



MINISTRY OF FISHERIES  
Te Tautiaki i nga tini a Tangaroa

ASB Bank House, 101 - 103 The Terrace,  
P O Box 1020, Wellington, New Zealand.  
Phone (04) 470-2600, Fax (04) 470-2601.


FP 8/1/5/1  
10/15/4

24 September 1997

Minister of Fisheries

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR  
SNA1 FOR THE 1997-98 FISHING YEAR

1. The attached document provides reasons for your decisions as a result of the review of sustainability measures and other management controls for SNA1 for the 1997-98 fishing year. Crown Law and Mfish legal have been consulted in the preparation of this document. Subject to your approval of this document, Mfish will prepare covering letters for your signature to the stakeholders consulted to distribute your decisions in line with the obligations under section 12(2) of the Act.



A P Bauckham  
for the Chief Executive  
Ministry of Fisheries



---

Office of  
THE MINISTER OF FISHERIES  
Wellington, New Zealand

---

«Title» «FirstName» «LastName»  
«JobTitle»  
«Company»  
«Address1»«Address2»  
«City»

«Greeting» «Title» «LastName»

MANAGEMENT OF SNAPPER 1 (SNA 1) FOR THE 1997-98 FISHING YEAR.

Review Process

This letter outlines my final decisions on the management of the SNA 1 fishery for the 1997-98 fishing year. I note that the consultation period for SNA 1 this year was much longer than initially planned. This was for a number of reasons, in particular the release of the Court of Appeal's decision on the 1995 and 1996 SNA 1 TACC decisions on 22 July 1997. This judgment, amongst other things, set aside the decision to reduce the TACC to 3 000 tonnes. The TACC therefore remained at its pre 1995-96 level of 4 938 tonnes for the balance of the 1996-97 fishing year.

Consultation on SNA 1 included consideration of sustainability measures (including TAC and TACC levels) and other management controls. Following the reserved judgement of the High Court delivered on 11 June 1997 the review also encompassed reconsideration of an area closure in the inner Hauraki Gulf beyond that which was upheld by the Court.

The SNA 1 fishery is very important to both commercial and non-commercial groups. Accordingly, throughout the consultation process I held the view that it was important to give all interested parties as much time as possible, before the beginning of the new fishing year, to make their submissions and respond to my initial views, the Court decisions, and the Ministry's advice to me on this fishery.

Consultation on SNA 1 was carried out with the Fishing Industry Board, the Treaty of Waitangi Fisheries Commission, other industry associations, and a range of recreational and environmental groups who I determined as representative of persons having an interest in the stock, or the effects of fishing in the area concerned. Pursuant to Section 12 of the Fisheries Act 1996, over 70 Iwi were also given the opportunity to participate and provide input into the consultation process.

I would like to take this opportunity to thank all sector groups and Iwi for their patience and willingness to accommodate the adjusted SNA 1 consultation timetable. I have received numerous submissions, written and oral, from sector groups over the last three months and I acknowledge the time and effort committed to compiling and formulating those submissions. Together with the available fishery assessment information, and the comprehensive advice from my Ministry, this has resulted in a very large quantity of material for me to read and carefully evaluate. I have considered, and understood, the issues, submissions, and advice presented on this fishery before reaching my final decisions.

### Statutory Considerations

My decisions on this fishery have been made pursuant to the relevant provisions of the 1983 and 1996 Fisheries Acts and in a manner consistent with New Zealand's international obligations relating to the fishery and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act. I have also taken into account the environmental principles in the Act. I do not believe that my decisions will adversely affect associated or dependent species or the maintenance of biological diversity.

### 1997 Fishery Assessment

The 1997 assessment of SNA 1 gives an improved status of the overall fishery relative to the biomass level that would support the Maximum Sustainable Yield (MSY). This biomass level is referred to as the  $B_{MSY}$ . The status of the two SNA 1 substocks relative to  $B_{MSY}$  differs. The East Northland substock appears to be at about  $B_{MSY}$ . The Hauraki Gulf/Bay of Plenty substock is currently below  $B_{MSY}$ , and is estimated to be about 60%  $B_{MSY}$  at the beginning of 1997-98. In tonnage terms, the biomass of this substock at the start of 1997-98 is predicted to be about 34 000 tonnes, 23 000 tonnes below  $B_{MSY}$ . The SNA 1 fishery (both substocks combined) at 1 October 1997 is estimated to have a biomass of 50 700 tonnes, whereas  $B_{MSY}$  is estimated to be 73 580 tonnes.

Section 10 of the Act provides guidance in circumstances where there is uncertainty in the information available to make a decision. This section directs that I should be cautious when information is uncertain. The Plenary Report concludes that the 1997 assessment for SNA 1 is much less certain than the 1996 assessment. The uncertainty relates to the prediction of future recreational catch and also a number of other inputs into the assessment model. Stock projections into the future and risk analyses were not carried out for this year's assessment. One of the main reasons given for this was the considerable uncertainty in the model concerning historical and future recreational catch levels. I have taken this uncertainty into account by taking a substantive step to reduce removals in the fishery for 1997-98 and by indicating my intent to review the situation with improved information prior to 1 October 1998. Work is planned for 1997-98 to improve the assessment, including providing stock projections.

## TAC for 1997-98 and timeframe for rebuild to $B_{MSY}$

Section 13 of the Fisheries Act 1996 imposes an obligation on me to set a TAC that enables the level of any stock whose current level is below  $B_{MSY}$  to be altered in a way, and at a rate, that will result in the stock being restored to or above  $B_{MSY}$ . In considering the way in which, and rate at which, I satisfy that obligation I must have regard to the circumstances of a particular fishery and consider a number of appropriate factors, including the social, cultural and economic factors I consider relevant. The rate of rebuild to achieve  $B_{MSY}$ , and therefore the timeframe adopted to do so, is a matter for my discretion. In this context, I am advised that in any particular year, provided I am confident that it poses no risk to the stock, and there is an intent to move the stock towards  $B_{MSY}$  over time, a catch level may be determined that will not immediately move the stock toward  $B_{MSY}$ . However, in the long term there is a clear obligation that the target stock size must be  $B_{MSY}$ .

I believe there are a range of social, cultural, and economic factors which are relevant to my consideration of an appropriate rate of rebuild and therefore the TAC level, and subsequently the TACC level. I acknowledge that a significant TACC reduction will result in economic and social hardship in terms of loss in profit, employment and a consequential downstream reduction in economic activity. Impacts could be particularly severe on small operators, especially those who depend on leasing quota. Because snapper is a relatively high value species, it is an important component of fishing and related activities in a number of small coastal communities in the SNA-1 area. The impacts in these communities could be compounded by the fact that there will be few alternative sources of employment. In its submissions, industry notes that in the event of a significant TACC reduction, companies would probably rationalise their operations leading to retrenchment in areas where transport costs to export destinations are highest.

An analysis of forgone benefit in the commercial fishery at different levels of TACC reduction was provided by MFish in its final advice paper. This provided some assessment on the relative effect of different TACC reductions and different rebuild periods and indicated that a TACC reduction to achieve a rebuild over ten years may result in a 26% reduction in discounted net revenue over 35 years. The decrease in Net Present Value to achieve a rebuild in 20 and 30 years was estimated to be considerably less at 14.7% and 8.5%, respectively.

I believe there are a number of benefits of rebuilding the stock to both the non-commercial and commercial sector interests. These include an increase in the catch rate and average size of snapper, which should reduce the effort necessary to catch fish and the fishing-related mortality of undersize fish. An increase in stock size and reduction in the current exploitation rate would reduce the current growth over-fishing of the stock overall and improve yield per recruit from the fishery. This will provide a modest increase in total yield.

This stock is very important to non-commercial fishers and as the stock rebuilds to  $B_{MSY}$  there will be improved access and satisfaction from fishing. In considering the benefits that will accrue from a rebuild it is difficult to place a precise value on benefits that may not occur for a number of years, or decades, depending on the rebuild timeframe. In contrast, the costs of a TACC reduction are relatively obvious and more quantifiable.

Industry does not agree that rebuilding SNA 1 to  $B_{MSY}$  will deliver the commercial sector any tangible benefits. However, this is very much a shared fishery and the benefits of rebuilding, albeit hard to fully quantify, are important to non-commercial fishers. I, as Minister, must look at the SNA 1 fishery not only in terms of present day fishing, but also the reasonably foreseeable needs of future generations. When considering the issues from that perspective I place considerable weight on the benefits of a rebuild

In determining a timeframe to rebuild SNA 1 to  $B_{MSY}$  I have been mindful of the need to strike a balance between the costs of reducing removals and the requirement to rebuild the stock. Commercial fishers have emphasised the high economic and social costs of the large reduction in quota necessary to rebuild in a short period. Non-commercial fishers have advocated a time horizon within which most of today's fishers will see tangible benefits.

After carefully considering all of the submissions put to me on this issue I have decided to provide for the rebuild of SNA 1 to  $B_{MSY}$  in 20 years. I regard the cost to the commercial industry of a 10 year rebuild (as recommended by non-commercial and environmental groups) as excessive relative to the benefits, and risks of the current stock status. MFish estimates the relative costs of achieving a 20 year rebuild to be considerably less than for a 10 year rebuild. I believe that the successful development of, acceptance of, and compliance with further controls on non-commercial fishers will be considerably aided if the benefits are achieved within the lifetime of the majority of today's non-commercial fishers. In my view a 20 year rebuild provides a credible balance between the implications of reductions for the commercial sector and providing the benefits of a rebuilt stock that are sought particularly by non-commercial fishers in a reasonable timeframe.

Industry quote an FAO document which suggests that a rebuild should be considered on a time scale not exceeding two or three decades. If SNA 1 was a commercial only fishery, a time scale of 30 years might be appropriate provided there were no biological risks posed to the stock of such a rebuild period. However, because of the very high interest in this stock from non-commercial fishers, I believe that consideration of a rebuild period at the 20 year end of the spectrum suggested by the FAO is reasonable. Further, given the uncertainty in the long term projections for the stock status I am cautious in considering very extended rebuild timeframes. Future assessments may provide a less optimistic outlook for stock status. The longer the timeframe for rebuild the greater the potential that the rebuild may not be achieved.

In considering the TAC level for 1997-98 which would allow a 20 year rebuild I took into account two points. First, the Snapper Stock Assessment Working Group was not able to complete projections for the SNA 1 stock based on the current model. This was partly because of time constraints but also because the model required assumptions concerning future recreational catches which the Working Group has not yet agreed upon. Secondly, the calculations presented both by industry and by MFish are deterministic, i.e. they assume all the parameters of the model are exactly known. There is no allowance for uncertainty in the estimates of  $B_{MSY}$ , and recruitment is assumed to be constant in each year. The Working Group plans to develop a more comprehensive model for the 1998 assessment. Once the details of the model have been finalised, to calculate projections of stock biomass that allow the actual probability of a 20 year rebuild at various TAC/TACC levels to be evaluated.

For the above reasons I decided not to base my decision on the TAC level for 1997-98 on the level calculated by MFish (or industry) to achieve a 20 year rebuild. Instead I have, in the interim, decided to make a TAC decision for 1997-98 based on the exploitation rate (catch to biomass ratio) currently operating in the fishery. One advantage of using this strategy to set a TAC for the coming year is that it uses the information for which there is the greatest certainty; i.e. the estimates of current biomass and the current exploitation rate. I note that no sector group has disputed either of these estimates. This strategy does not depend upon knowing, with any certainty, the relationship of the current biomass to  $B_{MSY}$ . The status of the Hauraki Gulf/Bay of Plenty substock has varied in recent years from 46% to 64%  $B_{MSY}$  as the inputs to the assessment model have been amended. However, the estimate of current biomass has varied by only about 500 tonnes from 1995-96 (33 800 tonnes) to 1997-98 (34 300 tonnes).

The exploitation rate in 1996-97 was estimated to be 14.8% which indicates that the stock is currently being exploited at a level higher than the optimum rate estimated for SNA 1 of 11.8%. To ensure that there is no increase in the exploitation rate, I have decided to set a TAC for 1997-98 of 7 550 tonnes, which is about 14.8% of the current biomass estimate of 50 700 tonnes.

This TAC is close to the preliminary deterministic estimates of the TAC level required to achieve a 20 year rebuild. The estimated reduction in total removals in 1997-98 will prevent the exploitation rate increasing further and will provide an important first step in the rebuild towards  $B_{MSY}$ . Next year I will review the TAC and TACC levels along with other management controls, based on the improved assessment, with the intention of adjusting the total removals required to achieve a 20 year rebuild.

