S7038

2 August 2005

Minister of Fisheries

2005 REVIEW OF THE COROMANDEL SCALLOP FISHERY TAC

Executive Summary

1 MFish recommends that you agree to provide an in-season TAC increase for the Coromandel scallop fishery (SCA CS) from 48 tonnes meatweight to 239 tonnes meatweight for the remainder of the current fishing year. The TAC would revert to 48 tonnes meatweight at the end of the 2005-06 fishing year.

2 The SCA CS occupies the area from Cape Rodney in the Hauraki Gulf to Town Point in the Bay of Plenty. SCA CS is included on the Second Schedule of the Fisheries Act 1996 (the Act), which allows for a strategy of an in-season increase in the TAC if supported by information about the abundance of scallops during the fishing year.

3 Since 1978, research surveys have been used to estimate the abundance of scallops in the Coromandel scallop fishery. Yield estimates based on surveys have been used to set limits on catch for the fishery. The yield estimates provide the key information for decisions concerning the utilisation of the resource while ensuring sustainability.

4 In making your decision on required services for 2005-06, you agreed to an optional survey for SCA CS during 2005. Quota holders decided that scallop abundance should be assessed during 2005. A survey was undertaken in May 2005. The survey indicates that increased sustainable yield can be taken during the course of the current fishing year. Details and results from the survey are discussed in the Initial Position Paper (IPP).

Initial proposal and consultation

5 MFish proposed that the TAC be increased from 48 to 239 tonnes meatweight based on the research survey. The full proposal was to:

a) increase the allowance for recreational fishing from 7.5 tonnes meatweight to 40 tonnes meatweight;

b) increase the allowance for customary Maori fishing from 7.5 tonnes meatweight to 40 tonnes meatweight;

c) increase the allowance for other sources of fishing-related mortality from 11 tonnes meatweight to 41 tonnes meatweight;

d) increase the annual catch entitlement (ACE) for SCA CS by increasing the available ACE for quota owners from 22 tonnes meatweight to 118 tonnes meatweight; and

e) require that, at the end of the current fishing year for SCA CS, the TAC will revert to 48 tonnes meatweight, the allowance for recreational fishing will revert to 7.5 tonnes meatweight, the allowance for customary fishing will revert to 7.5 tonnes meatweight, the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight, and the ACE will revert to 22 tonnes meatweight.

6 The Act requires that you consult with parties you consider representative of those with an interest in the species or stocks prior to making a decision on a sustainability measure. Accordingly, MFish has consulted on your behalf with representative stakeholders, including commercial, recreational, environmental groups and iwi, on the proposal to review the TAC and allowances for the SCA CS fishery.

7 This Final Advice Paper has been structured so that summaries of stakeholders' submissions, MFish's discussion on the issues raised in submissions, and MFish's final recommendations are provided in this paper. The IPP for this proposal (released to stakeholders on 4 July 2005) has also been provided (Attachment 1). The two documents together form the full advice on the decisions sought.

8 Four written submissions were received from: Te Ohu Kai Moana (TOKM); Coromandel Scallop Fisherman's Association (CSFA): Environment and Conservation Organisations of NZ Inc. (ECO); and the NZ Recreational Fishing Council (NZRFC). MFish held a consultation meeting on the IPP proposal with stakeholders in Auckland on 11 July 2005. Representatives from CSFA, ECO, and NZRFC attended the meeting.

Proposed changes to amateur fishing regulations

9 As part of a separate fisheries management process, MFish has released six proposals to amend some of the amateur fishing regulations. Three of the proposals concern the management of the recreational scallop fishery: shucking scallops at sea, measuring scallops on the seafloor, and the "primary taker" rule. A fourth proposal is to increase the Coromandel scallop amateur bag limit from 20 to 30 scallops per taker per day. These proposed changes were discussed with stakeholders at the 11 July 2005 consultation meeting.

10 Based on submissions[1] received during a separate consultation process on these proposals and advice from MFish in separate Final Advice Papers, you will then decide whether to approve or decline the proposals. If you agree with the changes, then the amended regulations could come into effect in December.

[1] Submissions on the proposed changes to the amateur fishing regulations close on 10 August 2005.

Key Issues

11 The key issues to be considered for the SCA CS fishery are:

a) whether or not the survey information supports the proposed increase in the TAC (and ACE);

b) whether or not the TAC should also be increased with an increase in the separate allowances for customary Maori fishing and recreational fishing.

Issues raised in submissions

Proposed TAC, ACE, and allowances

Submissions

Te Ohu Kai Moana (TOKM)

12 TOKM supports the ACE increase from 22 to 118 tonnes meatweight, and the increase in the allowance for other sources of mortality from 11 to 41 tonnes meatweight. TOKM notes that the 2005 survey indicates that there has been a significant improvement in the number of scallops.

13 TOKM does not support the increases for the allowances for customary Maori fishing and recreational fishing proposed by MFish in the IPP. Instead, TOKM recommends that the allowances for both these sectors should be doubled from 7.5 to 15 tonnes meatweight.

14 TOKM notes that none of the non-commercial beds, which are to a large extent spatially separated from the commercial beds, were surveyed in 2005 or earlier years. TOKM considers therefore there is no scientific information provided to support any biomass estimates in these areas. TOKM notes that the IPP assumes that trends in scallop abundance in the non-commercial beds are likely to be similar to those for the surveyed commercial beds. TOKM does not accept this assumption.

15 TOKM is strongly of the view that the above assumption should not form the basis for a fivefold increase in the recreational allowance. An increase of this size should be supported by biomass estimates derived from surveys in the relevant beds.

16 TOKM also considers that any proposal to increase the recreational allowance should also be supported by reliable recreational harvest data. TOKM notes the recreational harvest estimates from the telephone/diary surveys conducted in 1993-94 (8.8 tonnes), 1996 (7.5 tonnes), and 1999-2000 (3.8 tonnes). TOKM is not convinced that these surveys provide reliable harvest estimates and that they should be used to inform the current assessment. TOKM also notes that, even if the estimates were accurate, it is difficult to see how MFish arrives at a fivefold increase in the recreational catch.

17 In the absence of any biomass and reliable harvesting estimates, TOKM will only support doubling the current 7.5 tonnes meatweight allowance for recreational fishing. TOKM's decision takes into account:

- trends in a number of other fisheries where recreational harvest has increased as a consequence of improvements in the fishery;
- not all the biomass may be available for harvesting owing to low densities in some areas;

- despite the significant improvement in the commercial beds, the fishery is still in recovery mode;
- the need for a precautionary approach when making decisions without good information;
- the sustainability risk associated with setting the recreational allowance at the level proposed by MFish.

18 TOKM notes the general criterion applied by MFish in estimating customary harvest levels. That criterion requires that in the absence of information and where the fishery is of known importance to Maori, the recreational allowance is used as a benchmark to set the customary allowance. TOKM does not accept this criterion.

19 TOKM prefers that MFish contact each Iwi having an interest in the SCA CS fishery and request access to the scallop information that is recorded by kaitiaki when issuing customary authorisations. TOKM is aware of at least 6 Iwi that have expressed an interest in the SCA CS fishery. This should make it less difficult to obtain catch information so that it can be made available to the Minister prior to him making any decisions on in-season adjustments to the TAC. In the absence of better information, TOKM will only support doubling the current allowance for customary fishing.

20 TOKM notes that the current proposals are for an in-season adjustment to the TAC. Given the size of the TAC in-season adjustments over the last 3 years, TOKM requests that MFish review the base TAC for SCA CS.

Coromandel Scallop Fisherman's Association (CSFA)

21 CSFA supports the in-season ACE increase from 22 to 118 tonnes meatweight. CSFA emphasises that the commercial scallop fishers are taking a very conservative approach towards the increases in the hope of rebuilding the Coromandel scallop fishery.

22 CSFA supports TOKM's comments regarding the increase in the recreational and customary fishing allowances from 7.5 to 40 tonnes meatweight. CSFA does not understand why there should be such an increase in the allowances, when there has not been that sort of increase in the biomass of the fishery.

23 CSFA does not support the proposed increase in the amateur daily bag limit from 20 to 30 scallops per fisher per day.

24 CSFA considers that there should be a biomass survey of closed [to commercial scallop dredging] areas before considering an increase in the recreational allowance.

Environment and Conservation Organisations of NZ Inc. (ECO)

25 ECO supports all of the increases (TAC, ACE, allowances) that were proposed in the IPP. However, ECO retains major concerns over the state of this fishery. ECO does not share the optimism of fishers that the fishery is returning to some level of normality. Despite the innate variability of scallop fisheries the overall downward trend over the history of the fishery has been alarming.

26 ECO notes that the proposed harvest level is the highest for many years and follows more modest improvements over the last three years. A similar series happened 1995-97

immediately prior to the virtual collapse of the fishery. ECO notes that this did not alter the relentless downward trend that the fishery has experienced over the last 20 years.

27 ECO does not support the proposed increase in the amateur daily bag limit from 20 to 30 scallops per fisher per day.

New Zealand Recreational Fishing Council (NZRFC)

28 NZRFC supports all of the increases (TAC, ACE, allowances) that were proposed in the IPP. NZRFC also supports the current pre-season assessment system and pre-season baseline, and believes the "conservative baseline" approach is appropriate.

