

TARAKIHI (TAR 1) AMP PROPOSAL – FINAL ADVICE

Minister's Preliminary Views

- 1 MFish received a proposal under the Adaptive Management Programme (AMP) from the **Northern Inshore Fisheries Company Limited** (Northern Inshore). The proposal is to establish a new five-year AMP for tarakihi in TAR 1 that will:
 - a) increase the TACC from 1 398 tonnes to 1 997 tonnes (a 43% increase);
 - b) assume responsibility for updating standardised Catch Per Unit Effort (CPUE) analysis for the TAR 1 fishery; and
 - c) implement catch effort splitting arrangements to avoid localised depletion.
- 2 MFish proposed that the proposal should include the following measures:
 - a) increase the TAC to 2 567 tonnes;
 - b) increase the allowances for the customary Māori catch to 70 tonnes, and for the recreational catch to 470 tonnes;
 - c) increase the allowance for unreported catch and incidental mortality to 30 tonnes to account for the increased commercial catch;
 - d) monitor the performance of the commercial fishery CPUE index under the AMP with the AMP proponents responsible for collecting and analysing data for annual review by the relevant working group;
 - e) workable tools for monitoring any effect that the increased TACC might have on the non-commercial interests in the fishery; and
 - f) the proponents provide the detail of how they will provide for their commitments to restrict fishing areas to existing tarakihi target trawl grounds, and spread catch under the increased TACC appropriately over those areas, to be evaluated and monitored annually.
- 3 In your letter expressing your preliminary views, you noted that you had considered the same proposal last year to increase the TAR 1 TACC. You explained that you declined the proposal because of your concerns that an increased TACC at the level proposed might affect the interests of non-commercial tarakihi fishers. The proponents did not provide you with details to indicate how they would spread any increased catch to avoid localised depletion and address the potential for effects on other sector's interests.
- 4 In particular, you noted that as a minimum you would expect the catch increase to be taken from areas of lesser importance to the non-commercial sector. For example, you considered that the increased catch could be restricted to the

northern west coast as one possible way of reducing concerns about immediate effects on non-commercial interests in the east Northland and Bay of Plenty areas.

- 5 You also asked stakeholders to comment on the concern that the AMP programme provides for a “default” re-allocation of the TAC – the additional catch being allocated to commercial fishers. You indicated that AMPs should not pre-determine future allocations between sectors. You provided two options to address this issue.

Key Issues

- 6 The key issues to be considered for the TAR 1 proposal are:
- a) whether or not the catch spreading arrangements based on the existing trawl areas proposed by Northern Inshore address your concerns;
 - b) whether or not the effect of the proposed TACC increase on the non-commercial fishery can be monitored;
 - c) whether or not AMP proposals are appropriate for large established inshore fishstocks that have substantial non-commercial interests; and
 - d) whether or not the allowances for Māori customary fishing and recreational fishing for TAR 1 should be changed on the basis of averaging the catch estimates from the 1996 and 1999-00 recreational fishing surveys arising from the methodological difficulties with both surveys.

Management Options

Submissions

- 7 **Ngatiawa** (Ngatiawa) has a mixed view about the merits of the proposal.
- 8 **Western Bay Fishing Limited** (Western Bay – a Bay of Plenty trawl fishing operator), **Te Ohu Kai Moana** (TOKM), the **Seafood Industry Council** (SeaFIC), the **Northern Inshore Fisheries Company Limited** (Northern Inshore), and **Sanford Ltd** (Sanford) support the proposal. Industry supports the proposal as they believe the AMP framework provides a good way of developing the TAR 1 fishery, and that recreational concerns can be mitigated by spreading the catch over the existing fishing areas.
- 9 **Blue Water Marine Research Ltd** (Blue Water), the **New Zealand Royal Forest and Bird Protection Society** (RFBPS - Head Office) and **The Environment and Conservation Organisations of NZ** (ECO), **KT Williams** (KT Williams – a Bay of Plenty recreational fisher), the **New Zealand Recreational Fishing Council** (NZRFC), the **New Zealand Big Game Fishing Council** (NZBGFC), and **Option4** (option4 – a recreational fishing organisation) oppose the proposal. These parties generally believe that the existing recreational

and commercial fisheries for TAR 1 are not spatially separate, and believe that the proposed TACC increase will impact upon their catch rates.

Rationale for Management Options

TAC

Submissions

- 10 **Ngatiawa** has no concerns as long as the figure [TAC] is sustainable. The iwi notes that there have been many instances in the past where the limits have proven to be not sustainable, and considers it better to get it “right” in the first instance.
- 11 **Western Bay** notes that the abundance and size of tarakihi has greatly increased in the Bay of Plenty since the start of the QMS, indicating that the stock is in a very good condition.
- 12 **Northern Inshore** considers that the statement in paragraph 34 of the Minister’s letter (“... concerned that any fishing down of the stock through an increase in catch will over time reduce the abundance of tarakihi)” contradicts MFish’s statement in the IPP that “... if the stock is above the MSY level and were to be moved towards that level, theory says that the availability of tarakihi might increase”. [SeaFIC also notes this point and makes a similar comment]. Northern Inshore says that because the point of an AMP is to identify where the stock is with respect to MSY, the Minister’s statement is quite unhelpful as it appears to assume that the stock is currently below MSY.
- 13 **Blue Water** asks whether MFish has a harvest strategy for TAR 1 in relation to the AMP proposal and the surplus production model, which relies upon a number of assumptions. For example, tarakihi movement into TAR 1 from less heavily fished areas could mask the effect of the higher catches under the AMP.
- 14 **K T Williams** notes that the 1983 discussion paper “Future Policy of the Inshore Fishery” states that a long term yield for TAR 1 is 750 tonnes, and questions how this can be reconciled with the proposed TACC of 1997 tonnes. K T Williams notes that over this period the recreational sector has seen the tarakihi bag limit reduced from 30 to 20 tarakihi, such that it seems the bag limit reduction is being used to increase the TACC. K T Williams requests that the Bay of Plenty TACC be capped at 400 tonnes.
- 15 The initial joint submission from the **NZRFC–NZBGFC–option4** notes that tarakihi is a highly mobile fish travelling vast distances (including migrations between Kaikoura, Bay of Plenty and Northland). The recreational groups are concerned that the additional fishing pressure will lead to a reduction eventually across the entire fishery due to the mobility of the species. The group is aware that there are non-commercial concerns in some areas of TAR 1.

- 16 The recreational groups are concerned that the average tarakihi size will also reduce as the biomass is reduced, and that the recreational catch will be made up of smaller fish. They note that tarakihi are not fast growing, reaching sexual maturity at an age of 4 to 6 years with a maximum age of 40+ years.
- 17 **Option4** notes that there are no decision rules established for the TAR 1 proposal.
- 18 **NZRFC** notes that TAR 1 is a fishery that has already been fished for 50-60 years and believes that it has probably already been fished down to MSY. If TAR 1 is not already down to MSY, then NZRFC believes it must be very close to it after 50 years of effort.

MFish Discussion

Current status of TAR 1 in relation to B_{MSY}

- 19 The 2002 Fishery Assessment Plenary reported that although the TAR 1 stock size is uncertain, there is a reasonable probability that the TAR 1 biomass is greater than the size that will produce MSY. **Northern Inshore's** supplementary paper reports that there are no known sustainability concerns about TAR 1. Northern Inshore's second submission reports that there is uncontroversial evidence that TAR 1 may be under-utilised.
- 20 However, recreational submissions and the representatives who attended a meeting on 30 July 2003 disputed the current status of TAR 1 in relation to the biomass that can produce the MSY (B_{MSY}). The recreational representatives argued that TAR 1 was a long established stable fishery that was most probably at B_{MSY} for east Northland and the Bay of Plenty. Commercial interests commented that tarakihi on the west coast had been fished only lightly in the past; the recreational representatives did not dispute this point.
- 21 There was also considerable discussion at the 30 July meeting about the development of the AMP proposal in the Fishery Assessment Working Group process. The recreational fishers noted that there had been very little recreational representation at the Inshore Working Group meetings because they could not afford the financial costs of attending the Working Group meetings in Wellington. Industry commented that the minutes and draft Working Group reports are reasonably widely circulated by email and the postal system to Working Group members for written comments. Therefore, industry considered that the recreational sector could have become involved in the Working Group process.
- 22 The workings of the Inshore Working Group and Fishery Assessment Plenary process (the key final meeting in the Fishery Assessment process) are important to the TAR 1 proposal. At issue, is whether or not there is a "reasonable probability" that TAR 1 is above B_{MSY} . This matter is important because a key

part of the AMP framework¹ is that there must be a “reasonable probability that current biomass is greater than the size that will support the MSY”.