#### Non-Commercial Allowance

Section 28D(1)(a) of the Fisheries Act 1983 specifies that when setting or varying any TACC the Minister shall allow for non-commercial interests in the fishery but does not provide any guidance as to the amount that should be allowed. In considering the allowance for non-commercial interests in the SNA 1 fishery, I have taken into account a number of issues including current and predicted non-commercial catch, sustainability, the impact on commercial fishers and the QMS and issues of concern to the non-commercial sector.

In 1995 and 1996 the previous Minister made an allowance of 2 600 tonnes for non-commercial take in SNA 1. This allowance reflected an assessment of non-commercial use which took into account that Māori fish under the amateur regulations as well as utilising customary fishing permits in some instances. The allowance made for non-commercial fishing in SNA 1 is not intended to constrain the extent of customary take. I am conscious that Māori customary fishing rights will be further defined in proposed new Māori customary fishing regulations which are close to being finalised by the Crown and Māori representatives. The allowance of 2 600 tonnes for non-commercial take is based on the best information available to the Ministry on the extent of both recreational and customary take.

Recreational catch was estimated from the 1996 telephone and diary survey at 2 330 tonnes. This is less than the 1994 diary survey estimate of 2 794 tonnes. I am advised that the assessment model estimates non-commercial catch at about 2 400 tonnes for the 1997-98 fishing year. However, there is considerable uncertainty in the model concerning historical and future recreational catch levels. Despite that, I consider the figures do not support the industry argument that there has been reckless management of the recreational fishery. I believe it is reasonably likely that recreational catch will stay at about the same level, or possibly decrease given the implementation of recent management controls and the low recruitment that is predicted to enter the fishery in 1997-98 and the impact that this will have on the biomass. I have, therefore, decided to maintain the allowance for non-commercial interests at 2 600 tonnes for 1997-98.

In 1994 the snapper MLS for recreational fishers was increased from 25 to 27cm, which is estimated to have reduced recreational catch by 10%. Increasing the MLS for snapper towards 30cm will likely increase the yield-per-recruit and thus the overall yield (MSY) available from the stock. The available information suggests that small snapper caught by recreational fishers from shallow depths have a high probability of survival upon release. A recently published MFish educational pamphlet giving guidelines for releasing undersize fish will assist recreational fishers to reduce juvenile snapper mortality.

I intend reviewing the recreational MMS in tandem with a review of the commercial MLS for longlines. This review could take place in 1998-99 once the results from the 1997-98 research on the mortality rate of commercial longline caught and released snapper become available and are considered by the Stock Assessment Working Group.

In the short term, I believe there is no urgency to consider industry suggestions such as in-season monitoring of recreational catch and closing seasons when the recreational allowance has been taken. Research is to continue in 1997-98 on the assessment of recreational catch through different survey mechanisms. In particular, a diary survey of a sample of recreational fishers will continue through 1997. This sample will allow a comparison of catch and effort for these fishers in successive years and also allow an estimate of recreational harvest in SNA 1 in 1997. The development of the model of past and future non-commercial harvest is important to the assessment of recreational catch. Results from this model will be incorporated in the 1998 assessment of SNA 1.

Further surveys are proposed at regular intervals to monitor changes in harvest levels. In addition, the available data from telephone/diary surveys, boat-ramp surveys and aerial counts of vessels will be used to establish relationships between the total catch and effort and the various factors influencing fishing such as environmental variables (season, weather), time of year (holiday period, weekend), fishing methods and location. Such relationships may help in interpreting how well the estimates of recreational catch and effort from the diary surveys represents average conditions. There is also to be boat ramp surveys in Tauranga Harbour, Ohiwa Harbour and the Bay of Islands to estimate summer recreational catch and effort.

Closed seasons would have significant implications on fishing for other recreational species. The potential biological cost of returning snapper to the water after a season was closed cannot be fully determined until further research is completed into the survivorship of returned fish.

I am of the view that further measures are not necessary for 1997-98 to restrain recreational removals at about current levels. I intend to consider the adjustment of controls on recreational take next year and in future years so that an increase in removals does not compromise the rebuild of SNA 1.

### Recreational Charter Boat Activities

Industry has submitted that immediate controls are necessary on recreational charter boat activities, including licenses or permits under section 11 of the Act, and that they should be levied with cost recovery levies and be required to hold a catch entitlement. The information from recreational surveys indicates that charter vessels accounted for only 6% in 1994 and 7% in 1996 (provisional result) of snapper from the overall recreational catch in the North Region. In order to gather more information on the recreational catch from charter vessels a national survey is being undertaken in 1997-98 to determine the nature of charter operations by area and season and to estimate catch and effort for key species, including SNA 1.

Although there is scope under provisions of the Fisheries Act 1996 to take some of the steps proposed by industry, there has not been sufficient time to consider whether there is conflict with other specific empowering provisions. Such regulations which could significantly impact on charter boat operators would require prior consultation with such operators.

In addition to legal and administrative issues, policy issues arise in considering the necessity of implementing such measures. Charter vessels provide transport services to recreational fishers, yet the industry proposals would have the effect of imposing commercial fishing requirements on a charter vessel operator who is neither taking fish nor doing so on someone else's behalf. Some elements of the industry proposal would appear to be outside the intended application of the Fisheries Act 1983 (and Fisheries Act 1996). I consider that fish taken from recreational charter vessels should be managed in the context of an overall framework for the management of recreational fisheries.

MFish has indicated that it intends to develop policy to better integrate recreational fishing rights with the QMS. Options to achieve this integration range from more sophisticated use of input controls such as size and bag limits to entitlements-based approaches. The development of an appropriate mechanism and any subsequent amendments to the Fisheries Act 1996 requires policy development, consultation and Government approval. This process will not be completed before the start of the 1997-98 fishing year.

In conclusion, I am of the view that industry proposals regarding recreational charter boats are more appropriately dealt with through consideration as a statutory amendment than by regulation, and that this be done as part of a wider consideration of options for integrating recreational fishing with the QMS.

### TACC and other commercial management controls

Given a TAC level for 1997-98 of 7 550 tonnes, making an allowance of 2 600 tonnes for non-commercial fishers and taking into account an estimate of 10% for illegal catch, this results in a TACC of 4 500 tonnes for 1997-98. This represents about an 8.9% reduction from the 1996-97 TACC of 4 938 tonnes. As noted earlier, I will review the TAC, and subsequently the TACC, next year based on the improved assessment that will be available in 1998, with the intent of adjusting removals to achieve a 20 year rebuild.



A provision in the 1983 Act (now repealed) required that I consider the imposition of other management measures to achieve a reduction in removals as an alternative to a TACC reduction. There are some measures that have promise and are currently being investigated through research to assess how they could be applied, their effectiveness and implications. MFish is uncertain of the potential of these measures to achieve immediate benefit to the stock. Further research will need to be completed and discussed in the appropriate fora to ascertain the benefits of particular proposals. For many measures further consultation will be necessary to consider implementation issues and the acceptance of the value of the measures.

Industry has suggested a range of other management controls it believes would be appropriate and effective to provide for the rebuild of the snapper fishery. The majority of these proposed controls are contained in a draft Memorandum of Understanding (referred to as the Memorandum) that was produced following discussions between industry and the NZRFC in 1996. This Memorandum is unsigned and the NZRFC have not ratified it. Many of the proposals in the Memorandum concern non-compliance with existing regulations and legislation. The Compliance Business Unit of the Ministry has set the measurement of compliance in NZ fisheries as a key output for its future operations. In 1997-98 there is a research project to provide an estimate of non-compliance with commercial fishery management measures in three important OMS fisheries, including snapper. The specific objectives are to quantify the perceptions of the levels of non-compliance in these fisheries, the effectiveness of measures to control non-compliance, and ways to improve compliance. Over time, the perceived level of non-compliance will be used as a factor to determine the allocation of enforcement resources in fisheries such as SNA 1.

Some of the proposals regarding illegal fishing activity will be progressed in 1997-98 as a result of government approved 'new initiative' funding of \$766 000 to provide additional enforcement resources. These will address high grading and dumping in the snapper fishery and the current black market in snapper. The Auckland District has had an increase in staffing and increased attention is also being focused on the correct completion of Catch Effort and Landing Returns.

The Government has also approved funding to improve recreational fishing compliance through the Honorary Fisheries Officer (HFO) network. I believe the most effective way to increase the contribution of the HFO network is through improved co-ordination, training and support to enhance the programme. The proposals include a focus on providing improved educational material that can be used in the community (such as the recent pamphlet produced for recreational fishers).

Planned or proposed research in 1997-98 and/or 1998-99 will enable evaluation of the potential benefits of other controls. These include removing the MLS for trawlers and Danish seiners, review of the commercial longline MLS, and the use of attachments for longline hooks. For 1997-98 there is already research contracted to assess the proportion of lip and gut hooked snapper by commercial longlines. Results will be used in conjunction with those from earlier work to determine the benefits of any potential future changes to the commercial longline MLS. As noted earlier, the results may also be useful in reviewing the current recreational MLS of 27cm.

I intend deferring a review of the commercial longline MLS at least until the final results from the 1997-98 research becomes available (September 1998), and can be considered by the Snapper Stock Assessment Working Group. Data from research proposed in 1998-99 on the proportion of juvenile snapper caught by trawl methods could be used to evaluate the benefit of removing the no MLS for trawls and Danish seines.

In 1998-99 there is additional research proposed to assess the effects of modifications to hook designs and appendages on the rate of gut-hooking in juvenile snapper. Preliminary evaluation of hook appendages, conducted in 1996 and 1997, has shown that these can substantially reduce the incidence of gut-hooking. The use of final results from hook design research could be linked to the future review of the recreational MLS and commercial longline MLS. However, many factors are likely to influence mortality of line caught fish, most importantly how they are handled on capture. How any new technology is applied to the fishery will need to be considered carefully when research and trials have been undertaken. Education as to the benefits of a new hook type may be preferable to regulation for the recreational sector.

#### Discretion To Acquire And Deal With Quota On Behalf Of Crown Under Section 28U

My decision to reduce the TACC is based upon sustainability reasons and is not in any way intended to achieve a reallocation of the resource to the non-commercial sector. I do not consider, therefore, that the discretion under s28U for the Crown to acquire quota should be exercised. I believe that for the Crown to pay to acquire quota would amount to a cash payment for reducing fishing effort when the acquisition is for the sole purpose of reducing the commercial catch in a manner similar to a TACC reduction for sustainability reasons. This would be contrary to the general legislative intent that cash payments (whether in the form of compensation or a purchase price) are not payable for TACC reductions made for sustainability reasons and the 1990 amendment to the Fisheries Act 1983 which placed the risk of TACC increases and reductions on commercial fishers.

This intent is clearly shown by the repeal of the mandatory consideration in s28D(b)(ii). If Parliament had intended the Crown to purchase quota whenever a TACC reduction is made, it would not have repealed the mandatory consideration in s28D(b)(ii). This legislative intent is reinforced by the general no compensation provision contained in s28OD(7). Section 28U is merely a permissible consideration and I do not think the discretion conferred by the section would be properly exercised if the only reason advanced in support of its exercise is to avoid or reduce the severity of a TACC reduction for sustainability reasons.

Furthermore, s28U is a discretion to be exercised by the Chief Executive of the Ministry of Fisheries. While I am able to convey current government policy to the Chief Executive of the Ministry of Fisheries, the discretion is ultimately one for him to exercise. I do not think that it is appropriate to request that he exercises the discretion as I think that its effect would be to compensate for a TACC reduction made for sustainability reasons. The discretion under s28U may apply in a number of particular situations such as when the Crown requires quota to, for example, achieve a retransfer of quota in appropriate cases after forfeiture under the automatic forfeiture provisions of the fisheries legislation. While the discretion may be exercised in a particular situation of an individual commercial fisher, I believe there is no specific material before the Chief Executive in relation to an individual commercial fisher that would require him to exercise discretion under s28U as a result of my TACC decision this year.

## Splitting the Substocks

The available information on SNA 1 suggests there are two substocks of snapper, East Northland and Hauraki Gulf/Bay of Plenty. I note that industry has suggested these should be managed separately. Separate management could be achieved by an Act of Parliament or through regulations. The Fisheries Act 1996 provides a process for separation of QMAs with sufficient quota holder support. This section has not yet commenced. A formal split to the SNA 1 QMA would possibly be contentious and administratively difficult to achieve because of the need to reallocate quota among the existing 190 quota holders. There may also be complexities involved with the splitting of quota between two substocks which have a different biomass status in relation to  $B_{MSY}$ .

