

TARAKIHI (TAR 1) – FINAL ADVICE

Minister's preliminary views

- 1 MFish received a proposal under the Adaptive Management Programme (AMP) from the Northern Inshore Fisheries Company Limited (NIFC). 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 CPUE analysis for the TAR 1 fishery; and
 - c) implement catch effort splitting arrangements to avoid localised depletion.
- 2 MFish initially proposed that the AMP for TAR 1 include the following measures:
 - a) setting the TAC at 2 482 tonnes;
 - b) making allowances of 155 tonnes for customary Māori catch and 310 tonnes for recreational catch;
 - c) making an allowance of 20 tonnes for unreported catch and incidental mortality; and
 - d) implementing controls (to be devised on the basis of submissions) under the AMP on fishing areas so that only existing tarakihi target trawl grounds are fished, and that catch under the increased TACC is spread appropriately over those areas.
- 3 In your preliminary view you noted the support of the Fishery Assessment Plenary for the inclusion of this proposal in the AMP. The plenary considered that there is a reasonable probability that the current stock biomass is greater than the size that will support the MSY.
- 4 Your initial view was to accept the TAR 1 TAC and level of allowances proposed in the IPP. However, you noted that there was then no detail to support the proponent's stated intention to implement catch-spreading arrangements to avoid localised depletion. Such arrangements are likely to be of high interest to the recreational and customary sectors, which had yet to provide comment on this proposal at the time of releasing the IPP.
- 5 Given that the tarakihi fishery, in the Bay of Plenty area in particular, is a multi-sector fishery, you noted your expectation to receive informative submissions covering the customary and recreational perspectives. You also encouraged the respective sectors to discuss elements of this proposal with each other so that, if possible, issues could be resolved directly. You noted that MFish would be able to assist this process by facilitating such interactions during the consultative phase.

Environmental considerations

Submissions

- 6 **Option 4** submits that the IPP did not describe the possible effects of increased bottom trawling activities on benthic habitats and on non-target or bycatch species. It submits that it is well known that bottom trawling methods are very destructive of benthic habitats, and cause major, sometimes irreversible adverse effects on some key habitat areas. Option 4 submits that no analysis has been provided of the possible effects of a 43 % increase in trawling activities on benthic habitats, and no proposals provided on how industry intends to manage fishing pressure (how to ensure that fishing locations and target species are not misreported), and mitigate any adverse effects on sensitive habitats. Option 4 submits that specific proposals are required on mitigation measures to protect habitats of significance such as north of North Cape and Cape Reinga.
- 7 Option 4 notes that the IPP refers to school shark as a significant bycatch of tarakihi, but that the IPP mentions that there are no concerns about effects on associated species. Option 4 points out the slow growth and low fecundity of school shark, and refers to concerns about overfishing of the species in Australian waters. The submission notes that the TACC for school shark in SCH 1 has been exceeded for the last 6 years by up to 23 %. The submission points out that trawling is one of the many methods of taking school shark, and that it is likely that the AMP proposal could have a significant effect on school shark.

MFish discussion

- 8 Environmental considerations to be taken into account were outlined in paragraphs 10 to 13 of the IPP. MFish holds the view that limiting trawling to existing grounds should adequately mitigate any adverse effects of fishing under an increased TACC as proposed. However, MFish notes its statement in the IPP that it would require more certainty during the consultation about the proponent's ability to ensure that trawling would be restricted to previously fished grounds so as to avoid adverse effects in previously unfished areas. MFish notes the submissions by the NIFC, SeaFIC, and Sanford that they do not support controls on catch spreading being implemented under the AMP, although the rationale for this position is more related to inter-sector conflict issues.
- 9 MFish notes also the comments in the IPP about an area off Spirits Bay that is closed to trawling as a sustainability measure to avoid adverse effects of fishing on the unique biodiversity there.
- 10 MFish acknowledges that increased targeting of TAR 1 could have an effect of increasing bycatch of school shark. MFish notes that for QMS stocks, the catch balancing system is proving to be effective in minimizing the overcatch of TACCs.
- 11 The catch balancing system provides appropriate incentives to encourage fishers to cover all their catch of QMS fishstocks with Annual Catch

Entitlement (ACE). Over-fishing of ACEs by individual fishers will be controlled by graduated economic disincentives based largely around the payment of deemed values. For most stocks, the annual deemed value rate increases as the amount of catch in excess of a fisher's ACE increases. Finally, if the annual or deemed values are not paid, a fisher's fishing permit will be suspended, which will prevent the fisher from fishing commercially.

- 12 However, as financial imperatives prevail, there is a corresponding risk of dumping of excess bycatch at sea if fishing continues. This risk was factored in to the development of the over-catch provisions when the balancing regime was set up under the Fisheries Act.

Social, cultural, and economic factors

- 13 MFish notes the treatment of social, cultural, and economic matters at paragraphs 20 to 29 in the IPP. In the context of this proposal, they relate to the rate at which the stock is fished down to the target stock level. To be relevant, the stock must be assumed to be above the level that can produce the MSY. These matters are discussed below under the TAC/TACC setting sections.
- 14 MFish notes that the proponent (the NIFC) has submitted that its shareholders own more than 80 % of the quota for the species on which it made submissions (including BYX 1, BNS 1, TAR 1, LIN 1, RBY 1). It did not provide confirmation of its mandate to represent quota and ACE holders for the TAR 1 stock specifically. The proponent has not submitted details of the support by ACE holders for the proposal. MFish notes that Sanford Limited has submitted that it is a shareholder in the NIFC and a significant quota holder and fisher of TAR 1. TOKM has submitted that it and its 100%-owned subsidiaries are shareholders in the NIFC and support its activities. TOKM submitted that it will include any AMP requirements in its ACE sale contracts.