29 NZRFC is again concerned that the biomass survey was not carried out on the commercial closed areas that are also the known prime recreational harvest areas in this fishery. The unavailability of data on amateur catch levels is also of concern to the NZRFC. The NZRFC considers that these information problems leaves the NZRFC open to challenge from commercial scallop fishers, especially at a time when the NZRFC is seeking to share in the fishery rebuild with an increase in the daily amateur bag limit.

30 NZRFC supports the proposed increase in the amateur daily bag limit from 20 to 30 scallops per fisher per day.

MFish Discussion

Level of ACE for commercial fishing

31 MFish notes that all stakeholder groups that made submissions supported the proposed ACE increase. Based on these submissions and due to the significant improvement in the biomass of the Coromandel scallop fishery, MFish recommends that you agree to the proposed ACE increase from 22 to 118 tonnes meatweight.

32 MFish notes that the basis for the proposed ACE increase was largely due to the consensus recommendation from the Annual General Meeting (AGM) of the Coromandel Scallop Fishermen's Association. The Association has stressed that the commercial quota-holders are taking a particularly conservative and responsible attitude towards increasing ACE. This is because the biomass survey conducted in May 2005 has indicated that the ACE could be set at a higher level. However, at the AGM and the consultation meeting with MFish, the quota holders emphasised that they preferred to take a conservative management approach due to the extreme variability of scallop population numbers to ensure a successful long-term rebuild. MFish acknowledges and recognises the conservative management approach adopted by the Association.

Recreational allowance

33 In considering an in-season TAC increase, and having regard to the matters under s 68 and s 21, MFish believes that the most relevant consideration is that there has been a significant increase in the biomass of the scallop fishery. MFish notes that the survey results relate primarily to the scallop beds mainly fished by the commercial sector. However, trends in scallop abundance in the "recreational" scallop beds are likely to be similar to abundance trends for the surveyed beds.

34 MFish considers it likely that there will be an increase in the catch for the recreational sector for 2005-06. Due to the increased biomass, an increased recreational catch could be attained from a number of factors. It is likely that existing fishers will fish more frequently for scallops. There are also likely to be a greater number of "new" fishers fishing for scallops. In addition, it is likely that fishers will more frequently attain their full legal entitlement of scallops ie. the current daily bag limit of 20 scallops per fisher per day.

35 MFish recognises the two information problems identified by TOKM regarding the recreational allowance. Firstly, there has been no biomass survey of the areas closed to commercial scallop dredging. Secondly, there has been no quantitative harvest survey to determine the tonnage of scallops taken by the recreational sector since 2001. However, Fishery Officers at boat ramps and recreational fishing leaders have commented that that there has been a general steady increase in the number of scallops taken by the recreational sector over the last 2-3 years in the Coromandel fishery. MFish considers that this anecdotal information is consistent with the biomass improvement and MFish's contention that the overall recreational catch is likely to increase for 2005-06.

36 Given that the recreational catch is likely to increase, it is therefore reasonable to increase the recreational allowance. Accordingly, MFish recommends that you agree to the proposal in the IPP to increase the recreational allowance by the same proportion as the increase in ACE to commercial fishers – slightly more than a five-fold increase. Therefore, MFish recommends that the allowance for recreational fishing be increased from 7.5 tonnes meatweight to 40 tonnes meatweight for 2005-06. The recreational allowance would then revert to 7.5 tonnes meatweight at the end of the current fishing year for SCA CS (31 March 2006).

37 In response to TOKM's two concerns about the lack of scientific information for the recreational allowance, MFish will discuss at the appropriate forum with stakeholders and scientists (Shellfish Research Planning Group) the possibility that the pre-season biomass survey should include the main recreational scallop fishing areas. MFish notes that in previous years other stakeholder groups have also requested the inclusion of recreational areas in the biomass survey. An expanded biomass survey, would include extra scientific surveying of the recreational beds in the Kawau Bay area, the eastern end of Waiheke Island and some of the areas closed to commercial dredging on the eastern side of the Coromandel Peninsula.

38 TOKM's concerns about recreational fishing harvest surveys are common to other fisheries. The problem is that recreational harvest surveys are expensive, logistically challenging, and can produce uncertain results depending on survey methodologies. Despite these difficulties, for fisheries management purposes it is necessary to set an allowance for recreational fishing using the best available information. MFish acknowledges that at times this will mean that decisions will have to be based on low quality anecdotal information, because quantitative scientific information is not available.

Maori customary allowance

39 There is no quantitative information available on the overall tonnage of Coromandel scallops taken by Maori customary fishers. Some kaumätua and kaitiaki keep records of authorisations to take fish and shellfish pursuant to the Maori customary provisions under the Fisheries Act. However, MFish's experience is that most of these authorisations relate to mussels, rock lobster, and paua. In the future, better quantitative information on the

customary catch may become available due to the more comprehensive reporting required under the recently introduced North Island customary fishing regulations.

40 In the absence of quantitative catch information and where the fishery is of known importance to Maori, MFish has applied a general criterion that the recreational allowance be used as a benchmark to set the customary allowance. MFish does not consider there is any reason to depart from this general policy in the particular circumstances of this case.

41 Therefore, consistent with the recommended increase in the recreational allowance, MFish recommends that the allowance for Maori customary fishing be increased from 7.5 tonnes meatweight to 40 tonnes meatweight for 2005-06. The Maori customary allowance would then revert to 7.5 tonnes meatweight at the end of the current fishing year for SCA CS (31 March 2006).

Proposed amateur bag limit increase

42 MFish notes that TOKM, CSFA, and ECO do not support the proposed scallop bag limit increase; the proposed increase is supported by the NZRFC. MFish will more fully report on this issue in a separate paper to you in the near future. It is not necessary for you to decide on this issue here.

Review of the baseline TAC

43 TOKM has asked that MFish review the baseline TAC for the SCA CS fishery. This request has also been made by the CSFA in previous years. Conversely, NZRFC supports the current conservative baseline TAC approach.

44 Quota-holders are keen to increase the baseline TAC as a way of potentially avoiding the time consuming and uncertain annual in-season TAC review process. The CSFA recognises that a biomass survey would still have to be conducted each year. The CSFA has indicated a willingness to "shelve quota" if the survey estimated a biomass and sustainable catch level below the TAC.

45 MFish recognises the concerns raised by quota-holders and the problems in the current in-season TAC review process. Given that there has been a significant improvement in the biomass, it may be possible to review the baseline TAC for SCA CS as part of the annual April sustainability review process. Such a review would be subject to the availability of MFish staff and resources, and other commitments and priorities in late 2005 – early 2006. Another option would be for MFish to review the actual process used for increasing the TAC in-season in order to further improve the efficiency of this process.

46 In addition to resource and priority constraints, MFish also has two other more substantive concerns about a proposal to review the baseline TAC for SCA CS. The first is that a recent Crown Law Office legal opinion has raised some concerns about the practice of shelving. Any sustainability review would need to set the TAC in accordance with s 13 of the Fisheries Act that moves the stock towards a level at or above the level that can support MSY. Secondly, scientific modelling of the Coromandel scallop fishery by NIWA, has noted that there is a greater likelihood of stock collapse if the baseline TAC is increased, and fishers attempt to take the TAC regardless of the state of the stock.

Environmental Issues

Submissions

47 ECO notes that temperature and nutrition factors undoubtedly influence productivity. Reference [by MFish] has been made to the possible effects of the Southern Oscillation as a factor. However, ECO considers that such factors alone do not explain the large-scale loss of productivity and downward trend the fishery has experienced over the 3 decades of the fishery. ECO considers that further consideration has to be given to the effects of dredging on the productivity of the stock.

48 ECO considers that it should be considered if the reduced dredging effort in the late 1990s - early 2000s had some influence on the current season. ECO considers that MFish should investigate further the associated and dependent species and how biological diversity is being maintained in the benthic environment impacted by the scallop fishery. ECO reminds MFish that the Act prescribes environmental principles that must be taken into account when exercising powers in relation to utilisation of fisheries resources and ensuring sustainability.

49 The NZRFC continues to be concerned by the commercial dredge method, but acknowledges it's hard to see a realistic alternative. The NZRFC notes that the management group did consider two other dredge designs some years ago, and notes that to date no further work has been done on dredge efficiencies or design by the commercial fishers. It is considered that the fishers in the past have been reluctant to spend money on dredge development and have had little encouragement to be more proactive in seeking to better their individual dredge performance.

50 The NZRFC notes that fishing "style" probably affects efficiency (and damage) as much as the dredge itself. Some fishers like to fish "hard and fast" and trade off efficiency on each square metre of ground against covering more ground. Others fish more slowly and carefully, making the opposite trade-off. Thus, the "better fishers" who catch more may or may not be doing most damage.

51 The NZRFC considers that the restructuring within the commercial fishery and this ACE increase, effectively gives an increased gross return of some $1.5 million or a total return of nearly $1.9 million to commercial fishers. The NZRFC sees no reason why future independent research into commercial dredge design and efficiencies should be delayed any further. The NZRFC considers this will only lead to further efficiencies and increased operating profits.