Industry has suggested that in the interim a voluntary management agreement could be implemented, although it has not yet provided any documented proposals on how this could be formally achieved. However, given that over 80% of the quota is owned by 20 companies, industry is of the view that such a catch-spreading agreement could be implemented and managed by industry in the coming year. Despite the difficulties involved with achieving a split in the QMA (voluntary or otherwise), I acknowledge it could allow an appropriate management strategy to be applied separately to the two stocks over the longer term. Accordingly I invite industry to submit a more definitive proposal that can be discussed with other stakeholders in 1998.

## Enhancement

Industry has proposed developing an enhancement programme to release one million six month old snapper into the fishery each year for three years. I believe there would be high risks associated with this proposal as it stands. The technical difficulties of a project of this size would be difficult to overcome because of the short time frame suggested. In the longer term, it is possible that an effective project could be developed. The release of one million juvenile snapper has the potential to increase the yield from the Hauraki Gulf to a limited extent. However, the amount of any increase in yield is highly uncertain as it depends on survival after release. Considerable research into the optimum manner, location, timing, and age of release would be required. On average about 11 million four year old snapper naturally recruit into the SNA 1 fishery annually. I am therefore of the view that a better option in the short term to increase the yield available from the fishery is to investigate controls that would reduce the mortality of pre-recruit wild snapper.

## Inner Hauraki Gulf Closure

As I noted in my introductory comments, as well as reviewing TAC and TACC levels, consultation on SNA 1 also included reconsideration of an area closure in the Inner Hauraki Gulf. This was in accordance with directions given by the High Court in its reserved decision delivered on 11 June. The Court determined that the section of the area closed to commercial finfish fishing at the conclusion of the 1995 review of TACCs and management controls, which extends generally southward from the Whangaparaoa Peninsula through the Rangitoto Channel, and the Tamaki Strait, is valid. However, the Court directed that the area extending generally northward between Whangaparaoa and Cape Rodney should be reconsidered, "with the Leigh Fishermen's Association Inc. duly consulted."

In addition to re-assessing this area, I have also considered a proposal submitted by the NZ Marine Transport Association to extend the timing of the area closure to include April. This proposal was received and included as part of the review of sustainability measures and other management controls for the 1997-98 fishing year. It is a separate issue from reconsidering the northern part of the closed area, but because there is some commonality of issues, this proposal has been dealt with in conjunction with the area closure re-assessment.

In a letter to stakeholders dated 15 July, I indicated that consultation on and reconsideration of the area closure would be directed solely at the closure north of Whangaparaoa, and at determining for sustainability reasons whether closing this area to commercial fin-fishing in spring and summer would produce benefits by reducing the mortality of sub-legal snapper.

Notwithstanding the reserved decision of the High Court that the closure south of Whangaparaoa is valid and the further indication I gave in my letter of 15 July that only the northern area would be subject to reconsideration, I have received submissions seeking revocation of the southern closed area.

Consultation and reconsideration has primarily involved further assessment of information on juvenile fish distribution in the area, on catches of snapper taken by the fishing methods which would be excluded, on levels of mortality thought to be associated with each method, on possible affects of displacement of these methods to other areas, and on impacts of a closure on fishers who would otherwise operate in this area.

In respect of the southern closed area I am of the view that there is still benefit in the closure south of Whangaparaoa in terms of reducing juvenile mortality and spatial conflict between sector groups. I am of the view that the removal of this part of the area closure would not reduce the need for any PACC reduction by contributing as a sustainability control for the SNA 1 fishery. As to the northern part of the area closure, on the basis of information currently available, I cannot say that there would be sufficient sustainability benefits, in terms of reduction of juvenile mortality, to clearly outweigh costs in terms of impacts on the fishers affected.

I have therefore decided to revoke the northern part of the area closure and confirm that the seasonal closure to commercial finfish fishing apply to the area of the inner Hauraki Gulf south of Whangaparaoa Peninsula only and to make no change to the method exemptions that apply to this area of closure. In so doing I do not rule out the possibility that further controls on finfish fishing may usefully be applied over parts of the area north of Whangaparaoa Peninsula in the future.

With regard to the NZ Marine Transport Association proposal relating to the timing of the area closure, I am of the view that the extension of the closure to include April would not offer sufficient extra protection for juvenile snapper to outweigh the impacts on commercial fishers who currently operate in the area at that time of year. Extending the duration of the closure to improve recreational fishing would require legislative provisions not currently commenced.

In arriving at these decisions, I have been mindful that information from further research will be available in the near future which will provide a good basis to consider survival of juvenile snapper anew. Development of strategies to improve protection of juvenile snapper, making use of this and all of the other relevant information which has been compiled, would seem to be a key component of the management plan for the SNA 1 fishery.

I intend to proceed with the amendments as described above so that they are in place as soon as practicable after 1 October. However, in response to submissions made at the meeting of stakeholders on 18 September, I have indicated that I am open to considering alternative area closures on the basis of a consensus position between commercial, recreational, environmental and Maori stakeholders.

#### Management Plan for the SNA 1 Fishery

Industry has suggested that a management plan be formulated for the SNA 1 fishery. I believe that given a 20 year rebuild timeframe, the Ministry and sector groups can begin to formulate a management plan that will achieve this goal. An important part of this plan could be the development of a set of 'decision rules'. I note that there is proposed research in 1998-99 to evaluate decision rules for the rebuild of the SNA 1 fishery. However, preliminary work on developing decision rules for SNA 1 could begin in 1998.

Other elements of the strategy should include consideration of implementing other management controls as research is completed to support such deliberation. These will include measures to restrain recreational catches as the biomass rebuilds and reduce juvenile mortality in the fishery. MFish can facilitate this process but sector groups need to identify areas where agreement can be reached. I want to receive a consensus position on as many issues as possible rather than relying on my arbitration and decision on all issues.

The management proposals will need to consider my stated intent to rebuild this fishery to B<sub>MSY</sub> in 20 years. I intend to achieve this through further TAC/TACC reductions, if necessary, in conjunction with consideration of further controls on commercial and non-commercial fishing. The nature and extent of future TAC/TACC reductions and further controls on commercial and non-commercial fishing cannot be fixed now but will depend on ongoing monitoring of the fishery and new information as it becomes available.

Yours sincerely

Hon John Luxton  
Minister of Fisheries

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

REVIEW OF SUSTAINABILITY MEASURES AND OTHER MANAGEMENT  
CONTROLS FOR SNA 1 FOR THE 1997-98 FISHING YEAR

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT



# TABLE OF CONTENTS

<b>1. INTRODUCTION</b> .....	<b>3</b>
1.1. THE REPORT FROM THE FISHERY ASSESSMENT PLENARY .....	3
1.2. CONSULTATION .....	3
1.3. FINAL ADVICE TO THE MINISTER AND IMPLEMENTATION OF DECISIONS .....	5
<b>2. STATUTORY CONSIDERATIONS</b> .....	<b>7</b>
2.1. PURPOSE AND OBLIGATIONS .....	7
2.2. ECOSYSTEM-BASED MANAGEMENT .....	8
2.3. INFORMATION PRINCIPLES .....	9
2.4. FISHSTOCK MANAGEMENT .....	9
2.4.1. Quota Management Stocks .....	10
2.4.1.1. <i>Target Stock Level</i> .....	10
2.4.1.2. <i>Discussion of MSY</i> .....	11
2.4.1.3. <i>Alternative Target Stock Level</i> .....	12
2.4.2. Non-QMS Fishstocks .....	12
2.5. THE COASTAL MARINE AREA .....	13
2.6. TACS AND OTHER SUSTAINABILITY MEASURES .....	13
2.7. INTERFACE WITH FISHERIES ACT 1983 .....	14
2.8. FISHERIES WITHIN THE EEZ .....	14
2.9. ALLOCATION TO STAKEHOLDERS .....	15
2.9.1. Other Sources of Fishing Mortality .....	17
2.10. CONSULTATION .....	17
2.11. REGULATIONS AND NOTICES .....	19
2.12. EFFECT OF TACC VARIATION .....	19
2.13. COMPENSATION .....	19
<b>3. FISHERY ASSESSMENT</b> .....	<b>21</b>
3.1.1. Recreational Catch .....	21
3.1.2. Customary Catch .....	23
3.1.3. Abundance Indices .....	23
3.1.3.1. <i>Recruitment Indices</i> .....	23
3.1.3.2. <i>1994 Tagging Programme</i> .....	23
3.1.3.3. <i>1985 Tagging Programme</i> .....	25
3.1.3.4. <i>Model Results</i> .....	25
3.1.4. Yield Estimates .....	31
3.1.5. Other Sources of Mortality .....	32
3.1.6. Summary .....	32
<b>4. INDUSTRY VIEWS</b> .....	<b>35</b>
4.1. MAIN INDUSTRY SUBMISSION (FIB/SEAFIC) .....	35
4.1.1. New Context for the 1997 Decisions .....	35
4.1.1.1. <i>Fisheries Act 1996</i> .....	35
4.1.1.2. <i>Information Principles</i> .....	38
4.1.1.3. <i>Court of Appeal's Decision</i> .....	39
4.1.1.4. <i>Cost/Benefit Analysis and Reasonableness</i> .....	40
4.1.2. Fishery Assessment Considerations .....	41
4.1.3. Management Plan for SNA 1 .....	47
4.1.3.1. <i>No TAC or TACC Reduction Necessary Based on the Current Stock Assessment</i> .....	51
4.1.3.2. <i>Factors to be Considered When Contemplating TACC Reduction</i> .....	52
4.1.3.3. <i>Impact of a TACC Reduction on the Integrity of the QMS and Property Rights</i> .....	57
4.1.3.4. <i>Impact on the Treaty Settlement of a TACC Reduction</i> .....	59
4.1.3.5. <i>Other Management Controls as an Alternative to a TACC Reduction</i> .....	59
4.1.4. Cost-Benefit Analysis .....	60
4.1.5. Concluding Position of Commercial Industry .....	62
4.2. LEIGH FISHERMEN'S ASSOCIATION .....	63
4.3. AUCKLAND COMBINED FISHERMEN'S ASSOCIATION .....	64

