the TACC of 1185 t. GSH 4 catches have varied since introduction into the QMS, exceeding the TACC twice in the last five fishing years.

31. Given the likelihood that GSH 2 is part of a larger biological stock it is likely GSH 2 is currently at a level above B_{MSY}.

Relevant Fishery Information

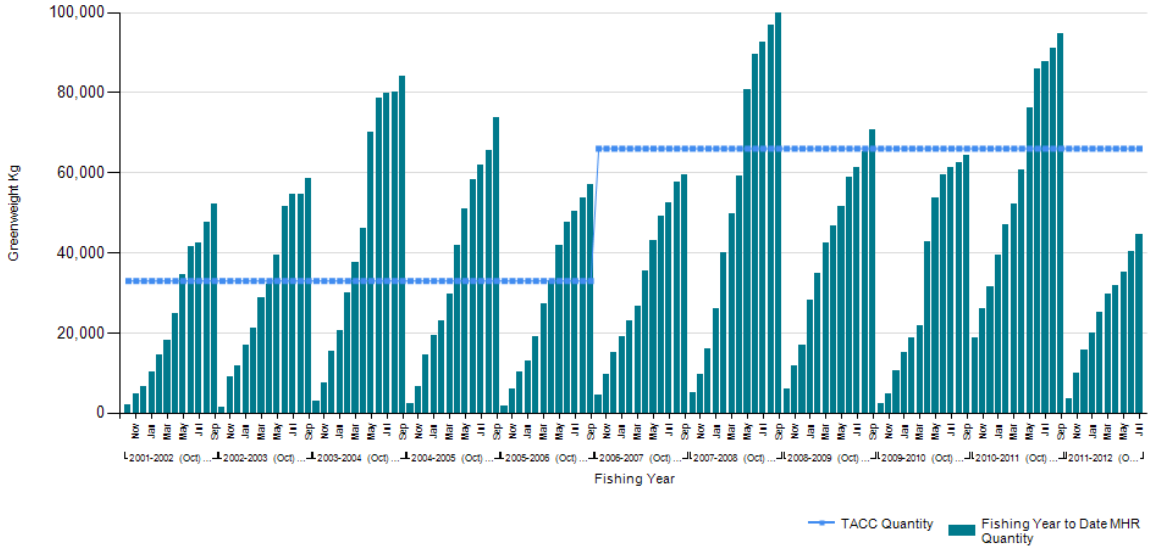
32. Dark ghost shark is a relatively low value commercial fishery taken as bycatch by trawlers. The Fish Monetary Stock Account: 1996–2009 published by Statistics New Zealand in 2010 estimated the asset value (derived from quota and ACE trades) for all GSH stocks between $1.9 million and $6.3 million.

33. The majority of GSH 2 catch is reported from the Cook Strait area and is taken by bottom trawlers. One of the key fisheries that GSH 2 is taken in is the hoki target fishery, but within that fishery it is a relatively minor bycatch.

34. In the last five years an increasing amount of GSH 2 has been taken by vessels targeting tarakihi (approximately 60% of GSH 2 catch in the last two fishing years). Dark ghost shark bycatch appears to be relatively higher in this fishery. Targeting of GSH 2 across all years is minor (less than 5%).

35. While GSH 2 landings have exceeded the TACC in the past, there is little target fishing (maximum 8 t for GSH 2). Small increases to the TACC are therefore unlikely to translate to a significant increase in fishing effort and associated impacts on other species or the environment.

Figure 3.2: TACC and reported landings for GSH 2 from 2001-2012 (landings are cumulative by month over the fishing year)



36. There is currently no quantitative information available on Māori customary or recreational fishing of GSH 2. NZRFC and NZSFC have both submitted that it is likely some recreational catch is occurring.

Other Key Considerations

37. The National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks) includes objectives and actions to:

- minimise waste and discards from shark catches in accordance with article 7.2.2(g) of the FAO Code of Conduct for Responsible Fisheries.
- facilitate improved species-specific catch and landings data and monitoring of shark catches.

38. The NPOA-Sharks also promotes consideration of the use of schedule 6 of the Act to support management of the incidental capture of sharks by allowing for return to the sea. MPI considers that this is not a feasible option in the dark ghost shark fishery as most would be unlikely to survive after being caught in a trawl net.

CONSULTATION

39. An IPP was released on 05 July 2012. MPI consulted with tangata whenua and stakeholders on the options outlined in Table 3.2.

Table 3.2: Proposed TACs, TACCs and allowances for GSH 2 in the IPP

Option	TAC (t)	Allowances			TACC (t)
		Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	66	0	0	N/A	66
Option 2 (MPI preferred Option)	100	0	0	10	90

Submissions

40. MPI received six submissions that responded to the proposals for GSH 2 in the IPP.

41. The submissions were from

- Aotearoa Fisheries Limited (AFL)
- Area 2 Inshore Finfish Management Company (Area 2)
- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird) ; and
- Sanford Limited (Sanford).

Option 1

42. Option 1 is the status quo and would retain the TAC at the average level of reported landings (66 t).

43. Option 1 is supported by NZSFC and Forest & Bird given the limited information on the status of GSH 2. Forest & Bird would prefer a decrease to the current TAC.

44. Concerns were raised by both these submitters about consideration of the target commercial fisheries in which GSH 2 is taken. Forest & Bird had specific concerns about seabird and marine mammal bycatch in the target fisheries.

45. GSH 2 is largely taken within the Cook Strait area with a low level of targeting (less than 5%). MPI does not consider that a TACC increase of 24 t in GSH 2 is likely to have a significant impact on the fishing effort in the bottom trawl fishery across the GSH 2 quota management area. It may have a limited impact within the tarakihi target fishery in the Cook Strait area, and catch data would continue to be monitored to assess this.

46. Forest & Bird also raised concerns about shark finning and suggested a significant proportion of dark ghost shark are landed only for fins. Reported landings for the fishery do not support the claim that dark ghost shark are harvested only for fins.

Option 2 (MPI Preferred Option)

47. Option 2 would result in an increase in the TAC to 100 t. The IPP proposed an allowance of 10 t for other sources of fishing related mortality and an increase of 24 t to the TACC.

48. Option 2 is supported by Sanford, Area 2, AFL and NZRFC.

49. NZRFC suggested proceeding with caution if this option was chosen and ensuring that commercial fishers were constrained to the TACC, but has made recommendations on allowances if a TAC increase were to occur.

50. The need to address “dumping” and “high grading” was raised by Sanford, NZRFC and NZSFC. Sanford recommends increasing observer coverage on vessels that MPI suspects to be engaging in these practices. NZSFC recommends observer coverage to quantify discard rates.

51. MPI is currently working on the development of approaches to improve monitoring at sea and manage discarding. In the meantime MPI considers that the TACC increase will reduce disincentives (lack of available ACE and deemed value liabilities) to land catch of GSH 2.

52. NZSFC has also called for the splitting of catch by species and the collection of biological parameters from shed sampling.

53. MPI notes that the GSH 2 covers only one species *Hydrolagus novaezealandiae*. MPI will be working with industry to explore cost-effective options to utilise the potential information that can be collected through shed sampling, but consider this to be a medium term, rather than immediate programme.

54. Both NZRFC and NZSFC submitted that recreational catch of dark ghost shark is likely to be occurring in GSH 2. NZRFC notes that recreational fishers are now targeting deeper water species with electric reels and catching dark ghost shark on occasion. NZSFC expects some dark ghost shark are taken while targeting tarakihi which is a popular species in the area.

55. In response to submissions MPI has altered Option 2 by recommending an allowance of 1 t for recreational fishing and decreasing the proposed TACC from 90 t to 89 t.

FINAL PROPOSALS

56. The final options for GSH 2 are presented in Table 3.1

Option 1

57. Option 1 proposes to retain the current management settings for GSH 2. This option would retain the current TAC and TACC, which are at a similar level to the average landings since introduction into the QMS.

58. While there is uncertainty, retaining the current TAC and TACC is likely to maintain the stock biomass at or above the level that can produce BMSY over the medium term. However, as GSH 2 is mainly taken as an incidental bycatch, attempts to constrain catch to average levels could create disincentives to report and land catch, making it difficult to identify trends or signals that there are opportunities or concerns arising in the fishery. Addressing these disincentives (e.g. by increasing vessel monitoring) may generate unnecessary costs.

59. Option 1 is more cautious and would reflect the uncertainties about what impact a TAC and TACC increase would have on fishing effort in the Cook Strait area.

Option 2 (MPI Preferred Option)

60. Option 2 proposes to adjust management settings to better provide for utilisation in the commercial fishery and will make allowances for other sources of fishing-related mortality and recreational catch.

61. MPI proposes that aligning the TAC with highest reported landings by increasing it from 66 t to 100 t (an increase of 51%) is unlikely to move the GSH 2 stock below BMSY in the medium term.

62. MPI proposes that the majority of the increase is allocated to the commercial sector, with a TACC increase from 66 t to 89 t (an increase of 35%). The proposed TACC is lower than the highest recorded landing but higher than the average landings in the fishery since QMS introduction (approximately 66 t). Based on the port price of $0.47 per kilogram, commercial catch of 23 t would be worth approximately $11,000.

63. This proposed option reduces disincentives to report catch and is therefore consistent with the objectives of the NPOA-Sharks.

64. A recreational allowance of 1 t has been proposed in response to submissions from NZRFC and NZSFC that recreational harvest of dark ghost shark is occurring in this area. This position was also held by the FMA 2 Recreational Forum during development of the IPP.

65. No change has been proposed to the Māori customary allowance as MPI does not hold any information to suggest that there is customary take of the GSH 2 stock, and no information on customary take was submitted during consultation on the IPP.

66. An allowance of 10 t for other sources of fishing-related mortality has been proposed on the basis of approximately 10% of the proposed TACC. This relatively high allowance is proposed because GSH 2 is taken by trawl with other higher value species, and condition will deteriorate if it isn't processed quickly, which is likely to result in wastage and under-reporting of catch.

67. GSH 2 is largely taken within the Cook Strait area, with a low level of targeting (less than 5%). MPI does not consider that a TACC increase of 24 t in GSH 2 is likely to have a significant impact on the fishing effort in the bottom trawl fishery across the GSH 2 QMA. But it may have some impact within the Cook Strait area and catch data would continue to be monitored to assess this.

ADDITIONAL MANAGEMENT CONTROLS

68. MPI is proposing that you adjust the annual deemed value rate for GSH 2 from $0.37 kg to $0.40 kg and interim deemed value rate from $0.19 kg to $0.36 kg

(refer separate final advice: Review of Deemed Value Rates for Inshore Stocks for 1 October 2012).

69. No other changes to management controls are proposed.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

70. MPI considers that all options presented in this paper satisfy your obligations under section 8 of the Act, by providing for utilisation of the GSH 2 fishery while ensuring sustainability. Each management option proposed will ensure the medium term sustainability of the stock. Option 1 is the most cautious but does not provide for increased utilisation. Option 2 is less cautious, but will only raise the TAC to the highest level of reported landings and does not provide for more growth in the fishery. Both are relatively cautious reflecting the lack of biological information on dark ghost shark and the use of catch trends as the primary monitoring tool.

71. In setting or varying sustainability measures, you must 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.

72. A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a) of the Act). MPI considers that the management options for GSH 2 are consistent with these international obligations.

73. MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b) of the Act).

74. There is an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (s 12 of the Act). MPI are promoting input through the development of iwi fisheries plans and participation through engagement with iwi forums. These mechanisms have not yet been developed in the GSH 2 area. As an alternative, written explanation of the proposals and process was sent to tangata whenua and iwi groups within the GSH 2 FMA.

Information Principles

75. Section 10 requires that you take specified information principles into account when making your decisions. These are:

    - your decisions should be based on the best available information
    - you should consider any uncertainty in the information available in any case
    - you should be cautious when information is uncertain, unreliable or inadequate, and

- you should not use the absence of, or any uncertainty in, any information as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

76. The options and analysis presented in this paper reflect the best available information on GSH 2 and outlines the uncertainty in the information available where it is relevant to your decision making.

Setting the TAC

77. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at, or moving it towards or above , B_{MSY}, in a way and rate considered appropriate for the stock. In doing so, you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. You must not use the absence of or any uncertainty in, the best available information as a reason for postponing or failing to set a TAC.

78. In considering the way in which, and the rate at which, a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors that you consider relevant (section 13(3)). There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

79. As discussed above the TAC options presented in this FAP take into account the requirements listed in section 13(2A) and 13(3) of the Act. MPI considers that neither of the options presented in this paper are inconsistent with the objective of maintaining the stock at, or moving it towards or above, or B_{MSY}.

Environmental Principles

80. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, section 9 requires you to take into account environmental principles, including that any non-harvested species taken or otherwise affected by the taking of GSH 2 be maintained above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

81. GSH 2 is predominantly a bycatch of tarakihi. MPI does not have any information on key environmental issues associated with the GSH 2 fishery and considers that all options presented in this paper have taken into account the matters under section 9 of the Act.

Section 11 Considerations

82. When setting a TAC for GSH 2 (a sustainability measure) you must also satisfy your obligations under section 11 of the Act as follows:

a) Section 11(1) (a) requires you to take into account any effects of fishing on the stock and aquatic environment. These effects have been taken into account under current management measures (Option 1). The effects are unlikely to change under Option 2 as GSH 2 is largely a bycatch fishery. Fishing operations are not expected to change significantly as a result of increasing the TACC. There may be small changes within the Cook Strait area where most of GSH 2 is caught and this would be monitored.

b) Section 11(1) (b) requires that you take into account any existing controls under the Act that apply to the stock or area concerned. For GSH 2, the current TAC of 66 t is the key control under consideration for change. Other existing controls include the current deemed value rates schedule for GSH 2. These controls are discussed and taken into account in this final advice.

c) Section 11(1) (c) requires that you take into account the natural variability of the stock. There is no information available on GSH 2 stock status and variability. The limited available information on biological characteristics of dark ghost shark, which may influence stock variability, is discussed in this final advice.

d) Section 11(2)(a) and (b) require you to have regard to any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991, and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and which you consider relevant, before setting or varying any sustainability measure. There are no instruments under the Resource Management Act 1991, or the Conservation Act 1987, that are relevant to the setting or varying of the TAC for the GSH 2 stock.

e) Section 11(2)(c) requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and which you consider relevant, before setting or varying the TAC. You must have particular regard to these provisions when setting or varying the TACC. The boundaries of the quota management area for the GSH 2 stock do not intersect with the Park boundaries, therefore this criterion is not relevant to your assessment.

f) Section 11(2)(d) requires you to have regard to a planning document lodged with the Minister by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011 that applies to the coastal marine area and which you consider relevant, before setting or varying the TAC. There are no customary planning documents which would apply to the quota management area for GSH 2 area, therefore this criterion is not relevant to your assessment..

g) Section 11(2A)(b) requires you to take into account any relevant fisheries plan approved under section 11A before setting or varying any sustainability measure. No fisheries plan for GSH 2 has been approved, therefore this criterion is not relevant to your assessment.

h) Section 11(2A)(a and c) require you to take into account any relevant conservation services or fisheries services or decisions not to require such services. No conservation services or fisheries services decisions materially affect the options proposed for GSH 2, therefore this criterion is not relevant to your assessment.

Setting Allowances

83. When setting or varying any TACC for a stock under section 20 of the Act, you must under section 21 of the Act have regard to the TAC for that stock and allow for Māori customary non-commercial fishing interests, recreational fishing interests, and for any other sources of fishing-related mortality.

84. When allowing for Māori customary non-commercial fishing interests, you must take into account any mātaitai reserve or closures/restrictions under section 186A in place in the relevant QMA (section 21 (4)). There are two mātaitai reserves within the GSH 2 QMA. Hakihea and Moremore mātaitai. The proposals in this paper will not impact on, or be impacted by, these mātaitai reserves.

85. 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.

86. Option 2 proposes an allowance for recreational interests of 1 t. This reflects the knowledge that there is likely to be an increasing amount of dark ghost shark caught as new technology enables deeper fishing, but that GSH 2 is unlikely to be targeted or taken in large quantities.

87. Option 2 proposes an allowance for other sources of fishing related mortality of 10 t. This relatively high allowance is proposed because GSH 2 is taken by trawl with other higher value species, and condition will deteriorate if it isn't processed quickly, making wastage and under-reporting of catch likely.

88. Option 2 proposes an increase in the TACC, which more closely reflects the current commercial catch levels. By increasing the TACC, fishers are more likely to be able to cover any additional catch with ACE.

89. MPI has no information on customary fishing interests to support a change to the current 0 t allowance.

CONCLUSIONS

90. The current TAC and TACC for GSH 2 were set in 2006 based on average landings since the stocks were introduced into the QMS on 1 October 1998.

While average landings remain at this level, the TACC has been exceeded a number of times in recent years.

91. Option 1 is cautious given uncertainty about how the increase may alter fishing effort in the bottom trawl fishery within the Cook Strait area, but does not address the disincentives that the current TACC creates for landing catch. Under Option 1, commercial fishers will continue to pay deemed values for excess GSH 2 catch.

92. MPI recommends Option 2 which would increase the TAC by 34 t. When setting the TACC MPI recommends that you make an allowance of 1 t for recreational fishing and 10 t for other sources of fishing related mortality. Option 2 would increase the TACC by 23 t to enable commercial fishers to balance their catch with ACE.

93. MPI considers both options are consistent with your statutory obligations.

94. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that for the GSH 2 fishery you choose either:

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for GSH 2 as follows:

(i) **retain** the existing TAC at 66 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 0 tonnes,
(iii) **retain** the recreational fishing allowance at 0 tonnes,
(iv) **retain** the existing TACC at 66 tonnes.

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for GSH 2 as follows:

(i) **set** the TAC at 100 tonnes**,**
(ii) **retain** the Mäori customary fishing allowance at 0 tonnes,
(iii) **set** the recreational fishing allowance at 1 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 10 tonnes,
(v) **set** the TACC at 89 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR DARK GHOST SHARK 8 (GSH 8)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

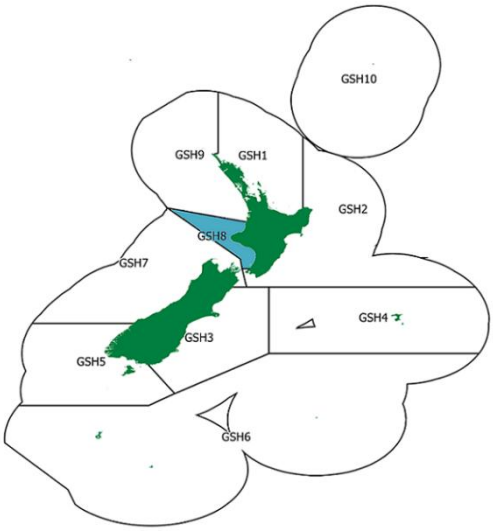


Figure 4.1: Quota Management Area (QMA) boundaries for Dark Ghost Shark

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for dark ghost shark in GSH 8 from 22 to 39 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 1 t for recreational fishing, 4 t for other sources of fishing-related mortality and a Total Allowable Commercial Catch (TACC) of 34 t. This would increase the TACC by 55%.

Table 4.1: Proposed TACs, TACCs and allowances for GSH 8

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	22	0	0	N/A	22
Option 2 (MPI Preferred Option)	39	0	1	4	34

8. Reliable estimates of the current level of the GSH 8 stock ($B_{CURRENT}$) or the level of the stock that can produce the maximum sustainable yield (B_{MSY}) are not available. The best available information on stock status for GSH 8 is trends in catch.

9. The TAC and TACC for GSH 8 were last reviewed in 2006, and were increased from 11 t to 22 t based on reported landings up to 1 October 2005. Since then landings have exceeded the TAC and TACC of 22 t on four occasions.

10. Option 1 is the status quo and the existing TAC would be retained at 22 t. This option reflects a cautious approach and may result in opportunity loss for the commercial sector.

11. MPI recommends increasing the TAC to just above the highest level of reported landings (Option 2). Given low volumes of catch in the past, and the likelihood that GSH 8 is part of a larger biological stock, MPI considers a TAC increase from 22 t to 39 t is not, in the medium term, inconsistent with the objective of maintaining the GSH 8 stock at or above B_{MSY} or moving the stock towards or above B_{MSY}.

12. If you decide to adjust the TAC, MPI recommends that the current 0 t allowance for recreational fishing be increased to 1 t. While there is no quantitative information on the current level of recreational fishing of dark ghost shark, both the New Zealand Recreational Fishing Council (NZRFC) and the New Zealand Sport fishing council (NZSFC) have submitted that recreational catch of dark ghost shark is likely to be occurring in GSH 8. It is likely that the proposed allowance will cover the existing level of recreational dark ghost catch in GSH 8.

13. No change to the 0 t customary allowance is proposed.

14. A relatively high allowance of 4 t for other sources of fishing-related mortality is recommended as GSH 8 is taken by trawl with other higher value species and wastage and under-reporting of catch is considered likely.

15. A 34 t TACC will provide more Annual Catch Entitlement (ACE) for commercial fishers to balance current levels of catch. It is unlikely to result in increased targeting and fishing effort as dark ghost shark is largely a bycatch species. Therefore it is unlikely to result in an increase in associated impacts on other species or the environment.

16. MPI received seven submissions that responded to the proposals for GSH 8 in the Initial Position Paper (IPP).

17. Sanford Limited (Sanford), Challenger Finfisheries Management Co. Ltd (Challenger Finfish), Egmont Seafoods Limited (Egmont Seafoods), Aotearoa Fisheries Limited (AFL) and the New Zealand Recreational Fishing Council (NZRFC) support MPI's recommendation to increase the TAC and TACC.

18. The New Zealand Sport Fishing Council (NZSFC) and the Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird) support the retention of the status quo.

KEY CONSIDERATIONS

Need to Act

19. The TAC and TACC for GSH 8 were last reviewed in 2006 and were increased from 11 t to 22 t based on reported landings up to 1 October 2005. Māori customary and recreational allowances were retained at 0 t and no allowance has been made for other sources of fishing-related mortality in GSH 8. Since then landings have exceeded the TAC and TACC of 22 t on four occasions.

20. The TAC for GSH 8 is set by you under section 13 of the Fisheries Act 1996 (the Act). Section 13 requires you to set a TAC for GSH 8 that enables the

stock to be maintained at, or moved towards or above, a level that will produce the B_{MSY}.

21. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13 (2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards or above B_{MSY}.

22. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

23. MPI considers that in circumstances where a TAC has been set primarily using information from reported landings, and landings then exceed the TACC on multiple occasions, it is important to review updated available information and consider management adjustments. This approach has been supported by industry submissions in the context of this paper.

24. Dark ghost shark require timely processing at sea to maintain their value and there is likely to be some wastage and misreporting occurring in the fishery. The inability of some fishers to cover all their catch with ACE and the cost of making deemed value payments may also be creating disincentives to land the catch. Despite this, landings exceeding the TACC have been reported.

25. Highest landings were reported in the 2010/11 fishing year and totalled approximately 33 t. The deemed value charges in that year were approximately $8, 600. The TACC was also exceeded in nine of the ten previous fishing years (Figure 4.2).

26. Given GSH 8 is likely to be part of a much larger biological stock and the relatively low volume of catch in GSH 8 in the past (reported landings have not exceeded 34 t in the thirty years that reliable records have been available) MPI consider there to be an opportunity for you to provide for increased utilisation over the medium term.

Biological characteristics of dark ghost shark

27. Little is known about the growth and age characteristics of dark ghost shark (*Hydrolagus novaezealandiae*), but productivity is considered likely to be low.

28. The species is distributed widely in New Zealand fisheries waters in depths from 30 to 850 metres, but is more abundant in the south. It has been proposed that there are three biological stocks; east coast New Zealand (FMAs 1-4), Stewart-Snares shelf and Campbell Plateau (FMAs 5 and 6), and west coast New Zealand (FMAs 7, 8, and 9) but there is also a possibility that these areas could all be linked. The current GSH 8 QMA is therefore likely to cover only part of a larger biological stock.