MFish Discussion

52 MFish acknowledges that dredging is having an effect on the benthic environment in localised sub-areas within the Coromandel scallop fishery. It is likely that benthic biodiversity in these areas has decreased compared with areas that are not dredged. However, MFish is not aware of any information for SCA CS suggesting that the biodiversity in the dredged areas is likely to have been significantly different (prior to the start of the dredge fisheries 30 years ago) in species composition from surrounding areas that are not dredged. Therefore, it is likely that the overall level of biodiversity in the wider area surrounding the scallop beds is being maintained.

53 Another consideration concerning the issue of the effects of dredging on the benthic environment is that dredging is currently the only cost-effective method for taking scallops on a commercial basis. It is not economically viable to take scallops commercially by diving. If dredging were to be banned, then society would not have the benefits associated with the scallop fishery. This is in contrast to some finfish fisheries where a range of methods (eg. longline, trawl, set net, purse seine) can be used to commercially harvest the resource.

54 Nonetheless, if information becomes available that indicates dredging is having an adverse effect on an area of special or significant biodiversity, then MFish will take steps to avoid, remedy, or mitigate the adverse effect. Such a situation occurred at Spirits Bay in the Northland scallop fishery in the late 1990s. Research information indicated that dredging and trawling were likely to be having a significant adverse effect on the rare and endemic benthic biota only occurring in that area. Consequently, a large area at Spirits Bay and Tom Bowling Bay was closed by fisheries regulation to dredging and trawling.

55 MFish acknowledges that dredging will be having some impact on habitats of particular significance to the management of the scallop fishery. This is because juvenile scallops in dredged areas tend to experience higher mortality than juveniles in non-dredged areas. However, a good feature of SCA CS is that the fishery is closed each year from 20 December. Anecdotal information suggests that a large part of the annual scallop spatfall occurs in the New Year when juvenile scallops would be most vulnerable to damage from dredging if the juveniles had recruited into the adult beds. MFish does not consider that dredging is having a significant adverse effect on habitats for finfish fisheries. For example, scallop dredging does not occur in areas that are particularly important to snapper spawning or juvenile recruitment.

56 MFish does not consider that dredging is having a significant adverse effect on habitats for finfish fisheries. For example, scallop dredging does not occur in areas that are particularly important to snapper spawning or juvenile recruitment.

57 All sectors have been concerned about the distribution of tubeworm throughout the Hauraki Gulf and Whitianga area. However, MFish notes that NIWA reported that tubeworms were rare during the 2005 scallop research survey. Over the last two years, MFish has also received very few reports from fishers concerned about the presence of black gill disease in scallops.

58 MFish recognises that the prevalence of tubeworms and black gill disease in the late 1990s may have been due to the adverse effects of scallop dredging. However, other factors also suggest that these effects may not be related to dredging. It has been speculated that the increase in tubeworms, which is thought to be a species introduced into New Zealand, was due to the discharge of ballast water by large log and timber carrying ships in the outer Hauraki Gulf in the late 1990s. It must also be recognised that disease outbreaks and spectacular increases (and decreases) in marine invertebrate species generally (eg. tubeworms, scallops) occur naturally due to their ecological characteristics such as high fecundity and short life-cycles.

59 The NZRFC noted that research has been conducted into dredge design in the Coromandel scallop fishery. The research showed that a single pass of a ring bag dredge (as used in the Southern (Nelson) scallop fishery) results in less damage to scallops and benthic epifauna than a single pass of the box dredge (as used in the Coromandel and Northland scallop fisheries). However, the review concluded that the box dredge's higher efficiency

more than compensated for the rate of damage at each pass, and made their use preferable on the harder sandy substrates in the north – in the Southern scallop fishery the seafloor is a soft muddy substrate.

60 MFish is satisfied that the research that led to the establishment of the 90 mm size limit for commercial fishers is robust. The main benefit of the change is that there is now less incidental mortality in the commercial scallop fishery because 90-100 mm scallops are now not being returned to the sea. In the past, when this size of scallop was returned, a proportion of these fish would not have survived. Scallops mature and spawn before reaching the 90 mm size limit. Part of the reason for the improvement in SCA CS may be due to the size limit change.

Social, cultural and economic factors

61 No submissions addressing social, cultural and economic factors were received. No further information or consideration is available to that provided in the IPP (attached for your consideration).

Consultation

Submissions

62 TOKM has provided MFish with a list of the Iwi having an interest in the SCA CS fishery and requests confirmation from MFish that each of the Iwi has been consulted. TOKM does not consider that Iwi and recreational interests are familiar with the in-season TAC review process for the Coromandel scallop fishery as evidenced by the lack of responses from these groups since SCA CS was introduced to the QMS in 2000.

63 TOKM considers that MFish should review the quality and delivery of consultation to Iwi and recreational groups within SCA CS. TOKM considers the review needs to result in quality engagement and input by Iwi and recreational groups with respect to sustainability and fisheries management decisions.

MFish Discussion

64 MFish (Auckland) does not have a record of receiving a specific list of Iwi contacts from TOKM. MFish has asked TOKM to provide the Iwi contact list – TOKM has agreed to provide the list in the near future.

65 For 2005, MFish posted the IPP to the following people on MFish contact lists representing various Maori organisations and Iwi: David Taipari (Ngati Maru Iwi Authority), Elaine Tapsell (Ngati Whakaue Marae Committee), Harry Mikaere (Hauraki Maori Trust Board), Makare Harawira (Waitaha representative), Allan Riwaka (Te Ohu Kai Moana), Te Ruunanga A Iwi O Ngati Tamatera, Ngaiterangi Iwi Inc, Ngati Hei Charitable Trust, Ngati Ranginui Iwi Society, Te Runanga O Ngati Rangitihi, Te Runanganui O Te Arawa Inc, and Ngati Wai Trust Board.

66 For the Coromandel scallop fishery, MFish employed the normal process used for consulting stakeholders on most other fisheries management proposals. This involves the release of an Initial Position Paper to representative stakeholder organisations outlining the rationale for the proposed management change; a consultation meeting in a central area for

stakeholders to discuss the issues, hear other views, and make oral submissions; and a timeline for making formal written submissions.

67 MFish is satisfied that this consultation process provides a reasonable opportunity for stakeholders to participate and have input into fisheries management decisions. For example, in 2004, a number of recreational fishing organisations (option4, Mount Maunganui Sportfishing Club, Tauranga Game Fishing Club) became involved in the Coromandel scallop fishery consultation by providing a detailed written submission. These groups were concerned about the adverse effects of dredging, and allocation-utilisation issues. Partly as a result of the involvement by these groups, MFish has responded by reviewing this year some of the amateur fishing regulations associated with the scallop fishery.

68 In the future, it may be possible to obtain qualitative information from Maori customary fishers on the state of the Coromandel scallop fishery through the Pou Hononga network. The Pou Hononga who have recently been appointed in Auckland and Tauranga should improve MFish's communication with Iwi. In addition, if MFish was to receive an invitation from a key marae or fishing club that was keenly interested in the Coromandel scallop TAC review, then MFish would hold a local consultation meeting(s) with that group. Specifically, on other issues and on request, MFish has held special consultative meetings with local stakeholder groups[2] that have a particular interest in a management proposal.

Decision letter

69 Accompanying this paper, is a draft letter from you to stakeholders informing them about the decision to increase the TAC for the Coromandel scallop fishery. You are required by section 12(2) of the Fisheries Act 1996 to provide reasons in writing, for your decisions to the parties who were consulted about the management proposals. If you decide to increase the TAC and agree on the text for the decision letter, MFish will mail out the letter, on your behalf, to interested parties.

Conclusion

70 MFish has undertaken an in-season review of the TAC for the Coromandel scallop fishery. MFish is satisfied that the scientific stock assessment for SCA CS is robust. The assessment indicates that there has been a significant improvement in the fishery, and that the fishery can support the TAC increase proposed in the IPP. Accordingly, MFish recommends that the TAC be set at 239 tonnes meatweight for the remainder of the 2005-06 fishing year, based on the research survey as the best available information on abundance for the current fishing year.

71 MFish recommends that because the TACC cannot be increased during a fishing year, an additional 96 tonnes meatweight of ACE be created for SCA CS by increasing the available ACE for quota owners from 22 to 118 tonnes meatweight. MFish recommends that you agree to the proposal in the IPP to increase both the Maori customary and recreational allowance by the same (nearly five-fold) proportion as the increase in ACE to commercial fishers. Both allowances would increase from 7.5 tonnes meatweight to 40 tonnes

[2] For example, special consultation meetings in 2002 and 2003 were held with representatives from the Awhitu Peninsula Ratepayers Association regarding the proposed set net closure to protect Maui's dolphin at the Manukau Harbour entrance.

meatweight. The allowance for other sources of fishing-related mortality should increase from 11 to 41 tonnes meatweight.

72 MFish notes that at the end of the current fishing year for SCA CS, the TAC will revert to 48 tonnes meatweight by operation of the law. Therefore, the non-commercial allowances will revert to 7.5 tonnes, and the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight.