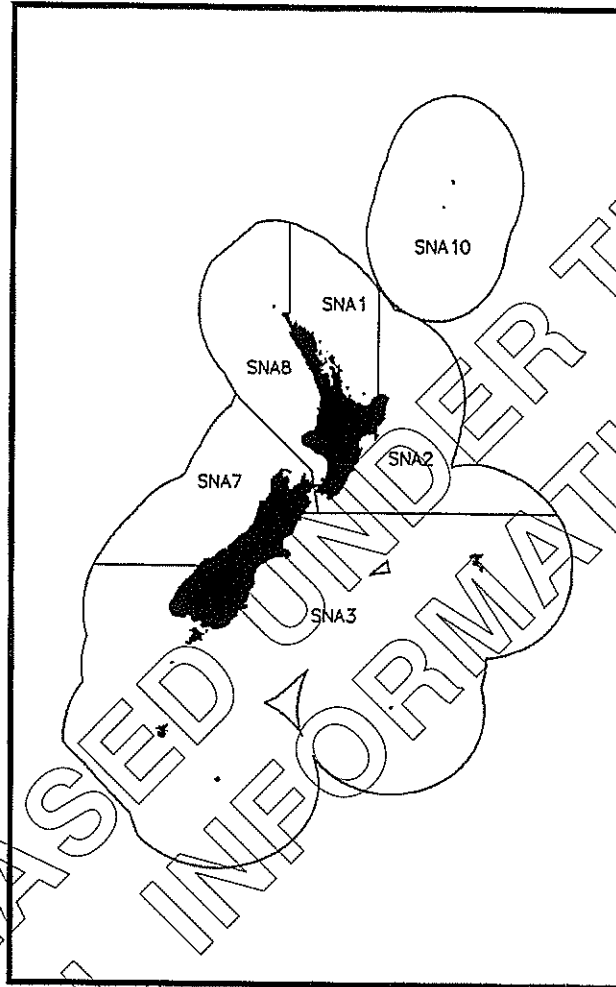
<b>5. TOKM (TREATY OF WAITANGI FISHERIES COMMISSION) VIEWS.....</b>	<b>65</b>
5.1. THE MSY CONCEPT .....	65
5.1.1. TAC/TACC.....	67
5.1.2. Recreational Take.....	68
5.1.3. Customary Take.....	69
5.1.4. Primacy of Māori Non-Commercial Fishing .....	69
5.1.5. Māori Interest.....	69
5.1.6. Māori Commercial Interest.....	71
5.1.7. Reallocation of TAC Access .....	72
<b>6. NON-COMMERCIAL SECTOR GROUP VIEWS .....</b>	<b>73</b>
6.1. NZ RECREATIONAL FISHING COUNCIL.....	73
6.1.1. Current Biomass in Relation to $B_{MSY}$ .....	74
6.1.2. Recreational Catch Estimates.....	74
6.1.3. SNA 1 Uncertainty in Regard to Forward Projections .....	75
6.1.4. Government Should Legislate the SNA 1 TACC by Act of Parliament.....	76
6.2. NZ MARINE TRANSPORT ASSOCIATION .....	77
6.3. ENVIRONMENTAL GROUPS .....	78
6.3.1. Separate Quota Areas .....	79
6.3.2. Legal Obligations .....	79
6.3.3. Rebuild Period.....	80
6.3.4. Economic Issues .....	82
6.3.5. Recommendations.....	83
6.4. OTHER.....	84
6.5. CUSTOMARY MĀORI VIEWS .....	84
6.5.1. Northern Iwi Consultation .....	84
6.6. FISHERIES LIAISON COMMITTEE VIEWS .....	85
<b>7. MFISH COMMENT .....</b>	<b>87</b>
7.1. BACKGROUND .....	87
7.2. PAST DECISIONS .....	87
7.2.1. The 1992 TACC Reduction .....	87
7.2.2. The 1993 and 1994 TAC/TACC and Management Control Decisions.....	88
7.2.3. The 1995 Fishery Assessment and TAC/TACC Decision for SNA 1 .....	88
7.2.3.1. Other Management Controls.....	90
7.2.3.2. Changes to Recreational Controls.....	90
7.2.4. The 1996 Fishery Assessment and TAC/TACC Decision for SNA 1 .....	91
7.3. SUSTAINABILITY MEASURES .....	92
7.3.1. Effects of Fishing.....	92
7.3.2. Existing Controls.....	92
7.3.2.1. Area Closures.....	92
7.3.2.2. Commercial Gear Restrictions.....	92
7.3.2.3. Non-Commercial Controls.....	93
7.3.2.4. Summary .....	93
7.3.3. Imposition of Other Controls .....	94
7.3.3.1. Minimising High Grading or Dumping of Snapper.....	95
7.3.3.2. Minimising Wasteful Fishing Mortality.....	96
7.3.3.3. Minimising Black Market Activity.....	101
7.3.3.4. Removing Under-Reporting Opportunities .....	103
7.3.3.5. Ensure Sectors Remain Within TAC Limits.....	104
7.3.3.6. Enhancement by Release of Reared Snapper.....	106
7.3.3.7. Empowerment of a Body to Represent Recreational Fishing Interests .....	106
7.3.3.8. Spatial Conflict .....	107
7.3.3.9. Splitting the Substocks.....	107
7.3.3.10. Recreational Controls.....	108
7.3.3.11. Commercial Longline MLS.....	111
7.3.3.12. The Coastal Marine Area.....	113

7.3.4. TAC Setting .....	113
7.3.4.1. Stock Status in Relation to <i>B<sub>MSY</sub></i> .....	113
7.3.4.2. Uncertainty.....	114
7.3.4.3. Yield Estimates From Fishery .....	116
7.3.4.4. Interdependence of Stocks.....	120
7.3.4.5. Social, Cultural and Economic Factors .....	121
7.4. TACC SETTING.....	139
7.4.1. Allowance for Non-Commercial Users.....	139
7.4.1.1. Recreational Catch.....	140
7.4.2. Customary Take.....	143
7.4.2.1. Other Sources of Mortality.....	145
7.4.3. Setting the TACC.....	146
7.5. RESEARCH PLANNED FOR 1997–98.....	147
7.5.1. Snapper Population and Modelling and Stock Assessment (SNA9701) .....	147
7.5.2. Estimation of Mortality of Juvenile Snapper (SNA9702).....	148
7.5.3. Estimation of Inshore Fish Abundance in the Hauraki Gulf and Adjacent Waters Using Trawl Surveys (INT9701).....	149
7.5.4. National Marine Recreational Fishing Survey (REC9701) .....	149
7.5.5. Modelling Recreational Fisheries (REC9702) .....	150
7.5.6. National Survey of Recreational Fishing from Charter Boats (REC9703).....	150
7.5.7. Estimation of Recreational Catch and Effort in the MFish North Region (REC9706).....	151
7.6. RESEARCH PROPOSED FOR 1998–99 .....	151
7.6.1. Snapper Population Modelling and Stock Assessment (SNA9801) .....	151
7.6.2. Estimation of Mortality of Juvenile Snapper (SNA9802).....	152
7.6.3. Estimation of Snapper Year Class Strength (SNA9803).....	154
7.6.4. Biomass Estimation for SNA 1 (SNA9804).....	154
7.6.5. Economic Analysis of the Northern Snapper Fisheries (SNA9806).....	155
<b>8. CONCLUSION.....</b>	<b>157</b>
8.1.1. Assessment.....	157
8.2. TACC SETTING .....	157
8.2.1. Relevant Factors .....	158
8.2.2. Non-Commercial Allowance.....	159
8.2.3. TAC and TACC Options for 1997–98.....	160
8.2.3.1. No Reduction in Current Biomass in 1997–98.....	160
8.3. OTHER MANAGEMENT CONTROLS.....	165
8.3.1. Compliance Issues and Proposals.....	166
8.3.2. No Minimum Legal Size (MLS) for Powered Fishing Methods.....	167
8.3.3. Escape Panels and Trawl Mesh Size.....	167
8.3.4. Review of the Commercial Longline Minimum Legal Size (MLS) .....	168
8.3.5. Recreational Bag Limit.....	168
8.3.6. Recreational MLS.....	168
8.3.7. Hook Size and Type.....	169
8.3.8. Splitting the Substocks.....	170
8.3.9. Enhancement.....	170
8.3.10. Inner Hauraki Gulf Closure (Northern Section).....	171
8.3.11. Plan for the SNA 1 Fishery.....	172
8.4. RECOMMENDATIONS.....	174
8.4.1. Allowance .....	174
8.4.2. TAC and TACC Options .....	174
8.4.3. Other Controls.....	175
8.4.4. Inner Hauraki Gulf Closure (Northern Section).....	175

## Glossary

Attachment A:	Legislation
Attachment B:	International Obligations
Attachment C:	Existing Area Closures in the Auckland Fisheries Management Area
Attachment D:	Inner Hauraki Gulf Closure

# SNAPPER (SNA 1)



SNA 1 Reported Catch (tonnes)					
Year		1993-94	1994-95	1995-96	1996-97
SNA 1	TACC	4 928	4 938	4 938	4 938
	Catch	4 846	4 831	4 959	4 556†

†Catch as at 3 September 1997

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

# 1. INTRODUCTION

1. This paper provides you with advice on the review of sustainability measures and other management controls for snapper 1 (SNA 1) for the 1997–98 fishing year. The process that is undertaken to accomplish this review involves consideration of recent research, analysis of commercial catch data and any other relevant information. The process also has regard to legal considerations, takes account of the views of all sector groups and Iwi and enables MFish to offer independent and objective advice to you. The process can be summarised into three major steps.

## 1.1. The Report from the Fishery Assessment Plenary

2. Between January and April 1997 Fishery Assessment Working Groups reviewed the available fishery research and catch data for all Quota Management System (QMS) fishstocks and for certain non-QMS species. These scientific working groups involved MFish Science Policy staff, NIWA research staff, commercial and non-commercial sector group representatives. The fishery assessments for each species were summarised in draft working group reports, and those with substantive changes from the preceding year were critically reviewed in the meeting of the fishery assessment plenary in April. The Report from the Fishery Assessment Plenary (the 'Plenary Report') contains the final agreed working group reports for each species.

## 1.2. Consultation

3. Section 2.1 summarises the consultation requirements of the 1983 and 1996 Acts. In preparing this advice paper, the following persons and organisations were consulted:

- a) Industry
  - i) Fishing Industry Board;
  - ii) Fishing Industry Association;
  - iii) Federation of Commercial Fishermen;
  - iv) Fishing Industry Guild;
- b) Māori:
  - i) Treaty of Waitangi Fisheries Commission;
  - ii) Iwi (70 groups identified);
  - iii) PaePae 2;

- c) Conservation:
  - i) ECO;
  - ii) Greenpeace;
  - iii) Royal Forest and Bird Protection Society;
- d) Recreation:
  - i) New Zealand Recreational Fishing Council.

4. The views of these persons are included in the paper. Note that there was additional consultation undertaken with the Leigh Fishermen's Association Incorporated following the High Court's judgment directing reconsideration of part of the seasonal inner Hauraki Gulf area closure.

5. On 30 May 1997, MFish released to sector groups and Iwi a document (the Initial Position Paper) containing an initial Ministry position on the fishstocks it had identified for review, and proposed amendments to the fisheries regulations. Sector groups and Iwi were invited to submit proposals for inclusion in the review of sustainability measures and other management controls by 6 June. The Fishing Industry identified SNA 1 for inclusion in the review process and recommended that the TACC for this fishery be set at 4-938 tonnes. The industry discussed its recommendation for SNA 1 in a paper titled "The Industry's TACC Proposals for 1997-98". This paper, and all other written sector group proposals, were circulated amongst all stakeholder groups on 9 June 1997.

6. Proposals submitted by both MFish and sector groups were considered in two national consultative meetings which were convened in Wellington on 11-12 June and 2 July 1997. The national consultative meetings were supported by regional consultation involving fisheries liaison committees and stakeholder group meetings throughout New Zealand. In order to provide for the input and participation of tangata whenua in the review process, MFish wrote to about 70 Iwi advising them of opportunities for involvement. Further, regional hui were held at key locations throughout New Zealand and the information gathered at these hui were incorporated into the national process.

7. On 18 June 1997 you wrote to individuals and organisations you considered representative of persons having an interest in the fishery and asked them for submissions on the proposed review of sustainability measures and other management controls. You included your preliminary views on the fishstocks and regulatory proposals identified for review (including SNA 1). These views formed the basis for discussions in the second consultative meeting between MFish and sector groups on 2 July. You have already received copies of the final minutes from the two consultative meetings, which includes a record of discussion on the management of SNA 1.

8. Sector groups and Iwi were invited to provide written submissions to you by 11 July 1997. Industry and other sector groups requested at the second consultative meeting that the deadline for final submissions on SNA 1 be extended until 30 days after the Court of Appeal decision on the judicial review of the 1995 and 1996 TACC decisions for SNA 1. At that time the Court of Appeal decision had not been given and it was not possible to predict when it would be released. On this basis sector groups were asked to keep to the original timeline for submissions. Some final submissions on SNA 1 were received by 11 July.

9. On 22 July 1997 the Court of Appeal gave its decision setting aside the previous Minister's decision to set the TACC for SNA 1 at 3 000 tonnes. As a result of the timing of this decision and subsequent discussions with industry you decided to amend the timetable for receipt of final submissions on the management of SNA 1 for 1997–98. This included not only consultation on the TAC/TACC, but also the reconsideration of the seasonal inner Hauraki Gulf area closure and a proposal from the NZ Marine Transport Association to extend the timing of the area closure. All sector groups were given until 14 August to provide final (or further) written submissions to you. All sector groups complied with this timetable except the fishing industry (SeaFIC and FIB) who did not provide its final submission until about 5pm, 18 August.

10. Due to the complex scientific and legal issues raised this year and partly as a result of the industry submission being four days late, the Ministry was unable to meet its original deadline (3 September) for provision of the SNA 1 Final Advice Paper to you. This necessitated a further amendment to the date for the consultation meeting between you and sector group and Iwi representatives. This meeting, as you are aware, is to now take place on 18 September 3–5pm.

11. Part of your consultation process for SNA 1 has involved accepting an invitation by industry to visit various fishing communities in the SNA 1 area and hold meetings with local commercial fishers and larger industry operators. On 12 and 13 August you attended meetings in Whitianga, Auckland, Leigh, Hikurangi, Maunganui and Houhora.

### **1.3. Final Advice to the Minister and Implementation of Decisions**

12. This paper provides MFish's final advice to you on the review of sustainability measures and other management controls for SNA 1 for the 1997–98 fishing year. The paper includes summaries of the fishery assessments, other relevant information, analysis of the views of all user groups, and advice and recommendations from the Ministry. This paper was provided to you on 10 September. It was also couriered/posted to all sector groups and Iwi on this date.

13. Following your final decision on the TAC and TACC level for 1997–98 you will forward formal notification of any TAC and TACC change necessary to the Parliamentary Counsel Office for declaration in a Gazette Notice. In addition, section 12(2) of the Fisheries Act 1996 requires that after setting or varying any sustainability measure, you are to, as soon as practical, write to sector groups advising them of the reasons for your final decisions.