- 23 Given the long and relatively stable history of TAR 1 over more than 30 years, the conclusion about the TAR 1 stock currently being above B_{MSY} is probably reasonable. Stable catches and stable CPUE do not reveal information about how close the biomass might be to B_{MSY} . The effect of the proposed TACC increase can thus not be predicted. Indeed, the proposal seeks to determine that effect.
- 24 MFish has researched the 1983 yield estimates for TAR 1 referred to in the submission by KT Williams from the document titled “Future Policy for the Inshore Fishery: A discussion paper August 1983”. The combined long-term yield estimates for areas within TAR 1 do tally to 750 tonnes, but this information is now 20 years out of date, and did not allow for any non-commercial catch. In addition, it is known that a commercial catch averaging 1401 tonnes was sustained throughout the 1990s.

Management at or above B_{MSY}

- 25 **Blue Water** asks whether MFish has a harvest strategy for TAR 1. MFish considers that a key management element for any fishery is that there should be an overall harvest or management strategy. MFish intends to develop stock management strategies for all stocks in the near future. MFish notes that it is likely to propose strategies for exploiting stocks at the MSY level as the minimum standard. Alternatively, stakeholders can develop harvest strategies as part of a Fisheries Plan (as provided by section 11 of the 1996 Act) for a fishstock. The management strategy for a stock could consider the most appropriate target biomass level for the stock and the rate of movement towards that level.
- 26 Through much of the 20th century, obtaining the MSY from fishstocks was the management strategy of choice. However, partly because of the uncertainties in determining MSY using stock assessment techniques available then, many fisheries were overfished due to this management strategy. There is now a growing international recognition that the B_{MSY} level should be a minimum level, and that it may be better to manage fisheries above B_{MSY} for long-term sustainability purposes and to contribute to an ecosystem approach to fishery management. In recognition of this international trend, section 13(2) of the 1996 Act explicitly allows for fishstocks to be managed at or above B_{MSY} , having regard to the interdependence of stocks.
- 27 The issue of management at or above B_{MSY} is relevant to the AMP proposal. The proposal seeks to increase the TACC to detect the effect that greater catch might have on the trawl CPUE as the measure of relative abundance. The change in CPUE could be used to determine parameters that would contribute to

¹ Specified by MFish’s document: “Revised Framework for the Adaptive Management Programme (December 2000)”.

determining the stock status and yield for TAR 1. The proposed TACC increase could result in the stock biomass moving down towards the B_{MSY} level. Nonetheless, MFish notes there has been no significant discussion amongst stakeholders about the alternative strategy of managing TAR 1 above B_{MSY} . In general, the main benefit of managing above B_{MSY} is that long-term sustainability is more certain. The cost is that there would be a lower yield and total catch available to stakeholders. MFish considers that for shared fisheries, there should be significant discussion amongst stakeholders about the possible management strategies.

Decision rule for TAR 1

- 28 In a related matter, MFish notes that a decision rule using the trawl CPUE index was initially provided in 2002 for the TAR 1 proposal. In summary, the proposed decision rule originally stated that if the standardised CPUE index falls by 30% or more, that the AMP is subject to review by the Inshore Working Group. However, the Plenary agreed that no decision rule was necessary for TAR1 because it considered “a full analysis of all information is a more effective way to review the performance of the stock”.
- 29 However, MFish considers that decision rules are important as they can provide agreed triggers for subsequent management decisions based on the key CPUE index used to monitor changes in stock status. If the trigger were to be invoked, the agreed management action would be taken. MFish considers that a decision rule for the TAR 1 proposal would provide some certainty about the action to be taken in given circumstances. If you decide to approve the TAR1 AMP proposal, then MFish recommends that the Working Group reconsiders appropriate decision rules to be employed and considers reviewing the CPUE index on an annual basis.

Clarification of Minister’s comment in relation to MFish’s comment on TAR 1

- 30 Regarding the inconsistency noted in **SeaFIC’s** submission about the effects of the proposed TACC increase, MFish makes the following clarifications. The comment (“... that any fishing down of the stock through an increase in catch will over time reduce the abundance of tarakihi”) from paragraph 34 of your letter could be more explicit if the word “abundance” was replaced by the word “biomass”. The following sentence “... if the stock is above the MSY level and were to be moved towards that level, theory says that the availability of tarakihi might increase ...” from paragraph 15 of the IPP should be made more explicit by deleting the word “availability” and replacing it with “yield” or “catch”.
- 31 The MSY concept is that the population structure of the fishstock is changed as a stock is fished down towards the MSY level. At virgin biomass, large old-aged slow growing fish that are not particularly productive dominate the stock, but the overall biomass of the stock is at its maximum. As a stock biomass is fished down from virgin biomass towards the B_{MSY} level, a higher yield is provided by

the greater productivity of smaller, younger, faster-growing fish that contribute to the yield, but not the maintenance of a higher biomass.

TACC and allowances

Submissions

- 32 **Northern Inshore** notes that the analysis in the original proposal demonstrated that a significant proportion of fishing effort for the recreational and commercial TAR 1 fisheries are geographically separated, with the exception of the Bay of Plenty and east Northland. Maps 1-8 in Northern Inshore's supplementary paper show the spatial location of the target trawl TAR 1 fishery based on analysis of effort data for the past five years. This shows the separation between the inshore recreational fishery (assumed to occur in depths less than 50 metres) and the commercial target TAR 1 fishery.
- 33 Under the proposal, all vessels targeting TAR 1 will complete TCEPRs providing detailed latitude and longitude information for each trawl tow. However, Northern Inshore considers that Maps 1-8 will not be comparable to those mapped after the proposal commences as all data will be mapped by latitude and longitude, not statistical area. Northern Inshore considers that the separation is caused primarily by topographic effects - the commercial target trawl TAR 1 fishery traditionally operates on the flat grounds, whereas the recreational fishery exists around the foul and reefs where trawlers cannot operate. Northern Inshore considers that this means there is a very low probability that trawl fishing will expand into areas traditionally used by recreational fishers.
- 34 Northern Inshore notes that the existing fisheries regulations also provide effective separation between the sectors. A range of prohibitions for commercial fishers exist including all trawl, drag and seine netting within 1 nautical mile of the west Auckland coast, Hauraki Gulf and a significant number of inshore harbours and bays. Commercial fishing is also excluded from a series of marine parks and marine reserves in the region. The regulations are provided in Appendix C of Northern Inshore's supplementary paper.
- 35 Northern Inshore notes that the following management measures will be used to ensure that fishing is restricted to the existing trawl grounds: communication strategy to Northern Inshore shareholders; all the major TAR 1 quota holders to agree to a Memorandum of Understanding; all trawl vessels targeting TAR 1 will be required to provide latitude and longitude catch effort data; research services to co-ordinate the data collection, input and analysis, including managing the reporting requirements, will be tendered.
- 36 Northern Inshore considers that currently under the QMS, owners of TAR 1 quota may harvest their ITQ from any location (subject to regulations) within TAR 1, which could mean all TAR 1 fish harvested from one statistical area. Nonetheless, Northern Inshore proposes that the historical spreading of the TAR 1

catch will generally continue. However, Northern Inshore notes that effort may increase outside the Bay of Plenty and East Northland disproportionately to historical catches and this would not be considered adverse to the proposal. An example would be a possible disproportionate increase in catch from TAR 1 on the west coast where the impact on other sectors spatial access would be considered nil.

- 37 Northern Inshore believes that for the direct comparison of data, two years of data will need to be collected as the first year will be incomparable to previous data due to the change in data collection methodology.
- 38 Northern Inshore obtained independent advice from a respected international fisheries scientist, and based on his advice are not proposing to monitor recreational CPUE. Northern Inshore considers monitoring recreational CPUE would be a very complex and difficult project to achieve statistically robust data. They consider the economic costs of undertaking a recreational CPUE project far outweigh the economic and management benefits from an increased TACC. Specific details which were identified as prohibitive were the sample size required, large fishery distribution (time and spatial size), broad range of abilities/success in the fishery, selection of possibly biased sample, and robust information.
- 39 Northern Inshore does not consider it appropriate to use the findings of the 1999-00 recreational fishing survey as they are currently being reviewed and they understand the findings are contentious, uncertain, and have not been accepted and approved by the Fisheries Assessment Working Group process. Northern Inshore considers that the 1996 recreational survey is the best available accepted and approved information, and that it be used to derive historic recreational harvest levels for the TAR 1 recreational fishery.
- 40 Northern Inshore notes that the 2003 MFish IPP acknowledges the doubts surrounding the 1999-00 recreational survey, but also notes that the IPP has averaged the 1996 and 1999-00 surveys to estimate recreational catches. This issue highlights concerns relating to the collection of recreational effort and harvest data and its subsequent use. It is important to have reliable, robust recreational effort and harvest data. The frequency of the surveys and the statistical robustness of any future recreational surveys should be further considered through the Recreational Research Planning Group process for all recreational stocks, not just TAR 1.
- 41 Northern Inshore prefers that the current commercial CPUE analysis be used as an indicator for any changes in stock structure as a de facto management tool to measure the effect the AMP increase may have on the recreational catch. The benefits of using the commercial CPUE as an indicator of change are the robustness of the data, the frequency of the analysis, and it is already being undertaken as part of the AMP. Northern Inshore assumes that there is mixing of stock between the recreational fishery and the commercial fishery within localised

fisheries (ie. east Northland, Bay of Plenty) as tagging programmes in the late 1980's found that tarakihi are capable of moving long distances. Northern Inshore considers that any changes in the commercial CPUE would be used as a direct indicator for the neighbouring recreational fishery. Northern Inshore would update this CPUE analysis annually and report it to the Working Group on an annual basis. The working group would consider the findings and subsequent management requirements resulting from the monitoring.