Final Recommendations

73 MFish recommends that you:

a) **agree** to increase the TAC for SCA CS from 48 tonnes meatweight to 239 tonnes meatweight for the 2005 season, and within the TAC:

b) **agree** to increase the allowance for recreational fishing from 7.5 tonnes meatweight to 40 tonnes meatweight;

c) **agree** to increase the allowance for customary Maori fishing from 7.5 tonnes meatweight to 40 tonnes meatweight;

d) **agree** to increase the allowance for other sources of fishing-related mortality from 11 tonnes meatweight to 41 tonnes meatweight;

e) **agree** to increase the annual catch entitlement (ACE) for SCA CS by increasing the available ACE for quota owners from 22 tonnes meatweight to 118 tonnes meatweight; and

f) **note** that at the end of the current fishing year for SCA CS, the TAC will revert to 48 tonnes meatweight, the allowance for recreational fishing will revert to 7.5 tonnes meatweight, the allowance for customary fishing will revert to 7.5 tonnes meatweight, the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight, and the ACE will revert to 22 tonnes meatweight.

If you agree to the recommendations set out in the previous paragraph, then MFish recommends that you:

g) **sign** the attached *Gazette* Notice, and

h) **sign** the attached letter to interested parties explaining the reasons for your decision to increase the TAC for the Coromandel scallop fishery.

Jodi Mantle
for Chief Executive
Ministry of Fisheries

AGREED / NOT AGREED / AGREED AS AMENDED

Hon David Benson-Pope
Minister of Fisheries

/ / 2005

Attachment 1: Initial Position Paper - proposal to review the TAC for the Coromandel scallop fishery for 2005

INITIAL POSITION PAPER - PROPOSAL TO REVIEW THE TAC FOR THE COROMANDEL SCALLOP FISHERY (SCA CS) FOR 2005

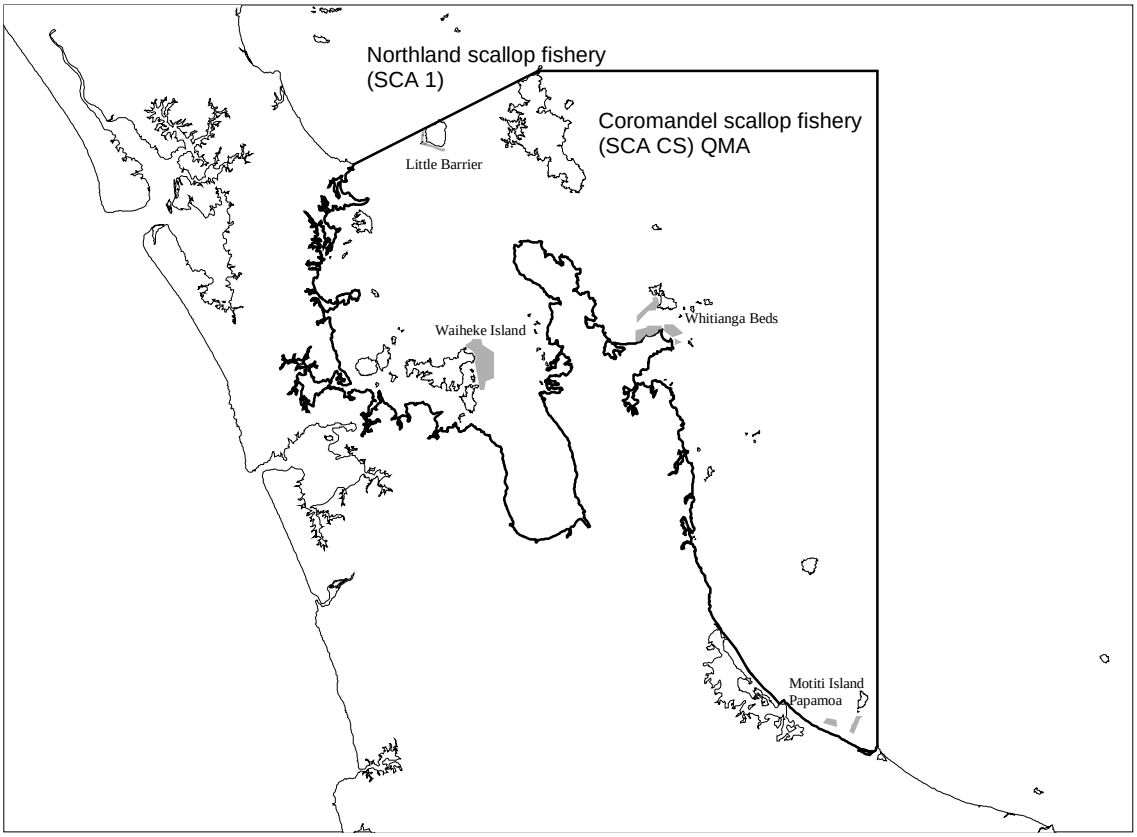

Figure 1: **Boundary of the Coromandel scallop (SCA CS) Quota Management Area and the location of the main scallop beds fished by commercial fishers (shaded areas).**

Proposal

1 The Ministry of Fisheries (MFish) proposes to review the total allowable catch (TAC) of the Coromandel scallop fishstock (SCA CS) for the purpose of providing for an in-season TAC increase for the 2005 fishing season. MFish proposes that the Minister of Fisheries, after taking into account information about scallop abundance in SCA CS during the current fishing year, considers the management measures proposed below.

2 The proposal is to increase the TAC for SCA CS from 48 to 239 tonnes meatweight, and within the TAC:

a) increase the allowance for recreational fishing from of 7.5 tonnes meatweight to 40 tonnes meatweight;

b) increase the allowance for customary Maori fishing from of 7.5 tonnes meatweight to 40 tonnes meatweight;

c) increase the allowance for other sources of fishing-related mortality from 11 tonnes meatweight to 41 tonnes meatweight;

d) increase the Annual Catch Entitlement (ACE) from 22 tonnes meatweight to 118 tonnes meatweight.

3 At the end of the current fishing year for SCA CS, the TAC will revert to 48 tonnes meatweight, the allowance for recreational fishing will revert to 7.5 tonnes meatweight, the allowance for customary fishing will revert to 7.5 tonnes meatweight, the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight, and the ACE will revert to 22 tonnes meatweight.

Management Framework

4 During 2001, the Minister of Fisheries agreed to set a TAC (under section 13 of the Fisheries Act 1996 (the Act)) for SCA CS at 48 tonnes meatweight to apply from the start of the fishing year on 1 April 2002. Section 13 requires the TAC to be set at a level that will maintain or move the stock towards or above the level that will produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks.

5 MSY is defined, in relation to any fishstock, as being the greatest yield that can be achieved over time while maintaining the stock's productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock. A requirement to maintain stocks at a level that is capable of producing the MSY is generally recognised internationally as being an appropriate fishstock target, although there is some international support for MSY representing a minimum threshold level.

6 The Minister also decided in 2001 to include SCA CS on the Second Schedule of the Act. A stock listed on the Second Schedule may have its TAC increased during the season under s 13(7) of the Act after consideration of information about the abundance of the stock. At the start of the next fishing year, the TAC reverts to the level set at the start of the previous fishing year. The TAC can only be increased during the fishing year and not decreased.

7 Since 1978, surveys have been used to estimate the abundance of scallops in the Coromandel scallop fishery. Yield estimates based on these surveys have been used to set limits on catch (including the TAC, TACC, and allowances) for the fishery.

8 In making his decision on required services for 2004-05, the Minister agreed to an optional survey for SCA CS during 2005. Quota holders decided that scallop abundance should be assessed during 2005. A research survey was undertaken in May 2005 to assess SCA CS.

9 Section 13(7) recognises that abundance for some stocks can be highly variable between years. S 13(7) allows for further utilisation in years when the stock is more abundant, so long as the catch is still sustainable. Accordingly, the same considerations (s 13(2), s 13(3)) to achieve the direction and rate of change towards the MSY level must be taken into account in making an in-season adjustment as in setting the original TAC.

10 Section 20(4) of the Act states that the increase of the TAC cannot result in an increase to the total allowable commercial catch (TACC) during the fishing year. However, under s 68(1), if the Minister is satisfied that after considering the matters required for TACC setting (as prescribed under s 21(1)) he would have made an in-season increase to the TACC but for the prohibition against that in s 20(4), then he may create additional ACE for fishers equal to the amount of the increase in the TACC that he would have made.

11 Section 21(1) provide that in setting or varying the TACC the Minister shall make an allowance for Maori customary fishing, recreational fishing, and other sources of fishing-related mortality. It is implicit that the Minister, when increasing the TAC in season, can increase the level of non-commercial allowances. However, there is nothing in the Act that requires these allowances to automatically revert to the original allowances at the end of the fishing year. The TAC only reverts. Therefore, if the Minister decides to increase any of the allowances for the remainder of the current fishing year, then part of his decision will also be that the allowances will reduce to the original level at the start of the next fishing year on 1 April 2006. The process outlined in the preceding paragraphs was followed during the 2002, 2003 and 2004 fishing seasons for SCA CS in providing an in-season ACE increase for commercial scallop fishers.

Steps in the process to review the TAC

12 To progress this review, MFish proposes the following steps:

- consideration of the survey information about the abundance of scallops in SCA CS during the current fishing year;
- consultation with quota holders, tangata whenua, stakeholders and Te Ohu Kai Moana in order to review the TAC, allowances, and ACE for SCA CS (**this paper**);
- the Minister's consideration of MFish's final advice and his decision on the proposal;
- notice of any increased TAC agreed to by the Minister to be notified in the *New Zealand Gazette;*
- generation of ACE.