OFFICIAL INFORMATION ACT  
RELEASÉD UNDER THE

## 2. STATUTORY CONSIDERATIONS

14. The legislation relating to setting TACs, TACCs and other management controls is in transition. The provisions of the Fisheries 1996 Act, which are currently commenced, provide for setting TACs, catch limits, and other management controls (called sustainability measures). The Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977 provides for a TAC to be set for every fishery within the exclusive economic zone and an assessment made of the allowable catch for New Zealand fishing craft, with any residual allowable catch to be made available for foreign fishing craft. The Fisheries Act 1983 provides for varying TACCs, consequential adjustments to quota and the making of regulations to give effect to any other management controls.

15. The following is a guide to the interpretation of the relevant sections under the legislation. The relevant sections of these Acts are provided in Attachment A.

### 2.1. Purpose and Obligations

16. The purpose of the Fisheries Act 1996 is to provide for the utilisation of fisheries resources while ensuring sustainability. It is a statement of the overarching goal for fisheries management against which all decisions under that Act should be measured. 'Utilisation' of fisheries resources is defined as conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural wellbeing. 'Ensuring sustainability' is also defined to provide a guide on which of the range of sustainable yields from fisheries resources is desirable. It requires fisheries resources to be maintained with the potential to meet the reasonably foreseeable needs of future generations. Section 13 of the Act further specifies a means of quantifying the needs of future generations by specifying the environmental standard or reference point for fishstock management which is consistent with the purpose. In addition the purpose requires that any adverse effects of fishing on the aquatic environment should be avoided, remedied, or mitigated. The purpose statement creates a hierarchy of objectives, and requires that, if there is a conflict between providing for fishing and the sustainability of fisheries resource, sustainability takes precedence over use.

17. At the same time, within the parameters of these environmental standards, there is a positive obligation to provide for the use of fisheries resources. While the Act does not require the Government to promote fishing or maximise the net national interest from fishing, there is a requirement to provide a level and quality of access which will enable people to provide for their social, economic and cultural wellbeing from fishing. Section 8 says "enabling people to provide for their social, economic and cultural wellbeing". This implies decisions under the Act should *enable* people to provide for their *own* wellbeing. Decisions should create the opportunities. The Government does not need to ensure that people take those opportunities, neither does it need to provide for 'wellbeing' directly.

18. The Fisheries Act 1996 shall be interpreted, and all persons exercising or performing functions, duties, or powers under the Act are required to act, in a manner consistent with New Zealand's international obligations relating to fishing and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

19. It is the Ministry's view that the provisions of the Fisheries Act 1996, and the proposed exercise of powers under the legislation in respect of TACs, TACCs, and other management controls, are consistent with New Zealand's international obligations relating to fishing and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. It is noted that in some circumstances the provisions of the Fisheries Act 1996 are more specific than the corresponding obligation arising from an international convention or agreement. This is permissible when any country incorporates its obligations into domestic law. A list of conventions and agreements ratified by New Zealand relating to fishing is provided in **Attachment B**.

20. The Fisheries Act 1996 must be interpreted in a manner that is consistent with the Treaty of Waitangi (Fisheries Claims) 1992.

## 2.2. Ecosystem-Based Management

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

22. These environmental principles are taken from our international obligations and are intended to provide elaboration and guidance to decision makers in achieving the purpose of the Act. These environmental principles will be achieved directly through controls on fishing. The Minister may directly set controls on fishing (ie sustainability measures) for one or more stocks or areas to avoid, remedy, or mitigate any adverse effects of fishing on the aquatic environment, taking into account these environmental principles. Alternatively, the target stock level for fishstock management could be determined, having regard to the interdependence of stocks, which may include the relationships among and between harvested species (ie any fish, aquatic life, or seaweed or one or more species that are treated as a unit for the purpose of fisheries management). MFish does not believe that the environmental principles in respect of associated or dependent species could be effected by qualifying the setting of target stock levels under section 13, because these species do not fall within the definition of a stock.

23. Where there are issues related to these environmental principles associated with the stocks discussed, or the fisheries and methods used to harvest those stocks, they are discussed in the stock sections following. Similarly any particular concerns in submissions received will be drawn to your attention.

24. In the case of associated or dependent species which are protected species under the Wildlife Act 1953 or the Marine Mammals Protection Act 1978, the Department of Conservation may prepare population management plans. Where such a plan exists, the Minister is required to take all reasonable steps to ensure that the maximum allowable fishing-related mortality level set in the plan is not exceeded. To date, no population management plans are in force. In the absence of a population management plan, the Minister may, after consultation with the Minister of Conservation, take such measures as are necessary to avoid, remedy, or mitigate any adverse effects of fishing on protected species. Such measures may include setting a limit on fishing-related mortality or prohibiting all or any fishing or fishing methods in an area for the purpose of ensuring such a limit is not exceeded.

### **2.3. Information Principles**

25. Because of the nature of the data and assumptions that are used to generate fisheries assessments the results produced contain inherent variation and uncertainty. The Fisheries Act 1996 specifies information principles to deal with uncertainty. Decisions should be based on the best information that, in the particular circumstances, is available without unreasonable cost, effort, or time. Decision-makers should consider any uncertainty in the information available in any case and be cautious when information is uncertain, unreliable, or inadequate. The absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

26. These principles apply to all scientific, customary Māori, social or economic information and any analysis of that information. In interpreting these principles, it is the Ministry's view that the less information there is, the more cautious or conservative the approach should be when making a decision under the Act. Accordingly, where information is truly unavailable, provided a decision is made for the purposes of the Act, that decision would not be called into question on that ground alone. A cautious approach would suggest that steps are taken to minimise risks, particularly if stocks are at risk of falling below the environmental standards specified in the Act. The result of applying the cautionary principle might mean a decision is made to obtain further information before a variation of the TAC takes place.

### **2.4. Fishstock Management**

27. The Act further prescribes requirements, for maintaining or moving fishstocks towards a target stock level, which are consistent with international obligations, the Settlement Act and achieving the purpose of the Act.

## 2.4.1. Quota Management Stocks

### 2.4.1.1. Target Stock Level

28. In the case of quota management stocks, there is a requirement to maintain or move fishstocks towards a target stock level, being at, or above, a level that can produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks. MSY is defined, in relation to any fishstock, as being the greatest yield that can be achieved over time while maintaining the stocks productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock. A requirement to maintain stocks at a level that is capable of producing the maximum sustainable yield is generally recognised internationally as being the primary fishstock target, although more recently some managers and scientists are suggesting it as a minimum fishstock target.

29. If the stock is currently below a target stock level, there is a requirement to set a TAC that will result in the stock being restored to a target stock level within a period appropriate to the stock, having regard to its biological characteristics and any environmental conditions affecting the stock. If the stock is above a target stock level, there is a requirement to set a TAC that will result in the stock moving towards the target stock level, or alternatively remain above the target stock level, having regard to the interdependence of stocks. In determining the way in which, and rate at which, a stock is altered to achieve the target stock level, the Minister shall have regard to such social, cultural, and economic factors as the Minister considers relevant. Section 13(3) makes it explicit that those qualifying factors are relevant in the determination of the way and rate, rather than in the determination of the target stock level.

30. The rate of rebuild to achieve  $B_{MSY}$ , and therefore the timeframe adopted to do so, is a matter of discretion for the Minister. In this context, the Minister could make a decision that allowed a fish stock to decline away from a level which would produce the MSY provided he or she has an intention or plan to rebuild the stock to the target level over a reasonable period of time.

31. The Court of Appeal addressed the issue of the importance of considering relevant factors in a decision about the way and the rate of a rebuild. (*New Zealand Fishing Industry Association (Inc) and Ors v Minister of Fisheries and Ors*, 22/7/97, *Tipping J*). In this judgment it was held that:

“The Minister acknowledged the impact his decision would have, but there was little if any analysis either in the advice paper or in the decision itself of the costs and benefits of all kinds to be derived or incurred either from the objective of moving to MSY or from the speed at which that should be done. Indeed the advice to the Minister suggested no great concern at the time frame for moving to MSY, yet there was apparently no consideration given in the decision to the differences which would flow to both costs and benefits if the time frame adopted were altered to 30 years, or any other period, from the period of 20 years which the Minister ultimately fixed”; and

“the Minister would be wise to undertake a careful cost benefit analysis of a reasonable range of options available to him in moving the fishery toward MSY”.

32. The Act allows the Minister to manage fisheries above  $B_{MSY}$  on an ongoing basis, but only in certain circumstances. In the case of quota management stocks, section 13 of the 1996 Act sets out the requirement to maintain or move fishstocks towards a target stock level, being at, or above, a level that can produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks. The interdependence of stocks (ie any fish, aquatic life, or seaweed or one or more species that are treated as a unit for the purpose of fisheries management) is a legitimate basis for determining whether a stock is managed at or above a level that can produce the MSY. Section 13 is in Part III of the Act dealing with sustainability measures. Section 2 defines ‘sustainability measure’ as any measure set or varied under Part III of the Act for the purpose of ensuring sustainability. Therefore a TAC set under this part must be set for the purpose of achieving sustainability, rather than, for example, to provide for utilisation, the other element of the purpose statement. Given this interpretation, only proposals directed at ensuring sustainability would be relevant considerations in setting a TAC above the level that would produce MSY. An additional point is that if a stock was to be intentionally managed substantially in excess of  $B_{MSY}$ , a consequently lower overall yield would be available. In MFish’s view, this would be contrary to our international obligations, if undertaken for purposes other than sustainability, because it could in effect deny foreign nations access to surplus yield.

#### **2.4.1.2. Discussion of MSY**

33. It should be noted that the TAC is not necessarily the same as MSY. The TAC is a level of total removals that, with other controls, will allow the fishery to move towards a biomass level that will support the MSY over time. In practical terms MSY cannot usually be measured directly. The fishery assessment plenary report describes the use of biological reference points to approximate MSY. They embody the concept of MSY, apply to all conditions of stock size, account for stock fluctuations, and are measurable.

34. MSY corresponds to the highest or maximum point on a theoretical yield curve of the whole range of stock biomass sizes.  $B_{MSY}$  is the stock biomass that will allow this yield to be taken on a sustained basis. For reasons including uncertainty in the stock assessment, and the effect of environmental variability on stock abundance it is not possible to actually maintain a stock exactly at this optimum biomass. However the aim of management is to use the assessment to determine stock size relative to  $B_{MSY}$  and then adjust catch limits and management controls to achieve the target biomass over time, and thereby achieve the highest sustainable yield.

35. The reference points most commonly used are Maximum Constant Yield (MCY) and Current Annual Yield (CAY) which derive from two ways of viewing MSY: a static interpretation and a dynamic interpretation. MCY is based on the idea of taking the same catch from the fishery year after year. The latter interpretation from which CAY is derived, recognises that fish populations fluctuate in size from year to year (for environmental and biological reasons, as well as

fishery reasons) so that to get the best yield from a fishery it is necessary to alter the catch every year. This leads to the idea of maximum average yield, MAY, which is how fisheries scientists generally interpret MSY.

### **2.4.1.3. Alternative Target Stock Level**

36. The Act further prescribes an exception to the target stock level based on an assessment of MSY in limited circumstances. If:

- a) it is not possible, because of the biological characteristics of the species, to estimate MSY; or
- b) a catch limit for New Zealand has been determined as part of an international agreement; or
- c) the stock is managed on a rotational or enhanced basis;

then the Minister may, after consultation, recommend to the Governor-General the adding of the species to the Third Schedule to the Act. Note that currently the species listed on this schedule are southern scallops and squid. In respect of any quota management stock listed on the Third Schedule, the Minister may set a TAC other than in accordance with the requirements in respect of target stock levels set out above, if satisfied that an alternative TAC would better achieve the purpose of the Act.

37. There are no proposals to either, add a new quota management stock to the Third Schedule, or in respect of TACs for existing species on the Third Schedule, in this paper.

### **2.4.2. Non-QMS Fishstocks**

38. The requirements for non-QMS fishstocks are slightly less prescriptive than in the case of quota management stocks. The Minister may set or vary any sustainability measure; section 11 first lists the catch limit, including any commercial catch limit for any stock, and then a number of input controls on fishing.

39. When setting or varying a catch limit (including a commercial catch limit) for any non-QMS fishstock, the Minister is required to have regard to the matters prescribed for quota management stocks in respect of maintaining or moving stocks towards a target stock level, being a level at or above that level which can produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks. If setting a commercial catch limit, the Minister is required to have regard to section 21, which has not commenced as yet, but relates to making an allowance for non-commercial fishing interests in that stock and any other mortality to that stock caused by fishing, before setting a commercial catch limit.

