

Blue Cod 8 (BCO 8): Final Advice Paper

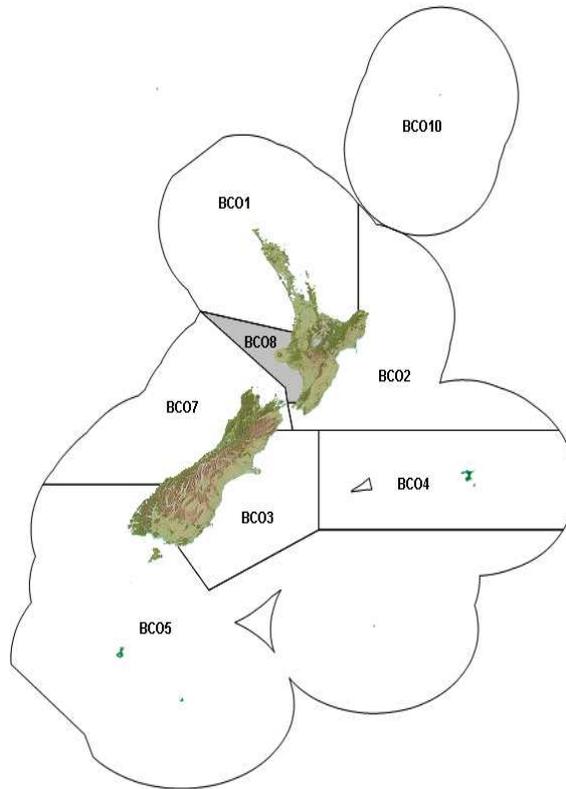


Figure 1: Quota Management Areas for Blue Cod

Summary

1 The Ministry recommends that you consider the following management options for BCO 8:

Table 1: Proposed Management Options for BCO 8

| Option | TAC (t) | TACC (t) | Customary Māori allowance (t) | Other sources of mortality (t) | Recreational | |
|---------------------------------------|---------|----------|-------------------------------|--------------------------------|---------------|-------------|
| | | | | | Allowance (t) | Bag limit |
| 1 | 269.4 | 74.4 | 2 | 5 | 188 | 20 blue cod |
| 2 <i>Ministry preferred option</i> | 226 | 34 | 2 | 2 | 188 | 10 blue cod |
| 3 | 160 | 25 | 2 | 2 | 131 | 5 blue cod |

2 The Ministry's preferred option (Option 2) is to reduce the Total Allowable Commercial Catch (TACC) for BCO 8 from 74.4 t to 34 t, and to set a recreational daily bag limit of 10 blue cod for BCO 8.

3 No Total Allowable Catch (TAC) or allowances have been previously set for BCO 8. The Ministry recommends you set a TAC of 226 t, a Maori customary allowance of 2 t, a recreational allowance of 188 t, and an allowance for other sources of fishing related mortality of 2 t.

4 There is limited information to monitor and assess fish abundance in the BCO 8 stock. Available catch information and anecdotal information from some fishers suggests that the current TACC and recreational daily bag limit of up to 20 blue cod may pose a sustainability risk if fully caught.

5 The options offer differing approaches to managing the potential risk to the sustainability of the fishery, and reflect the uncertainty in the information. In general, the lower TAC options (Options 2 and 3) are more likely to reduce the risk of BCO 8 decline, but may result in some reduced utilisation for the recreational and commercial sectors. Option 1 does not address any potential sustainability risk.

6 The Ministry's preferred option is Option 2. This option seeks to remove potential catch "headroom" in the fishery, but achieves this differently for each sector. Under this option the TACC would be reduced to the highest commercial catch recorded in recent years (34 tonnes (t)), while the recreational daily bag limit would be set at 10 blue cod, to reduce the risk of expansion of recreational catch. Option 2 seeks to prevent the risk of future overfishing of this low information stock.

7 Many submitters on the Ministry's Initial Position Paper (IPP) note the lack of information available on BCO 8. Option 2 is the most supported option (by six submitters). One submitter supports Option 1 and two submitters support Option 3. Seven submitters propose a variety of alternate options. Thirteen of the 19 submitters support a reduction to the BCO 8 recreational daily bag limit, and one submitter recommends a voluntary reduction to the BCO 8 recreational daily bag limit.

Key Considerations

Need to Act

8 There is limited information to monitor and assess fish abundance in the BCO 8 stock. The available catch information and anecdotal information from some fishers suggests, however, that catches at the current TACC and recreational daily bag limit may pose a sustainability risk if fully caught.

9 The TACC for BCO 8 has never been caught; commercial landings have been below 50% of the TACC in most years since introduction into the Quota Management System (QMS) in 1986.

10 The BCO 8 fishery is an important recreational fishery, and this sector takes the bulk of the catch in BCO 8. Recreational fishery participants, including some FMA 8 recreational forum members, have recently expressed concern about catch levels and sustainability. They consider recreational participation rates may have increased in the BCO 8 fishery and that fishers are now better at targeting and catching blue cod. They also say there has been a decline in the size and abundance of fish in the fishery, indicating a potential sustainability issue.

11 Anecdotal information, such as the concerns raised by some recreational fishers, carries more weight in fisheries such as BCO 8 where we lack other information to monitor stock status. The Ministry considers you should also act with caution when managing low information fisheries generally, particularly when the biology of the stock creates risks from overfishing. This is the case for blue cod (see following section).