Stock status

29. Reliable estimates of $B_{CURRENT}$ and B_{MSY} are not available for any of the dark ghost shark stocks. The best available information on stock status for GSH 8 is trends in catch. The highest reported catch prior to introduction into the QMS on 1 October 1998 was 27 t, since then reported landings have ranged from 7 t to 33 t.

30. GSH 8 (33 t landed in 2010/11) is likely to be part of the same biological stock as GSH7 (1130 t landed in 2010/11). GSH 7 catches were stable around approximately 600 t between 2000 and 2008 and have increased to 1100 t over the last three fishing years.

31. Given the likelihood that GSH 8 is part of a larger biological stock, it is likely GSH 8 is currently at a level above B_{MSY}.

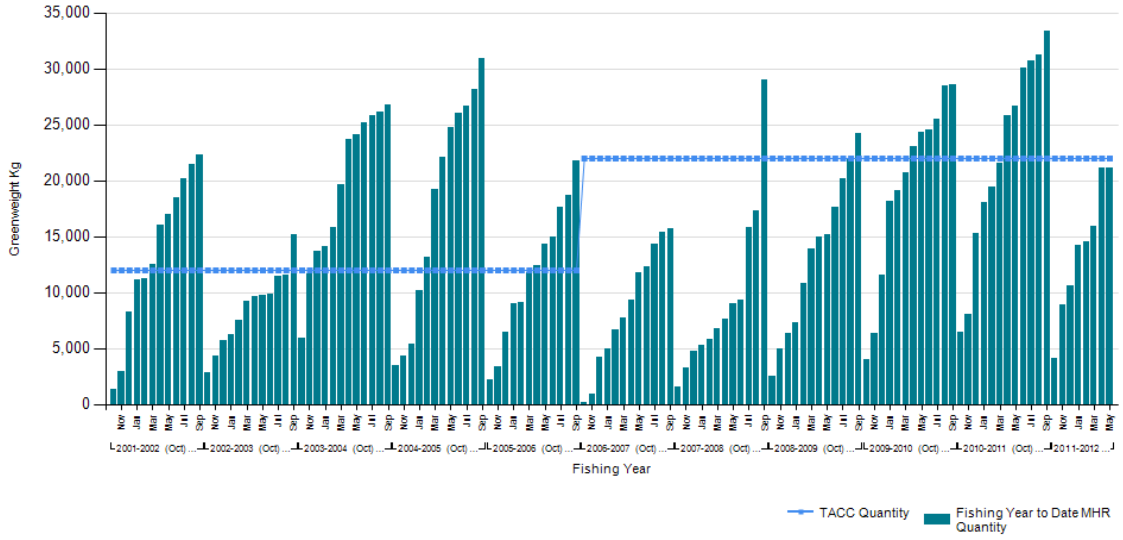
Relevant Fishery Information

32. Dark ghost shark is currently a relatively low value commercial fishery taken as bycatch by trawlers. The Fish Monetary Stock Account: 1996–2009 published by Statistics New Zealand in 2010 estimated the asset value for all GSH stocks between $1.9 million and $6.3 million.

33. The majority of GSH 8 catch is reported from bottom trawl, targeting tarakihi. Targeting of GSH 8 is minor (generally less than 5% although there have been exceptions of 12% in 1999/00 and 36% in 2002/03).

34. While GSH 8 landings have exceeded the TACC in the past, there is little target fishing (a recorded maximum of 3 t for GSH 8). Small increases to the TACC are therefore unlikely to translate to a significant increase in fishing effort and associated impacts on other species or the environment.

Figure 4.2: TACC and reported landings for GSH 8 from 2001-2012 (landings are cumulative by month over the fishing year)



35. There is currently no quantitative information available on Māori customary or recreational fishing of GSH 8. NZRFC and NZSFC have both submitted that it is likely some recreational catch is occurring.

Other Key Considerations

36. The National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks) includes objectives and actions to:

- minimise waste and discards from shark catches in accordance with article 7.2.2(g) of the FAO Code of Conduct for Responsible Fisheries.
- facilitate improved species-specific catch and landings data and monitoring of shark catches.

37. The NPOA-Sharks also promotes consideration of the use of schedule 6 of the Fisheries Act 1996 to support management of the incidental capture of sharks by allowing for return to the sea. MPI considers that this is not thought to be a feasible option in the dark ghost shark fishery as most would be unlikely to survive after being caught in a trawl net.

CONSULTATION

38. An IPP was released on 05 July 2012. MPI consulted with tangata whenua and stakeholders on the options outlined in Table 4.2.

Table 4.2: Proposed TACs, TACCs and allowances for GSH 8 in the IPP

Option	TAC (t)	Allowances			TACC (t)
		Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	22	0	0	N/A	22
Option 2 (MPI Preferred Option)	39	0	0	4	35

Submissions

39. The Ministry received seven submissions that responded to the proposals for GSH 8 in the IPP.

40. The submissions were from

- Aotearoa Fisheries Limited (AFL)
- Challenger Finfisheries Management Company Ltd (Challenger Finfish)
- Egmont Seafoods Limited (Egmont Seafoods)
- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Royal Forest and Bird Protection Society of New Zealand Inc (Forest & Bird); and
- Sanford Limited (Sanford).

Option 1

41. Option 1 is the status quo. Option one retains the TAC and TACC at 22 t, approximately the average level of reported landings.

42. Option 1 is supported by NZSFC and Forest & Bird given the limited information on the status of GSH 2. Forest & Bird would prefer a decrease to the current TAC.

43. Concerns were raised in both these submissions about consideration of the target commercial fisheries in which GSH 8 is taken. Forest & Bird had specific concerns about seabird and marine mammal bycatch in the target fisheries.

44. The majority of GSH 8 catch is reported from bottom trawl, targeting tarakihi. Targeting of GSH 8 is minor. MPI does not consider that a TACC increase of 12 t in GSH 8 is likely to have a significant impact on the fishing effort in the bottom trawl fishery across the GSH 8 QMA.

45. Forest & Bird also raised concerns about shark finning and suggested a significant proportion of dark ghost shark are landed only for fins. Reported landings for the fishery do not support the claim that dark ghost shark are harvested only for fins.

Option 2 (MPI Preferred Option)

46. Option 2 would result in an increase in the TAC to 39 t. The IPP proposed an allowance of 10 t for other sources of fishing related mortality and an increase of 24 t to the TACC.

47. Option 2 is supported by Sanford, Challenger Finfish, Egmont Seafoods and NZRFC.

48. NZRFC suggested proceeding with caution if this option was chosen and ensuring that commercial fishers were constrained to the TACC.

49. Egmont Seafoods submit that the current TACC is set at a conservative level and has the potential to be a constraining factor for other target species.

50. The need to address “dumping” and “high grading” was raised by Sanford, NZRFC and NZSFC. Sanford recommends increasing observer coverage on vessels that MPI suspects to be engaging in these practices. NZSFC recommends observer coverage to quantify discard rates.

51. MPI is currently working on the development of approaches to improve monitoring at sea and manage discarding. In the meantime MPI considers that the TACC increase will reduce disincentives (lack of available ACE and deemed value liabilities) to land catch of GSH 8.

52. NZSFC has also called for the splitting of catch by species and the collection of biological parameters from shed sampling. MPI notes that the GSH 8 stock covers only one species *Hydrolagus novaezealandiae*. MPI will be working with industry to explore cost-effective options to utilise the potential information that

can be collected through shed sampling, but consider this to be a medium term, rather than immediate programme.

53. Both NZRFC and NZSFC submitted that recreational catch of dark ghost shark is likely to be occurring in GSH 8. NZRFC notes that recreational fishers are now targeting deeper water species with electric reels and catching dark ghost shark on occasion. NZSFC expects some are taken while targeting tarakihi which is a popular species in the area.

54. In response to submissions MPI has altered Option 2 by recommending an allowance of 1 t for recreational fishing and decreasing the proposed TACC from 25 t to 84 t

FINAL PROPOSALS

55. The final options for GSH 8 are presented in Table 4.1.

Option 1

56. Option 1 proposes to retain the current management settings for GSH 8. This option would retain the current TACC, which are at a similar level to the average landings since introduction into the QMS.

57. Retaining the current TAC and TACC is likely to maintain the stock biomass at or above the level that can produce B_{MSY} over the medium term. However, as GSH 8 is mainly taken as an incidental bycatch, attempts to constrain catch to average levels could create disincentives to report and land catch, making it difficult to identify trends or signals that there are opportunities or concerns arising in the fishery. Addressing these disincentives (e.g by increasing vessel monitoring) would generate unnecessary costs if the level of catch is considered to be sustainable.

58. Option 1 is more cautious, as there are uncertainties about what impact a TAC and TACC increase would have on associated or dependent species. However, MPI does not consider that a TACC increase of 12 t in GSH 8 is likely to have a significant impact on the fishing effort in the bottom trawl fishery across the GSH 8 QMA.

Option 2 (MPI Preferred Option)

59. Option 2 proposes to adjust management settings to better provide for utilisation in the commercial fishery and will make allowances for other sources of fishing-related mortality and recreational catch.

60. Given the low volumes of catch in the past, MPI proposes that setting the TAC just above highest reported landings by increasing it from 22 t to 39 t (an increase of approximately 77%) is unlikely to move the GSH 8 stock below B_{MSY} in the medium term.

61. The TAC is 6 t higher than previous annual landings, but still relatively cautious because of the biological vulnerability of dark ghost shark.

62. MPI proposes that the majority of the increase is allocated to the commercial sector, with a TACC increase from 22 t to 34 t (an increase of approximately 55%). The proposed TACC is just above the highest landings recorded in the fishery to date. Based on the port price of $0.50 per kilogram, commercial catch of 12 t would be worth approximately $6 000.

63. The proposed option reduces disincentives to report catch and is therefore consistent with the objectives of the NPOA-Sharks.

64. A recreational allowance of 1 t has been proposed in response to submissions from NZRFC and NZSFC that recreational harvest of dark ghost shark is occurring in this area.

65. No change has been proposed to the Māori customary allowance as MPI does not hold any information to suggest that there is customary take of the GSH 8 stock, and no information on customary take was submitted during consultation on the IPP.

66. An allowance of 4 t for other sources of fishing-related mortality has been proposed on the basis of approximately 10% of the proposed TACC. This relatively high allowance is proposed because GSH 8 is taken by trawl with other higher value species, and condition will deteriorate if it isn't processed quickly, which is likely to result in wastage and under-reporting of catch.

ADDITIONAL MANAGEMENT CONTROLS

67. MPI is proposing that you adjust the annual deemed value rate for GSH 8 from $0.45 kg to $0.40 kg and interim deemed value rate from $0.23 kg to $0.36 kg (refer separate final advice: Review of Deemed Value Rates for Inshore Stocks for 1 October 2012).

68. No other changes to management controls are proposed.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

69. MPI considers that all options presented in this paper satisfy your obligations under section 8 of the Act, by providing for utilisation of the GSH 8 fishery while ensuring sustainability. Each management option proposed will ensure the long term sustainability of the stock. Option 1 is the most cautious but does not provide for increased utilisation. Option 2 is less cautious, but will only raise the TAC just above the highest level of reported landings and does not provide for more growth in the fishery. Both are relatively cautious given the lack of biological information on dark ghost shark and the use of catch trends as the primary monitoring tool.

70. In setting or varying sustainability measures, you must 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.

71. A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a) of the Act). MPI considers that the management options for GSH 8 are consistent with these international obligations.

72. MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b) of the Act).

73. There is an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (s 12 of the Act). The Ministry are promoting input through the development of iwi fisheries plans and participation through engagement with iwi forums. These mechanisms have recently begun operating in the GSH 8 area but were not sufficiently operating at the time the proposals were developed. As an alternative, written explanation of the proposals and process was sent to tangata whenua and iwi groups within the GSH 8 FMA.

Information Principles

74. Section 10 requires that you take specified information principles into account when making your decisions. These are:

    - your decisions should be based on the best available information
    - you should consider any uncertainty in the information available in any case
    - you should be cautious when information is uncertain, unreliable or inadequate, and
    - you should not use the absence of, or any uncertainty in, any information as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

75. The options and analysis presented in this paper reflect the best available information on GSH 8 and outlines the uncertainty in the information available where it is relevant to your decision making.

Setting the TAC

76. Section 13(2A) requires you to set a TAC that is “not inconsistent” with the objective of maintaining the stock at, or moving it towards or above, in a way and rate considered appropriate for the stock. In doing so, you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. You must not use the absence of or any uncertainty in, the best available information as a reason for postponing or failing to set a TAC.

77. In considering the way in which, and the rate at which, a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors that you consider relevant (section 13 (3)). There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

78. As discussed above, the TAC options presented in this final advice take into account the requirements listed in section 13(2A) and 13(3) of the Act. MPI considers that neither of the options presented in this paper 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 maximum sustainable yield.

Environmental Principles

79. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, section 9 requires you to take into account environmental principles, including that any non-harvested species taken or otherwise affected by the taking of GSH 8 be maintained at or above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

80. GSH 8 is predominantly a bycatch of the tarakihi fishery. MPI does not have any information on key environmental issues associated with the GSH 8 fishery and considers that all options presented in this paper have taken into account the matters under section 9 of the Act.

Section 11 Considerations

81. When setting a TAC for GSH 8 (a sustainability measure) you must also satisfy your obligations under section 11 of the Act as follows:

    a) Section 11(1) (a) requires you to take into account any effects of fishing on any stock and aquatic environment. These effects have been taken into account under current management measures (Option 1). The effects are unlikely to change under Options 2 as GSH 8 is largely a bycatch fishery. Fishing operations are not expected to change significantly as a result of increasing the TACC.

    b) Section 11(1) (b) requires that you take into account any existing controls that apply to the stock or area concerned. For GSH 8, the current TAC of 22 t is the key control under consideration for change. Other existing controls include the current deemed value rates schedule for GSH 8. These controls are discussed and taken into account in this final advice.

    c) Section 11(1) (c) requires you take into account the natural variability of the stock. There is no information available on GSH 8 stock status and variability. The limited available information on biological characteristics of dark ghost shark, which may influence stock variability, is discussed in this final advice.

d) Section 11(2)(a) and (b) require you to have regard to any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991, and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and which you consider relevant, before setting or varying any sustainability measure. There are no instruments under applicable to the Resource Management Act 1991, or any management strategy or plan under the Conservation Act 1987, relevant to the setting or varying of the TAC for the GSH 8 stock.

e) Section 11(2)(c) requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and which you consider relevant, before setting or varying the TAC. You must have particular regard to these provisions when setting or varying the TACC. The boundaries of the quota management area for the GSH 8 stock do not intersect with the Park boundaries, therefore this criterion is not relevant to your assessment.

f) Section 11(2)(d requires you to have regard to a planning document lodged with the Minister of Fisheries by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011 that applies to the coastal marine area and which you consider relevant, before setting or varying the TAC. There are no customary planning documents which would apply to the quota management area for GSH 8 area, therefore this criterion is not relevant to your assessment.

g) Section 11(2A)(b) requires you to take into account any relevant fisheries plan approved under section 11A before setting or varying any sustainability measure. No fisheries plan for GSH 8 has been approved, therefore this criterion is not relevant to your assessment.

h) Section 11(2A)(a and c) require you to take into account any relevant conservation services or fisheries services or decisions not to require such services. No conservation services or fisheries services decisions materially affect the options proposed for GSH 8, therefore this criterion is not relevant to your assessment.

Setting Allowances

82. When setting or varying any TACC for a stock under section 20 of the Act, you must under section 21 of the Act have regard to the TAC for that stock and allow for Māori customary non-commercial fishing interests, recreational fishing interests, and for any other sources of fishing related mortality.

83. When allowing for Māori customary non-commercial fishing interests, you must take into account any mātaitai reserve or closures/restrictions under section 186A in place in the relevant QMA (section 21 (4)). There are no mātaitai reserves or closures/restrictions under section 186A within the GSH 8 QMA, therefore this criterion is not relevant to your assessment.

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. Option 2 proposes an allowance for recreational interests of 1 t. This reflects the knowledge that there is likely to be an increasing amount of dark ghost shark caught as new technology enables deeper fishing, but that GSH 8 is unlikely to be targeted or taken in large quantities.

86. Option 2 proposes an allowance for other sources of fishing related mortality of 10 t. This relatively high allowance is proposed because GSH 8 is taken by trawl with other higher value species, and condition will deteriorate if it isn't processed quickly, making wastage and under-reporting of catch likely.

87. Option 2 proposes an increase in the TACC, which more closely reflects the current commercial catch levels. By increasing the TACC, fishers are more likely to be able to cover any additional catch with ACE.

88. MPI has no information on customary fishing interests to support a change to the current 0 t allowance.

CONCLUSIONS

89. The current TAC and TACC for GSH 8 were set in 2006 based on average landings since the stocks were introduced into the QMS on 1 October 1998. While average landings remain at this level, the TACCs have been exceeded for the last four years.

90. Option 1 does not address the disincentives that the current TACC creates for landing catch. Under Option 1, commercial fishers will continue to pay deemed values for excess GSH 8 catch.

91. MPI recommends Option 2 which would increase the TAC by 17 t. When setting the TACC MPI recommends that you make an allowance of 1 t for recreational fishing and 4 t for other sources of fishing-related mortality. Option 2 would increase the TACC by 12 t to enable commercial fishers to balance their catch with ACE.

92. Option 2 would make allowances for recreational fishing and other sources of fishing related mortality while increasing the TACC by 12 t to enable commercial fishers to balance their catch with ACE.

93. The Ministry considers both options are consistent with your statutory obligations.

94. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that for the GSH 8 fishery you choose either:

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for GSH 8 as follows:

(v) **retain** the existing TAC at 22 tonnes,
(vi) **retain** the Mäori customary fishing allowance at 0 tonnes,
(vii) **retain** the recreational fishing allowance at 0 tonnes,
(viii) **retain** the existing TACC at 22 tonnes.

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for GSH 8 as follows:

(i) **set** the TAC at 39 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 0 tonnes,
(iii) **set** the recreational fishing allowance at 1 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 4 tonnes,
(v) **set** the TACC at 34 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR RED GURNARD 3 (GUR 3)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

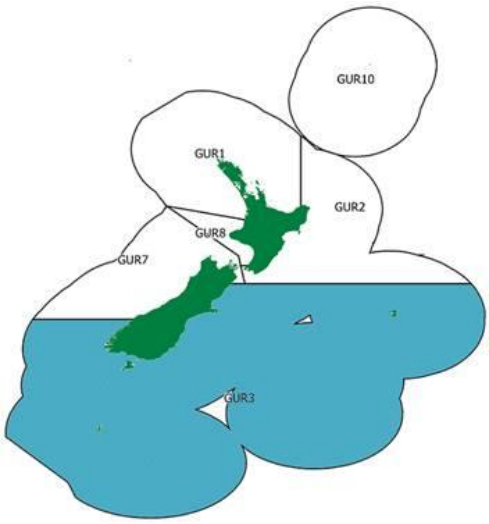


Figure 5.1: Quota Management Area (QMA) boundaries for Red Gurnard

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for red gurnard in GUR 3 from 953 tonnes to 1163 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 5 t for recreational fishing, 3 t for customary Maori fishing, 55 t for other sources of fishing related mortality and a Total Allowable Commercial Catch (TACC) of 1100 t. This would increase the TACC by 22%.

Table 5.1: Proposed TACs, TACCs and allowances for GUR 3

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	953	3	5	45	900
Option 2	1058	3	5	50	1000
Option 3 (MPI preferred Option)	1163	3	5	55	1100

8. The best available information on stock status for GUR 3 are trends in relative abundance from the fisher independent East Coast South Island (ECSI) trawl survey[28] and a catch per unit effort (CPUE) analysis. Abundance indices show that relative abundance of GUR 3 is increasing. In addition, ageing data suggest that there are currently one or two relatively strong year classes moving through the fishery. This suggests that there is potential to obtain higher benefits from the stock, at least in the short-term while ensuring sustainability.

9. Option 1 is the status quo and the existing TAC would be retained at 953 t. This option reflects a cautious approach to sustainability as all indicators show GUR 3 abundance is at the highest level it has ever been over the twenty year period reviewed.

[28] The winter ECSI trawl survey employs a number of monitoring tools and, in 2012, the survey has been optimised for GUR 3. The ECSI trawl survey was not carried out for a period from the mid 1990s until 2007.

10. Option 2 would result in an increase in the TAC to 1058 t and a 100 t increase in the TACC to 1000 t. This option would provide the commercial sector with an opportunity to increase utilisation. Based on the 2012 port price of $1.96 per kilogram, commercial catch of 1000 t would be worth approximately $196,300 annually.

11. MPI recommends Option 3, which would see the TAC increased to 1163 t and a 200 t increase to the TACC. Option 3 enables higher commercial growth than either Option 1 or 2. Based on a 2012 port price of $1.96 per kilogram, additional commercial catch above the present TACC would generate an additional $392,000 of revenue annually.

12. All three options retain the current Mäori customary and recreational allowances. Catch from these sectors makes up a relatively small component of overall catch.

13. MPI received six submissions that responded to the proposals for GUR 3 in the Initial Position Paper (IPP).

14. Sanford Limited and South East Finfish Management Company Ltd support Option 3.

15. Aotearoa Fisheries Ltd supports Option 2.

16. Bill Hartley (recreational fisher), the New Zealand Recreational Fishing Council, and the New Zealand Sport Fishing Council all submit in support of retaining the status quo (Option 1).

KEY CONSIDERATIONS

Need to Act

17. Abundance indices show that relative abundance of GUR 3 is increasing. In addition, ageing data suggest that there are currently one or two relatively strong year classes moving through the fishery. MPI considers there to be an opportunity for you to provide for increased utilisation over the short term.

18. Increasing catch limits at this time of higher relative abundance could increase productivity and enable economic growth from GUR 3, whilst keeping the stock within sustainable levels.

19. The TAC for GUR 3 is set by you under section 13 of the Fisheries Act 1996 (the Act). Section 13 requires you, as the Minister for Primary Industries[29] (the Minister), to set a TAC that enables the stock biomass to be maintained at, or move towards, a level at or above the level that will produce the maximum sustainable yield (B_{MSY}).

[29] The Minister for Primary Industries now exercises the powers and duties of the Minister of Fisheries under the Act.

20. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13(2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

21. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

22. There is no current biomass estimate for GUR 3. It is not known what stock size would produce the B_{MSY}.

23. A target reference point has been established for GUR 3. The Southern Inshore Working Group (the Working Group) and the Plenary Report concluded in 2012 that GUR 3 is very likely (>90%) to be above the target reference point. This suggests that there is potential to secure greater benefits from the GUR 3 stock and that a higher TAC might be sustainable, at least over the short- to medium-term.

24. The CPUE index was accepted by the Working Group as an index of abundance for GUR 3. The CPUE index has been increasing steadily since the late 1990s up to 2009/10, but declined in the most recent year. Biomass indices from the ECSI trawl survey since 2007 are greater than equivalent estimates from the early 1990s. The preliminary data from the 2012 survey show that GUR 3 biomass is up compared to 2009[30]. These indicators all suggest that current abundance is at the highest level it has been over the twenty year period reviewed.

Relevant Fishery Information

25. GUR 3 is largely a bycatch of bottom trawling targeting flatfish (FLA 3), red cod (RCO 3) and barracouta (BAR 1). Some are also taken in the target tarakihi (TAR 3) and (STA 3) bottom trawl fisheries. The level of targeting of GUR 3 is around 10% of the total landed catch.

26. Reported catches of GUR 3 have exceeded the TACC of 900 t for the last two years (by 118 t and 29 t respectively) Prior to that, catches had exceeded the TACC of 800 t for five of the previous six years; averaging 948 t for that last six years and 932 t for the last four years (see Figure 5.3).

[30] The data are not directly comparable, but the data from the same strata are up in 2012 compared to 2009. For 2012, there is also lower c.v.s (co-efficients of variance), so there is more confidence in the estimate.