- 42 Northern Inshore represents over 88% of the TAR 1 TACC quota owners. The company has also provided a signed Memorandum of Understanding outlining the arrangements between the six major shareholder participants (representing 80.49%), which will ensure that the TAR 1 programme commitments will be met.
- 43 Northern Inshore made a second submission providing analysis of the key issues arising from the IPP and Minister's letter based on consultation and legal advice. The Company believes that there is unfair emphasis being placed on the concerns of recreational fishers, and that many of their concerns are outside the scope of this AMP proposal. In varying a TACC, the Minister is required to take into account recreational interests (section 20 and 21 of the 1996 Act). However, Northern Inshore considers this does not mean that recreational interests are to be elevated above all others.
- 44 Northern Inshore believes that an AMP is a highly effective tool for achieving the core purpose of the 1996 Act, namely utilisation of fisheries resources while ensuring sustainability. The Company believes the unfair emphasis on recreational interests at the expense of the utilisation of the resource through commercial fishing is contrary to the purpose of the Act. Northern Inshore notes that there is uncontroversial evidence that TAR 1 may currently be under-utilised, and that the TAR 1 proposal will improve the information base on which future sustainability measures may be made.
- 45 Northern Inshore considers it incorrect to assume, as the Minister and the IPP appear to, that an increased TACC under an AMP will be "*at the expense of the interests of other fishing sectors*" (paragraph 33 of the Minister's letter). They consider that recreational and commercial interests will share the benefit of the increased information on the stock being gathered and reviewed annually. The Company notes that the recreational sector is currently not subjected to any meaningful management controls nor any constraints on extractions, and are able to continue to increase their "share" of the fishery. Northern Inshore believes that the only sector which has been able to increase their catch "*at the expense of the interests of other fishing sectors*" is the recreational sector. However, Northern Inshore has not proposed any constraints on the recreational sector due to their contention TAR 1 is under-utilised.
- 46 Northern Inshore would be extremely concerned if the existence of recreational interests in a "shared fishery" were seen as precluding the implementation of an AMP. Northern Inshore's view is that both the IPP and the Minister's preliminary

view appear to be predicated on that basis, and that this approach would be inconsistent with the purpose of the Fisheries Act.

- 47 Northern Inshore objects in the strongest terms to the suggestion by the Minister that if it is not possible to “mitigate the concerns about effects” of an increased TACC on non-commercial interests in TAR 1, directed research may be required (paragraph 35 of the Minister’s letter). The Company considers that an AMP is designed to test those concerns and allow for mitigation if proven. Northern Inshore encourages Crown-funded research on recreational tarakihi fishing in TAR 1. The Company does not accept that an automatic consequence of any issues or concerns remaining unresolved is that the AMP should be refused and a directed research programme be required.
- 48 **Western Bay** states that in the 45 years the operator (Don Gwillam) has been involved in the Bay of Plenty trawl fishery, he has never had any conflict with recreational fishers over tarakihi. The reason is that the trawlers do not fish over foul ground, and trawl in depths and distances too great for the majority of recreational fishers. All target trawling for tarakihi is done along the edge of the continental shelf (15-25 miles from the coastline, and 100-250 metres deep). Western Bay submits that recreational fishing for tarakihi is mostly done over foul ground in depths of 20–70 metres.
- 49 **TOKM** has signed a Memorandum of Understanding with Northern Inshore regarding operating arrangements for the AMP proposal, which will be incorporated into ACE contract conditions.
- 50 **SeaFIC** considers that if the results from the 1999-00 recreational fishing survey are considered unreliable, then there is no justification to use them to determine the recreational catch level (by averaging the 1999-00 results with the results from the 1996 survey).
- 51 **Sanford** has signed the Memorandum of Understanding with Northern Inshore ensuring that Sanford meet the commitments made. Sanford supports the comments made by SeaFIC on the AMP proposal.
- 52 Sanford considers that the concessions made by Northern Inshore to the non-commercial fishers are significant, and potentially could have adverse implications for TAR 1 quota holders. For example, the proposal to operate within existing fishing grounds, removes an existing right for tarakihi fishers to freely fish their quota from any part of the TAR 1 area. Sanford considers the proposed catch spreading further restricts flexibility for fishers and potentially imposes additional costs.
- 53 **Blue Water** states that the “Analysis of Spatial Separation” in Northern Inshore’s supplementary paper is totally wrong as it is based on the assumption that recreational catch is in depths less than 50 metres. Most of the recreational catch

is in water of 60–100 metres. Sounders find fish in modern recreational boats, and people fish where the fish are.

- 54 Blue Water notes that Northern Inshore’s paper does not say where the data for Maps 1-8 comes from. Blue Water believes the data originate from TCEPRs, which are mainly used by larger vessels – data from smaller vessels is therefore missing. Blue Water believes that the smaller trawlers will fish in shallower water when targeting TAR 1. Blue Water notes that there is some trawl effort for TAR 1 near Whakatane and Opotiki.
- 55 Blue Water states that at the meeting on 21 May, commercial representatives claimed that there would be no effect on recreational CPUE by increasing the TACC. However, Blue Water now says that the industry is saying that changes in recreational CPUE can best be monitored by looking at trawl CPUE only. Blue Water argues that these assumptions can only be true if the 43% increase in TACC has no effect on either recreational or commercial CPUE. Blue Water notes that the whole point of such a large increase in the commercial catch was to fish down the stock and provide contrast in the trawl CPUE index. Blue Water considers that if this is the purpose, then industry have to admit that there will be an adverse effect on recreational fishers and this proposal must be rejected.
- 56 Blue Water is critical of an unnamed international fisheries scientist [as stated in Northern Inshore’s supplementary paper] who does not like the idea of monitoring recreational CPUE for TAR 1. It is noted that MFish is currently monitoring the kahawai fishery from length and age distributions of the recreational catch, and that the Recreational Research Planning Group is looking toward targeted surveys for specific species. Blue Water considers that quantifying the catch per fisher per hour targeting tarakihi and monitoring the size distribution of recreationally caught tarakihi is achievable.
- 57 **KT Williams** is concerned that his request for the commercial trawl plots from the western Bay of Plenty was refused by MFish Auckland. He believes that a significant proportion of the Bay of Plenty commercial tarakihi catch is taken from water depths of 10-40 metres, notably close to the shore between Waihi Beach and Whangamata. He is aware of trawlers working this area at night, sometimes catching as much as 2–3 tonnes of tarakihi. This activity has a detrimental effect on recreational fishing in this area, which is popular and of easy access for recreational fishers.
- 58 The initial joint submission from the **NZRFC–NZBGFC–option4** considers that MFish’s comment (“most tarakihi catch is taken by trawler and the existing trawl lines protect important non-commercial areas.”) is incorrect. They ask that you direct MFish to provide supporting scientific evidence or that MFish desist from making such claims in advice to you without stating it is an assumption of someone in MFish. They consider MFish’s advice is incorrect because most non-commercial tarakihi catches are taken outside the trawl exclusion areas. This

is because tarakihi live deeper than other inshore species, consequently relatively few tarakihi are within the trawl exclusion line most of the time.