Relevant Fishery Information

12 Limited stock status information is available for BCO 8. There is no stock status research planned for BCO 8.

13 The biological characteristics of blue cod make them susceptible to the effects of fishing and to localised depletion, which means populations may take a long time to recover once depleted. This is because blue cod:

- are relatively slow growing and long lived, reaching a maximum age of 32 years
- tend to be territorial as they generally move less than 1 km
- populations may be isolated from each other and there may be several distinct populations within a management area, and
- are protogynous hermaphrodites¹ with some (but not all) females changing into males as they grow.

Māori Customary

14 Blue cod is an important kaimoana species for tangata whenua. Reported Māori customary catch is low, with only one customary authorisation reported to have been issued in the last two years. This suggests tangata whenua use of customary Māori harvesting provisions (as opposed to commercial or recreational) may be low at this time.

15 The information is uncertain and relates to only a portion (less than half) of the QMA as iwi in many parts of the QMA are operating under regulations 27 and 27A of the Fisheries (Amateur Fishing) Regulations 1986. Reporting is not mandatory under these regulations.

Commercial

16 BCO 8 commercial catches have fluctuated well below the TACC since 1986 (Figure 2). From 1986-87 to 2009-10, average reported landings were 25 t. They were highest in 1987-88 (44 t) and were lowest in 2004-05 (7 t).

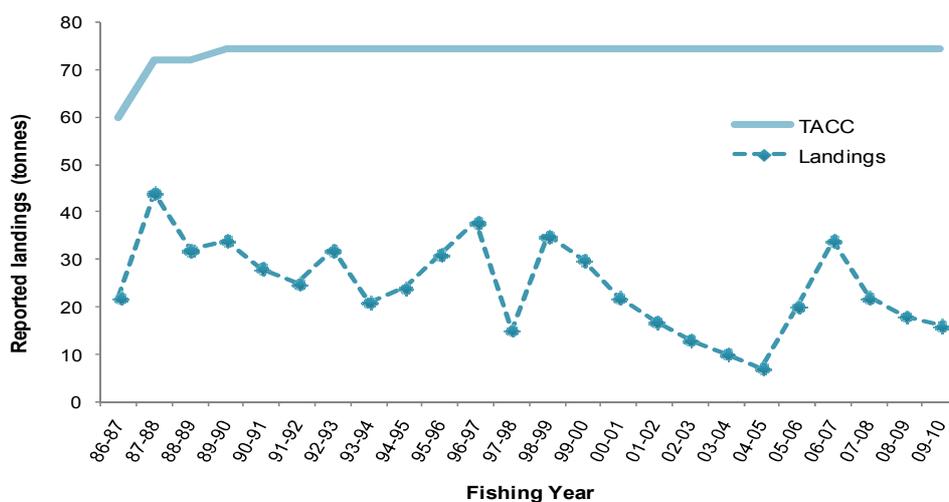


Figure 2: BCO 8 reported commercial landings and the TACC from 1986-87 to 2009-10.

¹ This means that blue cod can start life as either male or female, but the females can change into males.

17 The commercial catch from BCO 8 is taken in a combination of target and bycatch fisheries using several different fishing methods. Over the last four years, approximately 50% of all commercially caught BCO 8 came from the target cod pot fishery, with bottom long lining accounting for 20%, followed by bottom trawl (12%) and hand lining (11%).

Recreational

18 Blue cod is a popular target species for recreational fishers and is mainly taken by line fishing. The most popular areas for fishers targeting blue cod are from Whanganui to Taranaki in the north, and from Kapiti Island to Mana Island in the south. These are some of the few areas within the QMA with the rocky reef habitat preferred by blue cod. BCO 8 is included in a combined daily bag limit of 20 finfish (i.e. a maximum of 20 blue cod can be taken daily per person if no other specified finfish species are taken).

19 Recreational fishers are not required to report their catches. Reliable estimates of recreational BCO 8 catch are not available. Estimates of BCO 8 recreational catch are available from telephone and diary surveys but are considered unreliable (Table 2). The 2011 Ministry Plenary advises that the 1996 and earlier surveys contain a methodological error and the 1999-2000 estimates should be evaluated with reference to the coefficients of variations (CVs)².

Table 2: Recreational catch estimates for BCO 8

| Year | Estimated Number caught | Coefficient of Variation (%) | Estimated harvest range (t) | Point estimate (t) |
|---------|-------------------------|------------------------------|-----------------------------|--------------------|
| 1992/93 | 124,000 | 35 | 50-110 | N/A |
| 1996 | 159,000 | 12 | 70-90 | 79 |
| 1999/00 | 232,000 | 32 | 127-249 | 188 |

20 In 2006-07, a recreational research project for snapper along the West Coast of the North Island included analysis of the broader mix of species landed in different areas. Snapper was the most commonly landed species in all areas, except on the southern open coast (e.g., Kapiti to Whanganui), where blue cod made up the highest proportion of recreational landings.

21 The project also provided data on recreational daily catch per fisher for BCO 8 (Figure 3). This data indicates that surveyed fishers landed less than 10 blue cod in the majority (over 90%) of fishing trips. The survey results did not record those fishers who caught no blue cod in their catch.