Fishery Information

Species Biology

13 Scallops (*Pecten novaezelandiae)* inhabit waters to about 60 m deep, but are more common in the Coromandel fishery in depths of 10 to 30 m. Growth rates are spatially and temporally variable; growth to 100 mm takes between 1.5 and 3.5 years. The maximum age of scallops in unexploited populations is about 6 or 7 years.

14 *Pecten novaezelandiae* is an hermaphroditic species, each individual carrying both male and female gonads at the same time. Most individuals are sexually mature at about 60 mm, although larger individuals have disproportionately larger gonads. The commercial minimum legal size limit of 90 mm probably mitigates risk of recruitment failure, as scallops mature and spawn before reaching the size limit. They are extremely fecund and can spawn several times each year (although not all of these spawning events lead to successful spat settlement). Larval development lasts for about 3 weeks, depending on water temperature.

15 Scallops grow rapidly (albeit with considerable variation), have high natural mortality, and exhibit highly variable recruitment. Such a life history results in fluctuating biomass, catch, and reliance on relatively few year-classes.

Fishery Characteristics

16 The management arrangements for commercial and non-commercial fishers differ. Extensive parts of the Hauraki Gulf and many inshore scallop beds within SCA CS are closed by regulation to commercial scallop fishing. Therefore, the non-commercial and commercial fishing sectors are separated spatially to a large extent. The main beds in the commercial scallop fishery are found north of Whitianga (at the Mercury Islands), east of Waiheke Island, around Little Barrier, Cape Colville, and in the Bay of Plenty principally around Motiti Island and Papamoa Beach (see Figure 1).

17 There are also differences between the sectors in the minimum legal size limit (90mm for commercial fishers, and 100mm for recreational fishers). The duration of the fishing season is controlled by regulation and also differs: 15 July to 20 December (inclusive) in the same year for commercial fishers; and 15 July to 14 February (inclusive) of the following year for recreational fishers. The commercial and recreational fisheries can also be closed under shellfish sanitation requirements.

18 Maori customary fishers are currently able to take scallops for hui and tangi purposes in accordance with regulation 27 of the Fisheries (Amateur Fishing) Regulations 1986. If a kaitiaki has been appointed, then she or he can authorise the taking of scallops under the Fisheries (Kaimoana Customary Fishing) Regulations 1998. Recreational fishers are restricted to a maximum daily bag limit of 20 scallops per fisher per day in SCA CS.

Commercial Fishery

19 The reported commercial catch has varied from 6.6 tonnes (meatweight) in 2000 to 384.0 tonnes (meatweight) in 1987 (Table 1). Since 1992, limits on the overall commercial catch have been determined from the results of dredge and dive surveys undertaken before the start of each fishing season. However, the catch limits for SCA CS have often not been caught, notably in 1998, 1999 and 2000 (Table 1).

Table 1: SCA CS reported landings (tonnes meatweight) by commercial fishers from 1986 to 2004 and the sum of permit condition entitlements (tonnes meatweight) for 1995 to 2000, a commercial catch limit (CCL) was set for the 2001 season and a TACC set for 2002 to 2004.

Fishing year	Reported landings (LFRR data)	Sum of permit condition entitlements / CCL / TACC
1986	162.3	
1987	384.0	
1988	181.9	
1989	103.8	
1990	153.3	
1991	203.2	
1992	146.8	
1993	62.3	
1994	49.4	
1995	88.4	85.8
1996	81.0	88.0
1997	93.9	104.9
1998	36.6	110.0
1999	7.7	31.0
2000	6.6	15.4
2001	22.1	22.0
2002	32.3	35.0
2003	57.9	58.0
2004	78.5	79.0

20 The variability of scallop biomass over short timeframes may be partly responsible for why limits on catch have not always been achieved. To reduce this influence as much as possible, surveys are conducted as close to the expected start of the commercial season as possible. Another factor is the difficulty in predicting available yields in a scallop fishery with any precision. The uncertainty due to the variables of dredge efficiency and residual scallop density are discussed in the section on information about abundance during the current fishing year. There is also additional uncertainty when the TACC is allocated in meatweight, because the meatweight to greenweight ratio varies throughout the year. Actual yields will depend on scallop condition, natural mortality and scallop growth.

21 The Coromandel scallop stock fluctuates in biomass from year to year. Recruited biomass in any given year cannot be predicted from historical biomass estimates, nor even from biomass estimates in the previous year adjusted by catch in the intervening season. Nevertheless, the system may not be entirely random. Prior to 1999, there appears to be a relationship between scallop recruitment (as measured by catches two years later) and the Southern Oscillation Index (Figure 2).

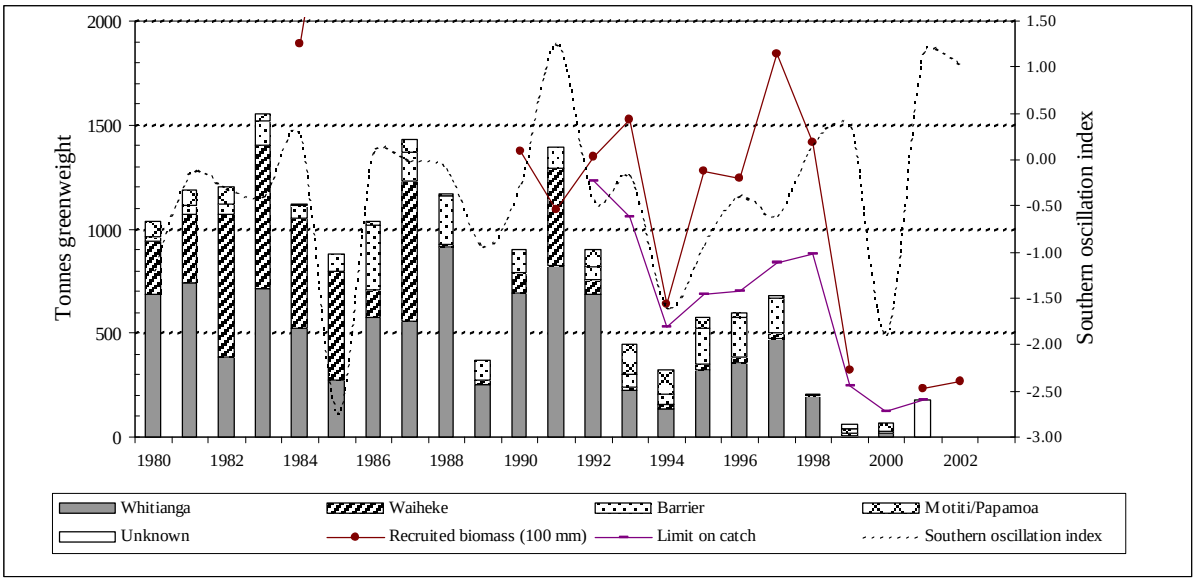

Figure 2: Reported catches by area, catch limit, survey estimates of recruited biomass (100 mm) for the Coromandel scallop fishery and the Southern Oscillation Index.

22 The 1999 season was very poor with periods of the season not fished (voluntarily) because of "black gill" condition in the scallops. Commercial dredging was affected between 1998 and 2000 by the spread of the C*haetopterus* tubeworm into some areas. The tubeworm builds large clumps of parchment-like tubes that make dredging for scallops impossible as the dredge fills with tubes, such that the dredge cannot catch scallops. Tubeworms were very rare during the 2005 dredge survey, and were never a hindrance to surveying by filling the dredge.

Recreational fishery

23 Telephone/diary surveys were undertaken during 1993-1994, 1996 and 1999-2000. The recreational harvest estimate from the 1993-94 survey was 8.8 tonnes meatweight. The 1996 survey estimate of the recreational catch was 7.5 tonnes meatweight. The recreational catch estimate from the survey in 1999-2000 was 3.8 tonnes meatweight. The average of these recreational catch estimates is 6.7 tonnes.

24 The recreational diary surveys include catches reported from areas closed to commercial fishing by regulation. The areas closed to commercial dredging by regulation include popular recreational and customary fishing areas such as Kawau Island, Omaha Bay, parts of Waiheke Island and the Firth of Thames, Great Mercury Island, Otama Beach, Opito Bay, Slipper Island, and Motiti Island. The rationale for these closed areas in this fishery is that the closures protect key non-commercial scallop fishing areas from the effects of commercial scallop dredging. Some of these closed areas were initially agreed under a three-year plan negotiated by the sectors. In general, the closures are utilisation measures, rather than sustainability measures.

Mäori customary fishery

25 In common with many other shellfish, scallops are important to Mäori as a traditional food. However, no quantitative information on the level of customary take of SCA CS is available. The level of customary catch is unknown. The Minister has set the customary allowance at the level of the recreational allowance. MFish has applied a general criterion that, in the absence of information and where the fishery is of known importance to Maori, the recreational allowance is used as a benchmark to set the customary allowance.

Other sources of fishing-related mortality

26 Quantitative information on the level of illegal catch is not available. However, quantitative information on other sources of fishing-related mortality was gathered in the Coromandel scallop fishery as part of MFish project AKSC03 during the 1996-97 fishing year. This work by NIWA assessed the incidental effects on growth and mortality of scallops from encounters with commercial dredges of various designs.

27 Individual-based population modelling and yield per recruit analysis suggested there are incidental effects of dredging on growth and mortality rates that are highly influential on the determination of yield from scallop dredge fisheries. Using NIWA's model, the level of incidental mortality was estimated to be 34.4% of the level of the commercial catch. Based on this model, an allowance for fishing-related mortality is proposed later in this paper.