- 59 The recreational groups understand that much of the trawl effort targeting tarakihi is in water depths of 120 to 180 metres, which is a narrow band, particularly in the western Bay of Plenty. If catch rates decline, the groups are concerned that tarakihi trawl effort may expand inshore where the trawlers will be competing directly with non-commercial fishers. The groups are also concerned that the proposed TACC increase could result in an increase in the trawl bycatch for species such as red gurnard that have never been constrained under the QMS. The groups state that gurnard have now disappeared from the Hauraki Gulf.
- 60 **NZRFC** considers the statement made in Northern Inshore's supplementary paper that recreational anglers do not fish outside the 50-metre mark is totally wrong. NZRFC notes that tarakihi are a mobile species that can be inside the 20 metre mark and then a week later they can be out to 50 metres. The NZRFC's President (Ross Gildon) personally fishes, along with many others, in waters that are 120 metres deep.
- 61 NZRFC also considers another statement in the supplementary paper (that recreational anglers only fish over foul ground and therefore trawlers would not affect the recreational ability to catch tarakihi) is totally misleading. NZRFC believes that the majority of tarakihi caught in the Bay of Plenty are caught over either sandy or mud bottoms, and recreational fishers are therefore in direct spatial conflict with trawlers.
- 62 NZRFC provides the following description of recreational fishing for tarakihi. Most recreational fishers targeting tarakihi slow the boat right down to a crawl waiting for a school of tarakihi to show up on the sounder. The fishers then stop the boat and drift fish. If the school do not stay under the boat, the crew will relocate the school and go through the same process again.
- 63 NZRFC does not agree with Northern Inshore that MFish is wrong to establish the recreational tonnage by using an average between the 1996 and 1999-00 surveys. NZRFC considers the Company wants to use the 1996 survey because it is a lower figure and makes the recreational sector look a smaller stakeholder. NZRFC believes that the 1996 figure is too low when compared with earlier surveys, and that the 1999-00 survey is closer to the real tonnage of TAR 1 taken.
- 64 NZRFC also has difficulty with the comments made by an overseas scientist that it is not feasible to carry out work on the present recreational catch. A number of NZRFC members have been involved with ramp survey work on kahawai for a number of years. NZRFC does not see it as difficult to question all returning anglers as to whether they have been targeting tarakihi and measuring any fish caught. NZRFC are aware that there have been 28 boat ramps between Mangonui and East Cape surveyed to obtain statistics on the recreational KAH 1 catch. NZRFC considers that with a slightly modified interview form and some

additional ramps on the west coast that sufficient data could be obtained to satisfy their concerns. NZRFC considers that the data obtained probably would not be statistically robust data.

- 65 NZRFC considers it strange that the proposal suggests that there will be a difference in any new maps because they will be on GPS marks rather than statistical areas. NZRFC believe that if the shots in the past are correct as far as statistical areas, then there should be a similarity to the location of the shots in the future using GPS. NZRFC expect analyses to be available at the end of the first twelve months.
- 66 In relation to the TAR 1 proposal, NZRFC notes that recreational anglers are also not allowed to fish in marine reserves, and fails to see how these reserves create effective separation. They also fail to see what the 46 metre rule has got to do with trawling for tarakihi as they are unaware of any vessels in excess of 46 metres targeting tarakihi.

MFish Discussion

- 67 Section 21 of the 1996 Act stipulates the matters you must take into account before setting or varying a TACC for a stock. You shall have regard to the TAC for the stock, and allow for Māori customary non-commercial fishing interests, recreational interests, and all other mortality to the stock caused by fishing. Various aspects of these factors are discussed below.

Spatial separation between sectors and monitoring recreational CPUE

- 68 As evidenced above by comments in submissions, there was no agreement between the commercial and recreational sectors as to the degree of spatial separation between the sectors. The industry position is that the recreational fishery occurs in depths less than 50 metres. The recreational sector's view is that most of the recreational tarakihi catch is from 60-100 metres of water. MFish is not aware of any quantitative information that could resolve this matter. The diarists who participated in the recreational fishing telephone/diary surveys were not required to provide detailed latitude and longitude information about their fishing locations or depths.
- 69 There was also no agreement between the sectors as to the merits and feasibility of monitoring catch rates from the recreational tarakihi fishery. In the supplementary paper, **Northern Inshore** states that it would be a very complex and expensive project to achieve statistically robust data due to various factors. In contrast, the recreational sector considers that a recreational fishing survey to obtain catch rate and fish size information on TAR 1 would be possible.
- 70 As part of the TAR 1 AMP proposal, MFish considers a survey to monitor recreational TAR 1 CPUE and fish size from boat ramps, especially in the Bay of Plenty, would be achievable. This is because the diary surveys have shown that

most of the TAR 1 catch taken by recreational fishers is caught by boat fishers. In the Bay of Plenty, there are only a limited number of boat ramp access points where boats can be launched. Costs could be further reduced because data from previous boat ramp surveys could be analysed to develop a profile of the times and ramps that are most frequently used by fishers targeting or catching tarakihi. MFish considers it would be possible to monitor recreational CPUE through a combination of relatively inexpensive localised boat-ramp interview and/or diary surveys.

- 71 MFish considers that monitoring the performance of the recreational fishery (ie, catch rates, size of fish caught) should be an important component of the TAR 1 AMP proposal. In your letters to stakeholders in 2002 and 2003, you have consistently stated that the affects on the non-commercial fishery need to be considered as part of the proposal. This issue has not been fully considered in the past, certainly by the Inshore Working Group, because this group's focus is primarily on stock assessment matters *per se*. Working Groups are not required to consider the full spectrum of fisheries management matters that are required to be considered by the 1996 Act.
- 72 Monitoring the recreational TAR 1 fishery is potentially important because s 21 of the 1996 Act states that the Minister shall allow for recreational interests in setting or varying the TACC. The Act does not define recreational interests, and the allowances are open to the Minister's discretion. Determining recreational interests could require consideration of more than just an estimate of the recreational catch tonnage. Consideration can include a range of issues that could affect non-commercial interests such as the quality of recreational fishing as indicated by recreational catch rates and fish size. A good way to obtain this information is by a survey specifically designed to monitor these performance factors for the recreational fishery. Ideally, this information should be gathered before any TACC increase in order to better assess whether or not the increase has an effect on the non-commercial fishery – this is a basic for good statistical design.
- 73 A monitoring programme could also be implemented to monitor the Māori customary fishery. However, MFish acknowledges that this would be a complex procedure given the difficulty of developing a method to regularly and consistently sample Māori customary fishers. MFish is certainly open to considering any good ideas on ways to sample the customary fishery. In the absence of a dedicated Māori customary fishery monitoring programme, MFish considers that monitoring the rod and reel or handline recreational fishery is likely to provide a reasonable insight into the performance of the Māori customary rod and reel or handline fishery.
- 74 **Northern Inshore's** supplementary paper states that the current commercial trawl CPUE analysis be used as a "de facto" management tool to measure the effect of the AMP increase on the recreational tarakihi fishery. MFish considers that this might not provide a reliable indicator because trawling is a much more powerful

method and completely unrelated to recreational rod and reel or handline fishing. In addition, for a variety of reasons, the trawl CPUE index may remain relatively stable whereas a recreational CPUE index could decline if the TAR 1 biomass were to be progressively fished down. For example, a skipper of a trawler that was fishing TAR 1 on a regular basis may be able to stay with the main aggregations of tarakihi and thereby maintain a reasonably constant CPUE catch rate. In contrast, recreational fishers fishing infrequently, even allowing for the use of sounders, are likely to experience more variable fishing success.

- 75 MFish has not been able to find the direct quote (“most tarakihi catch is taken by trawler and the existing trawl lines protect important non-commercial areas.”) referred to in the initial joint submission from the **NZRFC–NZBGFC–option4**. MFish considers that the concern relates to paragraph 21(k) in the IPP concerning the existing areas closed to trawling by fisheries regulation. MFish noted these controls because section 11(1)(b) requires that, when setting a sustainability measure, you take into account any existing controls that apply to the stock or area concerned.
- 76 The trawl closed areas referred to in paragraph 21(k) of the IPP are within the TAR 1 management area. However, at no stage did MFish in this paragraph, or the IPP generally, imply that because of these controls the increased TACC would have a minimal impact on non-commercial fishers. MFish acknowledges that all of these trawl closed areas are in relatively shallow areas where tarakihi are unlikely to be a major component of the recreational catch. MFish is also aware that there is a large amount of recreational fishing outside these closed areas.

Existing commercial fishing rights

- 77 **Northern Inshore’s** supplementary paper notes that the revised proposal could potentially have perverse implications for TAR 1 quotaholders. The paper notes that the proposal to operate only within existing fishing grounds removes an existing right for tarakihi fishers to freely fish their quota from any part of the TAR 1 area.
- 78 MFish acknowledges that as an extreme example the industry could potentially take all of the existing TAR 1 TACC from a small part of the overall QMA. However, the right to fish a certain amount of ACE (part of the TACC) is subject to other considerations that can affect a fisher’s ability to fish anywhere within a QMA. For example, the 1996 Act sets out three environmental principles that must be taken into account by you in a decision-making capacity. Consistent with these environmental principles, your predecessor made a decision to close an area to trawling at Spirits Bay to maintain biological diversity.
- 79 Other examples of how legislation could impact on commercial fishers’ ability to exercise their right to fish their quota from any part of the TAR 1 area are marine reserves, mātaihai, and the possible outcomes of the dispute resolution sections (Part VII) of the 1996 Act. The dispute part of the Act provides a way for an

affected party to seek redress if another party is having a significant adverse effect on their fishing activities. In recent years, the dispute procedure has been used as the basis for implementing the closed area regulations to resolve the Tauranga Harbour, Coromandel scallop, and eastern Bay of Plenty (trawling) disputes.