22 The Ministry notes that while this is the best available data, there are some limitations to it, including:

- The age of the data (four years old)
- The data presented is a subset of all the data collected for the project as the project was primarily focussed on catches of snapper
- As the results are solely observed landings of blue cod, they do not take account of released fish, zero catches, or the composition of the fishers combined species bag. Therefore, nothing can be inferred about BCO 8 catchability
- The data presented is a small portion of the total blue cod bag frequency as not all days throughout the year were sampled and only trailer boat fishers were

² CVs are a measure of data variability e.g., the higher the CV the more variability in the data.

surveyed on those days (i.e. no marina based launches, charter boats or kayaks were surveyed).

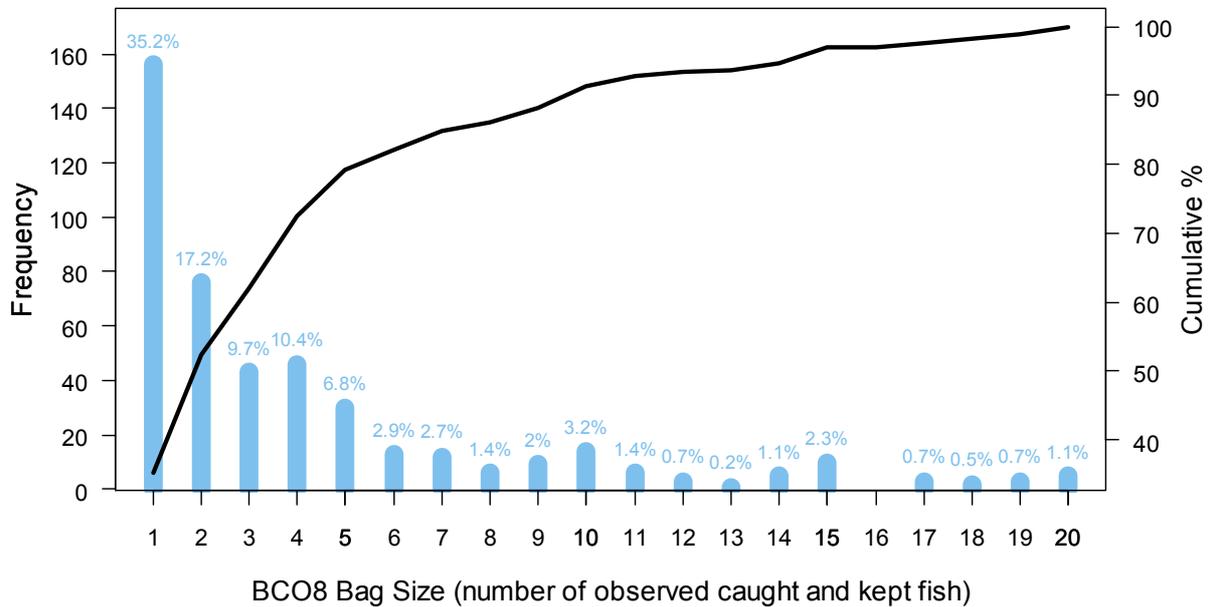


Figure 3: Frequency of different numbers of BCO 8 caught per observed fisher during 2006/07 survey

23 Results from a ‘Large Scale Multi Species’ recreational catch survey are scheduled to be reported back in early 2013. However the survey is not being stratified to specifically focus on providing statistically robust information for BCO 8.

24 Commercial fishers that take blue cod for non-commercial (e.g. recreational and customary) purposes require an approval under section 111 of the Fisheries Act 1996 (the Act) and must report their catch. In the 2009/10 fishing year, very little blue cod was taken under section 111 approvals in BCO 8 (approximately 180 individual fish).

Other sources of fisheries related mortality

25 The allowance for other sources of fishing-related mortality includes illegal take and method-related mortality, including fish that is returned to sea because it is undersize and unseen mortality as a result of interacting with fishing gear.

26 The target commercial blue cod fishery is predominantly a pot fishery, which is considered to have relatively low levels of incidental mortality. Some blue cod is taken in commercial trawls, bottom longlines or hand lines, which may have higher levels of incidental mortality than potting.

27 Non-commercial line fishing methods often result in the harvest of undersized blue cod. The survival of these fish on return to sea has been shown to be related to hook size. Larger hook sizes (i.e., circle hooks with a minimum size of 6/0) have been shown to lead to better survival rates. The level of usage of large hook sizes is unknown in BCO 8.

28 Reliable estimates of illegal take of blue cod in BCO 8 are not available.

Proposals Consulted On

29 The Ministry proposed the following management options for BCO 8 in the IPP for consultation purposes (Table 3):

Table 3: Proposed Management Options consulted on for BCO 8

| Option | TAC (t) | TACC (t) | Māori customary allowance (t) | Other sources of mortality (t) | Recreational | |
|--------|---------|----------|-------------------------------|--------------------------------|---------------|-------------|
| | | | | | Allowance (t) | Bag limit |
| 1 | 269.4 | 74.4 | 2 | 5 | 188 | 20 blue cod |
| 2 | 188 | 34 | 2 | 2 | 150 | 10 blue cod |
| 3 | 160 | 25 | 2 | 2 | 131 | 5 blue cod |

30 Currently, BCO 8 has no TAC. As part of this review, it is proposed that you set a TAC for the first time.

31 Option 1 reflects the “status quo” TACC and sets allowances for Māori customary, recreational and other sources of fishing related mortality using the best available estimates of current catch and mortality. No changes to the BCO 8 TACC or recreational bag limit would be made under this option.