## 2.5. The Coastal Marine Area

40. The Act also requires the Minister to consider the implications of any sustainability measures decisions on the management strategy for the coastal marine area in general. Before setting or varying any sustainability measure, the Minister must have regard to any provisions of—

- a) any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991; and
- b) any management strategy or management plan under the Conservation Act 1987—

that apply to the coastal marine area and which the Minister considers to be relevant. It should be noted that the coastal marine area extends to the outer boundary of the territorial sea of New Zealand. In the stocks considered in this paper, where there are elements of these plans statements or strategies that are relevant to varying a sustainability measure, they are discussed.

## 2.6. TACs and Other Sustainability Measures

41. The Act provides that the Minister may set or vary any TAC and other sustainability measures, after taking into account—

- a) any effects of fishing on the stock and the aquatic environment; and
- b) any existing controls that apply to the stock or area concerned; and
- c) the natural variability of the stock concerned.

42. Effects is defined to mean the direct or indirect effect of fishing; and includes—

- a) any positive or adverse effect; and
- b) any temporary or permanent effect; and
- c) any past, present, or future effect; and
- d) any cumulative effect which arises over time or in combination with other effects—

regardless of the scale, intensity, duration, or frequency of the effect; and also includes—

- e) any potential effect of high probability; and
- f) any potential effect of low probability which has a high potential impact.



43. In accordance with achieving the purpose of the Act, any adverse effects of fishing on the aquatic environment should be avoided, remedied, or mitigated. As noted above in the section on ecosystem management, where the Ministry is aware of issues related to the effects of fishing they are discussed in the stock section following.

## 2.7. Interface with Fisheries Act 1983

44. As at this time, Parts IV (Quota management system) and V (Foreign licensed access) of the Fisheries Act 1996 have not commenced. This means that decisions relating to the setting of the TACC and calculating an allowance for foreign fishing craft in the exclusive economic zone are made under other Acts.

45. However, in a recent High Court decision *Roaring Forties Seafood Limited and Chatham Island Fisherman's Co-operative Co. Ltd v Minister of Fisheries*, 1/5/1997, Ellis J, HC Wellington CP64/97, it was held that:

“Both [Acts] continue in force interlinked and as TAC is now determined under the 1996 Act, and the 1983 Act requires the Minister to have regard to the TAC when fixing the TACC, to hold otherwise would be worse than artificial. So in my view the factors which determine the TAC must also be considered when determining the TACC.” (p5) and

“He applied the principles spelt out in the 1996 Act to his decision under the 1983 Act and in my view he was correct in so doing, whether they were gleaned from the 1996 Act itself or our international obligations at the time.” (p10–11).

46. Therefore, in making decisions under relevant sections of the 1983 Act, the purpose, obligations, and principles of the Fisheries Act 1996 are relevant considerations for decision-makers. The TACC is currently set pursuant to section 28 of the 1983 Act.

## 2.8. Fisheries Within the EEZ

47. Under the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977, in respect of any fishery within the exclusive economic zone (that is those areas beyond the territorial sea but within 200 nautical miles from the coast), the Minister is required to set a TAC. Many of New Zealand's inshore species occur principally within the territorial sea, and therefore would not generate a TAC under this Act. TAC is defined, in respect of interpreting that Act and in relation to the yield from any fishery, as being the amount of fish that will produce from that fishery the maximum sustainable yield, as qualified by any relevant economic or environmental factors, fishing patterns, the interdependence of stocks of fish, and any generally recommended sub-regional, regional, or global standards.

48. It is the Ministry's view that any TAC set under the Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977 can only ever be less

than or equal to the TAC set under the Fisheries Act 1996 for the relevant stock. This TAC is used to determine an allowable catch for foreign fishing craft within the exclusive economic zone, in accordance with New Zealand's obligations under Article 62 of UNCLOS. It is not a sustainability measure.

49. The Minister is required to determine that portion of the TAC for every fishery within the exclusive economic zone that New Zealand fishing craft have the capacity to harvest. Any residual, after allowing for the harvesting capacity of New Zealand fishing craft, constitutes the allowable catch for foreign fishing craft for that stock in the exclusive economic zone. This foreign allowable catch is required to be made available to other fishing states for harvest. If a TACC reduction is being considered to give effect to the foreign allowable catch, the Minister must consider whether New Zealand's obligations could instead be achieved within the TACC by leasing and setting aside sufficient quota.

## 2.9. Allocation to Stakeholders

50. The Fisheries Act 1983 specifies the matters to be taken into account in determining or varying any TACC after having regard to the TAC. This part of the 1983 Act will continue to apply until the relevant parts of the 1996 Act are commenced. The Fisheries (Transitional) Regulations 1996 provide that, once a TAC has been set for any stock under section 13 or section 14 of the 1996 Act, section 28D of the 1983 Act shall, until the commencement of section 20 of the 1996 Act, be read as if every reference in that section 28D to a current TAC for any species or class of fish or fishery were a reference to the current TAC set under that section 13 or section 14 for the corresponding stock.

51. After having regard to the TAC determined under the 1996 Act and any TAC within the exclusive economic zone determined under the Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act 1977, the Minister must allow for:

- a) non-commercial interests in the fishery; and
- b) any foreign allowable catch;

when recommending any variation in the TACC. However, the Act does not provide any guidance as to the amount that should be allowed.

52. The meaning of this obligation to allow for non-commercial interests has been considered by the High Court. In *Roach v Minister of Fisheries*, 12/10/92, *McGechan J*, HC Wellington CP715/91, it was held that in the known absence of hard data the Minister is not expected to act in absolute precision in allowing for non-commercial fishing interests before determining the TACC. *McGechan J* also concluded that to allow for non-commercial fishing interests does not necessarily mean that the allowance must fully satisfy estimated non-commercial requirements. Where there are competing demands which will exceed the availability of a resource it could be said that the Minister can allow for non-commercial use by dispensing less than complete satisfaction.

53. Further consideration was given to these points in *New Zealand Federation of Commercial Fishermen (Inc) & Ors v Minister of Fisheries & Ors*, 24/4/97, *McGechan J*, HC Wellington CP237/95. In respect of whether non-commercial fishing interests should have priority over commercial fishing interests, *McGechan J* concluded that the legislation does not require the Minister to give priority to non-commercial fishing over commercial fishing interests. In the case of non-commercial customary Māori fishing interests such a priority, through an obligation to recognise and provide for use, could only be created through regulations passed under the Act.

54. *McGechan J* did give guidance as to the true shape and character of the non-commercial customary Māori fishing interest which must be allowed for when setting the TACC. He concludes:

“The Minister is not expressly obliged to take principles of the Treaty into account when exercising discretion under section 28D. There is no Treaty clause requiring him to do so. But when, in the exercise of the discretion, the Minister must consider how to provide for a certain item—here the Māori customary take—it is proper, and I have no doubt Parliament envisaged, that he would have appropriate regard to its Treaty based character and to the Crown’s ongoing Treaty obligations in deciding how as a particular item it properly should be treated.” (p148).

55. In respect of making an allowance for non-commercial interests, *McGechan J* held that a TACC could be reduced to serve legitimate conservation purposes or to advantage—deliberately or incidentally—non-commercial fishing interests. He states:

“It is not outside or against the purposes of the Act to allow a preference to non-commercials to the disadvantage in fact of commercials and their valued ITQ rights, even to the extent of the industry’s worst case of a decision designed solely to give recreationalists greater satisfaction. Both are within the Act.” (p89).

56. This point was also addressed in the Court of Appeal decision where the issue of whether the Act contained an implication of proportionality between commercial and non-commercial sectors (*New Zealand Fishing Industry Association (Inc) and Ors v Minister of Fisheries and Ors*, 22/7/97, *Tipping J*). In this judgment it was held that:

“We can see no reason why either as his primary purpose or as a consequence of some other purpose the Minister should not be able to vary the ratio between commercial and recreational interests.” And

“If over time a greater recreational demand arises it would be strange if the Minister was precluded by some proportional rule from giving some extra allowance to cover it, subject always to his obligation to carefully weigh all the competing demands on the TAC before deciding how much should be allocated to each interest group.”

57. Finally, at the time of the decision, McGechan J also held that there is clearly a relationship between managing recreational catch and reducing a TACC. He states:

“I am satisfied that when Parliament empowered the Minister to reduce the TACC for conservation purposes—not to improve recreational catch rate—it expected the Minister to take any concurrent steps necessary to minimise sabotage by recreational fishing. The significant point is that both law and common sense dictate that a Minister should not reduce the TACC for conservation reasons unless able to take, and taking, reasonable steps to avoid the reduction being rendered futile through increased recreational fishing.”

58. Consistent with the decision of McGechan J, it is the Ministry’s view that, when a TAC is set, the Minister will have an obligation to consider controls to constrain recreational fishing within that allowance. Ancillary management measures (eg daily bag limits, minimum legal sizes) will need to be considered to ensure they are consistent with the TAC/TACC decision. Note that it is not intended that any allowance for customary fishers is a constraint on their catch. In keeping with the Deed and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 the Ministry is currently working with Māori to develop regulations to assist in the management of customary Māori non-commercial take.

#### 2.9.1. Other Sources of Fishing Mortality

59. The Fisheries Act 1983 does not explicitly require the Minister to have regard to other sources of fishing mortality, such as incidental gear mortality, discarded fish and illegal removals, when recommending a TACC. Where there are estimates available in the plenary report they are applied. Clearly it would be appropriate to take account of these removals where there are estimates available. It is the Ministry’s view that this is a relevant consideration and consistent with New Zealand’s international obligations. This is supported by the High Court judgment of Ellis, mentioned above, in which it was held that:

“I am satisfied however that the 1983 Act in the present context is to be interpreted so as to give effect to those obligations from time to time and as are now represented by the 1996 Act.”

#### 2.10. Consultation

60. Before making any decisions under the Fisheries Act 1996 in regard to TACs, catch limits and other controls on fishing, the Minister is required to—

- a) consult with such persons or organisations as the Minister considers are representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including Māori, environmental, commercial, and recreational interests; and

- b) provide for the input and participation of tangata whenua having—
- i) a non-commercial interest in the stock concerned; or
  - ii) an interest in the effects of fishing on the aquatic environment in the area concerned—

and have particular regard to Kaitiakitanga.

61. Tangata whenua is defined in relation to a particular area, as being the Hapū, or Iwi, that is Māori and holds mana whenua over that area. Mana whenua is defined as being customary authority exercised by an Iwi or Hapū in an identified area. Kaitiakitanga is the exercise of guardianship; and in relation to any fisheries resources, includes the ethic of stewardship based on the nature of the resources, as exercised by the appropriate tangata whenua in accordance with tikanga Māori. Tikanga Māori is defined as customary Māori values and practices.

62. Before making any decisions in respect of TACCs under the Fisheries Act 1983, the Minister is required to consult with the Treaty of Waitangi Fisheries Commission and the NZ Fishing Industry Board and such other persons or organisations as the Minister considers are representative of persons having an interest in the fishery, and have regard to any views expressed by such persons or organisations.

63. There is relevant case law on how consultation is to occur and the views of interested parties taken into account. In *Port Louis Corp v A-G of Mauritius* [1965] AC 1111, 1124, the Privy Council accepted that the nature and object of consultation must be related to the circumstances which call for it. In *Wellington International Airport Ltd v Air NZ* [1993] 1 NZLR 671, the Court of Appeal accepted that statement and noted that while consultation did not require agreement, it required more than mere prior notification. The Court emphasised (at p676) that a consultation process is different from a negotiation, in that the latter implies a process which has the object of arriving at agreement, whereas the former does not. For consultation to be meaningful, adequate information must be provided so that a party can make useful responses.

64. In *Greenpeace NZ Inc v Minister of Fisheries* 27/11/95, HC Wellington CR492/93, Gallen J applied the above authorities and also noted (at pp16, 17) that consultation is not only different from negotiation, but also different from an adversarial process. He held that the Minister, under section 28D(2) of the Fisheries Act 1983, is not required to reconcile differing points of view. The Minister is, however, obliged to make an informed decision, made in the light of the responses of those persons or organisations identified as appropriate to respond. The Minister is not required to give all persons from whom a response is sought the opportunity to comment upon the responses of others. None the less, the consultation is required to be genuine. In the respective stock sections following, the principal points made by those consulted by the Ministry in writing and in meetings, and by yourself through your statutory consultation letters, are summarised for your consideration and discussed in the MFish advice.