Catch spreading and effects on non-commercial interests

- 80 In your letter to stakeholders expressing your preliminary views, you made it clear that you declined the proposal in 2002 because of your concerns that an increased TACC for TAR 1 might affect the interests of non-commercial fishers. You also indicated that as a minimum, you would expect the catch increase to be taken from areas of lesser importance to the non-commercial sector. For example, you considered that the increased catch could be restricted to the northern west coast as one possible way of reducing concerns about immediate effects on non-commercial interests in the east Northland and Bay of Plenty areas.
- 81 The supplementary paper from **Northern Inshore** states that the additional commercial catch of TAR 1 would be spread across the existing trawl fishing grounds. A Memorandum of Understanding amongst the five main TAR 1 quota share owners (holding 78% of the quota (from Appendix A in the supplementary paper) shows that these entities² would abide by **Northern Inshore's** catch spreading and monitoring arrangements for TAR 1. A further 10% of the quota is held by other quota share owners affiliated to Northern Inshore. On the basis of the Memorandum of Understanding, MFish accepts that it is very likely that the increased TAR 1 catch would be spread across existing fishing areas. Most of the trawlers involved in catching tarakihi are now required to report the start and end point (by latitude and longitude) of each trawl tow. Plotting the latitude-longitude information (similar to the eight maps in the supplementary paper) as part of the annual review of TAR 1 would show whether there had been any significant departures from the industry's catch spreading pledge.
- 82 However, the promise of fishing the increased TAR 1 quota only on the existing fishing grounds has not addressed the point you made in your letter expressing your preliminary view for TAR 1. You suggested that the industry could take the extra quota from the northern part of the west coast in TAR 1 – this area is well away from the main recreational fishing areas for tarakihi on the east coast. Northern Inshore's supplementary paper has loosely indicated that some of the increased TAR 1 TACC could be taken off the north-west coast. However, the supplementary paper does not at any stage guarantee that all of the increased TACC would be taken from the north-west coast.
- 83 The problem with taking the increased TACC from the existing trawl areas is that a greater TAR 1 commercial catch in the Bay of Plenty (the main existing commercial fishing area for TAR 1) could have an adverse effect on non-

² Moana Pacific, Sanford, North Harbour Nominees (linked to Simunovich), Treaty of Waitangi Fisheries Commission, Esperance Fishing (linked to Antons).

commercial interests in the fishery as outlined below. The Bay of Plenty catch accounted for 45% of the commercial estimated catch from 1989-90 to 1998-99 (from Table 3 and 10 in the supplementary paper). Part of the commercial catch is taken in waters less than 150 metres deep that may be fished by recreational fishers (Maps 1-8 in Northern Inshore's supplementary paper). Under Northern Inshore's proposed catch spreading arrangements, it is therefore likely that an additional 230 tonnes of TAR 1 would be taken from the Bay of Plenty by the commercial sector. Around 85% of the recreational TAR 1 catch is taken from the Bay of Plenty based on the 1992-93 and 1996 recreational fishing telephone / diary surveys. The increased commercial catch in the area could adversely affect the availability of tarakihi for non-commercial fishers.

- 84 Another key factor in assessing the likelihood of an effect on the non-commercial sectors is the mobility of tarakihi. It is known that tarakihi is not a “sedentary” species that spends most of its life in a particular harbour (eg, flounder) or on a particular reef (eg, red moki). Tagging programmes in the late 1980s found that tarakihi are capable of moving long distances. Therefore, fishing down an area (eg, waters deeper than 150 metres) of part of the stock could have an effect on tarakihi abundance in other areas (eg, shallow waters less than 100 metres deep). The mobility of tarakihi is therefore a key factor that needs to be considered, even if the commercial and non-commercial fisheries are completely spatially separate. The consequence is that the mobility of tarakihi could potentially mask the reliability of a CPUE index.

Non-commercial allowances

- 85 As part of the review process in 2002 for TAR 1, you set the TAC at 1 773 tonnes and set the allowances for recreational fishing at 310 tonnes, Māori customary fishing at 45 tonnes, and other sources of fishing-related mortality at 20 tonnes. That was the first time that a TAC had been set for TAR 1. In 2002, you declined the AMP proposal and retained the existing TACC at 1 398 tonnes. The recreational allowance was set in 2002 on the basis of the 1996 recreational fishing telephone / diary survey, which MFish considered to be the best available data at that time on the existing level of the recreational catch. The Māori customary allowance was set as a 15% proportion of the recreational allowance on the basis of similar allocations in the snapper fisheries.
- 86 For 2003, MFish proposed in the IPP that, in considering the AMP proposal, you change the recreational allowance to 470 tonnes, and change the Māori customary allowance to 70 tonnes. The proposed Māori customary allowance at 70 tonnes was set as a 15% proportion of the proposed recreational allowance. The basis for the proposed changes is the current interpretation of the recreational catch estimates from the 1996 and 1999-00 surveys (discussed further below). MFish proposed the revised allowances to better recognise the currently available information on the recreational catch and its contribution to the TAC. Whether or not you agree to the AMP proposal, the current information provides you the

information and opportunity to consider changes to the non-commercial allowances and to the TAC.

- 87 In submissions, industry disagreed with this approach and considered that only the 1996 survey results should be used as they consider the 1999-00 survey results to be unreliable. Conversely, the NZRFC considered that the 1996 survey results are too low, and that the 1999-00 survey is closer to the real tonnage of TAR 1 taken.
- 88 The background to the change in MFish's position on the recreational fishing surveys needs to be explained. The 1996 and 1999-00 surveys have both used the telephone / diary survey methodology. Households are contacted by telephone and fishers are asked if they will keep a diary recording their fishing activity over a whole year. In addition, surveys at boat ramps around the country are used to obtain data on the size and weight of individual species caught by recreational fishers. With the diaries and the boat ramp information, an estimate of the numbers and weight of fish taken by diarists can be accurately determined. There is a good level of consistency between the surveys in the catch rate and fish size information.
- 89 The difficulty in the survey methodology arises when the estimates from the diary participants have to be extended to the whole of the population who went fishing. This is necessary because obviously not everyone who goes recreational fishing keeps a diary. A formula is used to multiply up the diarist data – diarists represent the proportion of people in the population who go fishing. This formula, referred to as the "prevalence estimate", provides the main difficulty.
- 90 The two surveys have produced, in some cases, very different estimates of the recreational catch for some species. The overall change is approximately 300%. To try and reconcile the differences between the two surveys, MFish commissioned an independent review by an international expert (Professor Robert Kearney from Canberra University) of the results of the two surveys. The main conclusion from this review was that the major factor influencing the accuracy and reliability of the two surveys was the estimate of fisher prevalence. The 1996 survey used a prevalence estimate on an individual fisher basis of 9.7%, while 31.0% was the comparable estimate from the 1999-00 survey.
- 91 In considering the results of the two surveys, it is important to be aware that the catch estimate differences are largely due to differences in the prevalence estimates, as opposed to showing an increase in the overall recreational catch level. MFish is not aware of any quantitative information that suggests the recreational catch overall is decreasing or increasing. Apart from the prevalence problem, another difficulty with discerning whether or not the overall recreational catch level is changing is the infrequency of the surveys. Telephone / diary surveys conducted at a nationwide level are usually done at 3-4 yearly intervals as they are a very expensive undertaking. Another key problem is assessing whether changes are due to "good" or "bad" weather years for recreational fishing effort. For example, the overall recreational catch in a given year for fishstocks such as

SNA 1 and TAR 1 will likely decrease if there are a lot of days with onshore winds from the north-east that prevent most recreational fishing boats from fishing due to safety reasons.