TAC, TACC, allowances and catch spreading

Submissions

- 15 The **New Zealand Seafood Industry Council (SeaFIC)** supports the proposed AMP for TAR 1 at the TACC of 1977 tonnes (*sic*).
- 16 SeaFIC submits that an AMP condition requiring that fishers operate only within existing trawl grounds is unnecessary and has potentially perverse implications. SeaFIC submits that it would remove a right that tarakihi fishers could freely exercise now, and would be a condition not faced by other fishers. SeaFIC submits that it also raises the prospect of permanent closure of an additional area to fishing, with the attendant reduction on the existing rights of fishers.
- 17 SeaFIC submits that catch spreading can be a useful tool where it aids information gathering and that it has supported its use in specific cases in the past. It submits, however, that catch spreading restricts the flexibility for fishers, potentially imposes additional costs, and imposes an explicit area-based character to the quota right. SeaFIC notes that information may be

obtained without a mandatory catch spreading arrangement by adhering to an agreed, statistically robust information plan.

- 18 The **Northern Inshore Fisheries Company Limited (NIFC)** supports the SeaFIC submission in its entirety, and supports the proposed TAR 1 TACC increase from 1398 tonnes to 1997 tonnes.
- 19 The NIFC notes your comments regarding catch spreading arrangements to avoid localised depletion, and notes their assumption that your comments referred to the Bay of Plenty area and the possible impact of the increased harvest on the recreational sector. The NIFC reiterates that the AMP proposal has been reviewed by the Inshore Fisheries Assessment Working Group, of which recreational and customary stakeholder representatives are members. The submission notes that despite many of the members not attending the meetings, all receive the meeting documents and are requested to provide comments. The NIFC also notes that the AMP proposal was sent to three recreational groups recommended by MFish (NZBGFC, NZRFC, NZ Trailerboat Federation). The NIFC notes that all comments received during that consultation were included in the document that the Fisheries Assessment Plenary (the plenary) reviewed and recommended for inclusion in the AMP.
- 20 The NIFC notes your comments that MFish would be able to assist in resolving any multi-sector issues (specifically Bay of Plenty recreational sector) during the consultative phase meetings. The submission notes that the NIFC made itself available to discuss any perceived issues at an Auckland Fisheries Liaison meeting, and called MFish to find out when the meeting was to be held. The submission notes that it was informed by MFish that no meeting was being held because there were no issues that any stakeholder had highlighted and requested to be discussed.
- 21 The NIFC submits that it does not intend to expand into new fishing grounds under a TACC increased under the AMP, and that it is intended that fishing behaviour will remain constant (no geographical expansion from historical fishing areas). The NIFC submits, therefore, that it does not support implementing catch spreading constraints for this fishery. It notes, however, that it will be available to discuss, following the consultation round, information you might receive in stakeholder submissions to ensure that issues can be addressed and the AMP can proceed in the 2002-03 fishing year.
- 22 **Sanford Limited** endorses the general comments in the SeaFIC submission, and supports the TAR 1 AMP proposal.
- 23 Sanford submits that it is a shareholder in the NIFC (the proposer of the AMP) and a significant quota holder and fisher of TAR 1. Sanford notes that a significant proportion of the TAR 1 TACC is processed through its Auckland plant, and that the catch will be available for sampling as proposed under the AMP.
- 24 Sanford notes your desire to implement controls on fishing areas so that only existing tarakihi target trawl grounds are fished. Sanford submits its support for the NIFC comments in the AMP proposal that no geographical expansion

into new grounds will occur, and it notes the view that this will mitigate against any adverse effects on the environment, including localised depletion concerns. Sanford submits that it therefore does not support implementing catch spreading constraints for this fishery, but it notes its availability to discuss this point further following the consultation round, should you desire it.

- 25 **Te Ohu Kai Moana (TOKM)** submits that AMP proponents normally seek the assent of quota owners before proposals are finalised, and that in many cases those quota owners also have a significant power of direction over the actual ACE users. TOKM submits that it seeks to pass on to its ACE users, through its ACE sales contracts, any AMP commitments that it has as quota owner. TOKM notes, however, that ACE is tradeable and can be on-traded without quota owners being aware that the associated AMP commitments have not also been passed on. It submits that MFish must be prepared to accept that commitments to complete logbooks and so on are entered into in good faith and every endeavour is made to ensure those undertakings, but that there will be lapses and an unavoidable risk to information gathering in any particular year.
- 26 TOKM submits that it and its 100%-owned subsidiaries are shareholders in the NIFC and support its activities. It submits that it will include any requirements associated with the AMP proposal in its 2002-03 ACE sale contract, subject to receiving advice of your decisions in time to make the ACE distribution. It notes that iwi have already been included in the AMP proposal development.
- 27 TOKM submits that it is somewhat bemused by the IPP proposal that the TACC increase be restricted so that only existing tarakihi target trawl grounds are fished. It submits that that is completely the reverse of the normal approach to AMP management to spread the increased effort on a fishstock as widely as possible. TOKM notes that the actual proposal does propose effort spreading, and on the basis that it would support such a requirement, it supports the proposal.
- 28 **Western Bay Fishing Limited** (Don Gwillim) submits that it has had a family involvement in the trawl industry in the Bay of Plenty for 45 years, and is one of the largest tarakihi catchers in the Bay (in excess of 100 tonnes per year with one trawler). It submits that it has seen an enormous increase in the tarakihi population and size over the last few years. The company submits that it is held to a catch limit of four to five tonnes per trip to give its fish receiver a supply over the year, and that the limit can easily be caught in one day or less if targeted. It submits that all of its fishing for tarakihi is done over 100 metre depths on clear mud bottom, as opposed to recreational fishing that is shallower and on foul ground. The company submits that it has had no conflict of interest with the recreational sector.
- 29 The **Bay of Islands Charter Fishing Association (Inc)** submits that given the short time for making submissions it has not been able to put the proposals before a full meeting of members. It submits that, once again, it protests at the time constraints imposed on it.