32 Under Option 2, a TAC of 188 t would be set. The TACC would be set at the level of the highest recorded catch, while the recreational allowance and daily limit for BCO 8 would be set to minimise the likelihood of expansion of recreational catch. .

33 Under Option 3, a TAC of 160 t would be set. The TACC would be set at the average recorded catch, while the recreational allowance and daily recreational bag limit would be set to reduce catch under this option.

Submissions

34 The Ministry received 19 submissions on the BCO 8 IPP from:

- Challenger Finfisheries Management Company Ltd (Challenger)
- Environment and Conservation Organizations of NZ (ECO)
- Fielding Surfcasting Club (FSC)
- Paul Hudson (Hudson)
- Neil Hutchinson (Hutchinson)
- Wanganui Cosmopolitan Fishing Adjunct, Manawatu Sea Fishing Club, Wanganui Underwater Club, Patea and Districts Boating Club, Wanganui East Club Fishing Adjunct, Wanganui Manawatu Sea Fishing Club, Castlecliff Club Fishing Adjunct, Patea Surfcasting Club (Joint submitters)
- Ray Mills (Mills)
- NZ Recreational Fishing Council (NZRFC)
- NZ Sports Fishing Council (NZSFC)
- Russ Pedley (Pedley)

- Peter Robins (Robins)
- Sanford Ltd (Sanford)
- The New Zealand Seafood Industry Council Limited (SeaFIC)
- Tasman and Sounds Recreational Fishers' Association (TASFISH)
- Te Ohu Kaimoana Trustee Ltd (TOKM)
- Tangimoana Boating and Fishing Club (TBFC)
- Wellington Recreational Marine Fishers' Association (WRMFA)
- Whanganui River Māori Trust Board (WRMTB)
- Geoff Williams (Williams)

35 Submitters support the proposed options as follows:

Table 4: Number of submitters in support, by option

| Option | 1 | 2 | 3 | Other | Not stated or none supported |
|---------------------------------|---|---|---|-------|------------------------------|
| Number of submitters supporting | 1 | 6 | 2 | 7 | 3 |

36 The majority of submitters note there is a lack of information on the BCO 8 fishery (WRFMA, FSC, Sanford, SeaFIC, TBFC, NZRFC, Challenger, TOKM, WRMTB, ECO, Hudson).

37 Two submitters are concerned that the Ministry is not taking account of environmental factors sufficiently (WRMFA, NZRFC). The Ministry's position is that all environmental factors such as flooding, rising sea temperatures and weed spraying are outside the jurisdiction of the Ministry. Where appropriate, the Ministry submits on regional and local government planning documents and/or individual resource consents. Where environmental factors are having a current impact on stock abundance, the Ministry needs to also take action to ensure catch limits are set sustainably.

38 Some submitters note concern that the IPP did not cover specific obligations under various sections of the Act (ECO, NZSPF) and/or Supreme Court decisions (NZFC, NZSFC). The Ministry's view is that it is not the purpose of an IPP to present legal arguments, but rather to present options and seek out relevant information. The Ministry considers that detailed information on statutory obligations is more appropriately addressed in an FAP such as this.

39 Other submissions are discussed in detail under the option(s) to which they relate (in the Final Proposals section below).

Final Proposals

40 The current TACC for BCO 8 is 74.4 t. There has been no TAC or allowances for Māori customary non-commercial interests, recreational interests or other sources of fishing-related mortality previously set for this fishery.

41 In addition to the TACC, the fishery is managed by way of recreational daily bag limits, a minimum legal size of 33cm for both recreational and commercial fishers, and fishing gear restrictions such as a minimum pot mesh size for commercial fishers.

42 Of the measures available under the Act, the Ministry considers the most appropriate response to the stock status concerns is to consider a range of TAC, sector allowance, and recreational bag limit options. This is because the concerns relate to the overall sustainability of current catch limits as reflected in a TAC, and explicitly controlled by the TACC and recreational bag limits.

43 The Ministry proposes the following management options for BCO 8 for your consideration:

Table 5: Proposed Management Options for BCO 8

| Option | TAC (t) | TACC (t) | Māori customary allowance (t) | Other sources of mortality (t) | Recreational | |
|---------------------------------------|---------|----------|-------------------------------|--------------------------------|---------------|-------------|
| | | | | | Allowance (t) | Bag limit |
| 1 | 269.4 | 74.4 | 2 | 5 | 188 | 20 blue cod |
| 2 <i>Ministry preferred option</i> | 226 | 34 | 2 | 2 | 188 | 10 blue cod |
| 3 | 160 | 25 | 2 | 2 | 131 | 5 blue cod |

44 The current biomass of BCO8 and the biomass that can support the maximum sustainable yield (BMSY) cannot be reliably estimated. In such circumstances, you must 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 (section 13(2A) of the Act). No new information to assess stock status is expected to become available in the next few years. Under the Act you are required to act on the best available information and not postpone the decision due to the absence of, or uncertainty in, information.