Figure 5.2: Comparison of three available biomass series (east and South coast South Island winter trawl survey and two bottom trawl CPUE series, one targeted at flatfish and the other at red cod) with the trajectories of catch and TACCs from 1989/90 to 2007/08. The three biomass series have been standardised to the mean of each series for the survey years (90/91 to 93-94, 95/96 and 06/07 to 08/09).

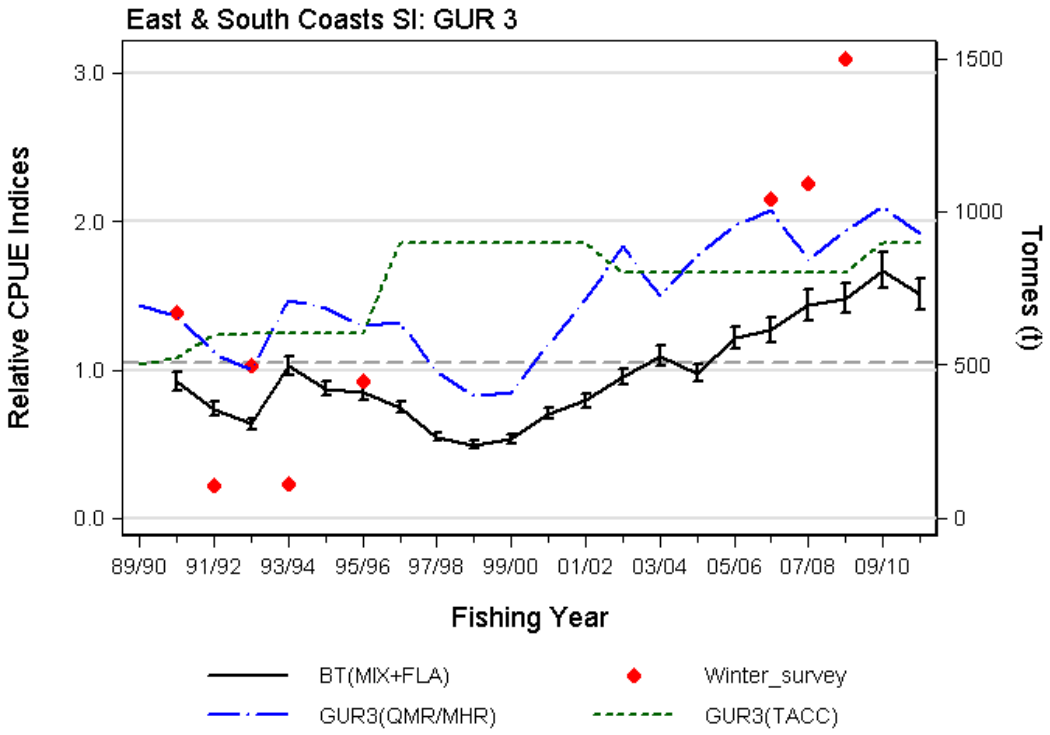
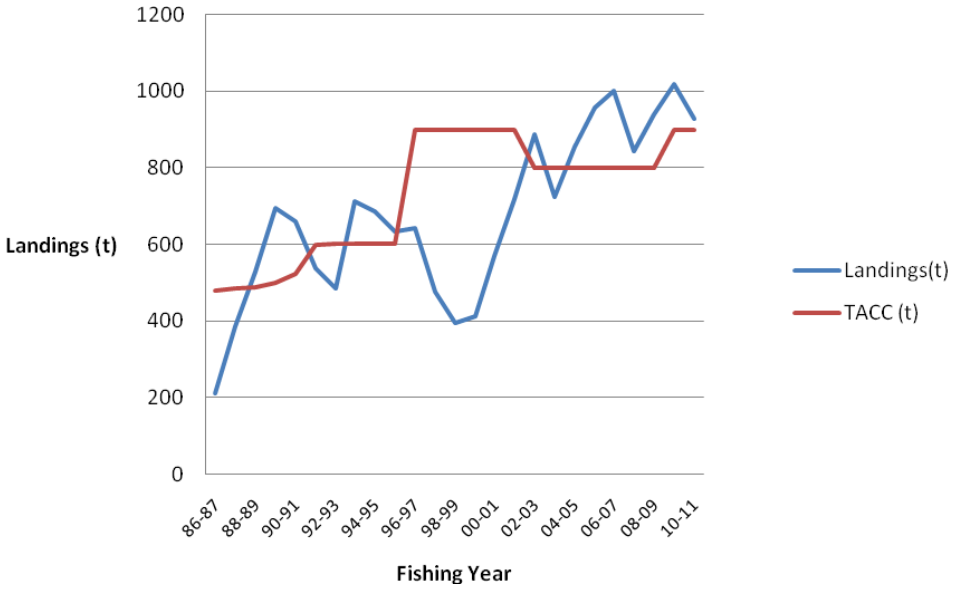


Figure 5.3: Reported catch landings and TACC (t) for GUR 3 from 1986-87 to the 2101-11 fishing year



27. There is anecdotal information that some GUR 3 catch is discarded at sea and not reported, though the level of discarding has reportedly been decreasing.

This discarding is thought to be due to a market preference for larger fish and suggests actual catches in GUR 3 are likely to have been greater than reported catches.

28. Available information is insufficient to provide an estimate of recreational catch for GUR 3.

29. Customary catch data is available for most of the GUR 3 QMA and does not show a large take of red gurnard. Anecdotal information suggests that customary catch is occurring within the recreational daily bag limit.

CONSULTATION

30. An IPP was released on 05 July 2012. The options proposed in the IPP were the same as set out in Table 5.1 above. MPI consulted with tangata whenua and stakeholders on the options outlined in Table 5.1.

Submissions

31. MPI received six submissions on the IPP from:

- Aotearoa Fisheries Ltd (AFL)
- Bill Hartley – a recreational fisher
- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Sanford Limited (Sanford)
- South East Finfish Management Company Ltd (South East Finfish)

Option 1

32. Bill Hartley, the NZRFC, and the NZSFC all submit in support of retaining the status quo (Option 1).

33. Bill Hartley sees the fishery in a rebuild and considers that the fishery is the best he has seen in thirty years. Due to the increased abundance, he believes that commercial fishers will get their catch with less effort and cost.

34. The NZRFC and NZSFC submit that there is no estimate of current stock biomass or evidence that the stock biomass would support maximum sustainable yield. They accept that the CPUE has been increasing under the current catch in GUR 3 and that the ECSI winter research trawl index for gurnard in part of GUR 3 was also higher in the late 2000s. NZSFC believes that increasing the TACC will hasten the inevitable decline in gurnard abundance. This view is supported by the FMA 3 and FMA 5 Recreational Fishing Forum. NZRFC contends that increasing the TACC to 1100 t will increase trawl effort and lead to higher mortality rates of other species.

35. In view of the evidence of current high abundance, MPI considers that all of the options are consistent with the objective of maintaining the GUR 3 stock at or above the level that can produce the maximum sustainable yield. Options 2 & 3

involve a slightly higher risk to the sustainability of the stock over the longer-term. However, this risk would be mitigated by continuing the current monitoring programme for GUR 3. This would allow any significant reductions in abundance to be identified and an appropriate management response to be initiated in a timely manner.

Option 2

36. AFL submits in favour of Option 2 and is encouraged to see the relative abundance of GUR 3 increasing, and the fact that two relatively strong year classes are moving through the fishery. AFL acknowledges that GUR 3 is above the target reference point but have concerns about the inherent fluctuations in recruitment often found in red gurnard. AFL, therefore, supports a modest increase by endorsing Option 2.

Option 3

37. Sanford and South East Finfish support Option 3 – increase the TAC to 1163 t and increase the TACC by 22%.

38. Sanford submits that the TACC has been regularly over caught, and supports an increase.

39. South- East Finfish acknowledges the extensive work that it has done with MPI with the adaptive management programme and, more recently, the characterisation and CPUE analyses for GUR3. On the basis of appropriate research and best available information, South –East Finfish agrees with MPI that the TACC should be set at 1100 t. South-East Finfish will be seeking to programme research and monitoring of this stock on a rolling two to three year basis, or as deemed appropriate.

40. MPI agrees with Sanford and South-East Finfish that the CPUE data is indicating an abundant fishery and the best available information suggests that catches at current levels would be unlikely to cause the stock to decline. MPI also strongly endorses the continued research and monitoring as this will detect any significant changes in abundance.

Other Consultation

41. Prior to developing the proposals for consultation, Te Waka a Mäui me Öna Toka iwi forum and Chatham Island Fisheries Forum Plan (CIFF @ 44^{o}) were approached for their collective views on GUR 3. No collective view was provided by Te Waka a Mäui me Öna Toka or CIFF @ 44^{o}.

FINAL PROPOSALS

42. The final proposals for GUR 3 remain unchanged following consultation and consideration of submission, and are presented in Table 5.1.

Option 1

43. Option 1, the status quo, proposes no changes to the TAC, TACCs or allowances for customary Māori, recreational or other sources of fishing related mortality. Based on the best available information, this option ensures continued sustainability as all indicators show GUR 3 abundance is higher than it has been in the twenty year period reviewed.

44. MPI considers that retaining the current TAC and TACC may result in lost utilisation opportunities for the commercial sector. Option 1 does not reflect commercial utilisation trends of the last six years that have averaged 948 t.

45. The current GUR 3 TACC could be constraining associated target fisheries like flatfish or redcod. In mixed fisheries, fishers have to change fishing practices and behaviours as they manage annual catch entitlement (ACE) constraints in bycatch species, such as gurnard. In some cases this will mean stopping fishing for target species. This option also necessitates the on-going cost to fishers of covering over-catch of GUR 3 with deemed value payments

Option 2

46. Option 2 would result in an increase in the TAC to 1058 t and a 100 t increase in the TACC, to 1000 t. The allowance for other sources of fishing related mortality would be increased from 45 t to 50 t (maintaining its level at 5% of the TACC), with no changes to customary Māori or recreational allowances.

47. This option proposes a TACC that would be set higher than existing reported catches but best available information suggests that biomass is substantially higher than the target reference point. MPI considers that Option 2 is not inconsistent with maintaining the stock at or above BMSY.

48. This option provides for some growth opportunities, at least in the short to medium -term. Based on a 2012 port price of $1.96 per kilogram, this option would generate an additional $196,000 of revenue compared to Option 1 (the status quo). Importantly, it would also provide for greater utilisation of target fisheries (FLA 3 and RCO 3, which are both fully caught) by providing more ACE to cover GUR 3 bycatch. MPI is not able to quantify the level or value of this increased utilisation of target fisheries.

Option 3 (MPI preferred option)

49. Option 3 would increase the TAC to 1163 t and increase the TACC from 900 t to 1100 t (an increase of 22%). The allowance for other sources of fishing related mortality would be increased from 45 t to 55 t (maintaining its level at 5% of the TACC), and no changes are proposed to customary Māori or recreational allowances.

50. Option 3 would enable the commercial fishing industry to obtain greatest opportunity to increase value from the fishery. Based on a 2012 port price of $1.96 per kilogram this would generate an additional $392,000 of revenue. It would also provide the best opportunities for enhancing utilisation of associated target fisheries by providing more GUR 3 ACE. MPI is not able to quantify the level or value of this increased utilisation of target fisheries.

51. Like Option 2, MPI consider Option 3 is not inconsistent with maintaining the GUR 3 stock at or above BMSY. However, as the risks are comparatively higher, continued monitoring will be even more important to mitigate those risks under Option 3. Close monitoring of the stock would identify any potential decline in stock abundance and enable an appropriate management response. In addition, MPI also considers that, under this option, resolving some of the uncertainties with the CPUE analysis is required; this involves increasing the observer coverage to assess the level of discarding in this fishery.Continued discussion with industry and potential trials with other methods of observation may contribute to alternative methods for collecting data that could enhance the use of CPUE.

52. MPI considers continued monitoring (via the ECSI trawl survey and CPUE analysis) mitigates any additional risk posed by Option 3. The Working Group cautions “that for a short-lived species, management should be prepared to respond to declines in abundance which may result from increased catches or reduced recruitment.”

53. Because of the recruitment driven nature of the fishery, MPI considers that CPUE analysis should be undertaken relatively frequently. The ECSI trawl survey is currently repeated every two years. This and updated CPUE analyses should enable any decline in abundance to be detected and catch limits to be reviewed promptly.

ADDITIONAL MANAGEMENT CONTROLS

54. MPI does not propose to review any other management controls for GUR 3 at this time.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

55. MPI considers that all options presented in this paper satisfy your obligations under s 8 of the Act in that they provide for utilisation in the GUR 3 fishery while ensuring sustainability. Each management option proposed will ensure the sustainability of the stock. Option 1 is more cautious but is likely to limit utilisation opportunities. In contrast, increasing the TACC to 1000 t under Option 2, or 1100 t under Option 3 (MPI’s preferred option) will allow for increased utilisation.

56. 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.

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

58. MPI also considers the proposed management options to be 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 GUR 3 to promote policies that help to recognise customary use and management practices.

59. There is also an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). Te Waka a Māui me Öna Toka iwi forum and CIFF@44^{o} were each approached for their collective view on GUR 3. No collective views were provided by Te Waka a Mäui me Öna Toka or CIFF@44^{o}.

Information Principles

60. Under section 10 of the Act you must take into account the information principles in of the Act these being that:

- decisions should be based on best available information;
- decision makers should take into account any uncertainty in the available information;
- decision makers should be cautious when information is uncertain, unreliable or inadequate, and;
- the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

TAC

61. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at or above, or moving the stock to a level at or above B_{MSY}, in a way and rate considered appropriate for the stock. In doing so you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. 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.

62. GUR 3 is a bycatch of the East Coast South Island bottom trawl fishery, which targets flatfish and mixed species. There are a number of species caught in these fisheries, for example red cod, barracouta, stargazer, tarakihi, and rig.

63. Red gurnard is a fast growing, moderately short lived species, with a maximum age of sixteen years. Red gurnard reach sexual maturity at two to three years of age, at a length of about 23 centimetres. Due to the fast growth rate and short lifespan of red gurnard, fluctuations in recruitment can result in large fluctuations in stock biomass

64. Large fluctuations in stock biomass can provide opportunities for increased utilisation when consecutive strong year classes appear in the population – as is the current situation. But, this also means that management measures would be required to rapidly reduce catches at times of persistent low recruitment.

65. In considering the way in which and rate at which a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors as you consider relevant. There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

66. The TAC options presented in this final advice take into account the requirements listed in s 13 of the Act, and offer differing approaches to managing the potential risk to sustainability of the fishery that reflect the uncertainty in available information.

Environmental considerations

67. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, s 9 requires you to take into account that associated or dependent species be maintained at or above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitats of particular significance for fisheries management should be protected.

68. Key environmental issues associated with the GUR 3 fishery and how they will be affected by an increase to the TAC are discussed below:

- There are measures in place in the GUR 3 fishery to mitigate the impacts of fishing on Hector's dolphins. Any TAC/TACC increase for GUR 3 will not affect these measures and they will continue to be just as effective. There remains a risk of incidental capture of Hector's dolphins under all three options.
- Incidental captures of seabirds do occur in this fishery. The number of such seabird captures has not been quantified. However, MPI considers the number of incidental seabird captures is unlikely to increase under any of the options because we do not expect the amount of trawling to increase significantly.
- GUR 3 is mainly a bycatch of the ECSI bottom trawl fishery. Increasing the TACC of GUR 3 will not necessarily increase the amount of bottom trawling undertaken because the increase in abundance of the GUR 3 stock has meant an increase in catch per unit effort. Option 3 may cause an increase in trawling effort, but the level of targeting of GUR 3 is low, averaging less than 10% of the total landed catch since 1989/90.

Section 11 considerations

69. In making your decisions on sustainability measures for GUR 3, you must also have regard to the requirements of s 11 of the Act as follows:

    a) Section 11(1)(a): Before setting or varying any sustainability measure for any stock, you must take into account any effects of fishing on any stock and the aquatic environment. The majority of GUR 3 commercial take is as bycatch in bottom-trawl fisheries targeting both flatfish and mixed species. As the TAC proposals do not affect catch limits for the key species targeted when GUR 3 is taken, it is not anticipated that the proposed TAC (and TACC) options would result in a significant change to fishing operations. Therefore, it is not anticipated there will be an increase in impacts on the marine environment or on the harvest of other stocks.

    b) Section 11(1)(b): Before setting or varying any sustainability measure for any stock, you must take into account any existing controls under the Act that apply to the stock or area concerned. Standard management controls apply to the GUR 3 fishery, for example deemed values, amateur bag limits, amateur minimum size limits, and fishing method constraints. The proposed changes to the TAC do not affect these measures.

    c) Section 11(1)(c): Before setting or varying any sustainability measure for this stock, you must take into account the natural variability of the stock. This has been discussed above in relation to the biological characteristics of GUR 3.

    d) Sections 11(2)(a) and (b): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and you consider relevant. MPI considers that all three options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the GUR 3 stock.

    e) Section 11(2)(c): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of s 7 and s 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Park boundaries.

    f) Section 11(2A)(b): Before setting or varying any sustainability measure for any stock, you must take account of any relevant and approved fisheries plans. There is no approved fisheries plan that will be effected by this change.

    g) Sections 11(2A)(a) and (c): Before setting or varying any sustainability measure for any stock, you must take into account any conservation or fisheries services, or any decision not to require such services. MPI does

not consider that existing or proposed services materially affect the proposals for this stock. No decision has been made to not require a service in this fishery at this time.

Setting Allowances

70. Section 21 of the Act requires you to allow for Mäori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, when setting or varying the TACC. 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.

71. There is no proposal to increase either the customary or recreational allowances for GUR 3. The GUR 3 TAC was last reviewed in 2009, when allowances for Mäori customary and recreational were also unchanged. Information on Mäori customary catch and recreational catch is uncertain. However, MPI considers that neither Mäori customary nor recreational catch have changed significantly over the last three years.

72. Section 21(4) requires you to take into account any taiapure or mätaitai reserve or closures/restrictions under s 186A to facilitate customary Mäori fishing. There are 10 Mätaitai Reserves and 1 taiapure being Koukourarata, Te Kaio, Moeraki, East Otago Taiapure, Puna-wai-Toriki (Hayes Gap),Oreti, Waikawa Harbour, Te Whaka a Te Werea, Horomamae, Pikomamaku, and Kaihuka Mätaitai Reserves. The proposals in this paper will not impact on, or be impacted by, these taiapure or mätaitai reserves.

CONCLUSIONS

73. MPIs preferred option is Option 3 – increasing the TAC of GUR 3 to 1163t, increasing the TACC to 1100 t, and increasing the allowance for other sources of fishing-related mortality to 55 t.

74. GUR 3 is experiencing a period of high abundance. The information available supports an increase in catch to this level (CPUE above target reference and biomass indices from ECSI trawl survey) for the short term. Ongoing monitoring via the existing CPUE analysis and the continued trawl survey modified to better monitor GUR 3, with a view to review the TAC again in two to three years, will ensure that the catch remains sustainable over the longer term.

75. A TACC of 1100 t would enable increased utilisation and economic benefit for the commercial sector.

76. The Ministry considers all three options are consistent with your statutory obligations.

77. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that, for the GUR 3 fishery, you choose either:

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for GUR 3 as follows:

(i) **retain** the existing TAC at 953 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 3 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **retain** the other sources of fishing-related mortality allowance at 45 tonnes,
(v) **retain** the existing TACC at 900 tonnes.

OR

Option 2 **AGREED/ NOT AGREED**

Agree to vary the TAC, TACC and allowances for GUR 3 as follows:

(i) **set** the TAC at 1058 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 3 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 50 tonnes,
(v) **set** the TACC at 1000 tonnes.

OR

Option 3 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for GUR 3 as follows:

(i) **set** the TAC at 1163 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 3 tonnes,
(iii) **retain** the recreational fishing allowance at 5 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 55 tonnes,
(v) **set** the TACC at 1100 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR RED GURNARD 7 (GUR 7)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

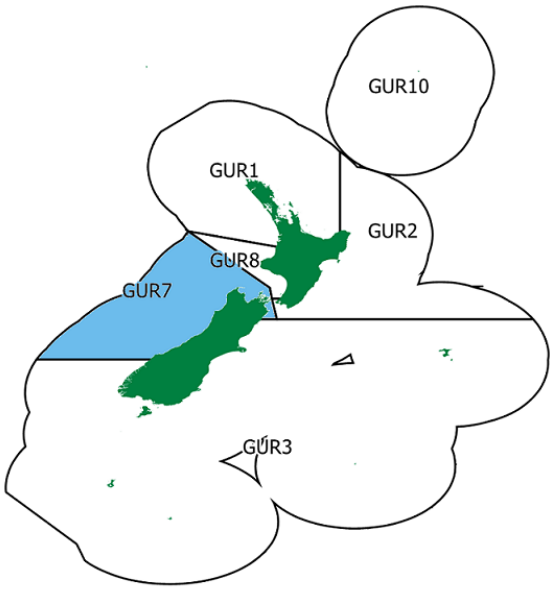


Figure 6.1: Quota Management Area (QMA) boundaries for Red Gurnard

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for red gurnard in GUR 7 from 759 to 855 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 20 t for recreational fishing, 10 t for Customary Maori fishing, 40 t for other sources of fishing-related mortality and a Total Allowable Commercial Catch (TACC) of 785 t. This would increase the TACC by 10%.

Table 6.1: Final proposals – TACs, TACCs, and allowances for GUR 7

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	759	10	20	14	715
Option 2	818	10	20	38	750
Option 3 (MPI preferred Option)	855	10	20	40	785

8. Data on relative abundance of GUR 7 from the West Coast South Island (WCSI) trawl survey suggests that the fishery is experiencing a period of elevated biomass, which is expected to persist in the fishery for the next two to four years. The available data shows that the biomass of GUR 7 has been steadily increasing since 2003 to the highest level in the series, in 2011.

9. Option 1 is the status quo and the existing TAC would be retained at 759 tonnes. This option reflects a cautious approach and may result in opportunity loss for the commercial sector.

10. Option 2 would result in an increase in the TAC to 818 t and the TACC to 750 t. This option would provide the commercial sector with an opportunity to increase utilisation. Based on the 2012 port price of $2.29 per kilogram, commercial catch of 35 t would be worth approximately $80,000 annually.

11. Option 3 would result in an increase in the TAC to 855 t and the TACC to 785 t. This would provide greater utilisation and economic growth opportunities than Option 2. A 70 t increase in commercial catch would be worth approximately $160,000 annually.

12. MPI notes that 75% of GUR 7 is taken as bycatch, and that abundance and market demand for the target species (flatfish, red cod, tarakihi and stargazer) will also influence the amount of GUR 7 able to be utilised.

13. All three options retain the current Mäori customary and recreational allowances. Catch from these sectors makes up a relatively small component of overall catch, and have likely increased as the biomass has increased.

14. MPI received six submissions that responded to the proposals for GUR 7 in the Initial Position Paper (IPP).

15. Four submitters (New Zealand Recreational Fishing Council, New Zealand Sport Fishing Council, Sanford Limited, and Tasman and Sounds Recreational Fishers' Association (Inc) were in favour of retaining the status quo (Option 1).

16. Aotearoa Fisheries Ltd submitted in support of Option 2.

17. Challenger Finfisheries management Co. Ltd submitted in support of Option 3.

KEY CONSIDERATIONS

Need to Act

18. Information on relative abundance of GUR 7 suggests that the fishery is experiencing a period of elevated biomass, which is expected to persist in the fishery for the next two to four years.

19. The TAC for GUR 7 is set by you under s 13 of the Fisheries Act 1996 (the Act). Section 13 requires you, as the Minister for Primary Industries[31] (the Minister) to set a TAC that enables the stock to be maintained at, or moved towards or above, a level that will produce the maximum sustainable yield (B_{MSY}). Where the current level of a stock ($B_{CURRENT}$) or B_{MSY} are not able to be reliably estimated, s 13 (2A) requires the Minister to set TACs at levels that are not inconsistent with this objective.

20. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13(2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

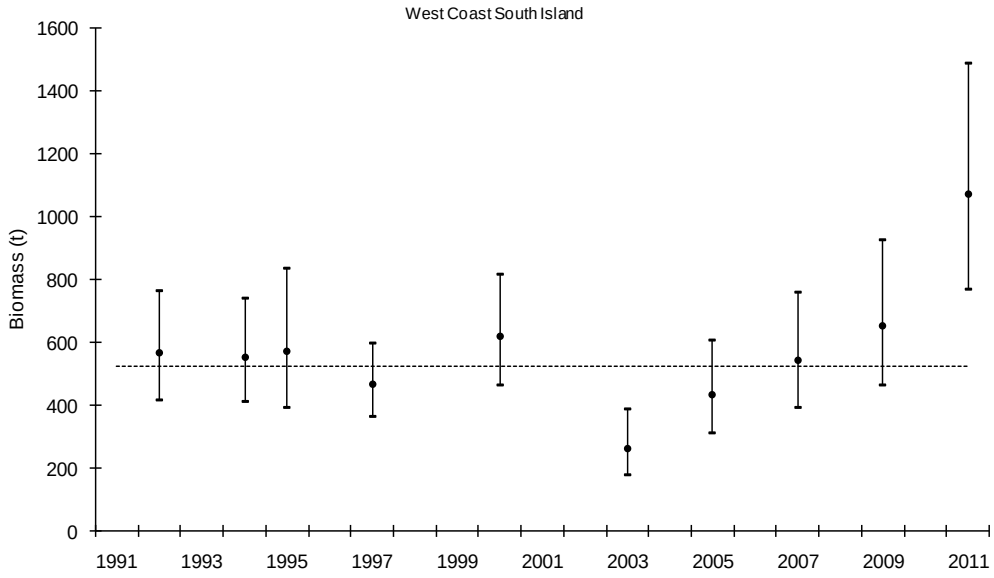
21. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

22. The best available information on the stock status of GUR 7 is from the inshore WCSI trawl survey. Information from this survey provides a reliable index of relative abundance for GUR 7, thus allowing you to set a TAC under s 13(2A)

[31] The Minister for Primary Industries now exercises the powers and duties of the Minister of Fisheries under the Act.

of the Act. This index shows that the biomass of GUR 7 has been steadily increasing since 2003 to the highest level in the series, in 2011, well above the long-term mean (Figure 6.2).

Figure 6.2: Biomass trends ± 95% CI (estimated from survey CV's assuming a lognormal distribution) and the time series mean (dotted line) from the WCSI trawl survey.



23. Length frequency analysis from the WCSI trawl survey showed pulses in recruitment from 1997 and 2000 that increased the population biomass since that time. A recruitment pulse was also observed in 2009. These fish are expected to grow into and persist in the fishery for the next two to four years.

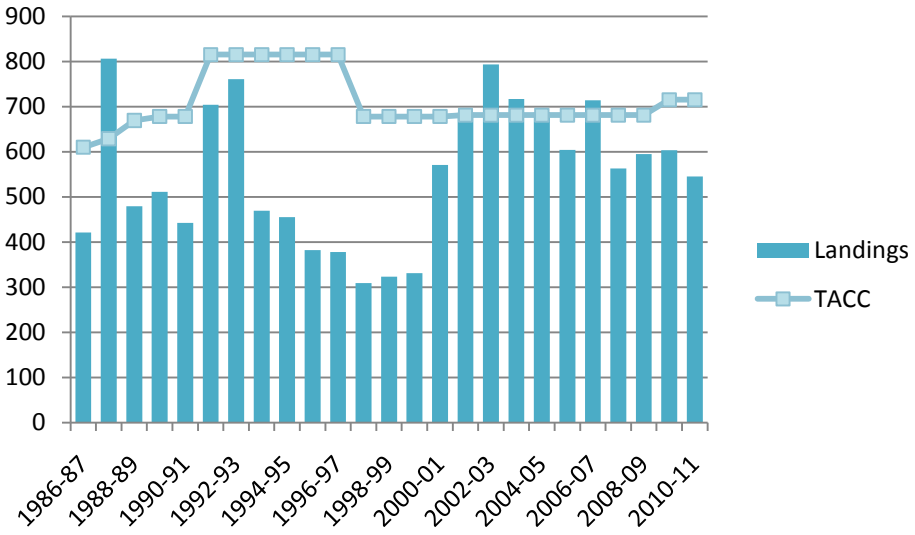
Relevant Fishery Information

24. Approximately 75% of commercial GUR 7 catch is taken as bycatch in the WCSI bottom trawl fishery, which primarily targets flatfish, red cod, tarakihi and stargazer. The remaining 25% is targeted using trawl and, to a small degree, Danish seine. Because GUR 7 is predominantly taken as bycatch, commercial catch levels fluctuate depending on abundance and market demand for target species.

25. GUR 7 landings reached a peak of 793 t in 2002/03. In the last four fishing years, between 76% and 87% of the TACC has been caught. Landings of GUR 7 in 2010/11 were 545 t (76% of the TACC) (Figure 6.3).

26. Red gurnard is a popular target species for recreational fishers and is included in a combined daily bag limit of 20 finfish (i.e. a maximum of 20 red gurnard can be taken daily per person if no other specified finfish species are taken).

Figure 6.3: Historical landings and TACC for GUR 7



27. Red gurnard is an important kaimoana species for tangata whenua and is identified by Te Waka a Mäui me Öna Toka iwi forum as a taonga species. MPI information on customary catch of GUR 7 is uncertain. There have been no customary authorisations for GUR 7 reported to MPI. This may reflect that tangata whenua in the Tasman Bay/Golden Bay and Marlborough Sounds areas are still operating under Regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986.

CONSULTATION

28. An IPP was released on 05 July 2012. MPI consulted with tangata whenua and stakeholders on the options outlined in the IPP. The options proposed were the same as set out in Table 6.1 above.

Submissions

29. MPI received six submissions on the IPP from:

- Aotearoa Fisheries Ltd (AFL)
- Challenger Finfisheries management Co. Ltd (Challenger Finfisheries)
- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Sanford Limited (Sanford)
- Tasman and Sounds Recreational Fishers' Association (Inc) (TASFISH)

Option 1 (Status Quo)

30. Sanford, NRFC, NZSFC, and TASFISH all submit in support of retaining the status quo (Option 1).

31. Sanford points out that the TACC is currently under caught and suggests an increase in TACC will place an unnecessary financial cost on GUR 7 quota holders (via levies) that cannot be offset against increased catch.

32. MPI agrees with Sanford that the TACC for GUR 7 has been under caught since the 2008-09 fishing year. However, 25% of the GUR 7 commercial catch is targeted and an increase in TACC will provide an opportunity for these fishers to increase their utilisation of GUR 7. Further, an increase in TACC will provide flexibility for those fishers needing to cover their bycatch of GUR 7 – which will likely increase as GUR 7 biomass increases.

33. Sanford owns approximately 2.6 % of the GUR 7 quota. MPI estimates that an increase in TACC of 70 t (Option 3) would increase GUR 7 levies from $120,000 recovered to $127,200 (excluding GST).

34. NZRFC and NZSFC believe that there is insufficient information in support of the 2011 research trawl survey result that a significant increase in abundance has occurred. They submit that the catch history trends show that this fishery cannot sustain commercial harvest levels of the current TAC and that the CPUE data supports this.

35. TASFISH submits that, while they accept that abundance has increased in some areas of GUR 7, the best available information that MPI currently has is insufficient to enable reliable estimates of $B_{CURRENT}$ and B_{MSY}. Further, TASFISH considers that Option 3 is not sustainable past the short term (two to four years) and would be irresponsible.

36. TASFISH is sure that market preferences are for larger fish, and submit that the smaller new recruits should be left in the water to grow, thus enhancing the economic value to the fishery. When commercial catches exceeded levels in Option 3 (1992/93), subsequent years' catch levels plummeted to an all time low. Catch history trends show that this fishery cannot sustain commercial harvest levels at the current TAC.

37. TASFISH also submits that recreational catches of gurnard have been low until the last two years. TASFISH submits that the recent increase in catch by the recreational sector cannot be jeopardised by an increase in TAC/TACC.

38. MPI notes that red gurnard is a survey target of the WCSI trawl survey and the Southern Inshore Working Group regards the series as a reliable index of abundance. The improved recreational catches of GUR 7 also reflect an increase in abundance. By increasing the TACC for GUR 7, industry is being given the opportunity to utilise this resource.

Option 2

39. AFL supports Option 2 – increase the TAC to 818 t and increase the TACC to750 t.

40. AFL is encouraged to see that the relative abundance of GUR 7 is experiencing a period of elevated biomass and shares the Challenger Finfisheries Management Company's interest to increase the TACC in this fishery. However, given the uncertainty associated with inconsistent recruitment, AFL supports a more modest response when reviewing the TACC increase in the GUR 7 fishery.

Option 3 (MPI Preferred Option)

41. Challenger Finfisheries submits in support of Option 3 – increase the TAC to 855 t and increase the TACC to 785 t.

42. Challenger Finfisheries submits that, by compiling and reviewing the research to date, and therefore looking back and tracking recruitment pulses and catch effort dynamics, more confidence has been gained and increases to the TACC for GUR 7 can be suitably justified.

43. Challenger Finfisheries will be seeking to ensure that this stock is monitored and analysed on a two-yearly basis to ensure that sustainable levels of catch are maintained in the medium-long term, and any decrease to the TACC is based on robust science.

44. MPI agrees with Challenger Finfisheries that the information available for GUR 7 is robust enough to justify Option 3. MPI also plans to monitor and analyse new WCSI trawl survey data on a two-yearly basis. This would detect any significant changes in recruitment.

Other Consultation

45. Prior to developing the proposals for consultation, Te Waka a Mãui me Öna Toka iwi forum was approached for their collective view on GUR 7. No collective views were provided by Te Waka a Mãui me õno toka. A representative of Ngati Kuia has indicated their support for Option 2.

FINAL PROPOSALS

46. The final proposals for GUR 7 remain unchanged following consultation and consideration of submissions (refer Table 6.1).

Option 1

47. Under Option 1, the existing TAC would be retained. The current TAC is 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. This option would reflect a cautious approach to change given the interdependencies with other fish stocks and that there is no harvest strategy for GUR 7.

48. MPI considers that retaining the current TAC and TACC may result in opportunity loss for the commercial sector. This option does not enable industry to respond to elevated biomass in a way that would allow them to maximise value. An increase in TACC would provide flexibility for those fishers needing to cover their bycatch of GUR 7, which will likely increase as GUR 7 biomass increases.

Option 2

49. Option 2 would result in an increase in the TAC to 818 t and a 35 t increase in the TACC, to 750 t.

50. Increasing the TACC would provide the commercial sector with an opportunity to increase utilisation during a period of strong recruitment and elevated biomass. Based on the 2012 port price of $2.29 per kilogram, an additional 35 t would be worth approximately $80,000, annually.

51. A 35 t increase in the TACC is a modest response to the elevated GUR 7 biomass. With current monitoring through the WCSI trawl survey, it is possible for MPI to respond to changes in stock biomass in a timely manner.

52. MPI proposes providing an allowance for other sources of fishing-related mortality (OSFRM) at 5% of the TACC. While there is no information available to quantify OSFRM, MPI considers that the current allowance is too low, given the biological characteristics of the stock and the various sources of OSFRM (e.g. high grading in response to market preference for larger fish, discarding to avoid deemed value penalty payments, and mortality caused by the trawling method).

53. MPI is not recommending any changes to the Mäori customary or recreational allowances because there is no new information available to suggest that these catch allowances are inconsistent with actual levels from these sectors. Recreational catch appears to have been increasing as biomass of GUR 7 has increased.

Option 3 (MPI Preferred Option)

54. Option 3 would increase the TAC to 855 t and increase the TACC by 70 t. This would provide greater utilisation and economic growth opportunities than Option 2. A 70 t increase in commercial catch would be worth approximately $160,000, annually. But, MPI notes that the majority of GUR 7 is taken as bycatch. So, abundance of, and market demand for, the target species (flatfish, red cod, tarakihi, and stargazer) will also influence the amount of GUR 7 able to be utilised. (In the target fisheries, FLA 7, has been more than 50% under-caught in recent years, while in the mixed species bottom trawl fishery, tarakihi and stargazer have been close to or fully caught and red cod has been around 40% under caught in recent years.) Challenger Finfisheries supports this option.

55. The available information indicates that the current biomass of GUR 7 would be able to produce a commercial catch of 785 t in the short term, during this period of elevated biomass. However, it is expected that biomass will decline through natural fluctuations over time and that a TACC of 785 t will not be sustainable in the long-term. MPI recommends ongoing biennial monitoring through the WCSI trawl survey. This is essential under this option, and would be with a view to review the TAC again once this information is updated in two years time.

56. As with Option 2, MPI is not proposing changing the settings Mäori customary or recreational allowances under this option.

57. As with Option 2, MPI proposes setting the allowance for other sources of fishing related mortality at 5% of the TACC under this option.

ADDITIONAL MANAGEMENT CONTROLS

58. MPI does not propose to review any other management controls for GUR 7 at this time.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

59. MPI considers that all options presented in this paper satisfy your obligations under s 8 of the Act in that they provide for utilisation in the GUR 7 fishery while ensuring sustainability.

60. Each management option proposed will ensure the long term sustainability of the stock. Option 1 is more cautious but is likely to limit utilisation opportunities. In contrast, increasing the TAC to 818 t under Option 2, or 855 t under Option 3 (MPIs preferred option), will allow for increased utilisation.

61. 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.

62. A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a)). MPI considers that the management options for GUR 7 are consistent with these international obligations.

63. MPI also considers the proposed management options to be 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 GUR 7 to promote policies that help to recognise customary use and management practices.

64. There is also an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). Te Waka a Mäui me Öna Toka iwi forum was approached for their collective view on GUR 7. No collective views were provided by Te Waka a Mäui me Öna Toka. A representative of Ngati Kuia has indicated their support for Option 2.

Information Principles

65. Under section 10 of the Act, you must take into account the information principles of the Act, these being that:

- decisions should be based on the best available information,
- decision makers should take into account any uncertainty in the available information,

- decision makers should be cautious when information is uncertain, unreliable, or inadequate, and

- the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

66. The best available information on the stock status of GUR 7 is from the West Coast South Island trawl survey. Red gurnard is a target species of this survey and the Southern Inshore Working Group regards the series as a reliable index of abundance for GUR 7.

TAC

67. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at or above, or moving the stock to a level at or above B_{MSY}, in a way and rate considered appropriate for the stock. In doing so you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. 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.

68. GUR 7 is a bycatch of the flatfish and West Coast South Island mixed species bottom trawl fisheries, targeting flatfish, and red cod, tarakihi, and stargazer.

69. Red gurnard is a fast growing, moderately short-lived species, that reaches sexual maturity at two to three years of age. Due to the fast growth rate and short life span, fluctuations in recruitment can result in large fluctuations in stock biomass.

70. Large fluctuations in stock biomass can provide opportunities for increased utilisation when consecutive strong year classes appear in the population – as is the current situation. But, this also means that management measures would be required to rapidly reduce catches at times of persistent low recruitment.

71. In considering the way in which and rate at which a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors as you consider relevant. There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

72. The TAC options presented in this final advice take into account the requirements listed in s 13 of the Act, and offer differing approaches to managing the potential risk to sustainability of the fishery that reflect the uncertainty in available information.

Environmental Principles

73. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, s 9 requires you to take into account that associated or dependent species be maintained at or above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

74. Key environmental issues associated with the GUR 7 fishery and how they will be affected by an increase to the TAC are discussed below:

- There are measures in place in the GUR 7 fishery to mitigate the impacts of fishing on Hector's dolphins. Any TAC/TACC increase for GUR 7 will not affect these measures and they will continue to be just as effective. But, there remains a risk of incidental capture of Hector's dolphins under all three options.

- Incidental captures of seabirds do occur in this fishery. The number of such seabird captures has not been quantified. However, MPI considers the number of incidental seabird captures is unlikely to increase under any of the options because we do not expect the amount of trawling to increase significantly (see below).

- GUR 7 is mainly a bycatch of the flatfish and WCSI bottom trawl fisheries. Increasing the TACC of GUR 7 will not necessarily increase the amount of bottom trawling undertaken. Although around 25% of GUR 7 is targeted, the increase in biomass of the GUR 7 stock should mean an increase in catch per unit effort.

- However, the FLA 7 target fishery has been more than 50% under-caught in recent years and red cod around 40% under-caught. It is possible that increasing the TACC for a bycatch species, such as GUR 7, will allow an increase in the amount of bottom trawling – depending on the ACE available for other bycatch species, and on market demand.

Section 11 Considerations

75. In making your decisions on sustainability measures for GUR 7, you must also have regard to the requirements of s 11 of the Act as follows:

a) Section 11(1)(a): Before setting or varying any sustainability measure for any stock, you must take into account any effects of fishing on any stock and the aquatic environment. The majority of GUR 7 commercial take is as bycatch in bottom-trawl fisheries targeting flatfish, red cod, tarakihi and stargazer. As the TAC proposals do not affect catch limits for the key species targeted when GUR 7 is taken, it is not anticipated that the proposed TAC (and TACC) options would result in a significant change to fishing operations. Therefore, it is not anticipated there will be an increase in impacts on the marine environment or on the harvest of other stocks.

b) Section 11(1)(b): Before setting or varying any sustainability measure for any stock, you must take into account any existing controls under the Act that apply to the stock or area concerned. Standard management controls apply to the GUR 7 fishery, for example deemed values, amateur bag limits, amateur minimum size limits, and fishing method constraints. The proposed changes to the TAC do not affect these measures.

c) Section 11(1)(c): Before setting or varying any sustainability measure for this stock, you must take into account the natural variability of the stock. This has been discussed above in relation to the biological characteristics of GUR 7.

d) Sections 11(2)(a) and (b): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and you consider relevant. MPI considers that all three options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the GUR 7 stock.

e) Section 11(2)(c): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of s 7 and s 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Park boundaries.

f) Section 11(2A)(b): Before setting or varying any sustainability measure for any stock, you must take account of any relevant and approved fisheries plans. There are no relevant and approved fisheries plans that would be affected by any of the options proposed for GUR 7. In particular, the SPO 7 (rig) fisheries plan would not be affected by any of the options proposed for GUR 7.

g) Sections 11(2A)(a) and (c): Before setting or varying any sustainability measure for any stock, you must take into account any conservation or fisheries services, or any decision not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for this stock. No decision has been made to not require a service in this fishery at this time.

Setting Allowances

76. When setting or varying a TACC for a stock under section 20 of the Act, the Minister must, under section 21 of the Act, have regard to the TAC for that stock and allow for Mäori customary non-commercial fishing interests,

recreational fishing interests, and for any other sources of fishing-related mortality.

77. When allowing for Mäori customary fishing interests, the Minister must take into account any mätaitai reserve or closures/restrictions under s 186A in the relevant quota management area (s21(4)).

78. When allowing for recreational interests, the Minister must take into account any regulations in place following a recommendation made by the Minister under s 311 of the Act that prohibit or restrict fishing (s21(5)).

79. 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. In the event of imperfect information, you are entitled to be cautious.

80. There is no proposal to increase either the customary or recreational allowances for GUR 7. The GUR 7 TAC was last reviewed in 2009, when allowances for Mäori customary and recreational were set for the first time. Information on Mäori customary catch and recreational catch is uncertain. While recreational catches of GUR 7 may have been increasing over the last two years (refer TASFISH submission), MPI considers that neither Mäori customary nor recreational catch have changed significantly over the last 3 years.

81. Within the GUR 7 quota management area are the Whakapuaka (Delaware Bay) Taiapure, and the Te Tai Tapu, Manakaiaua/Hunts Beach, Mahitahi/Bruce Bay, Tauperikaka, and Okura/Mussel Point mätaitai reserves. MPI notes that the proposals in this paper will not impact on, or be impacted by, these taiapure and mätaitai reserves. The boundaries of the quota management area for the GUR 7 stock do not intersect with the fisheries waters covered by s 186A of the Act; therefore this criterion is not relevant to your assessment.

82. There are no areas closed to commercial fishing methods made under s 311 of the Act in place in the GUR 7 quota management area; therefore this criterion is not relevant to your assessment when allowing for recreational interests.

CONCLUSIONS

83. MPI's preferred option is Option 3 – increasing the TAC of GUR 7 to 855 t, increasing the TACC to 785 t, and increasing the allowance for other sources of fishing-related mortality to 40 t.

84. GUR 7 is experiencing a period of strong recruitment and increased biomass. The information available supports an increase in catch to this level for the short term. Ongoing biennial monitoring via the WCSI trawl survey, with a view to review the TAC again in two years, will ensure that the catch remains sustainable over the longer term.

85. A TACC of 785 t would enable increased utilisation and economic benefit for the commercial sector.

86. The Ministry considers all three options are consistent with your statutory obligations.

87. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that, for the GUR 7 fishery, you choose either

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for GUR 7 as follows:

(i) **retain** the existing TAC at 759 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 10 tonnes,
(iii) **retain** the recreational fishing allowance at 20 tonnes,
(iv) **retain** the other sources of fishing-related mortality allowance at 14 tonnes,
(v) **retain** the existing TACC at 715 tonnes.

OR

Option 2 **AGREED/ NOT AGREED**

Agree to vary the TAC, TACC and allowances for GUR 7 as follows:

(i) **set** the TAC at 818 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 10 tonnes,
(iii) **retain** the recreational fishing allowance at 20 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 38 tonnes,
(v) **set** the TACC at 750 tonnes.

OR

Option 3 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for GUR 7 as follows:

(i) **set** the TAC at 855 tonnes,
(ii) **retain** the Mäori customary fishing allowance at 10 tonnes,
(iii) **retain** the recreational fishing allowance at 20 tonnes,
(iv) **set** the other sources of fishing-related mortality allowance at 40 tonnes,
(v) **set** the TACC at 785 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR JOHN DORY 7 (JDO 7)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

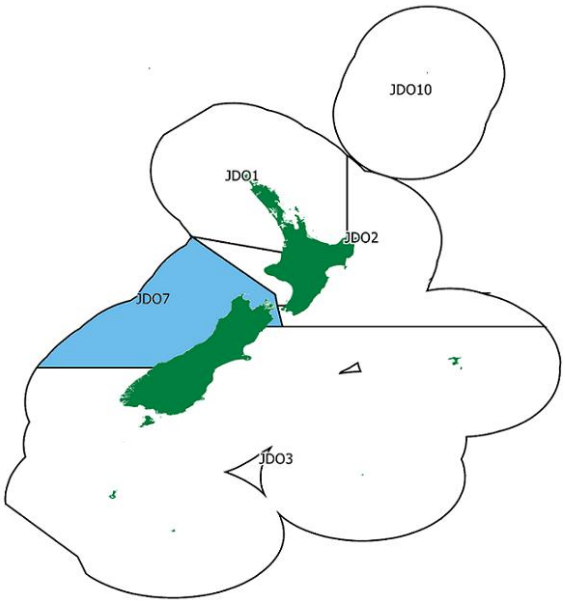


Figure 7.1: Quota Management Area (QMA) boundaries for John Dory

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for John dory in JDO 7 from 131 to 161 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 1 t for customary fishing, 2 t for recreational fishing, 8 t for other sources of fishing related mortality and a Total Allowable Commercial Catch (TACC) of 150 t. This would increase the TACC by 20%.

Table 7.1: Final proposals – TACs, TACCs, and allowances for JDO 7.

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	131	1	2	3	125
Option 2	147	1	2	7	137
Option 3 (MPI preferred Option)	161	1	2	8	150

8. Data on relative abundance of JDO 7 from the West Coast South Island (WCSI) trawl survey indicates that the fishery is experiencing a period of elevated biomass. This elevated biomass is expected to persist for the next two to four years.