Fishery Assessment

General Methodology

28 The biological reference points most commonly used in New Zealand are Maximum Constant Yield (MCY) and Current Annual Yield (CAY). These are derived from two ways of viewing MSY – a static interpretation and a dynamic interpretation. Under a static interpretation, MCY is the largest constant commercial catch that may be taken sustainably even if the number of recruits fluctuates from year to year.

29 Under a dynamic interpretation, CAY is the catch to biomass ratio that maximises the sustainable yield from a fishery over time. It is calculated as a constant proportion of the biomass and increases and decreases in tandem with changes in the stock biomass. It is possible to estimate CAY only when the current stock size is known, as is possible in the case of scallops immediately after a survey. The methodology for calculating CAY is set out in MFish's Stock Assessment Plenary report.

30 The current TAC for SCA CS is based on an estimate of MCY for the fishery. This is the level of constant commercial catch that is estimated to be sustainable, with an accepted level of risk, at all probable levels of biomass. However, because of the annual variation of scallop biomass, the CAY provides the most appropriate estimate of yield on which to base any consideration for an in-season increase in TAC.

31 Since 1978, recruited biomass at the start of the season, for most years, has been estimated by research surveys. Counts of scallops above a critical size at each survey site are converted to numbers per square metre of seabed according to the area swept by the dredge. The absolute density of scallops is estimated by correcting for the efficiency of the dredges.

The numbers of scallops are calculated by multiplying the mean scallop density by the area of each survey stratum. Mean recruit weight is estimated and used to calculate biomass.

Information about abundance during the current fishing year

32 A research survey of the main Coromandel scallop beds used for commercial fishing was conducted in May 2005. For the overall survey area, a simple "area-swept" analysis suggests there were 36.8 million scallops (with a Co-efficient of Variation (CV) of 14%) at or above a size of 90 mm at the time of the survey. However, this is an under-estimate, as this assumes that dredges are 100% efficient at catching all the scallops in the path of the dredge.

33 Dredge efficiency was assessed as part of most of the surveys in the 1990s by conducting experiments to compare scallop catch rates between divers and dredges operating in the same area at the same time. The vessel and skipper used for the 2005 survey were the same as used in many of the dredge efficiency experiments in the 1990s. Accordingly, for the 2005 assessment, the historical average dredge efficiency was used, as this most closely relates to the performance of the vessel and skipper used for the 2005 survey. By allowing for average dredge efficiency catch rates, the number of scallops above 90 mm is estimated to be 146.7 million.

34 To allow a comparison of trends over the history of the fishery since 1990, estimates based on scallops 95mm and above are provided (Table 2). These estimates indicate that there has been a substantial improvement in the number of scallops for 2005. The improvement is most pronounced for the Whitianga beds, which have historically been the most important scallop beds for the commercial fishery. The total survey estimate for 2005 (66.6 million (95 mm+ scallops)) is considerably larger than all previous survey estimates which ranged from 3.3 million (1999) to 33.2 million (2004).

Table 2: Millions of scallops (95 mm or greater shell length) estimated at the time of the survey in the main areas of the Coromandel commercial fishery since 1990. Historical average dredge efficiency has been assumed for all years, including 2001–03 when different vessels were used. Totals include data from all surveyed beds and are not directly comparable among years. Dashes (–) indicate no survey in an area or year.

Year	Whitianga / Mercury Is	Waihi Beach	Motiti / Papamoa	Little Barrier	Cape Colville	Waiheke Island	Total
1990	7.4	–	–	–	–	6.4	13.8
1991	11.1	–	–	–	–	2.8	13.9
1992	10.7	–	–	–	–	0.7	11.4
1993	6.6	7.1	–	–	0.3	0.4	14.4
1994	4.8	1.5	–	–	–	0.0	6.3
1995	4.4	0.6	4.5	2.5	0.1	0.3	12.5
1996	6.1	0.2	2.2	3.3	0.1	0.3	12.6
1997	6.1	0.7	1.9	4.0	0.3	5.4	18.4
1998	6.4	0.1	1.2	1.0	0.2	5.3	14.2
1999	1.8	0.2	0.9	0.2	0.0	0.2	3.3
2000	–	–	–	–	–	–	–
2001	1.5	–	0.7	1.6	–	0.2	4.2
2002	2.7	–	0.7	0.8	–	1.0	5.3
2003	4.2	–	2.1	1.4	3.5	1.7	12.9
2004	23.5	1.0	2.4	1.2	0.3	4.7	33.2
2005	53.2	3.7	1.8	2.8	2.5	2.4	66.6

35 For 2005, the total greenweight biomass (90mm+ scallops) can be calculated by multiplying the estimate of the numbers of scallops against the average weight of a scallop (85.01 grams) at the time of the survey. This provides an estimate of 12,474 tonnes allowing for historical average dredge efficiency.

36 To estimate CAY it is necessary to know the biomass of scallops at the start of the season. The numbers of scallops at length at the time of the survey was projected forward using assumptions concerning growth (determined from previous tagging programmes) and natural mortality (assumed to be M=0.5 spread evenly through the year). A non-parametric resampling and projection approach resulted in a median estimate of biomass over 90 mm in length of 14 370 tonnes (greenweight) with a CV of 23%, based on historical average values for dredge efficiency.

37 An additional biomass estimation step that is optional is to make an allowance for only that part of the fishery where scallops occur at a density considered viable for commercial fishing. Critical density will differ for various operators involved in the fishery. MFish considers 0.04 m^{-2} (ie. one recruited scallop for each 25 m^2 of seabed) to be the most appropriate critical density for the Coromandel scallop fishery, as it conforms closest to a catch rate of 50 kg greenweight per hour. This catch rate is considered by the Coromandel Scallop Fishery Management Committee to be about the minimum for an economic return from the fishery. An allowance for critical density at 0.04 m^{-2} would reduce the estimate by around 15%.

Current Annual Yield (CAY) calculation

38 Using the assumptions of historical average dredge efficiency and a reference rate of fishing mortality of $F_{0.1}$ (MFish standard rate), the CAY is estimated to be 4576 tonnes greenweight. It is then necessary to convert the greenweight to meatweight, as meatweight is the standard unit of measurement used in the Coromandel scallop fishery. This conversion results in a meatweight CAY estimate of 573 tonnes by using the average recovery rate from 1995 to 2002 (12.6%) for extracting the scallop meat from the whole scallop shell in the processing sheds. If an allowance is made for areas of low scallop density at a level of 0.04 m^{-2}, then the CAY would be reduced by about 15%.

Environmental Issues

39 The Act prescribes environmental principles that must be taken into account when exercising powers in relation to utilisation of fisheries resources while ensuring sustainability. Associated or dependent species (including non-fish bycatch) should be maintained above a level that ensures their long-term viability. Biological diversity of the aquatic environment (ie, the variability of living organisms, including diversity within species, between species, and of ecosystems) should be maintained, and habitat of particular significance for fisheries management should be protected.

40 The history of commercial dredging in the Coromandel scallop fishery dates back to 1968, and trawling has occurred in the area since the late nineteenth century. There is no doubt that these fishing methods have an impact on the seabed. There is some information available providing evidence of broad-scale changes in benthic communities that can be directly related to fishing. The seafloor in the area has also been modified by the impact of land-based activities over a much longer period. However, significant areas of habitat in the Firth of Thames and inner Hauraki Gulf are not open to commercial dredging.

41 MFish is not currently aware of any habitat of particular significance for fisheries management that requires additional protection. MFish does not consider that the catch levels proposed below in this paper will put at risk the long term viability of associated species or biological diversity within the area of the fishery.

42 Since 1997, populations of the large tubeworm (*Chaetopterus spp.)* have spread throughout the near-shore marine environment in north-eastern New Zealand. The taxonomic identity of the tubeworm is still uncertain. A Uniservices research report maps the distribution of the tubeworm around north-eastern New Zealand, and discusses the species taxonomic status and the ecological effect of *Chaetopterus* species in other parts of the world.

43 The tubeworm affects scallop fishing by clogging dredges, and has impacted on dredging mainly at the beds at Little Barrier Island and Whitianga. In addition to the affect on fishing, the presence of vast numbers of the tubeworm, combined with its rapid spread, has raised concerns about the potential ecosystem effects of this organism. However, as indicated earlier, tubeworms appear to have declined over the last three years and were very rare during the 2005 dredge survey. Nonetheless, the increase and decrease in the tubeworm population illustrates how variable associated and dependent species can be in seafloor communities.

Current and potential research

44 The current fisheries services applying to this fishery include optional surveys to estimate yield from the commercial scallop beds.

Proposed TAC, allowances, and ACE

TAC setting

45 Under s 13 of the Act, the TAC must be set at a level that will maintain the stock at or above, or move the stock towards or above, the level that will support the MSY. As SCA CS is on the Second Schedule to the Act, under s 13(7) the Minister can increase the TAC in-season after considering information about the abundance of the stock.

46 MFish notes that there is no current assessment of the entire SCA CS stock on which to base a TAC. The available assessment information on yield is based on a survey of the main commercial scallop fishing beds. The CAY method estimates sustainable yield from areas primarily utilised by commercial fishing. The CAY estimate is a proxy for MSY, and the proposed TAC increase is likely to move the stock towards the MSY level.