45 The best available information is anecdotal information suggesting declining sizes and abundance, and commercial catch information showing catches have never come close to the total allowable commercial catch (TACC).

46 Anecdotal information carries more weight in fisheries such as BCO 8 where there is little other information to monitor stock status. The Ministry considers you should act with caution when managing low information fisheries such as BCO 8, particularly when the biology of the species makes it vulnerable to overfishing, which is the case for blue cod.

47 In general, the lower TAC options (Options 2 and 3) are more likely to reduce the risk of a BCO 8 stock decline, but may create opportunity costs (Option 2) or actual costs (Option 3) for the recreational and commercial sectors. Option 1 does not address potential sustainability risk.

48 All options set allowances for Māori customary and other sources of fishing related mortality. These allowances are set at a level intended to reflect current catch levels however, available information to inform these allowances is uncertain.

49 A number of submitters (NZRFC, Hudson, joint submitters, WMTB, NZSFC, Challenger and TOKM) put forward a variety of alternate proposals. The Ministry notes that you are not constrained to the options set out below.

Option 1 – TAC of 269.4 t; Status quo TACC and new allowances

50 One submitter (TBFC) supports this option while three other submitters (Joint submitters, WMTB and TOKM) support this option if their proposed new options are not taken forward.

51 Option 1 reflects the “status quo” in that it retains the current TACC and sets allowances for Māori customary, recreational and other sources of fishing related mortality using the best available estimates of current catch and mortality. The maximum amount of blue cod able to be taken daily by a recreational fisher in BCO 8 would remain at 20 under this option (equivalent to the combined daily bag limit).

52 Option 1 reflects that information on BCO 8 stock status is highly uncertain and it is unknown if current catch levels are maintaining the stock at or above, or moving the stock to a level at or above BMSY.

53 Option 1 carries the greatest risk to stock health and fishery benefits as, should the BCO 8 stock be declining as some stakeholders suggest, the biological characteristics of blue cod mean recovery from low levels could be slow. This would result in reduced benefits for all fishery participants over the long-term.

54 Under Option 1, the allowance for recreational interests would be set at 188 t. The allowance is based on the 188 t point estimate from the 1999/2000 national diary survey of recreational fishers. This survey estimate, although uncertain, is the best available information. Anecdotal information suggests BCO 8 recreational catches could have decreased or increased since the 1999/2000 survey, due to decreased fish availability or greater fisher participation, respectively.

55 Option 1 proposes a Māori customary allowance of 2 t, which reflects available information on customary harvest and/or use of customary authorisations to take blue cod in BCO 8 is low; only one customary authorisation has been issued in the last two years. The Ministry recognises that information on customary harvest is uncertain and invited iwi, Tangata Tiaki/Kaitiaki, and customary permit issuers during consultation on its IPP to submit any additional information on customary catch. No additional information was provided.

56 TOKM and WRMTB submit that the Ministry has acted inconsistently by stating in the IPP that blue cod is an important kaimoana species for tangata whenua then only proposing a customary allowance of 2 t. TOKM and WRMTB submitted that the customary allowance should be set at 50 t on the basis that the TAC should be equally divided between customary, recreational and commercial interests. NZSFC also recommended that the customary allowance be increased to 5t, stating “as when caught it is expected to satisfy customary demand”. SeaFIC noted that the absence of customary data is not helpful in assessing the relevance of the proposed customary allowances.

57 The Ministry notes that tangata whenua harvest blue cod using commercial, recreational and customary Maori regulatory provisions. Available information on customary Maori harvest, in particular customary authorisations, suggests use of customary Maori provisions at this time is low. No new information was provided on levels of customary Maori harvest to support a change to the customary allowance recommended in the IPP. The Ministry notes that it is not desirable to overestimate customary harvest as this can result in incorrect conclusions being drawn about stock size and productivity. The Ministry notes that the allowance does not constrain customary Maori harvest and, when further information is available, the BCO 8 customary allowance can be reviewed.

58 Information on other sources of mortality is uncertain. The Ministry proposes an allowance for other sources of fishing related mortality of 5 t, approximately 2% of the proposed TAC. This is proportionally similar to the allowance set for comparable fisheries.

Option 2 – TAC of 226 tonnes; reduction in TACC, and recreational bag limit

59 Six submitters (Hutchinson, Mills, Pedley, Robins, FSC and Williams) support this option, as presented in the IPP.

60 Option 2 is the Ministry's preferred option. Information on BCO 8 stock status is highly uncertain and it is unknown if current catch levels are maintaining the stock at or above, or moving the stock to a level at or above BMSY.

61 The TAC of 188 t set under this option responds to the risk that if the historically uncaught ACE were taken, and if all recreational fishers fully took the total blue cod allowed within the bag limit provisions, the BCO 8 stock would likely be overfished. This option therefore reduces the risk of potential growth in the fishery, but seeks to mostly maintain current utilisation benefits. It reflects that information suggesting a sustainability risk is largely anecdotal, and that there are mixed views from fishery participants on the need for action.

62 If, however, current catch levels are unsustainable (which is unknown), Option 2 could see abundances decline further as it only seeks to constrain catches to current levels.