65. As soon as practicable after setting any sustainability measure, the Minister is required to give to the parties consulted reasons in writing for the decisions.

## **2.11. Regulations and Notices**

66. Any variation in the TAC, catch limit, or TACC shall be made by notice in the gazette. All notices must be made before the commencement of the first fishing year to which it relates and shall come into force on the first day of that fishing year.

67. In respect of other management controls, such measures will be given effect by regulations under section 89 of the Fisheries Act 1983 rather than under the current regulatory powers in section 298 of the 1996 Act. This will be necessary until a new regulatory structure can be created and the existing one replaced as part of the Fisheries Act implementation process.

## **2.12. Effect of TACC Variation**

68. Any TACC variation will be given effect by adjusting quota holdings under the Fisheries Act 1983. Where a TACC is increased, quota shall be allocated first to any person continuing to have rights under section 28OE(1)(a) of the Fisheries Act 1983, and any remaining increase shall be allocated proportionately to all quota owners for the stock. In the case of a TACC decrease, the Chief Executive of the Ministry of Fisheries shall cancel any quota held by the Crown up to the amount of the reduction. Where the Crown does not hold any quota, or the amount of the reduction is greater than the amount cancelled, all quota for the stock shall be reduced on a proportionate basis, without compensation. As soon as possible after any quota is adjusted, the Chief Executive shall notify any affected quota holder.

## **2.13. Compensation**

69. The Fisheries Act 1996 specifies that the Crown shall not be liable to pay compensation or damages to any person as a consequence of any action for the purpose of ensuring sustainability. Section 308 provides that nothing effected or authorised by various statutory provisions shall be regarded as making the Crown liable to pay compensation or damages to any person. In particular, section 308 sets out that any provision of the Act that provides for measures to ensure sustainability including sustainability measures and the variation of any total allowable commercial catch as a direct consequence of a variation in the corresponding total allowable catch shall not be regarded as making the Crown liable to pay compensation or damages to any person. In addition pursuant to the 1983 Act section 28OD(7) provides that no compensation shall be payable for any reduction in quota pursuant to section 28 of the Act.

OFFICIAL INFORMATION ACT  
RELEASÉD UNDER THE

### 3. FISHERY ASSESSMENT

70. The assessment of SNA 1 was updated from the 1996 assessment using:
- an additional year's information on catch and recruitment;
  - a revised model of the recreational fishery which includes a preliminary 1996 catch estimate;
  - an assumption of the range of historical Japanese longline catches;
  - a revised estimate of natural mortality;
  - constant recruitment up to 1970 in place of the previously assumed pattern of recruitment based on Albert Park air temperatures;
  - for 1996–97 the catch split between the east Northland stock and the Hauraki Gulf/Bay of Plenty stock was assumed to be 25%:75%; and,
  - selectivity parameters for different fishing gears.
71. The projections of biomass to the start of the 1997–98 fishing year were modelled assuming commercial catch at the previous TACC level of 4 938 tonnes (plus 10% overrun). Assumptions were made for the impact of changes to the daily bag limit and the increase in minimum legal size in the recreational fishery.

#### 3.1.1. Recreational Catch

72. A preliminary estimate of recreational catch for SNA 1 was available from the 1996 National telephone and diary survey. Mean weight data from boat-ramp surveys were used to convert numbers to weight. Estimates of recreational catch in 1985 were based on recreational tag returns from the 1985 East Northland and Hauraki Gulf tagging programme. The 1994 telephone and diary survey provided estimates for that year.

**Table 1:** Annual recreational catch estimates (tonnes) for SNA 1 used in the modelling (1996 estimates are preliminary)

Year	Source	East Northland	Hauraki Gulf/ Bay of Plenty	Total
1985	1985 Tagging programme	370	1 230	1 600
1994	1994 North diary survey	723	2 071	2 794
1996	1996 National diary survey	718	1 612	2 330

73. The Working Group discussed the three recreational catch estimates (Table 1) and accepted that they were the best available. The higher estimates of recreational catch in 1994 and 1996 were considered to be indicative of increasing



recreational fishing mortality. The reasons were that the catch estimates came from a period in the fishery where stock biomass was relatively stable. The Working Group acknowledged there was uncertainty concerning the interpretation of these catch levels (ie were they poor, average or good fishing years?). Some members felt that the catch estimates may be better explained by environmental conditions in each year. The relationship between recreational catch and environmental variables is the subject of a research study as part of the 1996–97 NIWA contract with the Ministry of Fisheries.

74. The Working Group attempted to determine the relative change in recreational fishing mortality since 1985. The 1996 catch estimates were not considered to be directly comparable to estimates from the two earlier years. The reason being an increase in snapper minimum legal size (MLS) was introduced in 1994 and a reduction in the bag limit was introduced in 1995. Catch estimates for 1996 were therefore adjusted upward. Catch totals were firstly scaled up to account for an assumed 8% reduction in catch due to the bag limit decrease (assuming 100% compliance). The 8% reduction in catch was estimated from the distribution of bag sizes in the 1994 boat-ramp survey. Secondly, an allowance was considered for the numbers of 25 and 26cm fish which are no longer landed. The length frequency section of the 1996 catch less than 27cm was replaced by the length frequency portion of the 1994 recreational catch, scaled so that the numbers at 27cm were the same. This added numbers of fish at 25 and 26cm to the length distribution of the catch for 1996. The adjusted 1996 length frequency catch was then converted to weight via the length weight relationship. This gave an estimate of what the recreational catch would have been if the management measures had not been introduced.

75. Separate models were calculated for East Northland and Hauraki Gulf/Bay of Plenty substocks. A 3.8% increase per year in recreational fishing mortality was estimated for Hauraki Gulf/Bay of Plenty and a 5.9% increase per year for East Northland. Annual recreational catches predicted by the model for all years from 1985 and 1994 were input directly into the stock assessment model. The 1995 model estimates of recreational catch were adjusted to account for the change in MLS and the 1996 estimates were adjusted to account for the change in bag size. Recreational fishing mortality was projected to increase after 1995 at a rate equivalent to that estimated by the fitted model.

76. The following assumptions were made in respect to recreational catch estimates input to the stock assessment models:

- a) the effect of the size limit change to 27cm (1 December 1994) was included by assuming that all fish five years and older were legal sized fish, but that four year old fish were returned to the water. The survival of four year olds returned to the water was assumed to be 80%;

- b) the effect of the bag limit change to nine fish on 1 October 1995 was estimated to result in a drop of 8% in the weight of the recreational catch (assuming 100% compliance). This 8% decrease in the recreational fishing mortality was assumed constant for all years after 1995–96;
- c) no allowance was made for further management controls in years after 1 October 1995.

### 3.1.2. Customary Catch

77. Snapper form important fisheries for Māori, but the annual catch is not known. In 1995 the previous Minister made a specific allowance of 300 tonnes for Māori customary take, within an overall TAC for SNA 1 of 5 600 tonnes for 1995–96. In 1996 this allowance was included under the 2 600 tonnes for non commercial fishers.

### 3.1.3. Abundance Indices

#### 3.1.3.1. Recruitment Indices

78. The relationship between abundance estimates of one year old snapper in the Hauraki Gulf trawl surveys and the Leigh water temperature was used to revise the 1996 year class index and predict the 1997 year class index. The mean water temperature for February–April 1997 of 19.56°C (equivalent to a mean February–June temperature of 18.18°C) gave a preliminary index of 0.68 for the 1997 year class. In the assessment model the observed index was input for all year classes when it was available and the predicted index for other year classes in the period 1971–1997. For years prior to 1971 mean constant recruitment was assumed in the model. These indices are used in both substocks of SNA 1.

#### 3.1.3.2. 1994 Tagging Programme

##### Tag Returns

79. In the last quarter of 1993, 30 477 snapper were tagged and released using trawl and longline throughout SNA 1. Fish were tagged with an internal tag of binary coded wire and tag recoveries were made from commercial landings by research staff.

80. From February 1994 to February 1995, about 1 300 tonnes of commercial landings of snapper were examined and tags recovered from the catch. The current assessment is based on 1 156 tonnes of snapper examined with an associated recovery of 541 tags.

### Release and Recovery Diagnostics

81. The diagnostics of the mark rates (number of tags recovered relative to the number of fish examined) showed that Danish seine recoveries had a declining trend with time and showed higher mark rates than other methods in the Hauraki Gulf. A comparison of the data from the first half of the recovery period with the latter half did not resolve the problem.

82. An additional analysis carried out last year showed some potential problems with the tagging experiment. The recoveries of fish from the two methods of release were compared. The longline recaptures showed higher recovery of trawl released fish than of longline released fish. These results indicate a problem with mixing of snapper in the experiment.

83. A number of hypotheses were proposed and tested, but no satisfactory explanation was found. In 1997 the Working Group again discussed the tagging results and decided to present a range of alternative estimates. The following two datasets were agreed:

- a) longline tag releases only, but recoveries from all methods. This estimate overcomes the difficulty with differential recovery rates from fish released by single trawl and longline; and,
- b) the same as used in Assumption 1 in the 1995 assessment (all releases were used but recoveries from trawl and Danish seine in the Hauraki Gulf were excluded). This estimate overcomes the trend in mark rate seen in the Hauraki Gulf Danish seine recoveries.

### Results

84. Two methods were used to analyse the tagging results the Petersen Analysis and the Observation Error Model. The Working Group agreed to report the results of both analytical methods with equal weighting. Simulation modelling will be undertaken in 1997-98 which may determine the properties of each method of estimation and establish which one is better. The two recovery/release datasets and two alternative tag analysis models result in four biomass estimates for each stock (Table 2).

Table 2: Biomass estimates from the 1994 tagging programme

<b>Hauraki Gulf/BOP (tonnes)</b>		
	<b>Petersen</b>	<b>Observation error model</b>
Longline releases/all recoveries	30 000	33 200
All releases/longline recoveries only Hauraki Gulf	34 300	37 400
<b>East Northland ('000 tonnes)</b>		
	<b>Petersen</b>	<b>Observation error model</b>
Longline releases/all recoveries	18 300	23 900
All releases/longline recoveries	13 700	15 300

85. The biomass estimate was taken to be the mean of the four estimates from the tagging results. This was assumed to represent the biomass at the start of 1993–94. Length at age data from the November 1993 trawl survey (Hauraki Gulf) showed that only 68% of five year old fish and almost no four year olds exceeded 25cm. Growth had apparently been slow over the previous few cool years.

86. The sum of the mean biomass estimates from the two substocks (East Northland 1 800 tonnes, Hauraki Gulf/Bay of Plenty 33 725 tonnes) is 51 525 tonnes.

### 3.1.3.3. 1985 Tagging Programme

87. The 1985 estimates were not corrected for growth. Therefore they have a positive bias in the smallest length classes caused by the growth of fish which were previously less than 25cm into the exploited population and the growth of larger fish from one size class to the next. Size at age information from November 1984 showed that only 36% of four year old fish were over 25cm, while 90% of five year old snapper were over this length. In the model fitting, the biomass estimate was assumed to represent all fish five years and over, and 50% of the four year old fish.

88. The tagging estimate of 53 400 tonnes (Hauraki Gulf 34 400 tonnes; East Northland 19 000 tonnes) which was assumed to represent the biomass at the start of 1983–84, was given a Coefficient of Variation of 0.3, to reflect the level of imprecision and reduce the importance of the estimate in the model fitting procedure. The lower Coefficient of Variation assigned to the 1994 tag estimate gave this tagging data much more weight to reflect the relative confidence of the Working Group in the two tagging programmes.

### 3.1.3.4. Model Results

89. Stock assessments were carried out separately for the East Northland and Hauraki Gulf/Bay of Plenty substocks. The results reported below are for the case where selectivity was fixed and recruitment indices were estimated for years from 1974–88 using catch at age data. Other year classes were not estimated in the model as it was thought that there were insufficient observations of these year

classes to enable accurate estimation of year class strength. Selectivity (for each method of fishing) is defined as the average vulnerability of an age class relative to the mean vulnerability or relative to the vulnerability at a reference age.

90. The following estimates of year class strength were used:

- 1850–1970 Constant mean recruitment assumed
- 1971–1973 Values from temperature-recruitment relationship (Note: 1971–77 for east Northland)
- 1974–1988 Estimated within model from catch at age data (Note: 1978–88 for east Northland)
- 1989–1997 Values from temperature-recruitment relationship

91. The advantages of using catch at age data to fit recruitment indices are (a) there are more than one observation for each year class, (b) the fish are seen in the fishery as adults, rather than just as 1+ fish and (c) the same pattern of recruitment does not need to be assumed for each substock. The problems of ageing error and the sensitivity of the estimates of year class strength to assumed selection patterns are disadvantages of the method.