- 30 The Association submits that tarakihi are a much-valued recreational species, and in earlier years often made up an angler's daily bag to a respectable level given the varying snapper and kingfish stocks in the Bay of Islands. It submits that there has been a pronounced decline in the species with stocks especially scarce in traditional inshore favourite areas. The submission notes that small private or charter vessels are now much restricted in accessing tarakihi because of distance and safety constraints. The Association submits that its experience shows a marked decline in tarakihi stocks, both in number and size. It submits accordingly that any increase in either the TAC or TACC is strongly opposed. It notes the lack of a current absolute biomass estimate, the unavailability of final results of the 2000 survey of recreational catch, no quantitative information on customary catch, and no estimates of illegal catch or other fishing mortality rates as supporting rationale for its position. The Association submits that with such an absence of critical data it is an act of irresponsibility to lift the TAC across the entire area of TAR 1.
- 31 The Association submits that TAR 1 covers a huge area of the North Island with significant variations. It notes that recreational fishers will be most affected in the Bay of Plenty and Bay of Islands, but have little interest in the portion of TAR 1 on the west coast. The Association submits that the future management of the fishery should be on the basis of 3 areas – west coast, North Cape to Great Barrier, Barrier to East Cape.
- 32 The submission refers to your comments in your preliminary views regarding the interests of the recreational sector, and notes its hope that a much wider consultation process will take place before a final decision is made.
- 33 The **New Zealand Recreational Fishing Council (NZRFC)** submits that the non-commercial sector takes a significant percentage of the catch in TAR 1, and that introducing TAR 1 into the AMP process is offensive to the sector.
- 34 The NZRFC submits that, because industry is consistently overfishing a TACC, it does not automatically have the right to suggest that it cannot help the overcatch. The submission notes that the TAC (*sic*) is currently set at 1398 tonnes, and has been at that figure since 1989/90. The submission points out that the proposed estimate of about 300 tonnes for recreational catch from the 1996 survey would then suggest that industry has been fishing a TACC of approximately 1 100 tonnes for the past 15 years, and landing 40 to 50 % more than that. The NZRFC submits that it is unsure of the source of the proposed recreational survey catch estimate of 310 tonnes, and questions the supposed increase of only 5 tonnes in the assumed recreational catch between 1996 and the present time. The NZRFC submits its view that the estimate is far too low, and suggests that a figure closer to 600 tonnes is more realistic. The submission also notes acknowledgement by MFish at recent meetings between it and the recreational sector that it had under-estimated the recreational catch by half, and that historical catch is likely to be higher than previously considered.
- 35 The NZRFC submits that it is unclear when MFish adopted the policy for setting the recreational allowance using data from diary surveys, etc. It submits that this is the first time that it has heard of diary survey data being

used. It notes that there has been no formal tabling of a recommended increase in bag limits for the recreational sector, and that the sector will not be satisfied with a commercial increase in TACC unless there is an equivalent recreational increase for TAR 1. The NZRFC submits that to make a larger allowance for the recreational sector without it having the ability to catch the extra fish would only allow a larger buffer for the commercial sector. It notes that the recreational sector took a cut in daily bag limit from 30 to 20 fish to supposedly increase stocks. It submits that if the stock has improved enough for a higher TACC, then the TAC must also increase to allow the recreational sector to enjoy some of the benefits.

- 36 The NZRFC submits that under the proposed increased TAC of 2 482 tonnes, and with allowances of 155 tonnes for customary catch and 600 tonnes for recreational catch, industry would be left with a TACC of 1 727 tonnes – an increase of 57 %. The NZRFC submits that it is unclear about where the original 1 210 tonne QMS introduction level came from, and suggests that if we disregard any increase in the TACC as a result of quota appeals, then perhaps we should be basing all figures on 1 210 tonnes rather than 1 398 tonnes.
- 37 The NZRFC submits that it does not believe that there is sufficient data available to support the proposal. The submission notes that the NZRFC has not been advised who suggested “a recent analysis of commercial catch suggested that the abundance of tarakihi has remained stable or has possibly increased”. The submission notes that the 2002 plenary suggested that they “thought” the current catch levels to be sustainable, and reported that “it is not known if the current TACC’s and recent catch levels will allow stocks to move towards a size that will produce MSY”.
- 38 The NZRFC submits its surprise that there is no stock assessment available considering that tarakihi has been a target species for so long. The submission notes concerns as to whether the increase in TACC is sustainable, and notes that the biomass in TAR 7 has decreased even though the commercial catch has been fairly consistent.
- 39 The NZRFC submits its disappointment that the recreational interest in tarakihi in the Bay of Plenty was only “noted”. It submits that its own surveys show that tarakihi is a more popular species than snapper by a large number of anglers, and rates as the second most popular eating species for all anglers in the Bay. The submission notes that more and more subsistence fishers are targeting tarakihi as snapper become harder to catch, and that is producing larger bag limits than previously seen.
- 40 The NZRFC submits that there is “very little data available of remedies as to how the increase in TACC will affect other stakeholders”. It notes that it does not support the theory that the recreational catch has been stable over the past decade, because its indicators show the opposite (with more boats, more anglers, and more fishers targeting tarakihi).
- 41 The NZRFC submits that it does not support TAR 1 being included in an AMP, but would support a small increase in TACC for TAR 1. The NZRFC

submits that, if the TAR 1 AMP proposal proceeds, the TAC should be set at 2 482 tonnes, with allowances of 155 tonnes for customary Māori, 610 tonnes for recreational catch, and 20 tonnes for unreported catch, and the TACC increased to 1 697 tonnes.

- 42 **Option 4** submits that the proposed TACC increase is a ‘massive 43 %’, and that the TAR 1 fishery has never been exposed to that level of fishing pressure in the 18-year record of commercial catches. Option 4 submits that the AMP is a ‘suck it and see’ approach in the absence of sufficiently robust and reliable fisheries data. The submission notes the absence of a current absolute biomass estimate, and estimates of B_{MSY} , B_{MAY} , CAY , CSP , MAY , MCY . Option 4 also notes that a biomass index, abundance indices, age structure, population-weighted length frequencies, and sex ratio information is limited, unavailable, or is work-in-progress. The submission notes that B_{MSY} cannot even be approximated without at least some of that data.
- 43 Option 4 submits that the AMP proponents have not, on balance, demonstrated that the proposed TAC and TACC are likely to allow the stock to move towards a size that will support the MSY, or remain above that level over the 5-year period of the AMP. Option 4 considers that implementing the proposal could see the stock fished down from what currently might be a sustainable catch level at B_{MSY} . Option 4 submits that MFish should conduct a robust fishery assessment before proposing any increases in commercial catch.
- 44 Option 4 submits that the proposal does not assess the possible effects of the proposed 43 % TACC increase on the abundance, availability, or quality of fish for customary Māori and recreational fishers, especially in the Bay of Plenty and east Northland areas of the fishery. Option 4 submits that the management of TAR 1 will be critical from the recreational fishers’ viewpoint, and will set a standard for the future, as this fisheries management area is where the majority of the recreational fishing population of the country resides, and where most of our international recreational fishing tourism industry operates. The submission notes that the proposed allowance for recreational fishing is based on an out-of-date survey. The submission notes the northward ‘drift’ of New Zealand’s population, and that the 1996 survey of recreational catch is likely to be a significant under-estimate. Option 4 notes that the draft report on the 1999-00 survey estimates recreational catch of TAR 1 to be 531 tonnes. Option 4 submits that an allowance based on the 1996 results will unfairly under-allocate the recreational share in all major fisheries. The submission suggests that if the proposal was implemented, the TACC would need to be reduced next year once the 1999-00 estimate of recreational catch is confirmed, otherwise the TAC would need to be increased with little or no supporting data. Option 4 seeks your decision to reject the proposal and set the TACC at 1430 tonnes, to instruct MFish to conduct a robust fishery assessment for TAR 1 before proposing any increases in commercial catch, and to instruct MFish to finalise and correct the TAR 1 recreational allowance based on the latest survey.