63 Removal of catch headroom is achieved differently for each sector, and is based on:

- a. setting a recreational allowance of 188 t, and setting a daily bag limit for blue cod at 10 within the mixed finfish species daily bag limit of 20.
- b. reducing the TACC to 34 t, which is the highest commercial catch level landed in the last ten years; and
- c. setting allowances for Māori customary and for other sources of fishing related mortality at 2 t each, based on estimated catch and estimated mortality levels, respectively.

64 The intent of this option is to constrain increases in recreational catch by setting the daily bag limit at 10. Currently, fishers in 90% of fishing trips surveyed took 10 or less blue cod per trip. A reduction in total recreational catch may therefore occur initially as a result of reducing the bag limit to 10 (potentially in the order of 12% based on bag frequency data, which is highly uncertain), but the intent is not to constrain it at a lower level. Rather, it is intended only to reduce the risk of catches expanding beyond current levels, which is difficult to achieve with precision or certainty for sectors where no mechanism to effectively cap total harvest levels is available. The Ministry recognises that total recreational catch in a fishery fluctuates depending on participation levels, weather, regulated and voluntary fishing constraints and fish abundance. If you choose this option, the Ministry considers the bag limit and allowance should be looked at again when better information becomes available on recreational catches to ensure the intent of the option is being realised.

65 The proposed allowance differs from the corresponding recreational allowance in the IPP for Option 2, which was proposed at 20% less than the Option 1 allowance. The Ministry considers retaining the same allowance as Option 1 better reflects the intent of this option. As noted earlier the relationship between bag limits and the recreational allowance is highly uncertain, and therefore using bag limits to manage risks or achieve specific allowance levels is difficult.

66 The TACC of 34 t proposed Option 2 is also not intended to reduce current utilisation by the commercial sector but instead to reduce the risk that catch levels will increase. The

TACC change may affect quota value (for example, the price may rise due to it being scarcer or it may fall because of perceived loss of opportunity to grow the fishery) and the availability of ACE, but the extent of this impact is difficult to predict.

67 Sanford submits that a reduction in the TACC provides no opportunity for growth. A number of other submitters note that the TACC has never been achieved, proving it was originally set too high (joint submitters, TASFISH, NZSFC, TBFC, FSC).

68 The Ministry considers blue cod to be a valuable species with established markets, yet the BCO 8 TACC has never been reached since 1986. It is likely the fishery would have been developed over the last 25 years, if the potential for growth existed.

Option 3 – TAC of 160 tonnes, further reduction in TACC and recreational bag limit

69 Two submitters (TASFISH and ECO) support this option.

70 Compared to Options 1 and 2, this option would reduce utilisation opportunities for commercial and recreational fishers. The information suggesting a sustainability risk is largely anecdotal, and there are mixed views on the level of concern. Therefore, the reductions in catch under this option may not be warranted at this time.

71 Under Option 3, a TAC of 160 t would be established. This TAC reduces risks to BCO 8 sustainability by reducing current catch levels. It is based on:

- a. setting a recreational allowance of 131 t and a maximum daily bag limit of five blue cod per person within the mixed finfish species daily bag limit of 20.
- b. reducing the TACC to 25 t; and
- c. setting allowances for Māori customary and for other sources of fishing related mortality at 2 t each.

72 Recreational fishers take the majority of blue cod harvested in BCO 8. The main tool you have to manage recreational harvest levels is the bag limit. Under this option, the maximum amount of blue cod that would be able to be taken daily by a recreational fisher would be 5 (within the Central Fishery Management area combined daily bag limit of 20 finfish). Fishers in 80% of surveyed fishing trips where blue cod was taken landed five or less blue cod.

73 The bag frequency information suggests a reduction of the bag limit to 5 could result in a total catch reduction in the order of 30%, at least initially. However, as noted under Option 2, the relationship between bag limit reductions and the recreational allowance is highly uncertain, and therefore the accuracy of this allowance is also uncertain. The proposed allowance is 30% below the current estimate of recreational catch and reflects the intent of this option to reduce recreational catch levels, and to constrain them at a level below current catches. As noted for Option 2, the Ministry recognises that total recreational catch in a fishery fluctuates depending on participation levels, weather, regulated and voluntary fishing constraints and fish abundance. If you choose this option, the Ministry considers the bag limit and allowance should be looked at again when better information becomes available on recreational catches to ensure the intent of the option is being realised.

74 NZRFC, joint submitters and TBFC submit that the IPP does not discuss or quantify any loss to recreational fishers if the recreational allowance is cut, noting many jobs and economic activities are associated with recreational fishing.

75 The Ministry acknowledges there could potentially be financial impact to these supporting industries. The Ministry does not have information to quantify the impact. The

submission process was an opportunity to provide this information, but none has been presented. However, the Ministry considers the impact is likely to be small because affected fishers are not prevented from taking blue cod and value ((in terms of boats, gear, charters etc) is more likely to be determined by factors such as recreational participation and activity rather than bag limits or total catch.

76 A TACC of 25 t reflects average commercial landings since introduction to the QMS. This is a 66% reduction to the current TACC. The proposed TACC has been exceeded in six (30%) of fishing years in the last 20 years. As for Option 2, the TACC change may affect quota value and the availability of annual catch entitlement, but the extent of this impact is difficult to predict.

Additional Management Controls

Recreational Daily Bag Limit

77 Under Options 2 and 3 it is proposed that a specific bag limit of 10 or 5 blue cod, respectively, be set within the combined daily bag limit of 20 mixed finfish. Currently fishers may take up to a maximum of 20 blue cod as part of the combined daily bag.