- 92 As a result of the international review and the review at the Recreational Research group meeting in late 2002, it is accepted that there are uncertainties with both surveys. MFish now considers that the estimates from the 1996 survey are likely to be too low, while the 1999-00 estimates are thought to be too high. Assuming a common participation rate would increase the 1996 estimate of recreational catch and reduce the 1999-00 estimate. Actual catches are likely to have been within the range of the estimates, but a range is not helpful for setting the non-commercial allowances, nor for establishing the contribution by non-commercial catch to the total fishing mortality that was used to determine the TAC in the absence of a stock assessment.
- 93 MFish acknowledges that the recreational catch information from both surveys is uncertain. However, despite this uncertainty, the 1996 Act requires that you set a TAC and make allowances within that TAC for the non-commercial catch based on the best available information and the other Information Principles outlined by section 10 of the 1996 Act. MFish has used the average of the estimates from the 1996 and 1999-00 surveys as the best available recreational catch information in other fisheries such as kingfish and blue cod (BCO 7). For TAR 1, the 1996 estimate was 310 tonnes, and the 1999-00 estimate was 636 tonnes. These estimates provide for an average recreational catch estimate of 473 tonnes. In essence, the average catch represents the current or existing recreational catch level. Accordingly, MFish now considers that the recreational allowance for TAR 1 should be set at 470 tonnes, and the Māori customary allowance should be set at 70 tonnes (15% of the recreational allowance).
- 94 The basis for the proposed Māori customary allowance is as follows. No quantitative information is available on the level of the customary catch. For TAR 1, MFish considers that the approach used in the snapper fisheries to provide for customary interests is appropriate for tarakihi. For the three main snapper fisheries (SNA 1, SNA 7, SNA 8), the allowance provided for customary fishing has been 13%, 17.7%, and 13.8% respectively. Accordingly, MFish proposed that the customary allowance should be set at 15% of the proposed recreational allowance for TAR 1. MFish notes that the customary allowance is not intended to limit the extent of the customary catch, but rather to provide for the likely level of that catch.
- 95 Some stakeholders may regard this recommended change in the recreational allowance from 310 to 470 tonnes as a reallocation of the TAC between the commercial and recreational sectors. However, MFish considers this change to be a technical adjustment on the basis of improved information. MFish also notes that in 2002 (when you originally set the TAR 1 TAC), if MFish's position on the recreational surveys had been to use the information from both surveys, the initial recommended allowances would have been derived accordingly.

- 96 Should you agree to increase the non-commercial allowances based on the likely current or existing catch levels, that will necessitate a change in the TAC for TAR 1. However, MFish considers that a TAC change to reflect past and current catch levels will be sustainable for TAR 1, as the estimates represent catches that have been taken from the stock without giving rise to sustainability concerns to date, and while stable commercial CPUE has been maintained. MFish notes that the commercial catch for TAR 1 has increased since the start of the QMS largely due to increases in the TACC from decisions made by the Quota Appeal Authority in the late 1980s. Since 1986, the TACC for TAR 1 has increased from 1210 to the current level of 1398 tonnes.

Social, Cultural and Economic Factors

Submissions

- 97 No submissions addressing specific social, cultural or economic considerations were received.

MFish Discussion

- 98 MFish notes that there could be substantial economic benefits from the return to industry from the proposed 599 tonne increase in the TACC. An indicator of the return to fishers can be provided by the most recent average port price for TAR 1 of \$2.49. The short-term return indicated by the port price for the initial year of the AMP would be some \$1.5 million. The full return from market prices would be greater. Longer-term returns would depend on the performance of the fishery over time. There would also be economic benefits from the increased asset value of quota. Declining the AMP proposal would forego those economic benefits.
- 99 As discussed above, higher commercial catch under the proposed AMP has the potential to affect non-commercial interests in the fishery. However, the extent of the potential effects is not known. There is no information currently available to indicate the economic value of the non-commercial tarakihi fishery in TAR 1 that could be used for comparison.

Environmental Considerations

- 100 No submissions addressing specific environmental considerations were received. No further information or consideration is available to that provided in the IPP.

Compliance Information

Submissions

- 101 **Western Bay** notes that any tarakihi caught by trawlers in under 100 metres of water is a bycatch of the snapper, gurnard, John dory, and barracouta fishery.

Trawlers fishing inside the 100 metre depth contour are required to use a 125mm cod-end.

- 102 **K T Williams** notes that it has been claimed that most tarakihi trawlers operate in 100 metres or deeper water using 100mm cod-ends. From hearsay, it appears that the trawlers are using 100mm cod-ends in shallower water to the detriment of the tarakihi stocks. KT Williams considers that better surveillance needs to be used to control this abuse.

MFish Discussion

- 103 All trawlers fishing in the Auckland Fishery Management Area (equal to the area for TAR 1) are required to use a minimum cod-end of 125mm if fishing inside the 100 metre depth contour line as defined on the main nautical chart for the area. In waters deeper than the 100 metre depth contour line, trawlers may use a minimum cod-end of 100mm.
- 104 Since this regulation was introduced in 1990s, MFish has conducted at-sea patrols to board trawlers to check on this and other regulatory controls. There has been successful prosecution against trawl operators for using a 100mm cod-end inside the 100 metre depth contour. MFish considers there is now a reasonably good level of compliance with the regulation. Nonetheless, MFish will continue to conduct at-sea patrols to check on this type of input control.

Consultation

Submissions

- 105 **Northern Inshore** held a meeting on 21 May 2003 with **MFish, Option4, NZRFC** and the Bay of Islands Charter Fishing Association. At the meeting, the original AMP proposal was presented. The Minister's concerns regarding the possibility of an increased TACC affecting non-commercial interests were also presented, but noted that this was not considered a stock sustainability concern.
- 106 The issues raised and discussed at the 21 May meeting included: identification of the key concerns of the recreational fishers, including preventing changes in fish length and availability, and fishery location; the possibility of monitoring any of these changes eg, recreational CPUE analysis; showing the spatial separation of the recreational and commercial fisheries; providing assurance that expansion into new areas of the TAR 1 fishery will not occur; preventing the depletion of localised recreational fishery areas. As a result of this meeting, a revised proposal (as outlined in Northern Inshore's supplementary paper) was presented at a second meeting with recreational interests on 30 July 2003.
- 107 **SeaFIC** and Northern Inshore consider that the Company has gone to considerable lengths to engage with the recreational fishing community to

develop proposals that are acceptable to both recreational and commercial fishing interests.

- 108 The initial joint submission from the **NZRFC–NZBGFC–option4** considers that the consultation process has not been acceptable and does not constitute real consultation as it denies the non-commercial sector representatives the opportunity to consult with those they represent. They consider that the initial meeting between the sectors cannot be construed as consultation as it was merely an opportunity for both sectors to gain an understanding of the issues the AMP proposal raised. The second meeting (30 July) was on the same day as the close-off date for submissions, and this did not allow enough time to consult with their members.
- 109 The recreational groups believe that the commercial sector cannot impose change upon other commercial fishers unless a high level of agreement exists between the quota owners. They understand the threshold for change to be in the vicinity of 80% agreement of the stakeholders in the commercial fishery where the change will be applied. They consider that no lesser standard should be applied to non-commercial parties that may be negatively impacted by the TAR1 AMP proposal. They note it is much more difficult to reach the public than a known list of quota holders.

MFish Discussion

- 110 As indicated in the submissions above, there was no agreement among stakeholders about the adequacy of the consultation process. MFish considers that the consultation process on TAR 1 has satisfied the standards required for formal statutory consultation. Section 12(1)(a) of the 1996 Act specifies that you:

“shall consult with such persons or organisations as the Minister considers are representative of those classes of persons having an interest in the stock . . .”

- 111 The IPP and your preliminary views letter were sent to the three main nationally based organisations (NZRFC, NZBGFC, option4) representing recreational fishing interests in TAR 1. The same documents were also sent to recreational fishing representatives at regional and local levels – most of these groups and individuals did not provide a submission.
- 112 MFish considers that there were no substantive changes to the TAR 1 proposal from the outline in the IPP to the additional matters provided in **Northern Inshore’s** supplementary paper. The key issue of catch spreading confined to existing areas, remained basically the same, except that the supplementary paper confirmed that the main TAR 1 quotaholders had signed a Memorandum of Understanding agreeing to the catch spreading arrangements. The supplementary paper did, however, clarify the recreational monitoring issue – Northern Inshore has indicated it does not believe this to be easily achievable and proposes to use the trawl CPUE as a proxy.

- 113 MFish believes that the consultation process meets your statutory obligations under the 1996 Act. The national recreational groups have made very clear their opposition to the proposal and have clearly articulated the reasons for their opposition. Conversely, fishing industry groups are very much in favour of the proposal, and have equally clearly explained their reasons for support. Consultation does not require extended periods of negotiation, nor does it require agreement between divergent interest groups. At the end of the consultation process, you as Minister of Fisheries must make a decision on this matter. In making your decision, you are required to consider stakeholder's views, and all the statutory requirements of the 1996 Act (discussed in the IPP).

Other Management Issues

Role of AMPs and voluntary tools

Submissions

- 114 **SeaFIC** considers that the purpose of AMPs is to provide for increased catch under controlled conditions (including rigorous reporting and monitoring provisions) to provide better information on utilisation while ensuring sustainability. SeaFIC considers that AMPs are not allocative tools, and are not linked with the assessment of or provision for non-commercial catch. SeaFIC sees no reason to alter any allowance for the non-commercial catch because of an AMP. At the conclusion of the AMP, it is appropriate to determine the ongoing level of commercial catch (TACC).
- 115 **Northern Inshore** concurs with the Minister's understanding of the AMP process. Their view is that AMPs are a well-documented method to test the sustainability of fisheries and does not believe it is linked structurally with ways to determine amateur and customary catch. Northern Inshore does not see that an AMP proposal should be used as an allocation tool or that there is a necessity to alter or increase the tonnage of the amateur or customary sectors. The outcome of an AMP, at the end of the process, is intended to be a stock assessment of that fishery. At that time, Northern Inshore considers it appropriate to determine at what level the commercial catch should be established.
- 116 The initial joint submission from the **NZRFC–NZBGFC–option4** considers that all the risks from the proposal are borne by the public and non-commercial fishers, while zero risk is borne by the commercial sector. They consider this is inequitable and unfairly gambles with non-commercial fish. The groups agree with your suggestion that if the effects on non-commercial interests cannot be adequately mitigated then directed research would be a better way to improve the knowledge of TAR 1. They ask that you reject the proposal, and that a baseline survey on pre-AMP non-commercial catch rates be started.