MFish discussion

Purpose of the AMP

- 45 MFish notes that where the status of a stock relative to B_{MSY} and the level of maximum sustainable yield are known from a formal stock assessment, there is no need to consider a proposal to increase catch limits under the AMP framework. The proposal has been submitted under the AMP framework as there is a lack of quantifiable information on the status of the stock in relation to B_{MSY} .
- 46 The AMP framework is an administrative initiative that allows for the development of existing fisheries specifically where there is no estimate of stock size relative to the biomass level that will produce the MSY, or no estimate of sustainable yield. The very purpose of the revised AMP framework is to provide opportunities to obtain information about, and monitor, the specific AMP stock. An increased level of commercial catch, and appropriate monitoring of commercial catch, effort, and the biological characteristics of the fished stock, can provide information about the fishery/stock that will assist in assessing the sustainability of the increased catch level.
- 47 In the New Zealand context, the AMP framework documents note that adaptive management increases have typically been relatively modest to balance the legislative obligations to provide for utilisation while ensuring sustainability, and apply caution in decision making in the face of uncertain information, as required by s 10 of the Act. The increased commercial catch under the AMP functions as part of the incentive for undertaking the increased operational requirements associated with the AMP (detailed monitoring, research, etc). Those operational requirements, and the ongoing evaluation of information from the programme, are to ensure that the increase in catch level is sustainable over the tenure of the programme. If the operational requirements are not met, the stock can be removed from the programme. If the ongoing evaluation process detects matters of concern, then the framework provides for a review and subsequent amendment of the AMP or withdrawal from the programme.
- 48 The AMP framework does not exclude management of “shared fisheries” (those with reasonable level of commercial, recreational and customary interest). To date, most of the stocks managed under the AMP have been predominantly fished by commercial fishers. Typically, an AMP proposal is submitted by industry to obtain an increase in the TACC based on a reasonability probability (but untested presumption) that the fishery is able to sustain higher catch levels. However, the framework requires the interests of different sectors to be taken into account both in terms of the proposal submitted and the measures implemented. There is the potential that an increase to the TAC and TACC under the AMP framework might impact on recreational catch rates and the quality of recreational fishing. There is also a potential for the stock to be fished below B_{MSY} .
- 49 The ability to monitor the effects of the increased TAC across all sectors is problematic. The most effective means of assessing the effect of the TAC

increase is through the monitoring programme adopted for the commercial fishery under the AMP. There is as yet no requirement under the Act or the AMP framework for decision rules to be included for a shared fishery targeted towards assessing the impact on recreational and customary sectors – for example, monitoring of catch rates in specific areas or changes in size of catch landed. MFish notes also that catch spreading is not just an information gathering tool, but also a fisheries management tool to mitigate the possible effects of overfishing and ensure that the interests of different sectors are effectively addressed.

- 50 The AMP framework does not preclude the need to consider the allocation of the TAC under ss 20 and 21 of the Act. While an AMP proposal may be submitted by industry, there is no requirement that industry will derive the full extent of any increase to the TAC. The AMP provides for investigation of the potential for further development of the fishery. There may be an opportunity for all sectors to derive benefit from that development. The development of a fishery for charter boat operations and the quality of fishing for other recreational and also customary fishers are matters that need to be taken into account along with the benefits to commercial fishers when allocating the TAC.
- 51 The AMP framework provides one option for managing shared fisheries. However, many of the issues that potentially need to be addressed may be better suited to a fisheries plan. Invariably, the issues being raised about TAR 1 relate to different views of the respective sectors about the management objective for a fishery (ie the need to manage a stock at or above B_{MSY}) and the tools to be adopted to ensure respective interests are effectively provided for (sub-area arrangement).

Role of working group/plenary

- 52 The role of the relevant fisheries assessment working group is to consider and evaluate proposals against the fishery assessment, monitoring, and decision rule criteria of the AMP framework. The revised AMP framework documents make it clear that the terms of reference of the working group and the plenary do not include providing recommendations for the management of fishstocks. The framework documents note that MFish discusses the findings of the working group with stakeholders, reviews fisheries management measures, and provides advice to the Minister on the appropriate management decisions.

Consultation

- 53 MFish notes that northern stakeholders were consulted, in writing, on the matters contained in the IPP that were considered to be of specific interest to them (including the TAR 1 AMP proposal). MFish offered to hold meetings to clarify and discuss matters in the IPP should stakeholders request such meetings. MFish notes that no requests to initiate meetings in the northern area were received from stakeholders. Stakeholders were advised also that information regarding the full suite of IPP contents was available on request.
- 54 MFish notes that the AMP proponent has submitted that it will be available to discuss, following the consultation round, information you might receive in

stakeholder submissions to ensure that issues can be addressed and the AMP can proceed in the 2002-03 fishing year. The AMP framework documents note that the Minister has indicated a desire to know how matters like catch splitting arrangements will be given effect to, and that both ITQ and ACE holders support the proposal, before the AMP is approved. MFish considers that you have made it clear that those matters should be discussed prior to your consideration of an AMP proposal, rather than after the statutory consultation round. However, MFish considers that you retain the discretion as to whether or not to approve the proposal on the basis of the information available to you, allowing stakeholders to hold further discussions after your decision. MFish does not, however, favour that approach.