78 Thirteen submitters support a reduction to the blue cod recreational daily bag limit. Of those submitters, the majority support the bag limit being reduced in conjunction with, and relative to, any TACC reduction. While there is no agreement on the appropriate level of the bag limit, the most supported option was 10 blue cod per day (Option 2).

79 One submitter (NZRFC) suggests that if the TACC was brought below the five year average catch, that a voluntary bag limit reduction would be accepted by recreational fishers.

80 The Ministry does not have confidence that voluntary recreational bag limit reductions would work as effectively as regulatory measures would in the BCO 8 fishery. The Ministry's position is that a cut to the recreational daily bag limit is the most effective management tool to address sustainability concerns.

81 Three submitters (TASFISH, NZRFC and Robins) support the blue cod daily bag being outside (ie in addition to) the current 20 mixed finfish bag limit.

82 The Ministry's proposals are for a specified limit for blue cod within the mixed daily bag limit of 20, not outside. This may result in some transfer of effort to other species included in the mixed bag (such as tarakihi and gurnard) where fishers seek to take their full daily bag allowance but does not translate to an overall increase in take across the species currently included in the mixed finfish combined bag limit. Consequently, the impact of any change in effort is minimised.

83 TASFISH consider that transit rules should be used to limit movement of recreational catch between BCO 2 and BCO 8.

84 The Ministry acknowledges the potential compliance risk of a differing blue cod daily bag limit between BCO 8 and BCO 2 for those recreational fishers returning to locations close to the QMA boundaries (such as Pukerua Bay, Plimmerton, Mana, Porirua, Titahi Bay and to a lesser extent, Makara). The Ministry has reviewed this risk and considers it to be manageable within existing Ministry compliance systems and practices at this time.

85 SeaFIC considers the significant number of less-successful recreational fishers in a fishery such as BCO 8 will soak up the gain obtained from a bag limit reduction. Consequently, for bag reductions to be effective in constraining catch they need to be very aggressive.

86 The Ministry's position is that a cut to the recreational daily bag limit is the most effective management tool to address potential sustainability concerns. The limitations and uncertainties associated with bag limit reductions are discussed and taken into account in the options. The Ministry considers the bag limit and allowance should be looked at again if and when new or better information becomes available on recreational catches.

87 The recreational daily bag limit proposals will require a regulatory change and separate implementation process. If adopted, a bag limit change would come into effect as soon as possible. There will be some cost involved in implementing any changes made to recreational bag limits, including Gazette notices, new signage and updates to recreational rule handbooks.

BCO 8 Deemed Value Rates

88 The Ministry has reviewed the deemed value rates criteria for BCO 8 and is not proposing any changes to the current settings. For further information, please refer to the separate Deemed Value Rate FAP.

Other Management Controls

89 SeaFIC submits that in the case of the blue cod stocks, where a range of issues have been identified including localised depletion, they would have expected an analysis as to the full range of management options such as local area closures or seasonal closures.

90 The Ministry notes that local area or seasonal closures can lead to effort displacement and localised depletion issues. This is especially so in a fishery like BCO 8, where the blue cod habitat is limited within the FMA. A recreational bag limit helps preserve blue cod for the next person who comes along to fish in a prime habitat area. Complex management controls also involve several regulatory interventions to achieve and may be contrary to the government's desire to have 'better and less' regulation.

Assessment against Statutory Obligations

General Obligations

91 The Ministry considers that all options presented in this paper satisfy your obligations under section 8 of the Act to provide for utilisation in the BCO 8 fishery while ensuring sustainability. Compared with Option 1, Option 2 (the Ministry's preferred option) places greater weight on potential sustainability concerns, while maintaining current utilisation benefits to a greater extent than Option 3. Option 3 could reduce utilisation opportunities for fishers. However, they may benefit from improved stock abundance and reduced risk of localised depletion.

92 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.

93 The Ministry considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (section 5 (b)). On-going work is being done within the area covered by BCO 8 to promote policies that help to recognise customary use and management practices, including, but not limited to, supporting tangata whenua to gazette their rohe moana and to participate in Iwi Forums and develop Iwi Fisheries Management Plans.

94 There are no specific international obligations relating to BCO 8. A wide range of international obligations relate generally to fishing, including use and sustainability of fishstocks, and maintaining biodiversity (section 5(a)). The Ministry considers that the management options for BCO 8 are consistent with these international obligations.

95 The Ministry has an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). 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 and customary interest in BCO 8 during this time although the Ministry acknowledges timeframes for input were short due to the development process. The Ministry is looking at ways to provide more time for input and participation of tangata whenua in the future.

96 In addition to an opportunity to input and participate in the development of the IPP the Ministry also consulted (as defined in section 12 of the Act) with the above tangata whenua groups and with tangata whenua who have registered an interest in BCO 8, on the options developed through the IPP. In particular, due to the uncertainty of the information the Ministry currently holds on customary permit fulfilment, the Ministry sought information from tangata whenua on levels of customary harvest. Information was received from TOKM and WRMTB and their views have been incorporated into this FAP where relevant.

TAC

97 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 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. The TAC options presented in this FAP take into account the requirements listed and offer differing approaches to managing the potential risk to sustainability of the fishery that reflect the uncertainty in available information.