9. Option 1 is the status quo and the existing TAC would be retained at 131 t. This option reflects a cautious approach and may result in opportunity loss for the commercial sector.

10. Option 2 would result in an increase in the TAC to 147 t and the TACC to 137 t. This option would provide the commercial sector with an opportunity to increase

utilisation. Based on the 2012 port price of $5.67 per kilogram, an additional 12 t would be worth approximately $68,000 annually.

11. MPI recommends Option 3, which would increase the TAC to 161 and increase the TACC by 25 t. This would provide greater utilisation and economic growth opportunities than Option 2. A 25 t increase in commercial catch would be worth approximately $140,000 annually.

12. MPI notes that the majority of JDO 7 is taken as bycatch. The abundance of, and market demand for, the target species (flatfish and snapper) will also influence the amount of JDO 7 able to be utilised.

13. The available information indicates that the current biomass of JDO 7 would be able to produce a catch of 161 t in the short term, while biomass is high. However, it is expected that biomass will decline through natural fluctuations over time. Hence, a 150 t TACC may not be appropriate in the long-term.

14. All three options retain the current Mäori customary and recreational allowances. Catches from these sectors make up a relatively small component of overall catch, and have likely increased as the biomass has increased.

15. MPI received six submissions that responded to the proposals for JDO 7 in the Initial Position Paper (IPP).

16. Four submitters (New Zealand Recreational Fishing Council, New Zealand Sport Fishing Council, Sanford Limited, and Tasman and Sounds Recreational Fishers' Association (Inc) were in favour of retaining the status quo (Option 1).

17. Aotearoa Fisheries Ltd submitted in support of Option 2.

18. Challenger Finfisheries management Co. Ltd submitted in support of Option 3.

KEY CONSIDERATIONS

Need to Act

19. The biomass of JDO 7 has fluctuated above the long-term mean since 2000, more than likely a result of a large number of recruits appearing in the fishery in 2000 and remaining in the population until 2007. Length frequency analysis shows that there was another strong recruitment event in 2009. The biomass estimate for 2011 is the highest in the series (Figure 7.2 below).

20. Challenger Finfisheries Management Company has requested a TACC increase for JDO 7.

21. The TAC for JDO 7 is set by you under s 13(2) of the Fisheries Act 1996 (the Act).

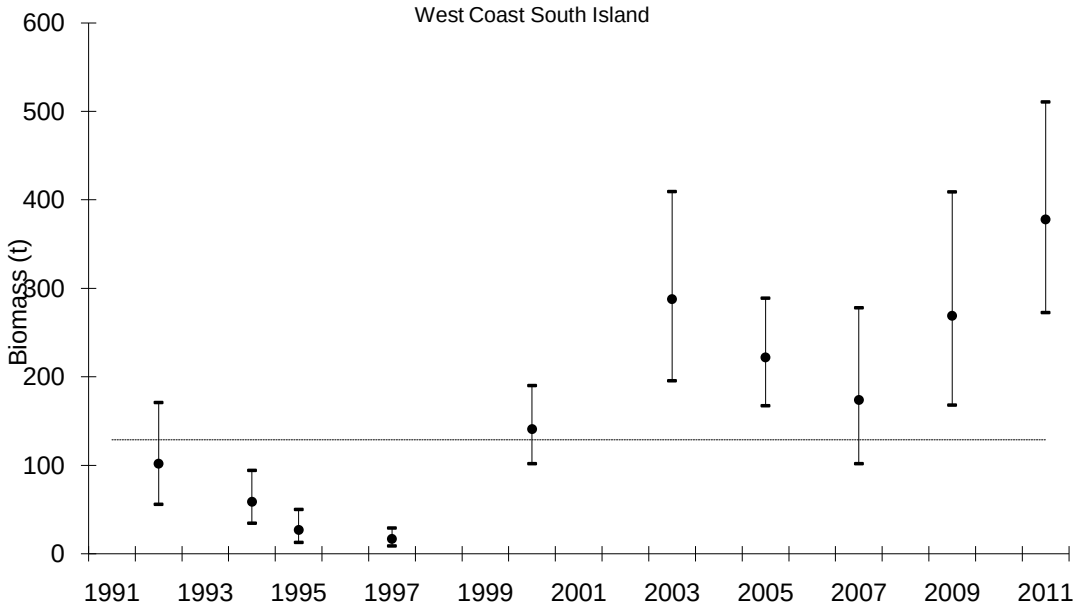
22. Before a TAC can be set under s 13(2) of the Act an assessment of $B_{CURRENT}$ and B_{MSY} is required. The best available information that MPI has on JDO 7 is insufficient to enable reliable estimates of $B_{CURRENT}$ and B_{MSY}.

23. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13(2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards or above, B_{MSY}.

24. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

25. There are no estimates of total biomass for JDO 7, and it is not known what stock size would produce the maximum sustainable yield. The best available information on the stock status of JDO 7 is from the inshore WCSI trawl survey. Information from this survey provides a reliable index of relative abundance for JDO 7, thus allowing you to set a TAC under s 13(2A) of the Act.

Figure 7.2: Biomass trends ±95% CI (estimated from survey CVs assuming a lognormal distribution) and the time series mean (dotted line) from the WCSI trawl surveys.

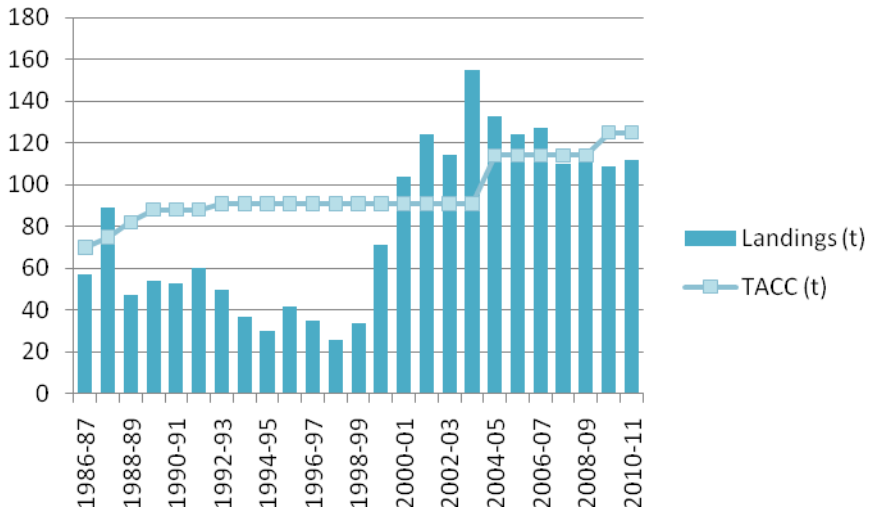


Relevant Fishery Information

26. Approximately 89% of JDO 7 catch is taken as bycatch in the WCSI bottom trawl fishery, which primarily targets flatfish and snapper. Because JDO 7 is predominantly taken as bycatch, commercial catch levels fluctuate depending on abundance of, and market demand for, the target species. MPI notes that less than 50% of the FLA 7 TACC has been caught in recent years while the SNA 7 TACC has been fully caught.

27. JDO 7 commercial catch has exceeded the TACC in six of the last ten fishing years. However, since the TACC was increased in 2008-09, catch has not exceeded the TACC (refer Figure 7.3 below).

Figure 7.3: Historical landings and TACC for JDO 7



28. John dory is an important species for recreational fishers and is included in a combined daily bag limit of 20 finfish (i.e. a maximum of 20 John dory can be taken daily per person if no other specified finfish species are taken).

29. John dory is also an important kaimoana species for tangata whenua, although not explicitly stated as a taonga species in the fisheries plan developed by Te Waka a Mäui me Öna Toka iwi forum. MPI information on customary catch of JDO 7 is uncertain. There have been no customary authorisations for JDO 7 reported to MPI in the last five years. This may reflect that tangata whenua in the Tasman Bay/ Golden Bay and Marlborough Sounds area are still operating under Regulation 27A of the Fisheries (Amateur Fishing) Regulations 1986.

CONSULTATION

30. An IPP was released on 05 July 2012. MPI consulted with tangata whenua and stakeholders on the options outlined in the IPP. The options proposed were the same as set out in Table 7.1 above.

Submissions

31. MPI received six submissions on the IPP from:

- Aotearoa Fisheries Ltd (AFL)
- Challenger Finfisheries Management Co. Ltd (Challenger Finfisheries)
- New Zealand Recreational Fishing Council (NZRFC)
- New Zealand Sport Fishing Council (NZSFC)
- Sanford Limited (Sanford)
- Tasman and Sounds Recreational Fishers' Association (Inc) (TASFISH)

Option 1

32. NZSFC, NZRFC and TASFISH all support Option 1 because they believe there is insufficient information from the research trawl survey estimates to show that an increase in biomass since 2003 is statistically significant. NZRFC and TASFISH submit that Option 3 is not sustainable past the short term and would, therefore, be irresponsible. They submit that the best available information is insufficient to enable reliable estimates of $B_{CURRENT}$ and B_{MSY}. NZRFC and TASFISH also submit that the TACC for JDO 7 was increased in 2009 from 114 t to 125 t, and that this increase has not been utilised by industry. NZRFC and TASFISH consider this is because the fish "are not there" and abundance has declined. Although MPI is recommending that the biennial WCSI trawl survey continue, NZRFC and TASFISH are concerned that a JDO 7 TAC review is not guaranteed at that time.

33. NZRFC and TASFISH also submit that the new recruits into the fishery should be left in the water to grow through, enhancing the economic value to industry beyond the $140,000, which is the difference between Option 1 and Option 3.

34. TASFISH further submits that John dory has represented a very low percentage of recreational catch and that it is apparent that the increase in abundance is now providing access to the fishery. This improved access and increase in catch levels by the recreational sector should not be jeopardised through increased TACCs.

35. MPI notes that John dory is a survey target of the WCSI trawl survey and the Southern Inshore Working Group regards the series as a reliable index of abundance. The improved recreational catches of JDO 7 also reflect an increase in abundance.

36. MPI notes that, by increasing the TACC for JDO 7, industry is being given the opportunity to utilise this resource.

37. Sanford submits in support of retaining the status quo. Sanford points out that the TACC is currently under-caught and suggests an increase in TACC would place an unnecessary financial cost on JDO 7 quota holders (via levies) that cannot be offset against increased catch.

38. MPI agrees with Sanford that the TACC for JDO 7 has been under-caught since the 2009-10 fishing year. However, MPI considers that, where abundance is high, opportunities to increase productivity should be provided, thereby enabling industry to find ways to utilise the resource. An increase in TACC would provide flexibility for those fishers needing to cover their bycatch of JDO 7, which will likely increase as JDO 7 biomass increases.

39. Sanford own 8.6% of JDO 7 quota. MPI estimates that an increase in TACC of 25 t (Option 3) would increase JDO 7 levies from $12,000 to $15,600 (exclusive of GST).

Option 2

40. AFL supports Option 2, increasing the TAC to 147 t and the TACC to137 t. AFL submits that, given the fluctuations in biomass often experienced in this fishery, a modest increase in the catch limit be considered. AFL is also concerned that Option 3 could increase catch of associated target and bycatch species where the TACCs have not changed.

Option 3 (MPI Preferred Option)

41. Challenger Finfisheries submits in support of Option 3 –increasing the TAC to 161 t and the TACC to 150 t. Challenger Finfisheries submits that, by compiling and reviewing the research to date, and therefore looking back and tracking recruitment pulses and catch effort dynamics, more confidence has been gained and increases to the TACC for JDO 7 can be suitably justified. Challenger Finfisheries will be seeking to ensure that this stock is monitored and analysed on a two-yearly basis to ensure that sustainable levels of catch are maintained in the medium-long term, and any decrease to the TACC is based on robust science.

42. MPI agrees with Challenger Finfisheries that the information available for JDO 7 is robust enough to support Option 3. MPI also plans to monitor and analyse new WCSI trawl survey data on a two-yearly basis.

Other consultation

43. Prior to developing the proposals for consultation, Te Waka a Mãui me Öna Toka iwi forum was approached for their collective view on GUR 7. No collective views were provided by Te Waka a Mãui me õno toka. A representative of Ngati Kuia has indicated their support for Option 2.

FINAL PROPOSALS

44. The final proposals for JDO 7 remain unchanged following consultation and consideration of submissions (refer Figure 7.1).

Option 1

45. Under Option 1, the existing TAC would be retained. The current TAC is 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. The option reflects a cautious approach to change given the interdependencies with other fish stocks and the adequacy of information in relation to stock status.

46. MPI considers that retaining the current TAC and TACC may result in opportunity loss for the commercial sector. This option does not enable industry to respond to elevated biomass in a way that would allow them to maximise value. An increase in TACC would provide flexibility for those fishers needing to cover their bycatch of JDO 7 – which will likely increase as JDO 7 biomass increases.

Option 2

47. Option 2 would result in an increase in the TAC to 147 t and an increase in the TACC to 137 t.

48. Increasing the TACC would provide the commercial sector with an opportunity to increase utilisation during a period of strong recruitment and elevated biomass. Based on the 2012 port price of $5.67 per kilogram, an additional 12 t would be worth approximately $68,000, annually.

49. A 12 t increase in the TACC is a modest response to the elevated JDO 7 biomass. With current monitoring through the WCSI trawl survey, it is possible for MPI to respond to changes in stock biomass in a timely manner in future.

50. MPI proposes providing an allowance for other sources of fishing-related mortality (OSFRM) at 5% of the TACC. While there is no information available to quantify OSFRM, MPI considers that the current allowance is too low, given the biological characteristics of the stock and the various sources of OSFRM (e.g. high grading in response to market preference for larger fish, discarding to avoid deemed value penalty payments, and mortality caused by the trawling method).

51. MPI is not recommending any changes to the Mäori customary or recreational allowances because there is no new information available to suggest that these catch allowances are inconsistent with actual levels from these sectors. Recreational catch appears to have been increasing as biomass of JDO 7 has increased, but will likely decline again if the increased TACC reduces abundance.

Option 3 (MPI Preferred Option)

52. Option 3 would increase the TAC to 161 t and increase the TACC by 25 t. This would provide greater utilisation and economic growth opportunities than Option 2. A 25 t increase in commercial catch would be worth approximately $140,000, annually. MPI notes that the majority of JDO 7 is taken as bycatch. The abundance of, and market demand for, the target species (flatfish and snapper) will also influence the amount of JDO 7 able to be utilised. In the main target fisheries, FLA 7 has been more than 50% under-caught in recent years, while SNA 7 has been fully caught.

53. The available information indicates that the current biomass of JDO 7 would be able to produce a catch of 161 t in the short term, while biomass is high. However, it is expected that biomass will decline through natural fluctuations over time. Hence, a 150 t TACC may not be sustainable in the long-term. MPI recommends that, under this option, ongoing biennial monitoring through the WCSI trawl survey is essential. The TAC would need to be reviewed again if there are any significant changes in JDO 7 abundance.

54. As with Option 2, MPI is not proposing changing the settings Mäori customary or recreational allowances under this option.

55. As with Option 2, MPI proposes setting the allowance for other sources of fishing related mortality at 5% of the TACC under this option.

ADDITIONAL MANAGEMENT CONTROLS

56. MPI does not propose to review any other management controls for JDO 7 at this time.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

57. MPI considers that all options presented in this paper satisfy your obligations under s 8 of the Act in that they provide for utilisation in the JDO 7 fishery while ensuring sustainability.

58. Each management option proposed would ensure the long term sustainability of the stock.

59. Option 1 is more cautious but is likely to limit utilisation opportunities. In contrast, increasing the TACC to 137 t under Option 2, or 150 t under Option 3 (MPIs preferred option), would allow for increased utilisation.

60. 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.

61. A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a)). MPI considers that the management options for JDO 7 are consistent with these international obligations.

62. MPI also considers the proposed management options to be 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 JDO 7 to promote policies that help to recognise customary use and management practices.

63. There is also an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). Te Waka a Mäui me Õna Toka iwi forum was approached for their collective view on JDO 7. No collective views were provided by Te Waka a Mäui me Öno Toka. A representative of Ngati Kuia has indicated their support for Option 2.

TAC

64. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at or above, or moving the stock to a level at or above B_{MSY}, in a way and rate considered appropriate for the stock. In doing so you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. 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.

65. JDO 7 is a bycatch of the West Coast South Island bottom trawl fishery, which primarily targets flatfish and snapper.

66. John dory is a fast growing, relatively short-lived species, that reaches sexual maturity at three to four years of age. Due to the fast growth rate and short life span, fluctuations in recruitment can result in large fluctuations in stock biomass.

67. Large fluctuations in stock biomass can provide opportunities for increased utilisation when consecutive strong year classes appear in the population – as is the current situation. But, this also means that management measures would be required to rapidly reduce catches at times of persistent low recruitment.

68. In considering the way in which and rate at which a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors as you consider relevant. There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

69. The TAC options presented in this FAP take into account the requirements listed in s 13 of the Act, and offer differing approaches to managing the potential risk to sustainability of the fishery that reflect the uncertainty in available information.

Environmental considerations

70. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, s 9 requires you to take into account that associated or dependent species be maintained at or above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

71. Key environmental issues associated with the JDO 7 fishery and how they would be affected by an increase to the TAC are discussed below:

    - There are measures in place in the JDO 7 area to mitigate the impacts of fishing on Hector's dolphins. Any TAC/TACC increase for JDO 7 will not affect these measures and they will continue to be just as effective. But, there remains a risk of incidental capture of hector's dolphins under all options.
    - JDO 7 is mainly a bycatch of the WCSI bottom trawl fishery. Increasing the TACC of JDO 7 will not necessarily increase the amount of bottom trawling undertaken because the increase in biomass should mean that CPUE increases. However, the target fishery, FLA 7, has been more than 50% under-caught in recent years. It is possible that increasing the TACC for bycatch species will cause an increase in the total amount of bottom trawling in these fisheries.

Section 11 considerations

72. In making your decisions on sustainability measures for JDO 7, you must also have regard to the requirements of s 11 of the Act as follows:

    a) Section 11(1)(a): Before setting or varying any sustainability measure for any stock, you must take into account any effects of fishing on any stock and the aquatic environment. The majority of JDO 7 commercial take is as bycatch in bottom-trawl fisheries targeting flatfish and snapper. As the TAC proposals do not affect catch limits for the key species targeted when JDO 7 is taken, it is not anticipated that the proposed TAC (and TACC) options would result in a significant change to fishing operations. Therefore, it is not anticipated there would be an increase in impacts on the marine environment or on the harvest of other stocks.

    b) Section 11(1)(b): Before setting or varying any sustainability measure for any stock, you must take into account any existing controls under the Act that apply to the stock or area concerned. Standard management controls apply to the JDO 7 fishery, for example deemed values, amateur bag limits, amateur minimum size limits, and fishing method constraints. The proposed changes to the TAC do not affect these measures.

    c) Section 11(1)(c): Before setting or varying any sustainability measure for this stock, you must take into account the natural variability of the stock. This has been discussed above in relation to the biological characteristics of JDO 7.

    d) Sections 11(2)(a) and (b): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and you consider relevant. MPI considers that all three options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the JDO 7 stock.

    e) Section 11(2)(c): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of s 7 and s 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Park boundaries.

    f) Section 11(2A)(b): Before setting or varying any sustainability measure for any stock, you must take account of any relevant and approved fisheries plans. There is no approved fisheries plan in place for any inshore stock at this time.

g) Sections 11(2A)(a) and (c): Before setting or varying any sustainability measure for any stock, you must take into account any conservation or fisheries services, or any decision not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for this stock. No decision has been made to not require a service in this fishery at this time.

Setting Allowances

73. Section 21 of the Act requires you to allow for Mäori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality. 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.

74. There is no proposal to increase either the customary of recreational allowances for JDO 7. There is no new information available to suggest the current catch allowances are inconsistent with actual catch levels from these sectors.

75. Section 21(4) requires that you take into account any mätaitai reserve or closures/restrictions under s 186A to facilitate customary Mäori fishing be taken into account. MPI is aware of the Whakapuaka (Delaware Bay) Taiapure, and the Te Tai Tapu, Manakaiaua/Hunts Beach, Mahitahi/Bruce Bay, Tauperikaka, and Okura/Mussel Point Mätaitai reserves. MPI notes that the proposals in this paper would not impact on, or be impacted by, the taiapure or mätaitai reserves.

CONCLUSIONS

76. MPI's preferred option is Option 3 – increasing the TAC of JDO 7 to 161 t, increasing the TACC to 150 t, and increasing the allowance for other sources of fishing-related mortality to 8 t.

77. JDO 7 is experiencing a period of strong recruitment and increased biomass. The information available supports an increase in catch to this level. Ongoing biennial monitoring via the WCSI trawl survey will ensure that the catch remains sustainable over the longer term.

78. A TACC of 150 t would enable increased utilisation and economic benefit for the commercial sector.

79. The Ministry considers all three options are consistent with your statutory obligations.

80. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that, for the JDO 7 fishery, you choose either:

Option 1 **AGREED/ NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for JDO 7 as follows:

(i) **retain** the existing TAC at 131 tonnes
(ii) **retain** the Mäori customary fishing allowance at 1 tonne
(iii) **retain** the recreational fishing allowance at 2 tonnes
(iv) **retain** the other sources of fishing-related mortality allowance at 3 tonnes
(v) **retain** the existing TACC at 125 tonnes.

OR

Option 2 **AGREED/ NOT AGREED**

Agree to vary the TAC, TACC and allowances for JDO 7 as follows:

(i) **set** the TAC at 147 tonnes
(ii) **retain** the Mäori customary fishing allowance at 1 tonne
(iii) **retain** the recreational fishing allowance at 2 tonnes
(iv) **set** the other sources of fishing-related mortality allowance at 7 tonnes
(v) **set** the TACC at 137 tonnes.

OR

Option 3 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for JDO 7 as follows:

(i) **set** the TAC at 161 tonnes
(ii) **retain** the Mäori customary fishing allowance at 1 tonne
(iii) **retain** the recreational fishing allowance at 2 tonnes
(iv) **set** the other sources of fishing-related mortality allowance at 8 tonnes
(v) **set** the TACC at 150 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR PORAE (POR 2)

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

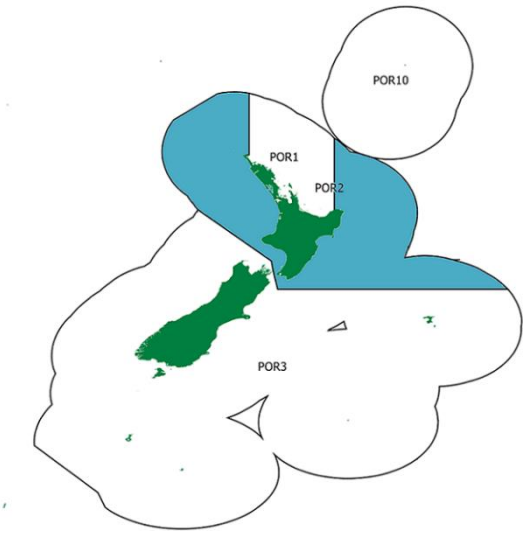


Figure 8.1: Quota Management Area (QMA) boundaries for Porae

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends that you increase the Total Allowable Catch (TAC) for porae in POR 2 from 9 to 22 tonnes (t) from 1 October 2012. Within this TAC MPI recommends an allowance of 1 t for customary fishing, 1 t for recreational fishing, 2 t for other sources of fishing related mortality and a Total Allowable Commercial Catch (TACC) of 18 t. This would increase the TACC by 200%.

Table 8.1: Proposed TACs, TACCs and allowances for POR 2

Option	TAC (t)	Allowances			TACC (t)
		Customary Mäori (t)	Recreational (t)	Other sources of fishing related mortality (t)	
Option 1 (Status Quo)	9	1	1	1	6
Option 2 (MPI preferred Option)	22	1	1	2	18

8. Reliable estimates of the current level of the POR 2 stock ($B_{CURRENT}$) or the level of the stock that can produce the maximum sustainable yield (B_{MSY}) are not available. The best available information on stock status for POR 2 is trends in catch.