Proposed TAC

- 55 MFish notes that when setting a TAC under s 13 of the Act, you are required to set it at a level that maintains the stock at or above a level that can produce the MSY, having regard to the interdependence of stocks. If a stock is currently above the level that can produce the MSY, s 13 requires you to set the TAC so that the level of the stock is altered in a way, and at a rate, that will result in the stock moving towards or above the level that can produce the MSY, again having regard to the interdependence of stocks. Section 13 states that in considering the way in which, and rate at which, a stock is moved towards or above a level that can produce the MSY, you shall have regard to such social, cultural, and economic factors as you consider to be relevant.
- 56 There is no quantitative information available to determine the status of the stock relative to B_{MSY} . MFish notes the report from the fishery assessment plenary, and its conclusion that the TAR 1 AMP proposal “could be considered for inclusion in the AMP”. The plenary agreed that the proposal meets the stock assessment criteria for an existing fishery. MFish notes that those criteria include that available information suggests that there is a reasonable probability that current biomass is greater than the size that will support the MSY, and, on balance, that the proposed TAC/TACC levels are likely to allow the stock to move towards a size that will support the MSY or remain at or above that level for the 5-year period of the programme.
- 57 A further criterion is that stock abundance appears to have remained stable at current catch levels, ie that current catch levels do not appear to be altering stock size (landings have remained stable and CPUE has remained stable – CPUE is taken to be an index of relative abundance). The plenary noted the standardised CPUE analysis reported by Hanchet and Field (2001) that showed stable (slightly increasing) abundance for TAR 1W and 1E at current catch levels. MFish notes that Hanchet and Field (2001) reported that standardised CPUE for TAR 1W increased by about 25 % over the period between 1989-90 and 1998-99, and the standardised CPUE for TAR 1E dropped in 1990-91, but increased steadily thereafter to above the 1989-90 reference level. The 1998-99 indices of relative abundance (CPUE) for TAR 1W and TAR 1E were both above the 1989-90 reference year. MFish notes also that Field and Hanchet (2001) considered the CPUE indices for both TAR 1W and 1E were probably monitoring abundance.

- 58 MFish notes that the working group and plenary discussions were concerned largely with the proposed increase to the TACC (for commercial access). MFish notes that recreational and customary catch levels are assumed to have been taken, and other sources of fishing-related mortality occurring, throughout the period that the commercial catch was being taken. Since abundance appears to have remained stable, the view of the plenary that the AMP proposal for TAR 1 meets the stock assessment criteria for an existing fishery and has a reasonable likelihood of meeting the requirements of s 13 to move a stock towards or above a level that can produce the MSY, is probably well founded.
- 59 MFish notes that, to date, a TAC has not been set for TAR 1, and that only a TACC has applied since 1986-87. Therefore, industry has not been landing 40 to 50 % more than the TACC for the past 15 years as incorrectly suggested in the NZRFC submission. MFish notes that there are two types of catch limits used in the plenary report that the NZRFC would have referred to - total allowable catch (TAC) and total allowable commercial catch (TACC). The current definition is that a TAC is a limit on the total removals from the stock, including those taken by the commercial, recreational and Maori customary sectors, illegal removals and all other mortality to a stock caused by fishing. A TACC is a limit on the catch taken by the commercial sector only. The definition of TAC was changed in the 1990 Fisheries Amendment Act when the term TACC was introduced. Before 1990, the term TAC applied only to commercial fishing. In the landings and TAC tables in the plenary report, the TAC figures equate to the TACC unless otherwise specified.
- 60 MFish notes that the Act requires that a TAC be set for all QMS stocks, although some stocks, like TAR 1, were introduced into the QMS (under the 1983 Act) without a TAC being set. It is required by s 13(10) of the Act that the Minister sets a TAC when a TACC is reviewed.
- 61 MFish concludes that there is a sound case for increasing the TACC for TAR 1 within a supporting framework as is established under the AMP. However, the lack of an objective stock assessment means that there is less certainty associated with the information you have to support your decision about whether or not to provide for an increase in catches without the monitoring and review infrastructure of the AMP.
- 62 As noted above, you are required (by s 13(3) of the Act) to have regard to such social, cultural, and economic factors you consider to be relevant when deciding on the way and rate of movement of the stock towards the target level at or above B_{MSY} .
- 63 In the case of proposals considered under the AMP framework, and specifically TAR 1, you do not have definitive information on the status of the stock relative to B_{MSY} . You have the opinion of the working group that the stock is likely to be above the B_{MSY} level, based on the available indices from the fishery (CPUE). Given that the stock status is not known with any degree of certainty, you cannot be certain about the rate at which the proposed TACC (and TAC) would move the stock towards the target level. As such, s 10 of the Act requires that you be cautious, but it does not provide a reason to

postpone or fail to implement a measure that will achieve the purpose of the Act. In addition, given that the possible effects of the proposed TAC/TACC increase on the interests of customary and recreational fishers cannot be determined, MFish considers that the possible effects on those interests are relevant factors for your consideration under s 13(3) of the Act. The possible effects on those interests are discussed further below.

- 64 No stock assessment has been completed for TAR 1 at this time. A number of issues make it a difficult task to undertake. The plenary report identifies tarakihi to be a single stock in the waters surrounding the main islands of New Zealand. The separate tarakihi fisheries all demonstrate a relatively stable level of catch over the last 20-30 years with CPUE throughout that time also remaining stable. CPUE data alone would not be a useful basis for the development of a stock assessment model, because of the lack of contrast over time. The stable level of catch and CPUE has been used as an indicator that existing catch levels are sustainable. However, catch levels do not provide a direct indication of the status of the stock relative to B_{MSY} .
- 65 From a stock assessment perspective, TAR 1 is a fishery ideally suited for management under the AMP framework. An increase in catch will potentially provide significant change in CPUE that can be effectively monitored. Monitoring of catch length data will also provide useful information, but a time series of 5 to 10 years might be required before any conclusions might be drawn as to the effect of increased catch levels. Information derived from the TAR 1 AMP would provide information about the TAR 1 fishery, but would not enable a stock assessment for the stock as a whole to be carried out.