47 The Annual General Meeting of the Coromandel Scallop Fishermen's Association was held in early June. At this meeting, the quota-holders discussed the results of the recent research survey in the draft NIWA report and were aware of the projected improvement in the fishery. Most of the quota-holders considered it appropriate to adopt a cautious approach towards the in-season TAC increase. The consensus recommendation from the meeting was for the increase to be to 4.5 tonne meatweight per license (as would have applied under the previous Coromandel Controlled Scallop Fishery regime). This equates to a proposal to increase the total available ACE to 117.9 tonnes, which would be rounded off to 118 tonnes.

48 The President of the NZ Recreational Fishing Council (RFC) has commented to MFish on the 2005 survey results and the draft NIWA report. The NZRFC is concerned

about the environmental effects of dredging and considered a pre-cautionary approach should be adopted. The NZRFC agreed with the catch increase proposed by the quotaholders.

49 MFish did not receive comments on the draft NIWA report from customary Maori, and the environmental sector.

50 MFish proposes that the Coromandel scallop TAC should be increased from 48 to 239 tonnes meatweight. The proposed TAC increase is largely based on the proposal to increase the total available ACE for commercial fishers for the 2005 season from 22 to 118 tonnes meatweight. As explained below, the remainder of the proposed TAC increase is based on the likelihood that the catch by recreational and customary Maori fishers will probably increase due to the increased abundance of scallops.

51 At the end of the current fishing year for SCA CS, the proposed TAC, ACE, and allowances would revert to the initial levels at the start of the fishing year.

Allowances and ACE

52 MFish notes there is no statutory obligation to make an adjustment to Maori customary or recreational interests when the TAC is varied pursuant to s 13(7) of the Act. However, s 68(1) requires the Minister to consider the provisions of s 21, under which he has the discretion to determine allowances.

Recreational Interests

53 In considering an in-season TAC increase, and having regard to the matters under s 21, MFish believes that the most relevant consideration is that there has been a significant increase in the biomass of the scallop fishery. MFish notes that the survey results relate primarily to the scallop beds mainly fished by the commercial sector and on this basis no change in the allowance for recreational fishing has been considered during annual TAC reviews. However, trends in scallop abundance in the "non-commercial" beds are likely to be similar to abundance trends for the surveyed beds and MFish now considers that these should be reflected increased annual non-commercial allowances for the fishery.

54 MFish considers it likely that there will be an increase in the catch for the Maori customary and recreational sectors for 2005-06. Due to the increased biomass, an increased non-commercial catch could be attained from a number of factors. It is likely that existing fishers will fish more frequently for scallops. There are also likely to be a greater number of "new" fishers fishing for scallops. In addition, it is likely that fishers will more frequently attain their full legal entitlement of scallops ie. the current daily bag limit of 20 scallops per fisher per day.

55 Given that the recreational catch is likely to increase, it is therefore reasonable to propose an increase in the recreational allowance. Accordingly, MFish proposes to increase the recreational allowance by the same proportion as the increase in ACE to commercial fishers – slightly more than a five-fold increase. Therefore, MFish proposes to increase the allowance to recreational fishing from 7.5 tonnes meatweight to 40 tonnes meatweight for 2005-06. As part of this proposal, the recreational allowance would then decrease to 7.5 tonnes meatweight at the end of the current fishing year for SCA CS (31 March 2006).

Proposed changes to amateur fishing regulations

56 As part of a separate fisheries management process, MFish intends to release six proposals for proposed changes to the amateur fishing regulations. Three of the proposals concern aspects of the management of the recreational scallop fishery: shucking scallops at sea, measuring scallops on the seafloor, and the "primary taker" rule. A fourth proposal is to increase the Coromandel scallop amateur bag limit from 20 to 30 scallops per taker per day.

57 The proposed changes to the amateur fishing regulations have involved discussions with the NZRFC. It is likely that the proposals will be released for consultation with other stakeholder groups in July. Based on the consultation process and advice from MFish, the Minister will then decide whether to approve or decline the proposals. If the Minister agrees with the changes, then the amended regulations could come into effect in December.

Maori Customary Interests

58 In common with many other shellfish, scallops are important to Mäori as a traditional food. However, no quantitative information on the level of customary take of SCA CS is available. MFish has applied a general criterion that, in the absence of quantitative catch information and where the fishery is of known importance to Maori, the recreational allowance is used as a benchmark to set the customary allowance. Accordingly, MFish proposes to increase the customary allowance to the level of the proposed recreational allowance – 40 tonnes meatweight.

Other sources of fishing-related mortality

59 The level of incidental mortality expected in the commercial dredge fishery has been calculated by NIWA to be 34.4% of the catch level. Therefore, MFish proposes to increase the allowance for other sources of fishing-related mortality from 11 tonnes meatweight to 41 tonnes meatweight for 2005.

ACE for commercial fishers

60 MFish notes that s 20(4) of the Act does not allow the TACC to be increased if the Minister decides to increase the TAC. However, under s 68(1), if the Minister after taking into account the matters under s 21, is satisfied that he would have increased the TACC but for the s 20(4) prohibition, then he may create an additional amount of ACE equal to the amount he would have increased the TACC. Any increase in ACE will be distributed proportionally amongst the scallop quota owners according to the formula in s 68(2).

61 MFish considers that the Minister can be satisfied that the survey results provides adequate grounds for increasing the TACC, but for the impediment of s 20(4). On that basis, MFish believes that the Minister can consider making available an additional amount of ACE equivalent to the TACC increase he would have considered. Accordingly, MFish proposes that the level of ACE for the SCA CS fishery for the 2005 season be increased from 22 to 118 tonnes meatweight.

62 Based on a port price of $16.00 per kilogram of meatweight ($16,000 per tonne), the proposed increase in ACE of 96 tonnes meatweight equates to an increased gross return to the commercial fishers of $1,536,000 for the 2005 season.

Other Legislative Considerations

63 Before setting or varying any sustainability measure, s 11(1) of the Act requires the Minister to take into account specified matters. These include:

i) any effects of fishing on any stock and the aquatic environment;

ii) any existing controls that apply to the stock or area concerned;

iii) the natural variation of the stock concerned.

64 Evaluation of the available information on the effects of fishing has led to a number of restrictions that underpin the existing commercial fishery management regime for SCA CS. These restrictions are consistent with the overriding obligation to avoid, remedy or mitigate the adverse effects of fishing. They are implemented through a combination of regulations and voluntary agreement and include:

a) restrictions on dredge size to reduce adverse effects on the seafloor;

b) five day fishing week and daylight only fishing (reduces fishing intensity);

c) daily catch limits to reduce fishing intensity (Coromandel Scallop Fishermen's Association initiative).

65 The proposal recognises that biological systems can be inherently variable, and stocks are prone to fluctuations in abundance. This particularly applies to scallop populations.

66 Section 11(2A) of the Act requires that before varying any sustainability measure the decision-maker must take into account any approved fisheries plan, any conservation or fisheries required services, and any decisions not to require fisheries services. The current fisheries service applying to the fishery is a pre-season survey to estimate CAY for the fishery. The survey estimate has been considered and forms the basis for the proposals contained in this paper. There are no conservation services applying to the fishery. There is no draft or approved fisheries plan for the Coromandel scallop fishery.

67 In relation to s 11(2) of the Act, there are no provisions applicable to the coastal marine area known to exist in any policy statement or plan under the Resource Management Act 1991, or any other management strategy or plan under the Conservation Act 1987, that are considered relevant to the setting of sustainability measures for the Coromandel scallop fishery.

68 Under s 11(2)(c), the Minister must have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 as part of the Coromandel scallop fishery is part of the area defined as the Hauraki Gulf for the purpose of that legislation. In summary, sections 7 and 8 articulate the national significance of the Hauraki Gulf to sustain the life-supporting capacity of the environment and note that management objectives for the Hauraki Gulf are to protect the life supporting capacity of the environment and to maintain the contribution of the natural resources to the social, recreational, and economic well-being of the people and communities of the Hauraki Gulf and New Zealand. Setting a sustainable commercial catch limit on a fishery resource, having taken into account the environmental principles of the Fisheries Act 1996, is consistent with these objectives as it provides for utilisation while ensuring sustainability.

69 Section 11 of the Act also provides for the setting or varying of sustainability measures other than a TAC or catch limits. The Minister may determine that area closures

and seasonal constraints required for the annual management of this fishery be set as sustainability measures. As mentioned, a number of commercial closed areas are already in place in the Coromandel scallop fishery, although these are not considered sustainability measures.

70 Stakeholders have indicated their preference for a harvesting strategy that primarily involves in-season adjustment of the TAC. However, they have also identified that an overhaul of current regulatory controls is overdue. Issues identified for review include the commercial minimum legal size, regulatory controls on days of the week fished and the requirement that fishing occur only in daylight. Possible changes to these controls are not proposed in this paper. Instead, stakeholders could undertake a review of the management measures as part of the development of a management plan for the fishery. The Coromandel Scallop Fishermen's Association and the NZRFC have expressed a strong desire for a fishery plan for the Coromandel scallop fishery.