9. Since introduction into the QMS on 1 October 2004, landings have ranged from 2 to 11 t. The current TACC of 6 t has been exceeded for the last four fishing years.

10. Option 1 is the status quo and the existing TAC would be retained at 9 t. This option reflects a cautious approach and may result in opportunity loss for the commercial sector.

11. MPI recommends increasing the TAC to 22 t (Option 2). This would be above the highest landings reported in the fishery. However, given the low volumes of catch in the past, and the large extent of the POR 2 QMA, MPI considers a

TAC increase from 9 t to 22 t is not, in the medium term, inconsistent with the objective of maintaining the POR 2 stock at or above B_{MSY} or moving the stock towards or above B_{MSY}.

12. If you decide to adjust the TAC, MPI recommends that the allowance for other sources of fishing related mortality be increased from 1 t to 2 t. No change to the 1 t customary or 1 t recreational allowance is proposed.

13. An 18 t TACC will provide more Annual Catch Entitlement (ACE) for commercial fishers to balance current levels of catch and enable some development in the fishery. While POR 2 landings have exceeded the TACC in the past, there is little target fishing. Small increases to the TACC are therefore unlikely to translate to a significant increase in fishing effort and associated impacts on other species or the environment. However, there is a risk that it could lead to increased targeting by set net which may impact other reef species.

14. The Ministry received five submissions that responded to the proposals for POR 2 in the Initial Position Paper (IPP).

15. Sanford Limited, Te Runanga Nui o Te Aupouri Trust, Area 2 Inshore Finfish Management Company Ltd and Aotearoa Fisheries Limited support MPI's recommendation to increase the TAC and TACC.

16. The New Zealand Recreational Fishing Council support an increase to the TAC and TACC but not to the extent proposed by MPI and have put forward an alternative suggestion of a 16 t TAC and 12 t TACC.

KEY CONSIDERATIONS

Need to Act

17. The TAC for POR 2 has not been reviewed since porae was introduced into the Quota Management System (QMS) on 1 October 2004. At that time sustainability measures were largely set on catch information. Since then landings have exceeded the TAC of 9 t twice and the TACC of 6 t on four occasions.

18. The TAC for POR 2 is set by you under section 13 of the Fisheries Act 1996 (the Act). Section 13 requires you to set a TAC for POR 2 that enables the stock to be maintained at, or moved towards or above, a level that will produce the maximum sustainable yield (B_{MSY}).

19. Where estimates of $B_{CURRENT}$ and B_{MSY} are not available, s 13 (2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY}, or moving the stock towards of above B_{MSY}.

20. Under the Act, there is a requirement to act on the best available information and not postpone or fail to set a TAC due to the absence of, or uncertainty in, information.

21. MPI considers that in circumstances where a TAC has been set primarily using information from reported landings, and landings then exceed the TACC on multiple occasions, it is important to review updated available information and consider management adjustments. This approach has been supported by industry submissions in the context of this paper.

22. In this instance, given the very large extent of the POR 2 QMA and the low volume of previous catches, MPI considers there to be an opportunity for you to provide for increased utilisation over the medium term.

Biological characteristics of porae

23. Little is known about the biology of porae (*Nemadactylus douglasii*), which is also found in southeast Australia. Porae are considered to be long-lived (maximum age of at least thirty) and have low productivity. There is evidence to suggest that populations are localised.

24. Porae are most common in the North and associated with reef habitats. POR 1 (Auckland East) is the main fishery in New Zealand, with annual landings generally between 45 t and 65 t. The management area for POR 2 is relatively large, covering the remainder of the North Island (see Figure 8.1), but there is likely to be significant variation in abundance throughout the area.

Stock status

25. Reliable estimates of $B_{CURRENT}$ and B_{MSY} are not available for any of the porae stocks.

26. The best available information on stock status for POR 2 is trends in catch. Reported landings from POR 2 have not exceeded 13 t since reliable records have been available (1989-90). Since introduction into the QMS on 1 October 2004, landings have ranged from 2 to 11 t. Given the very large extent of the QMA, and the low volume of previous catches, it is likely that POR 2 is currently above B_{MSY}.

Relevant Fishery Information

27. Porae is a relatively low value commercial fishery. The Fish Monetary Stock Account: 1996–2009 published by Statistics New Zealand in 2010 estimated the asset value (derived from quota and ACE trades) for all porae stocks between $700,000 in 2005 and $300,000 in 2009.

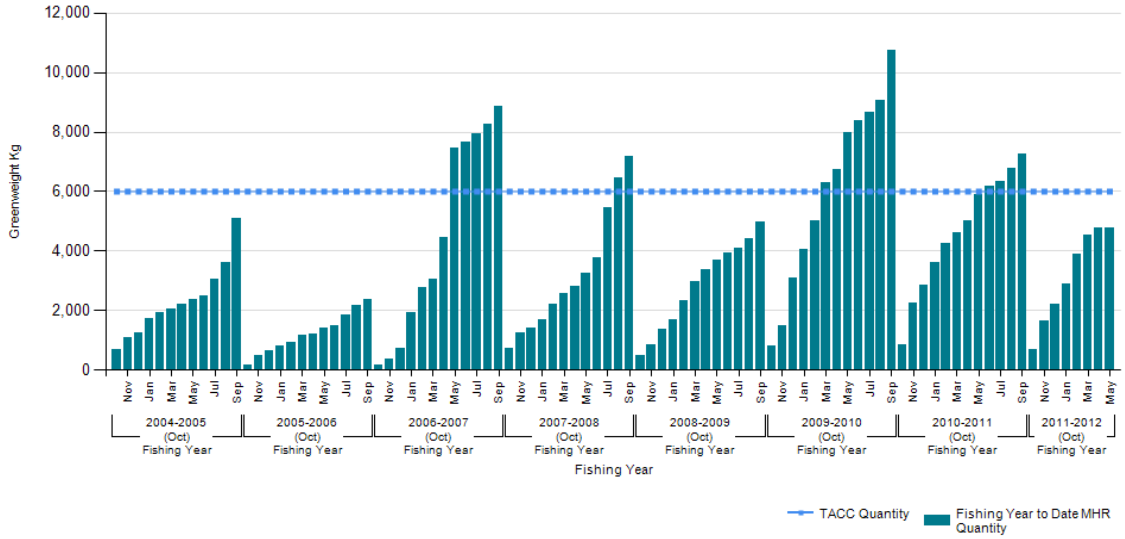
28. Commercial catch is mainly split between two key areas; the top of the North Island west coast (statistical area 47) and the central east coast (statistical area 13).

29. In statistical area 47, POR 2 is mostly taken by bottom longline when targeting snapper and by bottom trawl/ bottom pair trawl mainly targeting trevally. There is also a small target set net fishery.

30. In statistical area 13, catch is largely either by bottom trawl (mainly targeting tarakihi) or by set net targeting blue moki.

31. Highest annual reported catch prior to introduction into the QMS was just over 13 t. Since then, the highest annual landings for POR 2 were reported in 2009/10 and totalled approximately 11 t (exceeding the TACC by approximately 80%). The deemed value charges in that year were approximately $6,000. The TACC was also exceeded in 2006/07, 2007/08 and 2010/11. Landings to date indicate that the TACC may be exceeded in 2011/12 (see Figure 8.2).

Figure 8.2: TACC and reported landings for POR2 from 2004-2012 (landings are cumulative by month over the fishing year)



32. There is currently no quantitative information available on Māori customary or recreational fishing of POR 2, but it is likely taken in small quantities when targeting snapper or tarakihi and some targeted by spearfishing.

Other Key Considerations

33. While POR 2 landings have exceeded the TACC in the past, there is little target fishing (3.2 t in 2006/07 and less than 1 t each fishing year thereafter). Small increases to the TACC are therefore unlikely to translate to a significant increase in fishing effort and associated impacts on other species or the environment. However, there is a risk that it could lead to increased targeting by set net which may impact other reef species.

CONSULTATION

34. An IPP was released on 05 July 2012. MPI consulted with tangata whenua and stakeholders on the options outlined in the IPP. The options proposed were the same as set out in Table 8.1 above.

Submissions

35. The Ministry received five submissions that responded to the proposals for POR 2 in the Initial Position Paper.

36. The submissions were from

- Aotearoa Fisheries Limited (AFL)
- Area 2 Inshore Finfish Management Company Ltd (Area 2)
- Te Runanga Nui o Te Aupouri Trust (TRNOTA)
- New Zealand Recreational Fishing Council (NZRFC) ; and
- Sanford Limited (Sanford).

37. No submissions supported Option 1 which retains the current TAC and TACC.

38. AFL, Area 2, and Sanford all supported Option 2, which would result in an increase to the TAC from 9 t to 22 t. Within that the allowances of 1 t for customary fishing and 1 t for recreational fishing would be retained and the allowance for other sources of fishing-related mortality would increase from 1 t to 2 t. The TACC of 18 t is three times the current TACC and 5 t over the highest reported landings in the fishery.

39. TRNOTA supported Option 2 in principle, provided that it "maintains a sustainable yield for all fishery sectors".

40. NZRFC supported a TAC and TACC increase but did not agree with the magnitude proposed. They put forward an alternative option of a 16 t TAC and 12 t TACC. This would align the TACC with the highest reported landings in the fishery.

41. MPI understands the reasoning behind the NZRFC proposal, however considers that there is potential for some growth in this fishery.

FINAL PROPOSALS

42. The final options for POR 2 remain unchanged following consultation and consideration of submissions (refer table 8.1).

Option 1

43. Option 1 proposes to retain the current management settings for POR 2. This option would retain the current TACC, which is currently at a similar level to the average landings since introduction into the QMS.

44. Retaining the current TAC is likely to maintain the stock biomass at or above the level that can produce B_{MSY} in the medium term. However, as POR 2 is mainly taken as an incidental bycatch, attempts to constrain catch to average levels could create disincentives to report and land catch, making it difficult to identify trends or signals that there are opportunities or concerns arising in the

fishery. Addressing these disincentives (e.g. by increasing vessel monitoring) would generate unnecessary costs if the level of catch is considered to be sustainable.

Option 2 (MPI preferred option)

45. Option 2 proposes to adjust management settings to better provide for existing utilisation in the commercial fishery and enable some development.

46. Given the low volumes of catch in the past, MPI proposes a TAC increase from 9 t to 22 t is unlikely to move stock biomass below B_{MSY} in the medium term. The TAC proposed is higher than previous annual landings, but still relatively cautious because of the biological vulnerability of porae and risk for localised depletion.

47. MPI propose that the majority of this increase is allocated to the commercial sector, with a TACC increase from 6 t to 18 t. Based on the 2012 port price of $2.12 per kilogram, commercial catch of 12 t would be worth approximately $24,000.

48. There is currently no information to support a review of the Maori customary and recreational fishing allowances and this option proposes to retain the current one tonne allowances for each. In recognition of the provisions for an increase to commercial catch, a 1 t increase to the allowance for other sources of fishing-related mortality is proposed.

ADDITIONAL MANAGEMENT CONTROLS

49. MPI is proposing that you adjust the annual deemed value rate for POR 2 from $1.35 kg to $1.50 kg and interim deemed value rate from $0.68 kg to $1.35 (refer final advice: Review of Deemed Value Rates for Inshore Stocks for 1 October 2012).

50. If you decide to increase the deemed values, but not increase the TAC and TACC for POR 2 (Option 1 of this final advice), deemed value costs for some commercial fishers will increase slightly if catch continues to exceed available ACE.

51. No other changes to management controls are proposed.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

52. MPI considers that all options presented in this paper satisfy your obligations under section 8 of the Act, by providing for utilisation of the POR 2 fishery while ensuring sustainability. Each management option proposed will ensure the long term sustainability of the stock over the medium term. Option 1 is the most cautious but does not address disincentives to land catch. Option 2 is less cautious, but will provide for more growth in the fishery. Both are relatively cautious given the lack of biological information on porae and the use of catch trends as the primary monitoring tool.

53. In setting or varying sustainability measures, you must 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.

54. A wide range of international obligations relate to fishing, including use and sustainability of fishstocks; and maintaining biodiversity (s 5(a) of the Act). MPI considers that the management options for POR 2 are consistent with these international obligations.

55. MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b) of the Act).

56. There is an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (s 12 of the Act). The Ministry are promoting input through the development of iwi fisheries plans and participation through engagement with iwi forums. The operation of these mechanisms within the POR 2 area is limited at this stage. As an alternative, written explanation of the proposals and process were sent to tangata whenua and iwi groups within the POR 2 QMA. Development of MPIs initial position was directly discussed with the Te Hiku o te Ika Fisheries Forum who list porae as a taonga species within their Fisheries Management Plan.

Information Principles

57. Section 10 requires that you take specified information principles into account when making your decisions. These are:

    - your decisions should be based on the best available information
    - you should consider any uncertainty in the information available in any case
    - you should be cautious when information is uncertain, unreliable or inadequate, and
    - you should not use the absence of, or any uncertainty in, any information as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

58. The options and analysis presented in this paper reflect the best available information on POR 2 and outlines the uncertainty in the information available where it is relevant to your decision making.

Setting the TAC

59. Section 13(2A) requires you to set a TAC that is "not inconsistent" with the objective of maintaining the stock at, or moving it towards or above B_{MSY}, in a way and rate considered appropriate for the stock. In doing so, you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. You must not use the absence of or any

uncertainty in, the best available information as a reason for postponing or failing to set a TAC.

60. In considering the way in which, and the rate at which, a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors that you consider relevant (section 13(3)). There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

61. As discussed above the TAC options presented in this final advice take into account the requirements listed in section 13(2A) and 13(3) of the Act. MPI considers that neither of the options presented in this paper are inconsistent with the objective of maintaining the stock at, or moving it towards or above B_{MSY}.

Environmental Principles

62. The Act requires that when any effect of fishing is adverse this effect should be avoided, remedied or mitigated. More specifically, section 9 requires you to take into account environmental principles, including that associated or dependent species be maintained above a level that ensures their long-term viability, that the biological diversity of the aquatic environment should be maintained, and habitat of particular significance for fisheries management should be protected.

63. POR 2 is predominantly a bycatch fishery although some targeting does occur. MPI considers there could be some effects on reef fisheries if the TACC were to be increased and targeting by set net were to occur, and this has been taken into account in Option 2 of this paper.

Section 11 Considerations

64. When setting a TAC for POR 2 (a sustainability measure) you must also satisfy your obligations under section 11 of the Act as follows:

    a) Section 11(1) (a) requires you to take into account the effects of fishing on any stock and aquatic environment. These effects have been taken into account under current management measures (Option 1). The effects are unlikely to change under Options 2 as POR 2 is largely a bycatch fishery but there may be some effects on other reef species if targeting by set net were to occur. This is discussed within the final advice.

    b) Section 11(1) (b) requires that you take into account any existing controls that apply to the stock or area concerned. For POR 2, the current TAC of 9 t is the key control under consideration for change. Other existing controls include the current deemed value rates schedule for POR 2. These controls are discussed and taken into account in this final advice.

    c) Section 11(1) (c) requires you take into account the natural variability of the stock. There is no information available on POR 2 stock status and

variability. The limited available information on biological characteristics of porae, which may influence stock variability, are discussed in this final advice.

d) Section 11(2)(a) and (b) require you to have regard to any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991, and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and which you consider relevant, before setting or varying any sustainability measure. There are no instruments under the Resource Management Act 1991 or Conservation Act 1987 relevant to the setting or varying of the TAC for the POR 2 stock.

e) Section 11(2)(c) requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and which you consider relevant, before setting or varying the TAC. You must have particular regard to these provisions when setting or varying the TACC. The boundaries of the quota management area for the POR 2 stock do not intersect with the Park boundaries, therefore this criterion is not relevant to your assessment.

f) Section 11(2)(d) requires you to have regard to a planning document lodged with the Minister of Fisheries by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011 that applies to the coastal marine area and which you consider relevant, before setting or varying the TAC. There are no customary planning documents which would apply to the quota management area for POR 2 area, therefore this criterion is not relevant to your assessment.

g) Section 11(2A)(b) requires you to take into account any relevant fisheries plan approved under section 11A before setting or varying any sustainability measure. No fisheries plan for POR 2 has been approved, therefore this criterion is not relevant to your assessment.

h) Section 11(2A)(a and c) require you to take into account any relevant conservation services or fisheries services or decisions not to require such services. No conservation services or fisheries services decisions materially affect the options proposed for POR 2.

Setting Allowances

65. When setting or varying a TACC for a stock under section 20 of the Act, you must, under section 21 of the Act have regard to the TAC for that stock and allow for Maori customary non-commercial fishing interests, recreational fishing interests, and for any other sources of fishing-related mortality. 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.

66. When allowing for Māori customary non-commercial fishing interests, you must take into account any mātaitai reserve or closures/restrictions under section

186A in place in the relevant QMA (section 21 (4)). There are four mātaitai reserves within the POR 2 QMA. Hakihea, Moremore, Marokopa and Aotea Harbour mātaitai.The proposals in this paper will not impact on, or be impacted by, these mātaitai reserves.

67. There is no proposal to increase either the customary of recreational allowances for POR 2. There is no new information available to suggest the current catch allowances are inconsistent with actual catch levels from these sectors.

68. Option 2 increases the allowance for other sources of fishing –related mortality as incidental mortality may become more frequent if targeting were to increase under the proposed TACC.

CONCLUSIONS

69. The current TAC and TACC for POR 2 were set in 2004 based on historic catches. While average landings remain at this level, the TACC has been exceeded a number of times in recent years.

70. Option 1 is cautious given uncertainty in determining stock status and the potential effects of increased targeting on associated reef species. However, Option 1 does not address the disincentives that the current TACC creates for landing catch. Under Option 1, commercial fishers will continue to pay deemed values if they continue to overcatch the TACC.

71. MPI recommends Option 2, which would increase the TAC by 13 t. When setting the TAC MPI recommends that you retain the existing customary and recreational allowances and increase the allowance for other sources of fishing-related mortality by 1 t. Option 2 would increase the TACC by 12 t to enable commercial fishers to balance their catch with ACE.

72. The Ministry considers both options are consistent with your statutory obligations.

73. MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision.

MPI recommends that for the POR 2 fishery, you choose either

Option 1 **AGREED /NOT AGREED**

Agree to retain the existing TAC, TACC, and allowances for POR 2 as follows:

(i) **retain** the existing TAC at 9 tonnes
(ii) **retain** the Mäori customary fishing allowance at 1 tonne
(iii) **retain** the recreational fishing allowance at 1 tonnes
(iv) **retain** the other sources of fishing-related mortality allowance at 1 tonnes
(v) **retain** the existing TACC at 6 tonnes.

OR

Option 2 (MPI preferred option) **AGREED / NOT AGREED**

Agree to vary the TAC, TACC and allowances for POR 2 as follows:

(vi) **set** the TAC at 22 tonnes
(vii) **retain** the Mäori customary fishing allowance at 1 tonne
(viii) **retain** the recreational fishing allowance at 1 tonnes
(ix) **set** the other sources of fishing-related mortality allowance at 2 tonnes
(x) **set** the TACC at 18 tonnes.

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF DEEMED VALUE RATES FOR INSHORE AND DEEPWATER STOCKS – 01 OCTOBER 2012

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

REVIEW OF DEEMED VALUE RATES FOR INSHORE AND DEEPWATER STOCKS – 1 OCTOBER 2012

SUMMARY

7. MPI recommends that you approve changes to deemed value rates for inshore and deepwater stocks from 1 October 2012, as outlined in Table 9.1.

Table 9.1: Current and recommended deemed value rates for inshore and deepwater stocks

Species	Stock	Current deemed value rates /kg			Recommended deemed value rates /kg		
		Interim	Annual	Differential	Interim	Annual	Differential
	BYX1	$ 1.44	$ 1.52	Standard schedule[32]	$ 1.98	$ 2.20	Standard schedule
	BYX2	$ 1.00	$ 2.00	Starting at 10% over catch	$ 1.98	$ 2.20	Starting at 10% over catch
Alfonsino	BYX3	$ 0.75	$ 1.50	Standard schedule	$ 1.98	$ 2.20	Standard schedule
	BYX3 (CI)	$ 0.38	$ 0.75		$ 0.99	$ 1.10	
	BYX7	$ 0.88	$ 1.76		$ 1.98	$ 2.20	
	BYX8	$ 0.63	$ 1.25		$ 1.98	$ 2.20	
	BYX10	$ 0.83	$ 1.66		$ 1.98	$ 2.20	
Dark ghost shark	GSH1	$ 0.22	$ 0.43	Standard schedule	$ 0.32	$ 0.35	Standard schedule
	GSH2	$ 0.19	$ 0.37		$ 0.36	$ 0.40	
	GSH3	$ 0.08	$ 0.15		$ 0.36	$ 0.40	
	GSH4	$ 0.10	$ 0.34		$ 0.36	$ 0.40	
	GSH4 (CI)	$ 0.08	$ 0.15		$ 0.18	$ 0.20	
	GSH5	$ 0.17	$ 0.34		$ 0.36	$ 0.40	
	GSH6	$ 0.08	$ 0.15		$ 0.36	$ 0.40	
	GSH7	$ 0.17	$ 0.34		$ 0.36	$ 0.40	
	GSH8	$ 0.23	$ 0.45		$ 0.36	$ 0.40	
	GSH9	$ 0.20	$ 0.39		$ 0.36	$ 0.40	
	GSH10	$ 0.22	$ 0.43		$ 0.36	$ 0.40	
Blue moki	MOK1	$ 0.44	$ 0.88	Starting at 10% over catch	$ 0.79	$ 0.88	Standard schedule
	MOK3	$ 0.15	$ 0.29	Standard schedule	$ 0.79	$ 0.88	
	MOK4	$ 0.15	$ 0.29		$ 0.79	$ 0.88	
	MOK5	$ 0.15	$ 0.29		$ 0.79	$ 0.88	
	MOK10	$ 0.44	$ 0.88		$ 0.79	$ 0.88	
Porae	POR1	$ 0.68	$ 1.35	Do not apply	$ 1.35	$ 1.50	Standard schedule
	POR2	$ 0.68	$ 1.35		$ 1.35	$ 1.50	
	POR3	$ 0.68	$ 1.35		$ 1.35	$ 1.50	
	POR10	$ 0.68	$ 1.35		$ 1.35	$ 1.50	
Snapper	SNA1	$ 6.50	$ 13.00	Standard schedule	$ 7.20	$ 8.00	Starting at 5% over catch
	SNA2	$ 4.60	$ 5.60	Starting at 10% over catch	$ 5.40	$ 6.00	Starting at 10% over catch
	SNA3	$ 0.84	$ 1.68	Standard schedule	$ 5.40	$ 6.00	Standard schedule
	SNA7	$ 4.00	$ 8.00	Starting at 10% over catch	$ 5.40	$ 6.00	Starting at 10% over catch
	SNA8	$ 4.00	$ 8.00		$ 5.40	$ 6.00	Starting at 5% over catch
	SNA10	$ 6.50	$ 13.00	Standard schedule	$ 7.20	$ 8.00	
Trumpeter	TRU1	$ 0.25	$ 0.50	Do not apply	$ 1.35	$ 1.50	Standard schedule
	TRU2	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU3	$ 0.91	$ 1.81		$ 1.35	$ 1.50	
	TRU4	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU4 (CI)	$ 0.24	$ 0.48		$ 1.30	$ 1.44	

[32] Under a standard differential deemed value rate schedule (standard schedule) the applicable deemed value rate increases by 20% for every 20% of catch in excess of ACE holdings, up to a maximum 100% increase for all catch 100% or more in excess of ACE holdings.