Proposed TACC and allowances

- 66 Section 21 of the 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 Maori customary non-commercial fishing interests, recreational interests, and all other mortality to the stock caused by fishing. You are required to consult persons or organisations that you consider are representative of Maori, environmental, commercial, and recreational interests.
- 67 Section 21 specifies that when allowing for Maori customary non-commercial interests, you must take into account any *mātaitai* reserve in the relevant area, and any area closure or fishing method restriction made under s 186A. The IPP addresses these considerations at paragraph 35.
- 68 When allowing for recreational interests, s 21 requires you to take into account any regulations made under s 311 (established following the dispute resolution procedure set out in Part VII of the Act) that prohibit or restrict commercial fishing in any area. These considerations are addressed in the IPP at paragraph 33.
- 69 In the IPP, MFish proposed that you allow 155 tonnes for customary Maori catch, 310 tonnes for recreational catch, and 20 tonnes for unreported catch and incidental mortality. Rationale for those allowances is provided in the IPP at paragraphs 34 and 36.

- 70 No quantitative information is available on the level of the customary catch. The allowance for customary catch proposed in the IPP was based on broad MFish guidelines. They provide that in the case where it is reasonable to assume that some level of customary catch occurs, the customary allowance should be set at half the recreational allowance. However, for the TAR 1 fishery, MFish has now reconsidered that view in the context of allowance setting decisions that have been made in snapper fisheries where MFish considers that customary interests are likely to be at a similar level to that 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 proposes that a customary allowance of 45 tonnes, about 15% of the proposed recreational allowance of 310 tonnes, might be more applicable to TAR 1. MFish notes that the customary allowance is not intended to limit the extent of customary catch, but rather to provide for the likely level of that catch.
- 71 The proposal is to increase the TACC for TAR 1 from 1398 tonnes to 1997 tonnes – an increase of 43 %. The main stated objective of the proposed increase in commercial catch is to provide contrast in the abundance indices (both CPUE and from trawl surveys) eventually to enable a stock assessment to be carried out. The proponents of the AMP (Northern Inshore) suggested that a 30 % increase in commercial catch would provide sufficient contrast (MFish notes that the proposed increase in the TACC to 1997 tonnes represents a 43 % increase in commercial catch). Given that the current status of the TAR 1 stock relative to the biomass that would support the MSY is not known, MFish agrees that an adaptive management approach could provide useful information for assessment and management.
- 72 However, recreational fishing representatives have submitted their concerns for the use of the AMP in shared fisheries where they have substantial interests. Their concerns relate to the potential for an increased TACC to adversely affect the quantity and quality of tarakihi available to them. Non-commercial fishers have a substantial interest in the fishery, at a level possibly around 20 % of the commercial catch (recreational catch estimated at 310 tonnes in the 1996 survey, plus unknown customary Maori catch). MFish notes that final results from the 1999-00 survey of recreational catch are not yet available. An international expert is currently reviewing the preliminary results of that survey. MFish acknowledges that the recreational catch information is uncertain. Despite this uncertainty, the Act requires that you set a TAC and make allowances within that TAC for non-commercial catch.
- 73 MFish notes, in response to the NZRFC submission, that there has been no formal tabling of a recommended increase in bag limits for the recreational sector. Indications are that the overall recreational catch has increased under existing bag limits. Factors leading to increased catch may include increased number of fishers, increased levels of fishing, and increased abundance of the stock.
- 74 The potential for an increased TACC under the AMP to affect non-commercial interests through changes in fish size and availability was stated in the IPP. Without knowledge of the current stock size, it is not possible to estimate the

nature and extent of such effects that might arise from an increase to the TACC as proposed. MFish acknowledges that the AMP contains monitoring and review provisions that should detect changes in the stock. However, MFish notes that should those changes adversely affect the interests of the non-commercial sector, the changes would only be detected once the effect had already occurred. That is likely to result in a dispute between the sectors (as noted in the IPP).

- 75 MFish acknowledges that under the AMP proposal there is potential for adverse effects on non-commercial interests to arise (through reduced catchability and catch) while the commercial sector derives the commercial benefit from increased catches. However, the potential for adverse effects should be balanced against the likelihood of increased knowledge of the stock over the term of the AMP programme. MFish notes that the benefits derived from increased knowledge can be distributed across sectors (by allowing greater sustainable harvest) if the programme successfully demonstrates that the additional yield is sustainable.
- 76 MFish acknowledges that the potential for uneven benefits to be gained from an AMP is one reason for being cautious before applying the AMP framework to fisheries where there is a substantial level of interest by non-commercial fishers. This can be addressed, on occasions, if agreement can be reached between the commercial and non-commercial interests. In the case of TAR 1, no such agreement was established prior to the proposal being tabled and submissions from recreational interests indicate no agreement to the final proposal. MFish notes that industry submissions have stated their availability to further discuss the TAR 1 AMP proposal should you consider that to be necessary.
- 77 MFish notes that the revised AMP framework documents state that one of the limitations of the previous framework was that it was principally directed at commercial fishers, and might not adequately take into account the interests of other participants in the fishery. The documents note that the previous framework needed to be modified to ensure that the interests of all fishers are explicitly taken into account. The revised AMP framework documents note that it remains principally directed at commercial fisheries, and that application of the framework to fisheries with a significant recreational or customary catch has the potential to generate disputes. The documents note that the interests of other participants are to be considered in the initial evaluation of a proposal and the annual review process. The plenary report on the TAR 1 AMP proposal notes the recreational involvement in the fishery in the Bay of Plenty specifically.
- 78 MFish acknowledges that the management objectives of non-commercial fishers might be quite different from the commercial objectives. As noted, you are required to consider social, cultural, and economic factors that you think are relevant when deciding the rate at which to fish a stock down if it is considered to be above the MSY level.
- 79 In conclusion, in reflecting on both the support for the proposal and the opposition to it, the explicit allocation of any additional yield is not revealed

as the core issue. Further, under the AMP framework, allocation of the TAC is as much of a trial as the level of TAC and hence material concerns that may arise will be able to be addressed within the context of improved information. Rather, the concern primarily focuses on where and how the respective interests are likely to fish for tarakihi.