- 117 **Option4** considers that there should be a major reassessment of the role of AMPs in shared fisheries. They consider the proposer must accept the full risk and the full cost of the involvement of other stakeholders who have nothing to gain and much to lose from an AMP. In shared fisheries, option4 considers that it is more appropriate and fair to do fisheries research, which does not threaten the biomass or CPUE, in order to satisfy the obligations of the Fisheries Act to sustainably fish at or above MSY.
- 118 Option4 proposes a mechanism to shift the risk to the proposer of the AMP, that if the CPUE falls beneath a certain “threshold” that the AMP is then abandoned and the amount of additional fish taken under the AMP be removed from the TACC at the same rate as it was granted under the AMP until all fish taken under the AMP are replaced. Option4 notes that because the industry refused to accept the full risk of their proposal, that you should refuse the AMP on the grounds that the proposer of any AMP must accept the full risk of their proposals, as any other outcome is unjust and unfair by any standard. Option4 considers that if AMPs are to be an effective management instrument in shared fisheries, then it is paramount that baseline and concurrent CPUE information to a scientifically robust standard be gathered and analysed for the non-commercial sector.
- 119 The **NZRFC** has been involved in the politics of fishing since the very early 1990s and the President (Ross Gildon) was involved and present at the meeting when the AMP process was first introduced. At the time, the NZRFC supported the new process as it allowed the industry to have a token TACC for a given time to make it economically viable to carry out the research on a fishery. The NZRFC still supports this type of AMP proposal.
- 120 NZRFC has some concern about the way the AMP is currently being used. It appears it is now a method is using to get higher TACCs. An example is the AMPs for LIN3 and LIN4 that increased the TACC by about 30% for 1994/95 at 2810 and 5720 tonnes. These stocks were removed from the AMP on 1 October 1998 and the TACCs maintained at the increased levels. However from 1 October 2000, the TACCs for LIN 3 and LIN 4 were reduced to 2060 and 4200 tonnes. Consequently, NZRFC believes there are too many “guesstimates” being used as to whether a stock is suitable for an AMP.
- 121 At the time of writing the 2002 final submission, the NZRFC was not aware that changes had been made to the AMP process that allowed for species and areas as proposed for TAR 1. None of the NZRFC members were aware of any consultation taking place about the change. It is only since discussions with MFish that the NZRFC has discovered that some obscure document was released approximately three years ago proposing the changes. NZRFC believes that this is totally unsatisfactory and that the changes proposed should have been subject to wide open consultation.
- 122 For example, TAR 1 is a major recreational fishing area where non-commercial users in some areas take a significant percentage of the catch. To introduce

TAR 1 into the AMP process is offensive to the NZRFC because it is basically taking fish off the recreational sector to give to the industry, while the recreational sector carry the costs if the AMP fails. NZRFC considers there will be huge pressure placed on MFish to maintain the higher levels of a TACC at the end of the evaluation process, and it is for this reason that the NZRFC cannot support any AMP proposals for a fishery where the recreational sector is involved as a major stakeholder.

- 123 NZRFC is concerned that a large amount of the TAR 1 proposal relies on voluntary agreement by the quota holders. NZRFC's past experience is that voluntary agreements don't work and the more persons involved, the less likelihood of it working.
- 124 NZRFC notes that Northern Inshore has proposed to spread the additional tonnage over all areas. They consider there is a great temptation to catch the quota as close to the homeport as possible to keep costs to a minimum. NZRFC is aware of some quota holders (not Northern Inshore fishers) who have been charged with "trucking" in the past, and that these demeanours raise an element of suspicion.
- 125 NZRFC considers that if the proposal is to proceed, then the only way to allay its fear would be satellite monitoring of all vessels involved and observer coverage. However, NZRFC notes that Northern Inshore has already indicated that the value of the additional catch would not be viable with the cost of monitoring.
- 126 NZRFC notes that Northern Inshore has indicated that it would employ a contractor to manage the catch and CPUE analysis. NZRFC does not consider an employee of Northern Inshore should carry out the work. NZRFC considers Northern Inshore has a vested economic interest in the results and an employee of the company has the ability to manipulate results to the company's advantage. NZRFC considers the work should be carried out by an independent agency with the costs carried by Northern Inshore.

MFish Discussion

- 127 MFish notes that the role and purpose of AMPs was discussed in the TAR 1 Final Advice Paper to you in 2002. The commentary in that paper is relevant to most of the general issues raised in submissions by stakeholders during the 2003 consultation. As a general principle, MFish agrees with the industry that an AMP could apply to shared inshore fisheries. However, the details raised by the recreational sector indicate the difficulties with application of the AMP framework to shared fisheries.
- 128 MFish notes that virtually all of the stocks managed under the AMP process in the past have been predominantly fished by the commercial sector, with generally only around 1-3% of the overall catch taken by the recreational sector. TAR 1 is the first AMP proposal for a stock from which the recreational sector takes a reasonable share of the overall catch. The recreational TAR 1 catch (310 tonnes

from the 1996 survey, 636 tonnes for the 1999-00 survey) forms about 25% (based on the average of the catch estimates from the 1996 and 1999-00 recreational fishing surveys) of the total commercial and recreational catch at the current TACC of 1398 tonnes.

- 129 As part of progressing on from the 2002 debate, in your recent letter to stakeholders, you asked for comment on how the TAC should be allocated at the end of the five year AMP. Two options were proposed. Option 1 was that all sectors could receive an increase in catch at the outset of the AMP, thereby all sectors obtain some benefit. Option 2 was that the TAC and TACC would revert to the original level at the end of the five-year AMP, and then allocations be determined afresh.
- 130 **Northern Inshore** and **SeaFIC** consider that at the conclusion of the AMP, it is appropriate to determine the ongoing level of the TACC. The recreational groups do not directly comment on this matter as they are generally opposed to the use of AMPs for shared fisheries.
- 131 MFish notes that you are able to review the sustainability and other management controls for the TAR 1 fishery in advance of the start of any fishing year, regardless of whether or not the fishery is within the AMP. In the review process, you are able to make fresh decisions about the level of the TAC, allowances, and the TACC on the basis of available information. Your decision can include removal of a fishery from the AMP.
- 132 MFish considers that another fundamental difficulty with the current AMP framework if applied to established shared fisheries, is that there is currently no explicit requirement to monitor catch rates and fish size from the non-commercial fishery. This is important in order to directly assess the affect of the TACC increase on the non-commercial fishery. MFish considers generally that the costs associated with providing for an increased TACC under the AMP framework should be borne by the proponents. However, it is not certain whether the existing cost-recovery rules would provide for this.
- 133 The effect of these considerations is that MFish now considers that it would be helpful to review the AMP framework to assess the applicability of this administrative tool to significant shared inshore fisheries such as tarakihi, and to provide clearer guidance on its application. Until a review has been completed, MFish notes that future AMP proposals for established fisheries that involve the non-commercial sector taking a reasonable share of the overall catch are likely to give rise to similar issues to those that have arisen in this case.
- 134 Northern Inshore proposes to tender for research services to co-ordinate the data collection, input and CPUE analysis and reporting to the Inshore Working Group on an annual basis. The NZRFC believes that Northern Inshore has a vested economic interest in the results and an employee of the company has the ability to manipulate results to the company's advantage.

- 135 MFish notes that a key component of the AMP programme for most species is that the fishing industry takes a greater responsibility for providing, analysing, and reporting information to the Working Groups. This is part of the general devolution process of providing the industry with greater opportunity to have more input and responsibility for fisheries management. In addition, MFish has established a set of standards and specifications that stakeholders much comply with for gathering and analysing research data.
- 136 MFish considers that the issues about voluntary arrangements raised by the NZRFC concerning the proposed TAR 1 Memorandum of Understanding is an issue that also could be considered in a review of the AMP framework.