Species	Stock	Current deemed value rates /kg			Recommended deemed value rates /kg		
		Interim	Annual	Differential	Interim	Annual	Differential
	TRU5	$ 0.45	$ 0.90		$ 1.35	$ 1.50	
	TRU6	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU7	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU8	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU9	$ 0.25	$ 0.50		$ 1.35	$ 1.50	
	TRU10	$ 0.25	$ 0.50		$ 1.35	$ 1.50	

CONTEXT

The deemed value framework

8. The requirement for commercial fishers to balance catch with ACE is a fundamental principle of the QMS, contributing to both sustainability and utilisation objectives. The purpose of the deemed value framework is to encourage commercial fishers to balance their catch with ACE while not discouraging them from landing and accurately reporting catch.[33] The intent is to protect the long term value of stocks and to support kaitiakitanga by encouraging the overall commercial catch for each QMS stock not to exceed the total available ACE and/or the Total Allowable Commercial Catch (TACC).

9. The effectiveness of these incentives is dependent on individual fishers' compliance with landing and reporting requirements, their responses to the incentives provided and on the impact of other incentives such as those created by market conditions.

10. When commercial fishers know they will be unable to source enough ACE to cover their catch for a particular stock they need to change their fishing practices to avoid catching that stock or stop fishing altogether for the year. Resorting to illegal activities to continue fishing while not paying deemed values, like dumping and misreporting of bycatch species for which they hold no ACE, is totally unacceptable. This behaviour distorts basic information used for fisheries management and erodes the value of the resource for legitimate and responsible users. MPI will continue to devote resources to identify breaches and enforce landing requirements.

[33] Interim deemed value rates are charged each month to commercial fishers for every kilogram of fish landed in excess of ACE. If the fisher sources enough ACE to cover his or her catch, the interim rates paid are reimbursed. If the fisher does not source enough ACE by the end of the fishing year, the difference between the interim and annual deemed value rates is charged for all catch in excess of ACE. Therefore, the annual rate applies at the end of the fishing year only.

Differential deemed value rates, if applicable, are also charged at the end of the fishing year if the fisher harvested well in excess of his or her ACE holdings. The table below outlines the standard differential deemed value rate schedule (standard schedule), applicable to most stocks. Differential rates reflect the increasingly detrimental impact of higher levels of over catch on sustainability and on the long term value of the resource, providing stronger incentives to avoid over catch. For vulnerable or rebuilding stocks, a more stringent differential deemed value schedule (e.g. applying from 5% or 10% over catch) may be more appropriate than the standard schedule.

Catch in excess of ACE holdings	*0 - 20%*	>20%	>40%	>60%	>80%	>100%
Differential deemed value rate as a percentage of the annual deemed value rate	*100%*	120%	140%	160%	180%	200%

11. The deemed value framework is designed to provide industry with the ability to maximise the value of their fishing quota by providing flexibility to adjust fishing activity to reflect sustainable catch limits. Where adjustment of fishing activity is not possible, the alternative is for catch limits of associated target species to be reduced.

STATUTORY CONSIDERATIONS

12. Section 75(1) of the Fisheries Act 1996 (the Act) requires you to set annual and interim deemed value rates for all stocks managed under the QMS. When setting these rates, you are required under section 75(2)(a) to take into account the need to provide an incentive for every commercial fisher to acquire or maintain sufficient ACE each fishing year that is not less than the total catch of the stock taken by that commercial fisher.

13. Section 75(2)(b) specifies the matters that you may have regard to when setting deemed value rates for a stock. These are:

- the desirability of commercial fishers landing catch for which they do not have ACE;
- the market value of ACE for the stock;
- the market value of the stock;
- the economic benefits obtained by the most efficient commercial fisher, licensed fish receiver, retailer, or any other person from the taking, processing, or sale of fish, aquatic life or seaweed;
- the extent to which catch of that stock has exceeded or is likely to exceed the TACC for the stock in any year; and
- any other matters that you consider relevant.

14. Section 75(3) specifies that the annual deemed value rate must be greater than the interim deemed value rate. Furthermore, you may choose to set, under section 75(4), differential deemed value rates for specific stocks. Section 75(5) allows you to set different deemed value rates for fish landed in the Chatham Islands, reflecting the unique marketing conditions of those landings. Section 75(6) requires that you should not have regard to personal circumstances or set separate deemed value rates in individual cases. Under section 75(7) you may vary deemed value rates to take effect at the start of the next fishing year. Before setting deemed value rates, you must consult with stakeholders and tangata whenua that have an interest in the stock, as required by section 75A.

DEEMED VALUE GUIDELINES

15. The practical application of these statutory criteria is developed in the Deemed Value Guidelines (the Guidelines), which are summarised below:

- deemed value rates must generally be set between the ACE price and the port price;
- deemed value rates must generally exceed the ACE price by transaction costs;

- deemed value rates must avoid creating incentives to misreport;
- deemed value rates for constraining bycatch species may be higher;
- deemed value rates must generally be set at twice the port price for high value single species fisheries and species subject to international catch limits;
- deemed value rates for Chatham Island landings may be lower;
- interim deemed value rates must generally be set at 90% of the annual deemed value rate;
- differential deemed value rates must generally be set.

16. When making your decisions on deemed value rates, you should note that you are not legally bound to the Guidelines. Although the Guidelines outline a process for the review of deemed value rates and provide guidance for this advice and your decisions, based on the legal obligations and provision set out in the Act, they do not have any statutory or legal effect.

NEED TO ACT

Review of deemed value rates

17. Deemed value rates are reviewed on an annual basis. MPI determined stocks to review deemed value rates for, as summarised in Table 9.2, after:
    - assessing relevant information (summarised in Table 9.3) against the Guidelines and the need to provide effective incentives for fishers to balance catch with ACE; and
    - inviting tangata whenua, the fishing industry and other stakeholders to nominate stocks for deemed value rate reviews, in the context of discussions as part of the fisheries planning process for inshore fisheries.[34]

Table 9.2: Species for which deemed value rates are being reviewed

Species	Rationale for review
Alfonsino	6.9% over catch in 2010/11 and 1.2% over catch as at July 2012 despite increase in deemed value rates for the 2011/12 year (BYX2). Twenty-five percent increase in export value over the last three years.
Dark ghost shark	Deemed value rate higher than reported port price (GSH1) 40% over catch in 2010/11 and concurrent TACC review (GSH2) 46% over catch in 2010/11, and concurrent TACC review (GSH8)
Blue moki	7% over catch in 2010/11 (MOK3) Relatively low deemed value rates in relation to port price
Porae	20% over catch in 2010/11 and concurrent TACC review (POR2) No differential deemed value rates
Snapper	Deemed value rates higher than reported port price (SNA1, SNA7 and SNA8) Available information indicates illegal discarding and misreporting concerns Industry request to review deemed value rates (SNA7)

[34] Furthermore, MPI has adopted the approach of reviewing deemed value rates of all stocks of a particular species at the same time to ensure consistent and proactive incentives are provided. MPI notes that this approach does not necessarily mean aligning all deemed value rates for stocks of the same species; port price and other differences between stocks continue to be basic rationale for all deemed value rates proposed.

Trumpeter	Deemed value rate higher than reported port price (TRU3) 29% over catch in 2010/11 (TRU4) Relatively low deemed value rates in relation to port price and no differential deemed value rates

18. It is important to note that the over catch of GSH2, GSH8, and POR2 is likely be addressed by TACC increases currently recommended for those stocks. Nonetheless, it is important to maintain effective incentives for commercial fishers to balance their catch of those stocks with ACE.

Analysis

19. The review of deemed value rates is informed by the Guidelines and the information summarised in Table 9.3. The following sections outline the analysis and recommended deemed value rate changes for each stock reviewed, including tangata whenua and stakeholders' views raised in submissions.

Table 9.3: Information that informed the recommended deemed value rates

Species	Stock	Catch > Total ACE 10/11	Current annual DV rate	2012 reported port price/kg[35]	10/11 ACE price/kg	10/11 deemed value invoices
Alfonsino	BYX1		$ 1.51	$ 1.95	$ 0.69	$85.77
	BYX2	106.9%	$ 2.00	$ 1.96	$ 1.05	$227,958.11
	BYX3	102.6%	$ 1.50	$ 1.95	$ 1.03	$73,806.72
	BYX7		$ 1.76	$ 1.73	$ 0.57	$5.28
	BYX8		$ 1.25	$ 1.95	$ 0.77	$0.00
Dark ghost shark	GSH1		$ 0.43	$ 0.38	$ 0.18	$133.22
	GSH2	140.3%	$ 0.37	$ 0.47	$ 0.16	$19,727.78
	GSH3		$ 0.15	$ 0.48	$ 0.04	$0.00
	GSH4		$ 0.34	$ 0.25	$ 0.11	$342.04
	GSH5		$ 0.34	$ 0.44	$ 0.12	$673.00
	GSH6		$ 0.15	$ 0.47	$ 0.07	$0.00
	GSH7		$ 0.34	$ 0.47	$ 0.10	$273.07
	GSH8	145.8%	$ 0.45	$ 0.50	$ 0.15	$9,840.00
	GSH9		$ 0.39	$ 0.47	$ 0.17	$159.40
Blue moki	MOK1		$ 0.88	$ 1.89	$ 0.76	$9,751.67
	MOK3	106.6%	$ 0.29	$ 1.03	$ 0.17	$5,181.99
	MOK4		$ 0.29	$ 1.52	N/A	$0.00
	MOK5		$ 0.29	$ 2.07	$ 0.08	$69.83
Porae	POR1		$ 1.35	$ 2.33	$ 0.43	$3,098.79
	POR2	120.4%	$ 1.35	$ 2.12	$ 0.44	$2,524.37
	POR3		$ 1.35	$ 2.28	N/A	$54.34
Snapper	SNA1		$ 13.00	$ 5.89	$ 4.43	$2,475,157.88
	SNA2		$ 5.60	$ 5.71	$ 3.72	$47,328.25
	SNA3		$ 1.68	$ 5.70	N/A	$14.30
	SNA7		$ 8.00	$ 4.40	$ 2.55	$6,168.14
	SNA8		$ 8.00	$ 5.70	$ 4.71	$845,720.93
Trumpeter	TRU1		$ 0.50	$ 2.11	$ 0.19	$0.00
	TRU2		$ 0.50	$ 2.11	$ 0.24	$19.55

[35] Reported port prices are the average price for fish (greenweight) of each stock reported to be paid to independent fishers by licensed fish receivers (LFRs). These values ignore differences in size, quality and state of fish landed (i.e. fishing method), location of landings, seasonal price variations, deductions that fishers may pay to LFRs from time to time and price differentials for vertically integrated fishing companies. Reported port prices are therefore an indicator of limited reliability. In general, real port prices for average size and quality fish landed in the main ports by independent fishers would tend to be higher than the average prices reported by LFRs.

Species	Stock	Catch > Total ACE 10/11	Current annual DV rate	2012 reported port price/kg[35]	10/11 ACE price/kg	10/11 deemed value invoices
	TRU3		$ 1.81	$ 1.62	$ 0.43	$43.71
	TRU4	128.7%	$ 0.50	$ 2.11	$ 0.31	$11,710.36
	TRU5		$ 0.90	$ 2.54	$ 0.26	$343.62
	TRU6		$ 0.50	$ 2.07	N/A	$2.88
	TRU7		$ 0.50	$ 1.87	$ 0.16	$63.25
	TRU8		$ 0.50	$ 2.11	$ 0.15	$0.00
	TRU9		$ 0.50	$ 2.07	N/A	$5.75

CONSULTATION

20. MPI consulted on your behalf on the proposed changes with tangata whenua and stakeholders during July and August 2012. Separate initial position papers were prepared for inshore and deepwater stocks.[36] Initial proposals were the same as those outlined in Table 9.1, except for snapper (SNA8). MPI received 11 submissions relating to the proposed changes. All submissions related to inshore stocks; there were no submissions received regarding deepwater stocks. Any reference to submissions in this advice paper, which incorporates both inshore and deepwater stocks, relates solely to inshore stocks. Submissions were received from:

    - Anton's Group (Anton's);
    - Aotearoa Fisheries Ltd (AFL);
    - Area 2 Inshore Finfish Management Company Ltd (Area 2);
    - Challenger Finfisheries Management Company Ltd and South East Finfish Management Ltd (Challenger & South East);
    - Egmont Seafoods Limited (Egmont);
    - Mark Mathers (Mathers);
    - New Zealand Recreational Fishing Council (NZRFC);
    - New Zealand Sport Fishing Council (NZSFC);
    - Sanford Ltd (Sanford);
    - Seafood Industry Council Ltd (SeaFIC); and
    - Te Rūnanga Nui o te Aupōuri (TRNOTA).

21. The submissions are attached for your information.

22. Anton's, AFL, Challenger & South East, NZRFC and NZSFC call for changes to the catch balancing regime and the deemed value framework and refer to other issues which are beyond the scope of this paper.

23. A common issue raised by several industry submitters (Anton's, Egmont, Challenger & South East, SeaFIC) is that TACCs for many stocks, particularly bycatch species, are set too low and do not reflect the abundance of the stocks.

[36] The stocks in the deepwater paper consisted of all alfonsino stocks together with three dark ghost shark stocks (GSH4, GSH5 and GSH6).

24. However, the setting of deemed value rates is a separate process from setting TACCs. Your decision to set a deemed value rate should not be influenced by whether or not submitters consider the TACC for a stock to be set correctly. This is reinforced by recent case law which indicates that the adequateness of the TACC is not a relevant consideration when setting deemed value rates.[37]

25. Deemed value rates that are providing ineffective or inappropriate incentives must be reviewed. TRNOTA endorses the reasons to adjust deemed value rates, particularly for snapper, and supports any changes that would reduce dumping. NZRFC generally supports increases in deemed value rates but not decreases.

Dark ghost shark

26. Dark ghost shark is mainly caught by bottom trawl, both as a target species and as bycatch in mixed species fisheries.

27. Although MPI is recommending that you increase the TACCs of GSH2 and GSH8, potentially reducing the likelihood of ongoing over catch, it is important to maintain effective incentives for fishers to source and balance catch with ACE. MPI recommends that you adjust the deemed value rates for all dark ghost shark stocks as outlined in Table 9.4. The purpose of this change is to provide a more effective incentive, in light of the current port price.

28. Area 2 supports the recommended changes for GSH2. AFL supports the recommended changes for all dark ghost shark stocks. No other submitters commented explicitly on the recommended deemed value rates for dark ghost shark stocks.

29. MPI acknowledges that the recommended rate for GSH4 ($0.40) is greater than the port price for this stock ($0.25), which is inconsistent with the Principle 1 of the Guidelines. However, the Guidelines state that it is appropriate to depart from this Principle and MPI considers that having different rates for the adjacent GSH3 and GSH4 stocks could create incentives to misreport.

[37] *Pacific Trawling Limited & Independent Fisheries Limited v Minister of Fisheries, High Court, Napier Registry, 29 August 2008, CIV 2007-441-1016, Priestley J.*

Table 9.4: Current and recommended deemed value rates/kg for dark ghost shark stocks

	Stock	Interim	Annual	Differential (standard schedule)				
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	GSH1	$0.22	$0.43	$0.52	$0.60	$0.69	$0.77	$0.86
	GSH2	$0.19	$0.37	$0.44	$0.52	$0.59	$0.67	$0.74
	GSH3	$0.08	$0.15	$0.18	$0.21	$0.24	$0.27	$0.30
	GSH4	$0.17	$0.34	$0.41	$0.48	$0.54	$0.61	$0.68
	GSH4 (CI)[38]	$0.08	$0.15	$0.18	$0.21	$0.24	$0.27	$0.30
	GSH5	$0.17	$0.34	$0.41	$0.48	$0.54	$0.61	$0.68
	GSH6	$0.08	$0.15	$0.18	$0.21	$0.24	$0.27	$0.30
	GSH7	$0.17	$0.34	$0.41	$0.48	$0.54	$0.61	$0.68
	GSH8	$0.23	$0.45	$0.54	$0.63	$0.72	$0.81	$0.90
	GSH9	$0.20	$0.39	$0.47	$0.55	$0.62	$0.70	$0.78
	GSH10	$0.22	$0.43	$0.52	$0.60	$0.69	$0.77	$0.86
Recommended	GSH1	$0.32	$0.35	$0.42	$0.49	$0.56	$0.63	$0.70
	GSH2	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH3	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH4	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH4 (CI)	$0.18	$0.20	$0.24	$0.28	$0.32	$0.36	$0.40
	GSH5	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH6	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH7	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH8	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH9	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80
	GSH10	$0.36	$0.40	$0.48	$0.56	$0.64	$0.72	$0.80

[38] The Act provides for deemed value rates applicable to fish landed in the Chatham Islands that are different to the deemed value rates applicable to fish of the same stock landed elsewhere, recognising the unique economic characteristics of the Chatham Islands.

Blue moki

Table 9.5: Current and recommended deemed value rates/kg for blue moki stocks

	Stock	Interim	Annual	Differential (standard schedule, except current MOK1)				
Current	Over catch		0 - 10%	>10%	>20%	>30%	>40%	>50%
	MOK1	$0.44	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
	MOK3	$0.15	$0.29	$0.35	$0.41	$0.46	$0.52	$0.58
	MOK4	$0.15	$0.29	$0.35	$0.41	$0.46	$0.52	$0.58
	MOK5	$0.15	$0.29	$0.35	$0.41	$0.46	$0.52	$0.58
	MOK10	$0.44	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
Recommended	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
	MOK1	$0.79	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
	MOK3	$0.79	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
	MOK4	$0.79	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
	MOK5	$0.79	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76
	MOK10	$0.79	$0.88	$1.06	$1.23	$1.41	$1.58	$1.76

30. Blue moki is mainly taken in set net, both as target and bycatch species, and also as bycatch in inshore trawl fisheries.

31. MPI recommends that you increase deemed value rates for blue moki stocks as outlined in Table 9.5. The recommended rates are more consistent with the reported port prices (between $1 and $2 per kg) and thus would provide a more effective incentive for fishers to balance their catch with ACE. Given the increased rates, MPI recommends that a unique differential deemed value rate schedule is no longer necessary for MOK1; a standard differential deemed value schedule would apply to all blue moki stocks.

32. Area 2 supports the recommended changes for MOK1 because the existing deemed value rate is relatively low in comparison to the port price (not because there was over catch in MOK3). SeaFIC points out that because of changes in the port price survey methodology, regional variations in port prices are no longer evident and that blue moki is one of the species affected by this change. Yet no submissions provided additional information on blue moki port prices. AFL supports the changes recommended for blue moki. No other submitters commented explicitly on the recommended changes for blue moki.

Porae

Table 9.6: Current and recommended deemed value rates/kg for porae stocks

	Stock	Interim	Annual	Differential (→standard schedule)				
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	POR1	$0.68	$1.35	Not applicable ($ 1.35 for all levels of over catch)				
	POR2	$0.68	$1.35					
	POR3	$0.68	$1.35					
	POR10	$0.68	$1.35					
Recommended	POR1	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	POR2	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	POR3	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	POR10	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00

33. Porae is taken as bycatch in bottom trawl and set net fisheries targeting a range of inshore species, although it is also taken as a target species by set net.

34. No porae stocks are currently subject to differential deemed value rates. Although a TACC increase is recommended for POR2, it is important to maintain an effective incentive for fishers to balance catch with ACE in this and other porae stocks. Furthermore, the introduction of different deemed value rates for porae stocks would further discourage higher levels of over catch. The recommended changes are summarised in Table 9.6.

35. Area 2 supports recommended changes for POR2. Sanford and AFL support the recommended changes for all porae stocks. No other submitters provided specific comment on the recommended changes for porae.

Snapper

Table 9.7: Current and recommended deemed value rates/kg for snapper stocks

	Stock	Interim	Annual	Differential (standard and unique schedules)							
Current	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%			
	SNA1	$6.50	$13.00	$15.60	$18.20	$20.80	$23.40	$26.00			
	SNA3	$0.84	$1.68	$2.02	$2.35	$2.69	$3.02	$3.36			
	SNA10	$6.50	$13.00	$15.60	$18.20	$20.80	$23.40	$26.00			
	Over catch		0-10%	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%
	SNA2	$4.60	$5.60	$9.60	$10.60	$11.60	$12.60	$13.60	$14.60	$15.60	$16.60
	SNA7	$4.00	$8.00	$9.00	$10.00	$11.00	$12.00	$13.00	$14.00	$15.00	$16.00
	SNA8	$4.00	$8.00	$9.00	$10.00	$11.00	$12.00	$13.00	$14.00	$15.00	$16.00
Recommended	Over catch		0-5%	>5%	>10%	>20%	>30%	>40%	>50%	>60%	
	SNA1	$7.20	$8.00	$10.00	$12.00	$14.00	$16.00	$18.00	$20.00	$22.00	
	SNA8	$5.40	$6.00	$7.00	$9.00	$12.00	$16.00	$18.00	$20.00	$22.00	
	SNA10	$7.20	$8.00	$10.00	$12.00	$14.00	$16.00	$18.00	$20.00	$22.00	
	Over catch		0-10%	>10%	>20%	>30%	>40%	>50%	>60%	>70%	>80%
	SNA2	$5.40	$6.00	$6.75	$7.50	$8.25	$9.00	$9.75	$10.50	$11.25	$12.00
	SNA7	$5.40	$6.00	$6.75	$7.50	$8.25	$9.00	$9.75	$10.50	$11.25	$12.00
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%			
	SNA3	$5.40	$6.00	$7.20	$8.40	$9.60	$10.80	$12.00			

36. Snapper is a high value species targeted commercially by bottom trawl, bottom longline and Danish seine. It is also caught as bycatch in inshore fisheries targeting different species. Snapper is also highly valued by recreational fishers, which is why Ministers have previously set deemed value rates higher than reported port prices for several snapper stocks. Likewise, snapper is a taonga species of high customary importance for tangata whenua.

Proposal consulted on and stakeholder submissions

37. In the consultation paper, MPI proposed the same deemed value rates for SNA1 (as per Table 9.7 and Figure 9.1) and for SNA8. The recommendations outlined in Table 9.7 are the same as the proposals consulted on, except for SNA8.

38. Egmont and Challenger & South East do not support the proposed rates for SNA8, noting that the port price for snapper in the Taranaki region ($6.00/kg) is lower than in Auckland. They recommend that the interim and annual deemed value rates for SNA8 should be $5.40 and $6.00 per kg respectively (as recommended), with a differential deemed value schedule applying from 10% over catch. Mathers endorses Egmont's submission.

39. Anton's supports the recommended annual deemed value rates for SNA1 and SNA7 and the rates proposed for SNA8 in the consultation paper, although it

does not support the use of differential deemed value rates generally. AFL supports the recommended annual deemed value rate for SNA 1, although it expresses concern that a lower rate may lead to catch in excess of the TACC and negative implications for sustainability and the long term value of the resource. Area 2 supports the recommended deemed value rates for SNA 2. Challenger & South East support the recommended deemed value rates for SNA 7. Sanford supports the recommended annual deemed value rates for SNA 1 and the rates proposed for SNA 8 in the consultation paper.

40. NZRFC and NZSFC question the rationale for the recommended changes and suggest they would just make overfishing more profitable.

Recommendation

41. MPI has taken into account Egmont's and Challenger & South East's concerns and has adjusted the final recommendation for SNA 8 accordingly. The recommendation takes into account the characteristics of the fishery and, given that it is a rebuilding fishery, the need to ensure that adequate incentives are provided for commercial fishers to land, report and balance catch with ACE.[39]

42. MPI's recommended deemed value rates for snapper stocks, summarised in Table 9.7 (and illustrated in Figures 9.1 and 9.2 for SNA 1 and SNA 8), would provide incentives for fishers to balance catch with ACE. The recommended annual rates are still higher than reported port prices, which range from $4.40 (SNA 7) to $5.90 (SNA 1) per kg. However, anecdotal information and submissions suggest that real port prices may generally be higher than those reported. Submissions suggest that there is no agreement on the average landed price for snapper in SNA 8, although there appears to be a difference in the port price between Auckland and Taranaki.[40]

43. The recommended changes seek to strike a balance between providing a small margin of profit to encourage landing and reporting while not encouraging wilful over catching. Current annual deemed value rates for SNA1, SNA7 and SNA8 are higher than, or at the upper range of, port prices. This may be creating incentives for fishers to misreport. Available information suggests illegal discarding and other forms of misreporting are currently a significant concern for snapper stocks. The recommended deemed value rates may reduce incentives to discard illegally, potentially improving reporting.