- 80 MFish notes the comments in the IPP regarding the distribution of the commercial trawl catch being largely in the west coast and east Northland parts of the stock, where only a small proportion of the recreational catch was reported. MFish notes, however, that submissions from the recreational sector have reinforced the importance of the recreational tarakihi fishery in east Northland generally and in the Bay of Islands area. MFish notes also that about 30 percent of the commercial catch (averaged over the 1989-90 to 1998-99 fishing years – and reaching 40 percent in some years) of TAR 1 is taken from the Bay of Plenty area, where the recreational interest in the fishery is greatest. Without clear catch spreading arrangements, it is possible that increased commercial catch under an increased TACC could be taken from that area and give rise to a dispute. MFish notes that has insufficient information to determine or assess the probability or degree of any effect of the AMP proposal on recreational catch.

Catch spreading

- 81 MFish notes that the NIFC's proposal stipulates that catches will be spread throughout existing fished areas within the QMA, rather than the additional catch being taken within any localised fishery or single statistical area.
- 82 MFish notes that it proposed in the IPP that controls be implemented under any approved AMP to mitigate the risks of localised depletion – particularly where local depletion could lead to disputes. MFish proposed that controls could be devised on the basis of submissions so that only existing tarakihi target trawl grounds are fished (to mitigate any adverse effects of increased fishing on the aquatic environment), and that catch under an increased TACC be spread appropriately over those areas (to avoid local depletion and effects on other interests) as anticipated by the AMP framework. Your preliminary view was to support the MFish position in line with the general intent of the AMP framework.
- 83 The proponents have not, however, submitted any details of how they would achieve spreading catches throughout existing fished areas. MFish notes that NIFC, SeaFIC, and Sanford submit that they do not support implementing such catch spreading controls, for reasons set out in their submissions, as summarised above (in paragraphs 18, 19, 21, and 26).
- 84 MFish notes that without verifiable catch spreading arrangements, it cannot be demonstrated that the full intention of the proposal to increase the TAR 1 TACC, or the expectations of the AMP with respect to shared fisheries, can be met. Nevertheless, MFish acknowledges that it is a matter of discretion for you as to whether you accept the proponent's position that catch splitting arrangements are not necessary because they consider the trawl fleet will concentrate on existing fishing grounds rather than increase effort in areas of

interest to recreational fishers. Note, the Act does not provide any imperatives about “shared fisheries”.

Options for setting the TAC, TACC, and allowances

- 85 MFish considers there to be two options for you to consider at this time. Under either option, you will need to set a TAC and make allowances for customary non-commercial interests, recreational fishing interests, and all other sources of mortality caused by fishing. MFish recommends that you make allowances of 45 tonnes for customary fishing, 310 tonnes for recreational fishing, and 20 tonnes for other fishing-related mortality.
- 86 **Option one**, the MFish preferred option, is for you to decline the AMP proposal by the NIFC at this time, retain the TACC at its current level of 1398 tonnes and set a TAC of 1773 tonnes. MFish’s rationale for this option is based on the following factors.
- 87 The AMP framework and role of the working group is to consider the proposal on the basis of the evaluation of the status of the fishery and the ability to monitor effects of fishing under an increased TAC/TACC. The working group does not address management issues or allocation of the TAC between sectors. MFish notes that membership or attendance of recreational parties on the working group does not mean that the silence of those interests should be interpreted as the acceptance of all elements of a proposal by recreational fishers. While the AMP framework does not exclude shared fisheries, it acknowledges the need to ensure that different interests are taken into account. MFish notes the potential of the proposal to affect the recreational fishery by possible changes in catch rates and fish size available to the recreational sector. Effectively monitoring those effects would be difficult. MFish sees the proposed increased commercial catch (particularly in the Bay of Plenty) as an important issue that needs to be addressed, but the proponent has failed to do so. MFish’s recommendation is that you decline the proposal until that issue is addressed and the proposal perhaps includes decision rules explicitly targeted towards recreational and customary interests that might be affected.
- 88 **Option two** is to agree to implement the AMP proposal and set a TAC of 2372 tonnes, make the allowances for customary and recreational fishing, and other sources of fishing-related mortality as recommended, and set a TACC of 1997 tonnes. In respect of the second option, consideration could be given to whether the NIFC’s stated intent to spread catches and maintain constant fishing behaviour is adequate to address adverse effects on other participants in the fishery.
- 89 MFish notes, however, that there are other options for providing for an additional level of utilisation in TAR 1 that lie outside of the AMP framework. Given that there is uncertainty in the current status of the TAR 1 stock and the possible effects of the proposed TACC increase (of 43 %) on non-commercial users, MFish considers that you could proceed cautiously by providing for increased utilisation in an incremental way over time, and so allow for any effects of the increased catch to be monitored carefully. Alternatively, you could provide for increased utilisation in specific sub-areas, perhaps by

regulating to allow for increased commercial catch in areas where there is reduced interest by non-commercial fishers. You could also impose catch spreading controls as part of the current AMP proposal, however, the NIFC and other members of the industry have submitted that they do not support such measures. Without industry support it may be difficult to monitor and enforce a catch spreading measures.

- 90 MFish also notes that providing for additional catch in that way would be outside the scope of the current AMP proposal for TAR 1 as submitted by NIFC. MFish notes that the NIFC has accepted certain obligations under the AMP proposal, including responsibility for updating CPUE indices. Those obligations and their costs are balanced against the expected revenues from the proposed increased level of catch under the AMP for TAR 1. The current proposal, and its expected information benefits, have also been reviewed by the working group and found to warrant further consideration. Any revised proposal would benefit from a similar review to determine the associated information benefits.
- 91 MFish considers that it would be necessary to consult the NIFC, and stakeholders, before implementing any of the alternative means to provide for additional utilisation in TAR 1. MFish considers that undertaking the necessary consultation, and preparing the advice for your consideration, would be very difficult to achieve within the time remaining until the start of the 2002-03 fishing year. MFish therefore considers that the above alternative options would best be considered within a future review of sustainability measures and other management controls.