Administrative Implications

71 There will not be an opportunity to amend the cost recovery levies prior to the end of the SCA CS fishing season. Consequently, an over recovery will occur because levies are set on a per unit basis (per kilogram or quota share), and the number of units will increase. In setting future levy orders, the Minister must have regard to these over recoveries.

Consultation

72 In early June, MFish asked stakeholder representatives and members of the Shellfish Working Group to review the draft NIWA research report entitled "Dredge survey and stock assessment for the Coromandel scallop fishery, 2005". The report forms the basis of the proposed TAC change. No significant comments of a scientific nature were provided on the draft. Subject to a few minor changes, the document will therefore be accepted as the final report.

73 Prior to the statutory consultation with stakeholders involving this paper as the key document, there has been some preliminary consultation. MFish attended the AGM of the Coromandel Scallop Fishermen's Association where the management implications for the survey results were discussed. MFish also discussed management issues with the President of the NZRFC.

74 As indicated earlier, the main recreational and commercial stakeholder organisations suggested the basis for the proposed ACE increase. However, given the favourable stock assessment information, MFish is interested in hearing alternative views and options from stakeholders for the current fishing year, and for the medium to long-term future of the Coromandel scallop fishery.

75 The 2005 in-season review of the Coromandel scallop TAC is based on the process that operated for SCA CS from 2002 to 2004. Stakeholders are now familiar with this process. Stakeholders will have around three weeks to Friday 22 July 2005 to provide MFish with written submissions commenting on the management proposals. There will also be a consultative meeting with stakeholders at MFish's Auckland office (1–4pm, 11 July 2005). The short time for consultation is necessary because of the relatively short fishing season,

which closes on 20 December. Any in-season changes to the management measures for SCA CS need to be implemented as early as possible to be meaningful within that season.

Summary

76 The Fisheries Act 1996 imposes an obligation to provide for the utilisation of fisheries resources as long as sustainability is ensured. The proposed management measures take into account the research survey information showing a biomass increase for the Coromandel scallop fishery.

77 There is a reasonable level of consensus amongst key stakeholder groups for the TAC to be increased, and in particular, the proposal to increase the amount of ACE from 22 tonnes to 118 tonnes meatweight. This would allow additional utilisation and income to commercial fishers who derive part of their livelihood from this fishery. MFish considers that the proposed measures for the SCA CS fishery are consistent with the purpose and principles of the Fisheries Act 1996 and associated obligations.

Preliminary Recommendation

78 MFish proposes that:

a) The TAC for SCA CS is increased from 48 to 239 tonnes meatweight, and within the TAC:

   i) the allowance for recreational fishing is increased from 7.5 tonnes meatweight to 40 tonnes meatweight;

   ii) the allowance for customary fishing is increased from 7.5 tonnes meatweight to 40 tonnes meatweight;

   iii) the allowance for other sources of fishing-related mortality is increased from 11 tonnes meatweight to 41 tonnes meatweight;

   iv) the ACE for quota owners is increased from 22 tonnes meatweight to 118 tonnes meatweight; and

   v) at the end of the current fishing year for SCA CS, the TAC will revert to 48 tonnes meatweight, the allowance for recreational fishing will revert to 7.5 tonnes meatweight, the allowance for customary fishing will revert to 7.5 tonnes meatweight, the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight, and the ACE will revert to 22 tonnes meatweight.

Attachment 2: Gazette Notice

Fisheries (Coromandel Scallop Total Allowable Catch) Notice 2005 (No. F)

Pursuant to section 13 of the Fisheries Act 1996, the Minister of Fisheries, after having regard to the matters specified in that section, makes the following notice.

Notice

1. Title— This notice may be cited as the Fisheries (Coromandel Scallop Total Allowable Catch) Notice 2005.

2. Commencement— This notice shall come into effect the day after the date of its notification in the *New Zealand Gazette*.

3. Coromandel Scallop Fishery defined – The Coromandel Scallop Fishery quota management area is the area as defined in Schedule 4 of the Fisheries (Declaration of New Stock Subject to Quota Management System) Notice 2001.

4. Total allowable catch for the Coromandel Scallop Fishery increased for 2005-06 fishing year—The total allowable catch for the Coromandel Scallop Fishery for the 2005-05 fishing year is increased to 239 tonnes meatweight in accordance with section 13(7) of the Fisheries Act 1996.

5. Total allowable catch for the Coromandel Scallop Fishery reverts – From 1 April 2006, the total allowable catch for the Coromandel Scallop Fishery reverts back to 48 tonnes meatweight in accordance with section 13(8) of the Fisheries Act 1996.

Dated at Wellington this day of 2005.

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Hon David Benson-Pope
Minister of Fisheries

Attachment 3: Draft decision letter on Coromandel scallop fishery in-season TAC review for 2005

XX August 2005

Dear Fishery Stakeholder

2005 IN-SEASON TAC REVIEW FOR THE COROMANDEL SCALLOP FISHERY

This letter outlines the reasons for my final decisions on the Total Allowable Catch (TAC) for the Coromandel scallop fishery for the 2005 season. The Coromandel scallop fishery occupies the area from Cape Rodney in the Hauraki Gulf to Town Point in the Bay of Plenty.

On the basis of the research survey conducted in May this year, I have decided to increase the TAC for the Coromandel scallop fishery from 48 tonnes meatweight to 239 tonnes meatweight. The TAC increase has been allocated as follows:

- the allowance for recreational fishing is increased from 7.5 to 40 tonnes meatweight;
- the allowance for customary Maori fishing is increased from 7.5 to 40 tonnes meatweight;
- the allowance for other sources of fishing-related mortality is increased from 11 to 41 tonnes meatweight;
- the Annual Catch Entitlement (ACE) for quota owners is increased from 22 to 118 tonnes meatweight;
- at the end of the current fishing year for the Coromandel scallop fishery, the TAC will revert to 48 tonnes meatweight, the allowance for recreational fishing will revert to 7.5 tonnes meatweight, the allowance for customary fishing will revert to 7.5 tonnes meatweight, the allowance for other sources of fishing-related mortality will revert to 11 tonnes meatweight, and the ACE will revert to 22 tonnes meatweight.

The change to the TAC and the creation of additional ACE to quota owners should take effect in early to mid August. The Ministry of Fisheries will advise quota owners by letter of the exact date once this is known. The commercial fishing season for the Coromandel scallop fishery closes each year from 20 December. The recreational scallop-fishing season closes each year from 14 February.

In reaching my final decisions for the 2005 season, I carefully considered the available fishery assessment information, advice from the Ministry, and the issues and information put forward by sector groups in submissions. I also had regard to the legislative provisions of the Fisheries Act 1996 (the Act), especially the sections relating to the purpose of the Act, the environmental and information principles, and the setting and amending of sustainability measures.

The Fisheries Act imposes an obligation to provide for the utilisation of fisheries resources as long as sustainability is ensured. The Coromandel scallop fishery is listed on the Second Schedule of the Act, which enables an in-season increase to the TAC when this is sustainable. The research survey that was conducted in May indicates that additional yield will be available from the fishery for the remainder of the 2005 season. It is good news that the research survey has shown a significant increase in the biomass of the Coromandel scallop fishery. It is also encouraging to hear that the tubeworm population that affected the fishery in the late 1990s appears to have declined considerably.

To their credit, commercial quota owners have again taken a pre-cautionary approach when they proposed a modest increase to the available ACE to the commercial sector. All sector groups supported the proposed ACE increase.

Opinion was varied amongst the sector groups regarding the increase in the non-commercial allowances. In my view, the most compelling factor is that there has been a significant increase in the biomass of the scallop fishery. I note that the research survey results relate primarily to the scallop beds mainly fished by the commercial sector. However, trends in scallop abundance in the "recreational" scallop beds are likely to be similar to abundance trends for the surveyed beds. Due to the increased scallop biomass, an increased recreational catch could be attained from a number of factors. For example, it is likely that existing fishers will fish more frequently for scallops.

Given that the recreational catch is likely to increase, it is therefore reasonable to increase the recreational allowance. Accordingly, I decided to increase the recreational allowance by the same proportion as the increase in ACE to commercial fishers – slightly more than a five-fold increase.

There is no quantitative information available on the overall tonnage of Coromandel scallops taken by Maori customary fishers. In the absence of quantitative catch information and where the fishery is of known importance to Maori, the Ministry of Fisheries has a general criterion that the recreational allowance be used as a benchmark to set the customary allowance. I see no strong reason to depart from this general policy for Coromandel scallops. Therefore, the Maori customary allowance was also increased from 7.5 to 40 tonnes meatweight. Both non-commercial allowances will revert to 7.5 tonnes meatweight at the end of the current fishing year for the Coromandel scallop fishery (31 March 2006).

Finally, I am aware that there has been some initial discussion amongst stakeholders regarding the proposed changes to some of the amateur fishing regulations affecting the scallop fishery. In particular, the "primary taker" regulation, the requirement for SCUBA divers to measure scallops on the seafloor, the regulation preventing fishers from processing scallops at sea, and the proposed increase in the daily bag limit from 20 to 30 scallops per fisher. I look forward to considering stakeholder submissions and to making decisions on these management proposals in the near future.

I thank you for your interest in the management of the Coromandel scallop fishery. It's great that there has been such an improvement in the Coromandel scallop fishery, and that now all stakeholders can share in some of the benefits of the improvement.

Yours sincerely

Hon David Benson-Pope
Minister of Fisheries