44. Furthermore, the recommended differential deemed value rates, applying from 5% over catch for SNA 1, SNA 8 and SNA 10 and from 10% over catch for SNA 2 and SNA 7 would discourage higher levels of over catch, beyond incidental catches in excess of ACE holdings. Because of the marginal nature of SNA 3

[39] A higher proportion of snapper taken in SNA8 is taken as bycatch, mainly by trawl. By contrast, snapper in SNA1 is mainly targeted and taken by bottom longline and Danish Seine (60%), although some is also taken by trawl (35%). Although the vast majority of SNA8 catch is landed in Auckland (76%) where it appears to have a higher port price, the fishing method used and the target/bycatch ratio confirm the view provided by some submitters that the real port price for SNA8 would generally be lower than for SNA1.

[40] Sanford reports that the average price for snapper at the Auckland Fish Market (a significant marketing channel for northern snapper stocks) during 2010/11 ranged from $5.00 to $14.00/kg, with a "middle of the road" price of $8/kg. Sanford points out that snapper prices have increased by $1.00 on average in the current year. Egmont and Challenger & South East disagree with that, reporting that the port price paid for snapper in the Taranaki region is $6.00/kg, which they claim reflects the real average port price for SNA8. They disagree with the average price for snapper at the Auckland Fish Market being $8.00/kg, reporting it was between $5.50 and $6.00/kg.

(i.e. bycatch rather than targeted and catches well below the TACC), a unique differential deemed value schedule is not recommended for that stock.[41] Likewise, interim deemed value rates set at 90% of annual rates would provide an incentive for fishers to source ACE earlier in the fishing year. These changes would protect the TACC.

Figure 9.1: Current and recommended deemed value rates/kg for snapper (SNA1)

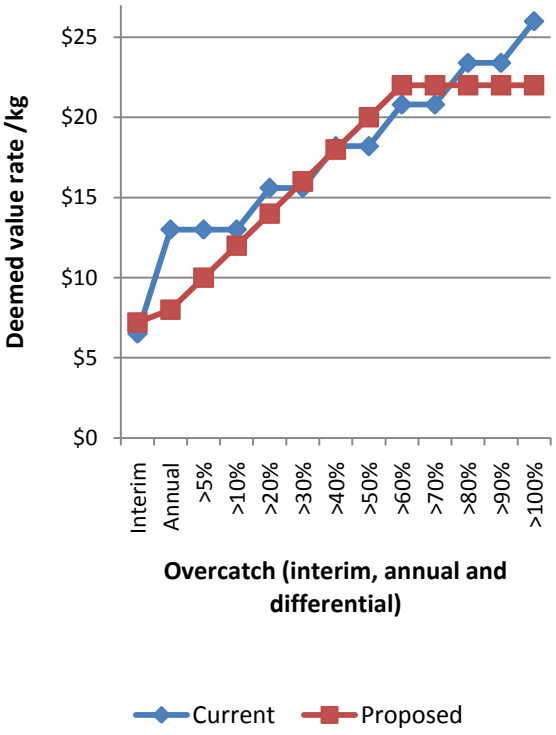
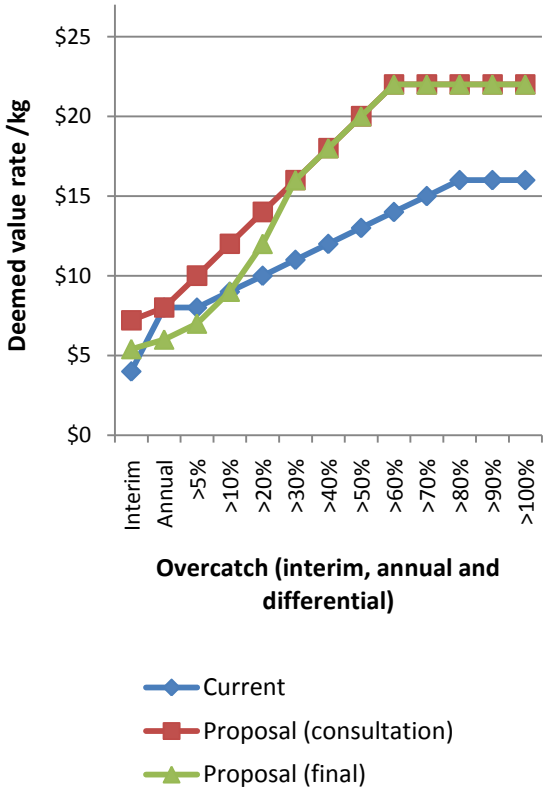


Figure 9.2: Current and recommended deemed value rates/kg for snapper (SNA8)



Monitoring

45. In the short term, MPI will continue to place observers on high risk vessels fishing for snapper, subject to capacity and other monitoring priorities. In the medium to long term, MPI expects to increase at sea monitoring across all inshore fisheries; snapper fisheries are likely to be a priority. Additional monitoring will be aimed at checking compliance with landing and reporting requirements and to gather information to indicate whether management measures are being effective and/or if further action is necessary.

Trumpeter

46. Trumpeter is mainly taken as bycatch in bottom longline fisheries targeting hapuku/bass, school shark and ling. Because trumpeter in TRU 4 is bycatch of a higher value species (hapuku/bass), there may continue to be some over catch in that stock. MPI will continue to monitor the performance of this stock to inform future management changes.

[41] SNA10 (Kermadec Fishery Management Area) is also a nominal and marginal stock. However, according to the *Guidelines*, deemed value rates for SNA10 in this case should be the set at the same level as those for SNA1 to avoid creating incentives for area misreporting.

47. MPI recommends that you set deemed value rates from trumpeter stocks, as summarised in Table 9.8. These rates would provide a stronger incentive for fishers to balance catch with ACE as they better reflect reported port prices. Furthermore, differential deemed value rates would further discourage higher levels of over catch. MPI also recommends that you increase Chatham Islands deemed value rates because there have been trumpeter landings in the Chatham Islands in recent years and it is important to ensure the incentives provided by those deemed value rates are consistent with the incentives provided for other landings.

48. Area 2 does not support the recommended changes for TRU 2, suggesting they are unnecessary. AFL supports the recommended deemed value rates for trumpeter stocks. No other submitters make explicit comment on the recommended changes for trumpeter stocks.

Table 9.8: Current and recommended deemed value rates/kg for trumpeter stocks

	Stock	Interim	Annual	Differential (→standard schedule)				
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	TRU1	$0.25	$0.50	Not applicable (annual deemed value rates apply to all levels of over catch)				
	TRU2	$0.25	$0.50					
	TRU3	$0.91	$1.81					
	TRU4	$0.25	$0.50					
	TRU4 (CI)	$0.24	$0.48					
	TRU5	$0.45	$0.90					
	TRU6	$0.25	$0.50					
	TRU7	$0.25	$0.50					
	TRU8	$0.25	$0.50					
	TRU9	$0.25	$0.50					
	TRU10	$0.25	$0.50					
Recommended	TRU1	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU2	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU3	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU4	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU4 (CI)	$1.30	$1.44	$1.73	$2.02	$2.30	$2.59	$2.88
	TRU5	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU6	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU7	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU8	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU9	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	TRU10	$1.35	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00

Alfonsino

Table 9.9: Current and recommended deemed value rates/kg for alfonsino stocks

	Stock	Interim	Annual	Differential (standard schedule, except BYX2)				
Current	Over catch		0 - 10%	>10%	>30%	>50%	>70%	>90%
	BYX2	$1.00	$2.00	$2.40	$2.80	$3.20	$3.60	$4.00
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
	BYX1	$1.44	$1.51	$1.81	$2.11	$2.42	$2.72	$3.02
	BYX3	$0.75	$1.50	$1.80	$2.10	$2.40	$2.70	$3.00
	BYX3 (CI)	$0.38	$0.75	$0.90	$1.05	$1.20	$1.35	$1.50
	BYX7	$0.88	$1.76	$2.11	$2.46	$2.82	$3.17	$3.52
	BYX8	$0.63	$1.25	$1.50	$1.75	$2.00	$2.25	$2.50
	BYX10	$0.83	$1.66	$1.99	$2.32	$2.66	$2.99	$3.32
Recommended	Over catch		0 - 10%	>10%	>30%	>50%	>70%	>90%
	BYX2	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40
	Over catch		0 - 20%	>20%	>40%	>60%	>80%	>100%
	BYX1	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40
	BYX3	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40
	BYX3 (CI)	$0.99	$1.10	$1.32	$1.54	$1.76	$1.98	$2.20
	BYX7	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40
	BYX8	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40
	BYX10	$1.98	$2.20	$2.64	$3.08	$3.52	$3.96	$4.40

49. In the main fisheries (BYX2 and BYX3) alfonsino is taken primarily as a target species by deepwater trawl vessels. MPI recommends that you increase the deemed value rates for all stocks as an incentive not to exceed catch levels. Recommendations are summarised in Table 9.9.

50. Catch of BYX2 has exceeded available ACE for five of the last seven years. MPI will continue to monitor the performance of this stock to guide future management changes. MPI recommends that you maintain the stock-specific differential deemed value rates for this stock as a further incentive not to exceed catch levels. MPI also recommends that you maintain the standard differential deemed value schedule for all other stocks.

51. MPI acknowledges that its recommendations to increase the deemed value rates for all BYX stocks are inconsistent with Principle 1 of the Guidelines, i.e. the deemed value rates would be greater than the port price.[42] However, the Guidelines state that it may be appropriate to depart from this principle. MPI considers the recommendations appropriate for this species given the 25% increase in export value over the last three years and the fact that alfonsino is largely a target species in the BYX2 and BYX3 quota management areas.

[42] The proposed annual deemed value rate is $2.20 per kg while port prices for the alfonsino stocks range between $1.73 and $1.96

Summary of Recommendations for Deemed Values

MPI recommends that you:

Agree to change the deemed value rates for dark ghost shark stocks as outlined in Table 9.4;	**AGREED / NOT AGREED**
Agree to change the deemed value rates for blue moki stocks as outlined in Table 9.5;	**AGREED / NOT AGREED**
Agree to change the deemed value rates for porae stocks as outlined in Table 9.6;	**AGREED / NOT AGREED**
Agree to change the deemed value rates for snapper stocks as outlined in Table 9.7;	**AGREED / NOT AGREED**
Agree to change the deemed value rates for trumpeter stocks as outlined in Table 9.8;	**AGREED / NOT AGREED**
Agree to change the deemed value rates for alfonsino stocks as outlined in Table 9.9;	**AGREED / NOT AGREED**
Note that you may choose to set deemed value rates other than those recommended in this paper.	**NOTED**

Ministry for Primary Industries
Manatū Ahu Matua

4 September 2012

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR SCHOOL SHARK

1. The Sustainability Review of fish stocks is an annual process that reviews catch limits and other management controls for selected stocks.

2. The review is undertaken with the intent to increase productivity derived from fisheries and improve sustainable resource use. This is consistent with the legal requirement to ensure sustainable utilisation of fisheries resources.

3. MPI's Inshore Fisheries Management has been operating under the direction of the draft National Inshore Fisheries Plans since July 2011. The proposed changes are consistent with the objectives stated in those plans.

4. Tangata whenua and stakeholders have had significant input into the formulation of the proposals. They were invited to identify stocks where they believe opportunities for increased utilisation exist, or where there are concerns for the sustainability of the stock. They also had the opportunity to provide input on the proposed changes prior to public consultation.

5. The proposals have been assessed in terms of the relevant statutory requirements and the best available information, including (where relevant) the latest scientific information as to the status of the stock, and tangata whenua and stakeholder input.

6. The Fisheries Act 1996 requires you to consider relevant information in deciding sustainability measures and other management controls. The final advice paper is separated into two sections. The first section provides you with the rationale for the proposal, and background information. The second part of the final advice sets out your statutory obligations.

SCHOOL SHARK (SCH) – ADD ALL STOCKS TO SCHEDULE 6

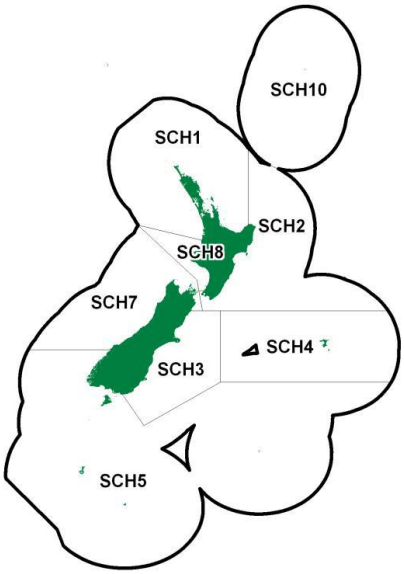


Figure 10.1: Quota Management Area (QMA) boundaries for School Shark (SCH)

SUMMARY

7. The Ministry for Primary Industries (MPI) recommends adding School shark (SCH) to Schedule 6 of the Fisheries Act 1996 (the Act). This will allow live school shark to be returned to sea, despite this being generally prohibited for Quota Management System (QMS) species.

8. Tag and release studies have shown that when sharks are returned to the water alive and as soon as practical after capture that they survive. Therefore, it is unnecessary to require fishers to land school shark and impose a cost (in the form of acquiring Annual Catch Entitlement (ACE) or paying a deemed value) if they are unwanted, can be returned to the sea alive, and are likely to survive. Allowing operators to return live school shark also confers sustainability benefits and may increase productivity.

9. All but one submission supports adding school shark to Schedule 6 (thereby allowing school shark to be returned to the sea when likely to survive). The NZ Royal Forest and Bird Society support the status quo because of concerns about survivability of released fish and the inability to monitor the effectiveness of the measure.

CONTEXT

Need to Act

10. School shark stocks are managed under the draft National Fisheries Plan (the Finfish Plan) for Inshore Finfish.[43] The Finfish Plan is an MPI policy document which came into operation from July 2011. It sets out management objectives for inshore finfish stocks, including school shark.

[43] The Fisheries Plan has not been formally approved under the Act

11. School shark stocks are identified as being particularly vulnerable to fishing pressure because they are long lived, slow growing and have a low reproductive rate. The objective for school shark is to maintain relative stock abundance at or above a target reference level. No target reference level has been established for any school shark stock. However, catch rate indices suggests stock size in some - but not all - areas is likely to decline at present catch levels.

12. The requirement to land all school shark has resulted in an economic cost in the form of deemed value payments for some fishers who are unable to avoid it when fishing for other species and do not have the ACE to cover the catch. In the past five years, commercial fishers have reported overcatch of school shark ranging from 25 to 55 tonnes (t) and collectively have paid total annual deemed values ranging from $45, 200 to $290, 100. The sustainability concerns noted above may lead to catch reductions in the future and potentially exacerbate the inability of fishers to cover school shark catches with ACE.

13. The inability of some fishers to cover all their catch with ACE and the cost of making deemed value payments may be creating disincentives to land the catch. The result is to discard and misreport.

14. In contrast to their biological vulnerability school shark are physically robust and are known to survive capture by many fishing methods and subsequent handling by fishing crews. This is a characteristic of many shark species and the following are listed already on Schedule 6: blue shark, mako shark, porbeagle shark, spotted dogfish (rig) and spiny dogfish.

Relevant Fishery Information

15. School shark (*Galeorhinus galeus*) stocks collectively are the 20th most valuable by quota value - $35m or 0.9% of the total New Zealand fishery[44]. Most of the school shark is utilised because the meat is valuable. Less than 0.1% of school shark is landed only as fins. Recent landings have periodically exceeded commercial catch limits.

16. School shark are both targeted (55% in 2010-11) and taken as bycatch in fisheries targeting other species. Overall set nets accounted for 45%, long line 31% and trawl 23% of estimated catches in 2010-11. School shark is predominantly taken in trawl in North Island waters and in set nets in South Island waters.

17. In general school shark is highly sought after because of its high value. For this reason there is little incentive to discard unless this value is diminished. School sharks require timely processing at sea to maintain their value. The flesh becomes tainted with ammonia if the carcass is not processed and iced promptly.

[44] Statistics New Zealand Fish Monetary Stock Account for 2009

CONSULTATION

18. An initial position paper (IPP) was released 1 July 2011 and proposed two options (Table 10.1).

Table 10.1: Proposed options for listing all school shark stocks on Schedule 6 of the Fisheries Act (1996)

Option 1	Status quo: No specific measures allowing school shark to be returned to the sea. All catch reported and counts against ACE.
Option 2	School shark can be returned to the sea if in a survivable state. Returned fish under this provision is reported but does not count against ACE.

19. Seven submissions (and two submissions in support of other submissions) regarding this proposal were received from:

- Area 2 Inshore Finfish Management Company Ltd
- Bill Hartley (a recreational fisher)
- Challenger Finfisheries Management Company Ltd (Challenger) (supported by Egmont SeaFoods and Mark Mathers (a commercial fisher)
- New Zealand Recreational Fishing Council
- Sanford Ltd
- Te Runanga Nui O Te Aupōuri Trust (TRNOTA)
- The Royal Forest and Bird Protection Society of New Zealand Inc. (Forest and Bird)

20. Copies of these submissions are available in the separate document containing all submissions to the October Sustainability Round IPPs.

21. All submitters except for Forest and Bird support the addition of all school shark stocks to Schedule 6 of the Act (Option 2). Last year when submitting on a proposal to include rig the Seafood Industry Council also submitted support for school shark being added to Schedule 6 of the Act.

Analysis

22. Option 1 is the status quo. Under Option 1, all mortality associated with commercial fishing of school shark will, in theory, be entirely constrained within the TACC as all school shark landed are counted against ACE (or attract deemed values). In practice, however, it is likely that unreported (illegal) discarding of school shark occurs due to the economic cost of landing unwanted school shark.

23. Forest and Bird support Option 1 and submit that fishers will dump excess or unwanted shark to avoid paying deemed values. MPI considers the status quo provides a greater incentive for commercial fishers to discard unwanted school shark than Option 2, since the option to release live school shark is unavailable in Option 1.

24. Option 1 also does not alleviate the economic cost associated with fishers having to hold ACE or pay deemed values on all school shark that is caught but could be released alive.

25. Under Option 2, all school shark stocks (SCH 1-5, 7, 8 and 10) would be added to Schedule 6 to enable commercial fishers to immediately return unwanted school shark back to the sea, if it is likely to survive on return, and if the return takes place as soon as practicable after the school shark is taken. Option 2 is supported by six of the seven submitters.

26. There is scientific evidence which shows that school shark can survive if returned to the sea. In inshore bottom trawl and longline fisheries, school shark are known to survive capture well if they are immediately returned to sea. School shark were caught, tagged, released and recapture rates of up to 15% (compatible with high survival) have been reported[45]. However, there is a risk that some school shark released under Schedule 6 will not survive. This risk is probably greatest for school shark caught and released from set nets.

27. Forest and Bird submits that data from other Sixth schedule shark fisheries indicate that not all shark discarded at sea are alive when released. MPI agrees for one species of shark -spiny dogfish – that not all discards are alive when released and this is quantified by a special reporting code. When considering this species for inclusion on Schedule 6 of the Act MPI has provided an assessment of school shark survivability based on the best available information.

28. Option 2 would provide some relief for those fishers without ACE. Fishers will not be forced to source ACE or pay deemed values for all school shark caught. However, for those school sharks that are unlikely to survive, they will still need to be landed and counted against the fisher's ACE.

29. Some submitted that the level of use and compliance with Sixth Schedule provisions be effectively monitored. Under Option 2, school shark returned to the sea, in accordance with Schedule 6 of the Act, will be recorded under a separate destination code. This information will assist in providing more accurate reporting on school shark stocks, which in turn, will assist in the management of the stocks. MPI is also further developing a framework and programme for inshore vessel monitoring. Improved monitoring will assist with managing the compliance risk of discarding school shark unlikely to survive.

30. Forest and Bird is concerned about the long term sustainability of school shark at current levels of catch and submits that the TAC is the primary means of ensuring sustainability. MPI agrees, although adopting Option 2 may provide a sustainability benefit to school shark stocks by increasing productivity. Released school shark may contribute to the spawning stock and thus increase the number of young being produced.

31. Forest and Bird submits that releases would account for less than 3% of current landings. MPI agrees on the basis of recent catch reporting that live releases

[45] See for example: Movements of the New Zealand school shark, Galeorhinus galeus, from tag returns RJ Hurst, NW Bagley, GA McGregor and MP Francis. New Zealand Journal of Marine and Freshwater Research, 33:1, 29-48

could account for up to 3% of current landings depending on the survival rate of the released school shark.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

General Obligations

32. The Ministry considers that both options presented in this paper satisfy your obligations under the Act. They provide for utilisation in the school shark fishery while ensuring sustainability. Either management option proposed will ensure the long term sustainability of the stocks.

33. Option 1 is likely to limit utilisation opportunities and forgo potential sustainability benefits. In contrast, Option 2 (the recommended option) will provide fishers the flexibility to return school shark likely to survive back to the sea or use ACE to land the school shark (or pay associated deemed values). Option 2 may also have benefits for sustainability, especially if releases include mature females.

34. This proposal is consistent with actions and objectives in the National Plan of Action for Sharks[46]. An action listed in the Plan is to review use of the Schedule 6 provision to allow live release of additional shark species. The objectives of the Plan include:

    - Minimise waste and discards from shark catches in accordance with article 7.2.2.(g) of the code of Conduct for Responsible Fisheries.
    - Facilitate the improvement of species specific catch and landings data and monitoring of shark catches.

35. The Ministry also considers the proposed options are consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b)).

Input and Participation

36. The Ministry has an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga. The Ministry sought input from and provided an opportunity for participation from iwi listed under schedule 3 of the Maori Fisheries Act 2004, the Ministry's Iwi Forums (via the forum chairs) and tangata whenua groups with a Fisheries Protocol. This opportunity was provided in writing prior to the development of the IPP. The Ministry did not receive any input on kaitiakitanga or on customary interest in school shark during this time

37. In addition to an opportunity to input and participate in the development of the IPP, the Ministry also consulted with the above tangata whenua groups and with tangata whenua who have registered an interest in school shark, on the options developed through the IPP.

Environmental considerations

[46] New Zealand National Plan of Action for the Conservation and Management of Sharks October 2008

38. It is unlikely either of the management options proposed would materially affect associated or dependent species or the biological diversity of the aquatic environment or affect relevant habitats of particular significance.

Information Principles

39. The best available information used to evaluate options is the tagging studies that suggest (through high recapture rates) that school shark caught and released from commercial fishing enjoy high survival rates.

CONCLUSION

40. MPI recommends listing all stocks of school shark on Schedule 6 of the Act (Option 2).

41. Adopting Option 2 would provide important flexibility in managing the unavoidable bycatch of school shark. It would also assist in the reduction of costs associated with landing unwanted school shark. Of importance is that better reporting outcomes may be achieved by including school shark on Schedule 6, as it may provide a disincentive to discard and not report catches. Allowing fishers to return school shark that are in a survivable state back to the sea also may result in less wastage and confer sustainability benefits.

42. Because this is a regulatory amendment it will not be in place by 1 October 2012. If the measure is approved, fishers will be formally advised of when the measure will come into effect.

Summary Recommendations for School Shark

MPI recommends that you:

Agree to recommend the Governor-General amend Schedule 6 of the Act, by Order in Council, so a commercial fisher may return any school shark to the waters from which it was taken if—

(a) that school shark is likely to survive on return; and

(b) the return takes place as soon as practicable after the school shark is taken.

AGREED / NOT AGREED