Conclusions

- 92 MFish agrees with the view of the plenary that the AMP proposal for TAR 1, and the proposed TAC, meet the stock assessment criteria for an existing fishery, and have a high likelihood of meeting the requirements of s 13 to move the stock towards or above a level that can produce the MSY.
- 93 MFish notes the discussion in the IPP about environmental considerations regarding the AMP proposal, and the view that the proposal appropriately takes into account the environmental principles of the Act on the basis of available information.
- 94 MFish notes that since there has been no formal stock assessment for TAR 1, and the status of the stock is uncertain, you have discretion as to whether or not you make additional catch available for the 2002-03 fishing year under the AMP as proposed by the NIFC.
- 95 Whether or not you decide to implement the AMP proposal at this time, you are required by s 13 to set a TAC designed to move TAR 1 towards a level at or above B_{MSY} , and within that, make allowances for non-commercial interests in the fishery, and other sources of mortality caused by fishing. MFish proposes that you set an allowance of 310 tonnes for recreational fishing on the basis of the available information as proposed in the IPP. MFish has reconsidered the basis for the initially proposed customary allowance of 155

tonnes. MFish recommends that you set an allowance for customary fishing on a basis similar to that applied in the snapper fisheries, as discussed above. That results in an allowance of 45 tonnes for customary interests. MFish recommends that you set an allowance of 20 tonnes for other fishing-related mortality.

- 96 MFish acknowledges that there is uncertainty about the available estimate of recreational catch of TAR 1. MFish notes also that an updated estimate might be available in the near future. There are issues associated with deciding appropriate management objectives for shared fisheries that have yet to be debated as part of the reform of recreational fisheries management. Those issues are likely to be relevant to your longer-term decisions regarding allowances for non-commercial interests in TAR 1.
- 97 MFish notes the submitted views of recreational fishing representatives that the use of the AMP for fisheries shared by the non-commercial sector is inappropriate. MFish notes the commentary in the IPP about the potential for the TAR 1 proposal to affect non-commercial interests in the fishery. MFish notes also that recreational submissions have pointed to their concerns regarding the proposal and its potential for effects on their interests, both in the Bay of Plenty and east Northland areas. There is, however, insufficient information to assess the probability or degree of any effect of the AMP proposal in recreational catch.
- 98 MFish notes your preliminary view that the AMP proposal for TAR 1 provided no detail to support the proponents' stated intention to implement catch-spreading arrangements to avoid localised depletion and mitigate possible effects on other participants in the fishery, as anticipated by the AMP framework. You noted that such arrangements are likely to be of high interest to the recreational and customary sectors, which had yet to provide comment on this proposal at the time of releasing the IPP. Although the NIFC did write to three recreational interest groups prior to this statutory consultation phase, those groups did not reply. Recreational fishing interests have, however, provided clear views opposing the AMP for TAR 1 during statutory consultation.
- 99 MFish notes that SeaFIC, NIFC, and Sanford have submitted their views that they do not support implementing catch spreading constraints for this fishery under the AMP. However, the proponent has noted that its interests do not intend to expand into new fishing grounds under the AMP proposal, and that it intends that fishing behaviour will remain as before. Accordingly, it has not provided any detail of how it would ensure that catches would be spread.
- 100 The Act does not require catch spreading arrangements to be implemented. However, the AMP is an administrative tool designed to manage the way and rate at which stocks are moved toward a level at or above B_{MSY} . Section 13 of the Act does not require you to consider the quality of recreational catch, rather you are required to have regard to those social and cultural factors you consider to be relevant in determining the way and rate the stock is moved towards the intended target level. MFish considers that without the details of how appropriate catch spreading will be ensured, it is difficult to determine the

extent of risk that the proposed increased commercial catch under the AMP might have for the interests of non-commercial fishers in TAR 1.

- 101 MFish considers there to be two options for you to consider. The first option, the MFish preferred option, is for you to decline the AMP proposal by the NIFC at this time. MFish sees the proposed increased commercial catch (particularly in the Bay of Plenty) as an important issue that needs to be addressed, but the proponent has failed to do so. MFish's recommendation is that you decline the proposal until that issue is addressed and the proposal perhaps includes decision rules explicitly targeted towards recreational and customary interests that might be affected.
- 102 Should you consider that the NIFC's stated intent to spread catches and maintain constant fishing behaviour is adequate to address any risk to other participants in the fishery, then you are able to decide on the second option and agree to implement the proposal to increase the TACC for TAR 1 in line with the AMP proposal. That will require you to set a TAC of 2372 tonnes, and make the allowances for customary and recreational fishing, and other sources of fishing-related mortality, as recommended.
- 103 MFish notes that other options might be available to provide for additional utilisation in TAR 1, but that these would require further development and consultation. MFish considers that would be achievable within a future review of sustainability measures and other management controls.

Recommendations

- 104 MFish recommends that you:

EITHER (MFish preferred option)

- a) decline the application to increase the TACC for TAR 1 to 1997 tonnes as proposed by the Northern Inshore Fisheries Company Limited; and
- b) set the TAC for TAR 1 at 1,773 tonnes; and within that TAC:
 - i) set an allowance of 45 tonnes for Maori customary non-commercial catch;
 - ii) set an allowance of 310 tonnes for recreational catch;
 - iii) set an allowance of 20 tonnes for all other mortality to the stock caused by fishing; and
 - iv) retain the TACC at the current level of 1,398 tonnes.

OR

- c) agree to implement the proposal for TAR 1 by the Northern Inshore Fisheries Company Limited under the Adaptive Management Programme, wherein the company assumes responsibility:
 - i) for updating standardised CPUE analysis for the TAR 1 fishery; and

- ii) implementing catch effort splitting arrangements to avoid localised depletion; and
- d) set the TAC for TAR 1 at 2,372 tonnes and within that TAC:
 - i) set an allowance of 45 tonnes for Maori customary non-commercial catch; and
 - ii) set an allowance of 310 tonnes for recreational catch; and
 - iii) set an allowance of 20 tonnes for all other mortality to the stock caused by fishing; and
 - iv) increase the TACC from 1,398 to 1,997 tonnes.