Conclusion

- 137 In 2002, **Northern Inshore** proposed to increase the TACC for TAR 1 for a five-year period under the AMP framework. However, you declined the proposal, primarily because of concerns about the possibility of an increased TACC affecting non-commercial interests in the TAR 1 fishery.
- 138 In 2003, Northern Inshore again proposed TAR 1 for a new five-year AMP to increase the TACC by 599 tonnes from 1 398 tonnes to 1 997 tonnes. As part of this proposal, Northern Inshore proposed that the increased commercial tarakihi catch would be spread over existing trawl grounds to avoid the possibility of localised depletion. In presenting this proposal, MFish proposed in the IPP to increase the TAC to 2 567 tonnes, and to change the allowances for the customary Māori catch to 70 tonnes, the recreational allowance to 470 tonnes, and other sources of mortality to 30 tonnes. The change in the proposed recreational allowance (and consequently also the customary allowance) is to recognise the best available information on the level of the recreational catch prior to you making your initial determination of the allowances, TACC, and the TAC for TAR 1.
- 139 Since your TAR 1 decision in 2002 and as part of the current consultation process, new information has become available or existing information has been re-evaluated that MFish now considers raises questions about whether or not TAR 1 is an appropriate candidate for the AMP process.
- 140 The positive information in favour of the proposal is that an increased TACC would provide for a higher level of commercial utilisation of TAR 1. This would provide for greater economic well-being for quota holders and commercial fishing companies, provide food for the nation, and increase the knowledge base for TAR 1 to be shared by all sectors. The main commercial fishing companies, that hold around 80% of the quota shares for TAR 1, have also signed a Memorandum of Understanding agreeing to take their quota shares from existing areas of the fishery. While the AMP proponents have provided the detail of their proposed catch spreading arrangements, they have not acceded to the statement in your preliminary views letter that the additional catch should be taken from areas of

lesser importance to the recreational sector (such as the northern west coast). They have indicated that a relatively larger portion of increased catch might be taken from such areas.

141 The information working against the proposal is that opinion is now clearly divided amongst the sectors on key issues:

- the current extent of spatial separation between the sectors;
- the appropriateness of monitoring the recreational fishery for CPUE;
- the current state of TAR 1 in relation to B_{MSY} ;
- the use of a decision rule for the trawl CPUE index; and
- and the overall role of AMPs for shared fisheries.

142 For spatial separation, industry considers recreational fishers take TAR 1 in depths less than 50 metres, whereas the recreational representatives consider that most of the recreational tarakihi catch is from 60-100 metres of water. MFish is not aware of any quantitative information that could resolve this matter. MFish does not have a view on this issue.

143 Regarding monitoring the recreational fishery, industry believes that it would be a complex and expensive project to monitor CPUE in the recreational TAR 1 fishery, whereas the recreational sector considers it would be possible. MFish considers that a recreational CPUE survey would be achievable and would be an important component of the TAR 1 AMP proposal.

144 Opinion was also divided between the sectors as to whether or not there is a reasonable probability that TAR 1 is above B_{MSY} . The industry, the Inshore Working Group, and the Plenary supported the view that there is a reasonable probability that TAR 1 is above B_{MSY} . The recreational sector (not closely involved in the Working Group – Plenary process) considers TAR 1 is probably at B_{MSY} . This is an important issue because a key part of the AMP framework is that there must be a “reasonable probability” that TAR 1 is above B_{MSY} . Given the long and relatively stable history of TAR 1 over more than 30 years, MFish considers the conclusion that TAR 1 is currently above B_{MSY} is probably reasonable.

145 The current TAR 1 proposal as agreed by the Plenary does not contain an explicit proposal for a decision rule to monitor trawl CPUE. If you decide to approve the TAR 1 AMP proposal for a TACC increase, then MFish recommends that the Working Group reconsiders appropriate decision rules to be employed and considers the review of the CPUE index on an annual basis.

146 There is also significant division between the sectors regarding the role of AMPs in relation to large established shared inshore fisheries. In the past, virtually all of the stocks managed under the AMP process have been predominantly fished by the commercial sector, with generally only around 1-3% of the overall catch taken

by the recreational sector. TAR 1 is the first AMP proposal that has involved the recreational sector taking a reasonable share (around 25%) of the overall catch.

- 147 As a general principle, MFish agrees with the industry that an AMP could apply to shared inshore fisheries. However, there would appear to be benefits in reviewing the current AMP framework for established shared fisheries in relation to issues such as recreational monitoring and decision rules, voluntary measures.
- 148 Based on all of the above considerations, MFish considers that while there are clear economic and stock information benefits associated with the AMP proposal, it is also possible that the proposal could affect recreational interests in the TAR 1 fishery. The nature and extent of such effects cannot be determined at this time with any certainty in order to address your concerns about effects on recreational fishing. MFish also considers that this proposal has raised the difficulties associated with AMPs in shared fisheries. MFish notes that, without clearer guidance in the AMP framework, any future AMP proposals are likely to raise similar issues to the TAR 1 AMP proposal.
- 149 The final matter to consider is the proposed change in the Māori customary and recreational allowances that were proposed in the IPP. In 2002, you set the recreational allowance at 310 tonnes and the Māori customary allowance at 45 tonnes based on the results of the 1996 recreational fishing telephone / diary survey. However, MFish has used the average of the estimates from the 1996 and 1999-00 telephone / diary surveys as the best available recreational catch information to inform decisions in the kingfish and blue cod (BCO 7) fisheries. MFish acknowledges that the estimates from both surveys are uncertain. However, MFish recommends the same averaging approach for TAR 1. Accordingly, whether or not you agree to the AMP proposal, MFish recommends that the recreational allowance for TAR 1 be set at 470 tonnes, and the Māori customary allowance be set at 70 tonnes (15% of the recreational allowance) as proposed in the IPP. Should you decline the AMP proposal, and agree to adjust the non-commercial allowances to recognise the current information, the TAC would be set at 1958 tonnes. MFish does not consider that these changes represent a sustainability risk to TAR 1 as the changes are recognising the likely existing catch levels for these sectors. The current TACC would be retained at 1398 tonnes, along with retaining the current allowance for other sources of fishing-related mortality at 20 tonnes.
- 150 Some stakeholders may regard this recommended change in the recreational allowance from 310 to 470 tonnes as a reallocation of the quota between the commercial and recreational sectors. However, MFish considers this change to be a technical adjustment on the basis of improved information. MFish also notes that, in 2002 when you originally set the TAC and non-commercial allowances for TAR 1, if MFish's position on the recreational surveys had been to use the information from both surveys, the initial recommended allowances would have been derived accordingly.

Final Recommendations

151 MFish recommends that you:

- a) **note** that MFish considers that there would be benefits in reviewing the existing AMP framework to clarify the applicability of the framework to large, established, shared inshore fisheries and to provide guidance for its application in such cases
- b) **note** that appropriate decision rules are helpful to guide management action according to detected changes in the indices monitored under an AMP
- c) **note** that any future AMP proposals for established fisheries involving the non-commercial sector taking a reasonable share of the overall catch are likely to raise similar issues to the TAR 1 AMP proposal

AND

EITHER

- d) **decline** the application to increase the TACC for TAR 1 to 1997 tonnes as proposed by the Northern Inshore Fisheries Company Limited
- e) **agree** to set a TAC for TAR 1 of 1958 tonnes, and within this TAC:
 - i) **agree** to retain the current allowance for other sources of fishing-related mortality of 20 tonnes
 - ii) **agree** to set an allowance for Māori customary interests of 70 tonnes
 - iii) **agree** to set an allowance for recreational interests of 470 tonnes
 - iv) **agree** to retain the current TACC of 1 398 tonnes.

OR

- f) **decline** the application to increase the TACC for TAR 1 to 1997 tonnes as proposed by the Northern Inshore Fisheries Company Limited
- g) **agree** to retain the TAC for TAR 1 of 1773 tonnes, and within this TAC:
 - i) **agree** to retain the current allowance for other sources of fishing-related mortality of 20 tonnes
 - ii) **agree** to retain the allowance for Māori customary interests of 45 tonnes
 - iii) **agree** to retain the allowance for recreational interests of 310 tonnes
 - iv) **agree** to retain the current TACC of 1398 tonnes.

OR

- h) **agree** to implement the proposal by the Northern Inshore Fisheries Company Limited under the Adaptive Management Programme, wherein the company assumes responsibility for:
 - i) **updating** standardised Catch Per Unit Effort (CPUE) analysis for the TAR 1 fishery
 - ii) **monitoring** commercial trawl CPUE as an indicator of changes in recreational CPUE as proposed in the company's proposal and supplementary paper
 - iii) **implementing** catch effort splitting arrangements to avoid localised depletion as indicated in the company's proposal and supplementary paper (and supported by the signed MoU).
- i) **agree** to set a TAC for TAR 1 at 2 567 tonnes, and within that TAC:
 - i) **set** the allowance for the customary Māori catch at 70 tonnes
 - ii) **set** the allowance for the recreational catch at 470 tonnes
 - iii) **set** the allowance for unreported catch and incidental mortality at 30 tonnes to account for the increased commercial catch
 - iv) **set** the TACC at 1997 tonnes.

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For Chief Executive
Ministry of Fisheries