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

Environmental principles

99 The Act requires that adverse effects of fishing should be avoided, remedied or mitigated. More specifically, section 9 requires you to take into account that associated or dependent species should 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.

100 The majority of BCO 8 catch is through the method of potting (commercial) and hand lining (recreational). Little bycatch or interaction with other species occurs. No habitat of particular significance for fisheries management has been formally identified within BCO 8.

101 As the options presented in this FAP either decrease or do not increase the catch taken from the BCO 8, interactions with the benthic environment are not expected to increase.

Section 11 considerations

102 In making your decision on sustainability measures for BCO 8 you must also have regard to the requirements of section 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 BCO 8 commercial take is as target potting, bottom long lining, and some bycatch in bottom-trawl fisheries. As the TAC proposals do not affect catch limits for the key species targeted when BCO 8 is taken or exceed historical recorded landings of BCO 8, 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 inshore 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 BCO 8 fishery, for example deemed value rates, recreational bag limits, recreational minimum size limits, and fishing method constraints. The proposed changes to the TAC do not affect most of these measures. Options 2 and 3 propose a reduction to the BCO 8 recreational daily bag limit.
- 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. The Ministry is not aware of any aspect of blue cod natural variability that will influence your decision. Natural variability of blue cod does occur year to year, although this can be attributed to a host of factors such as fish biology and behaviour and weather conditions.
- 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. The Ministry is not aware of any such provisions, management plans or strategies that apply to the coastal marine area that you might consider relevant.
- e. Section 11(2)(c): Before setting or varying any sustainability measure for any inshore stock, you must have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and you consider relevant. The boundaries of the QMA 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 BCO 8 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. The Ministry does not consider that existing or proposed services materially affect the proposals for this stock.

- h. Section 11(2)(d): Before setting or varying any sustainability measure for any stock, you must take account of any planning document lodged by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. The Ministry is not aware of any documents that apply to the BCO 8 QMA.

Setting Allowances

103 Section 21 of the Act requires you to allow for Māori 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.

104 For all three options presented to you Māori customary allowances are recommended to be set at 2 t. The Ministry recognises the information on customary is uncertain and is open to reviewing this allowance, if records support a change in the future. Similarly, the Ministry proposes an allowance for other sources of fishing related mortality of 5 t, approximately 2% of the proposed TAC. This is similar to that set for comparable fisheries.

105 Options 1 and 2 propose that the allowance for recreational interests would be set at 188 t. This allowance is based on the 188 t point estimate from the 1999/2000 national diary survey of recreational fishers, noting that this survey estimate is highly uncertain. Option 3 reflects a reduction and a proposed maximum daily bag limit set at five, a level that reflects the daily take by fishers in an estimated 80% of fishing trips.

106 Section 21(4) requires that any mātaihai reserve or closures/restrictions under s 186A to facilitate customary Māori fishing be taken into account. The Ministry notes that there are no mātaihai reserves located within BCO 8, nor are there any relevant s 186A closures/restrictions within the BCO 8 QMA.

Conclusion

107 Available information on the status of BCO 8 is highly uncertain. Some available information suggests current catch limits may present a sustainability risk to the BCO 8 stock. However, there are mixed views on the need for action from fishery participants. The biological characteristics of blue cod make them susceptible to the effects of fishing. Should the stock be over-fished, recovery could be slow.

108 On this basis, the Ministry recommends Option 2. This involves setting a TAC for the first time and removing the current headroom in the fishery by reducing the TACC to the highest recorded commercial catch, and setting a recreational daily bag limit of 10 blue cod.

109 The Ministry 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

110 The Ministry recommends that for the BCO 8 fishery, you choose either:

Option 1 YES/NO

- A. **Agree** to set a TAC of 269.4 t and within this:
- i. **set** an allowance for Māori customary fishing of 2 t
 - ii. **set** an allowance for recreational fishing of 188 t
 - iii. **set** an other sources of fishing-related mortality at 5 t; and
 - iv. **retain** a TACC of 74.4 t

OR

Option 2 (*Ministry's preferred option*) YES/NO

- B. **Agree** to set a TAC of 226 t and within this:
- i. **set** an allowance for Māori customary fishing of 2 t;
 - ii. **set** an allowance for recreational fishing of 188 t;
 - iii. **set** an other sources of fishing-related mortality at 2 t; and
 - iv. **decrease** the TACC from 74.4 t to 34 t

AND

- v. **Agree** to set a recreational BCO 8 daily bag limit of 10 blue cod within the mixed finfish bag limit of 20 finfish

OR

Option 3 YES/NO

- C. **Agree** to set a TAC of 160 t and within this:
- i. **set** an allowance for Māori customary fishing of 2 t;
 - ii. **set** an allowance for recreational fishing of 131 t;
 - iii. **set** an other sources of fishing-related mortality at 2 t; and
 - iv. **decrease** the TACC from 74.4 t to 25 t

AND

- v. **Agree** to set a recreational BCO 8 daily bag limit of 5 blue cod within the mixed finfish daily bag limit of 20 finfish

Leigh Mitchell
for Director General

AGREED / AGREED AS AMENDED / NOT AGREED

Hon Phil Heatley
Minister of Fisheries and Aquaculture

/ / 2011