#### *East Northland*

92. The model for east Northland was fitted to the two biomass estimates from the tagging programmes and three years of catch at age data from the longline fishery from 1994 to 1996. **Figure 1** (from 1850) and **Figure 2** (from 1971) show the biomass trajectory for the basecase assessment in 1997 fitted to the observed biomass estimates. The trajectory from the 1996 assessment is shown for comparison; the reasons for the change from 1996 include:

- a) the value of natural mortality has been increased to  $0.075 \text{ yr}^{-1}$  in the basecase assessment;
- b) catch history has increased significantly with the inclusion of assumed Japanese catches from 1960–77;
- c) the recruitment before 1971 was assumed to be average in each year;
- d) recruitment has been estimated using catch at age data.

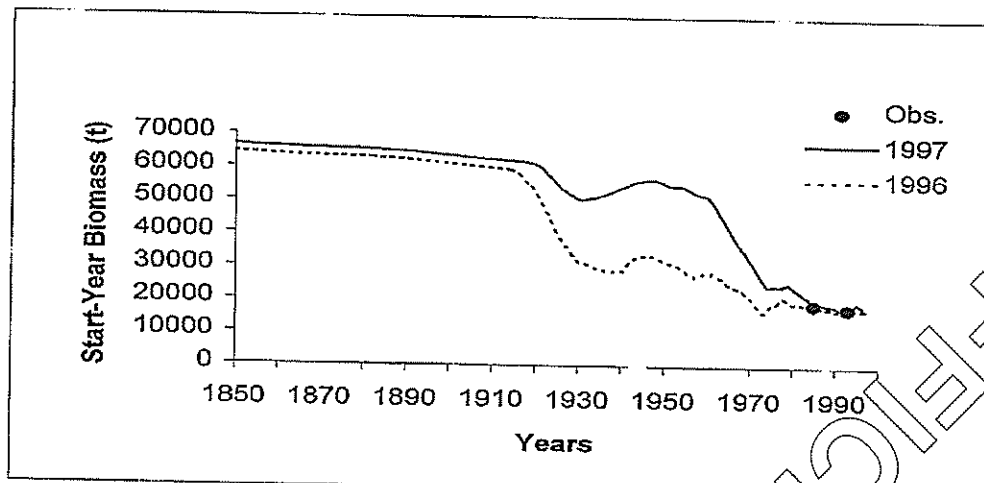


Figure 1: East Northland 1850-1997. Biomass trajectories from 1996 and 1997 stock assessments. The biomass estimates from tagging programmes are shown as dots (Obs.)

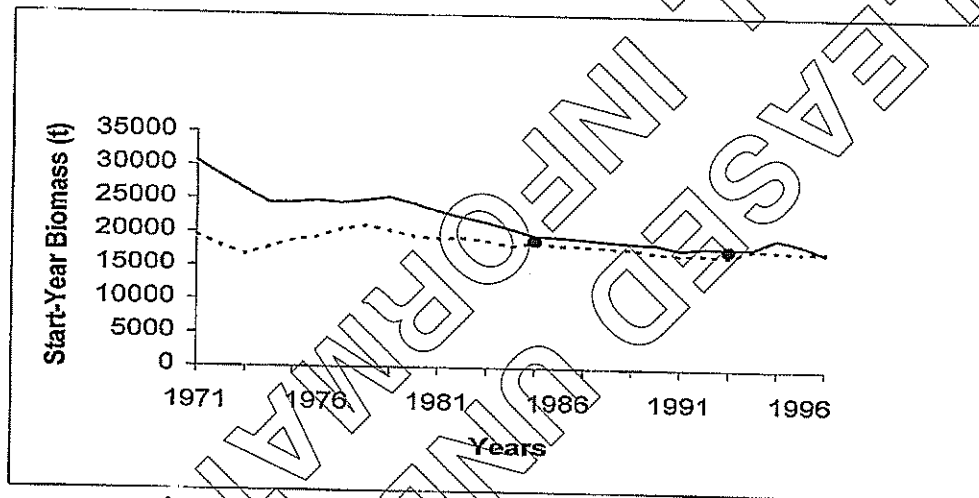


Figure 2: East Northland 1971-1997. Biomass trajectories from 1996 and 1997 stock assessments. The biomass estimates from tagging programmes are shown as dots (Obs.)

93. Table 3 shows the estimates of biomass,  $B_{MSY}$ , and status of stock relative to  $B_{MSY}$  for the basecase (natural mortality of  $0.075 \text{ yr}^{-1}$  and Japanese catch of 30 000 tonnes from 1960-77). The stock is predicted to be at about the level of  $B_{MSY}$  at the beginning of the 1997-98 season. The commercial catch from east Northland in 1996-97 was assumed to be 25% of 4 938 tonnes (plus 10% overrun).

**Table 3: East Northland estimates of biomass,  $B_{MSY}$ , and status of stock relative to  $B_{MSY}$ . All biomass estimates are beginning of season.**

	Biomass <sub>1996-97</sub>	Biomass <sub>1997-98</sub>	$B_{MSY}$	$B_{1997-98}/B_{MSY}$
East Northland (basecase)	17 500 t	16 400 t	15 930 t	1.03

94. The results from a number of sensitivity tests showed that with increasing values of  $M$ , the stock status improves, estimates of  $B_0$  decrease and the level of  $MSY$  increases.  $B_0$  and  $MSY$  increase with increasing levels of Japanese longline catch. However, stock status is not sensitive to increasing levels of Japanese catch.

#### *Hauraki Gulf/Bay of Plenty*

95. The model for Hauraki Gulf/Bay of Plenty was fitted to the two biomass estimates from the tagging programmes and seven years of catch at age data from the longline fishery from 1990 to 1996, three years of catch at age data from the trawl fishery (1990, 1991 and 1994) and four years of catch at age data from the Danish seine fishery (1992 and 1994 to 1996). **Figure 3** (from 1850) and **Figure 4** (from 1971) show the biomass trajectory for the basecase assessment in 1997 fitted to the observed biomass estimates. The trajectory from the 1996 assessment is shown for comparison. The reasons for the change in the biomass trajectory are the same as given above for the east Northland stock. The impact of the Japanese catch does not compensate for the higher value of natural mortality and the assumption of mean recruitment before 1971; virgin biomass is lower than estimated in 1996.

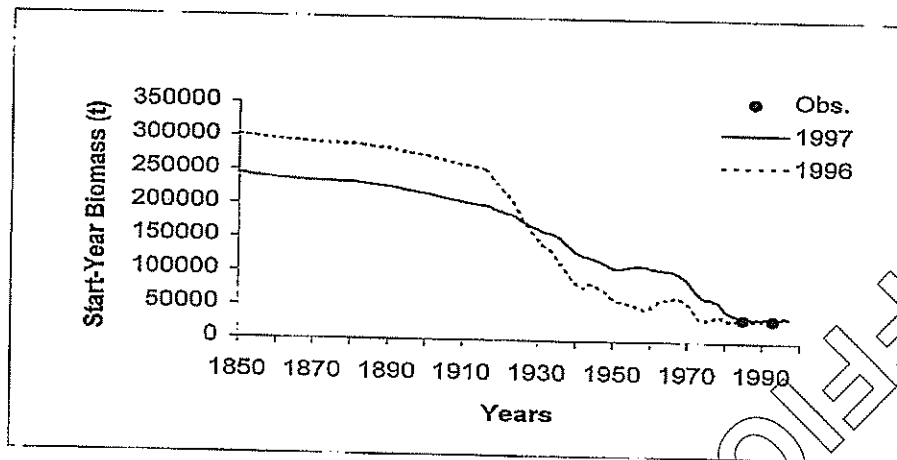


Figure 3: Hauraki Gulf/Bay of Plenty 1850-1997. Biomass trajectories from 1996 and 1997 stock assessments. The biomass estimates from tagging programmes are shown as dots (Obs.)

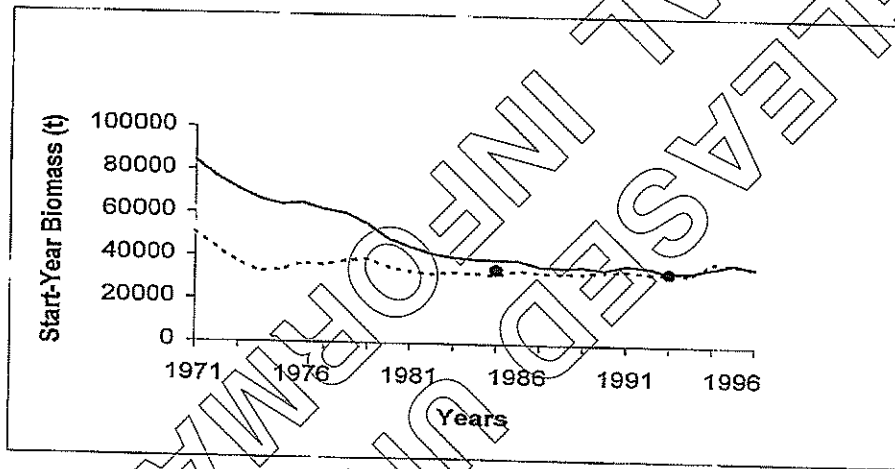


Figure 4: Hauraki Gulf/Bay of Plenty 1971-1997. Biomass trajectories from 1996 and 1997 stock assessments. The biomass estimates from tagging programmes are shown as dots (Obs.)

96. Table 4 shows the estimates of biomass,  $B_{MSY}$ , and status of stock relative to  $B_{MSY}$  for the basecase (natural mortality of  $0.075 \text{ yr}^{-1}$  and Japanese catch of 30 000 tonnes from 1960-77). The stock is predicted to be at about 60% of  $B_{MSY}$  at the beginning of the 1997-98 season. The commercial catch from Hauraki Gulf/Bay of Plenty in 1996-97 was assumed to be 75% of 4 938 tonnes (plus 10% overrun).



**Table 4: Hauraki Gulf/Bay of Plenty estimates of biomass,  $B_{MSY}$ , and status of stock relative to  $B_{MSY}$ . All biomass estimates are beginning of season.**

	Biomass <sub>1996-97</sub>	Biomass <sub>1997-98</sub>	$B_{MSY}$	$B_{1997-98}/B_{MSY}$
Hauraki Gulf/Bay of Plenty (basecase)	36 700 t	34 300 t	57 650 t	0.60

97. The results from a number of sensitivity tests showed the stock status in this substock is not as sensitive to the range of  $M$  values investigated as was the East Northland substock. As with the east Northland substock, the estimates of  $B_0$  decrease and the level of  $MSY$  increase with increasing  $M$ .  $B_0$  and  $MSY$  increase with increasing levels of Japanese longline catch. However, stock status is not sensitive to increasing Japanese catch.

98. The Plenary Report notes that when the assessment for SNA 1 this year is compared to the assessment made in 1996, several differences are apparent:

- a) the 1997 assessment is much less certain than the assessment prepared in 1996. This is partly because observation error was introduced into the estimation of the recruitment indices. Previously recruitment indices were treated as if they were known. Uncertainties in the estimates of selectivity and  $M$  have also been raised this year;
- b) even though considerable amounts of catch have been added to the assessment through the inclusion of the Japanese longline catch, yields are similar to those estimated in 1996. Offsetting the increase in catch has been a decrease in the estimated  $B_0$  because the historical pattern of recruitments (estimated from the Mt Albert air temperatures) is no longer used in the assessment;
- c) the stock status of the east Northland substock is similar to that estimated in 1996 (approximately equal to  $B_{MSY}$ ) while the stock status of the Hauraki Gulf/Bay of Plenty substock is higher than that estimated in 1996 ( $0.6 B_{MSY}$  compared to about  $0.48 B_{MSY}$  in 1996).

99. Stock projections into the future and risk analyses have not been carried out for this year's assessment. There were several reasons for this. Firstly, there have been considerable modifications to the assessment model. These took time to develop and have not yet been investigated sufficiently for the Working Group to have complete confidence in the projections and risk analyses. Secondly, there is considerable uncertainty in the model concerning future recreational catch levels. Agreement within the Working Group on how to proceed with the projections has not yet been achieved.

100. The varying assumptions do not substantially affect the modelling of the present stock status. In other words, all models used gave about the same assessment of the current state of the substocks; the Hauraki Gulf/Bay of Plenty substock is only 60% of  $B_{MSY}$ , the East Northland substock is close to  $B_{MSY}$  and the biomass of both substocks is predicted to decline in 1997-98 under a commercial catch

level of 4 938 tonnes (plus a 10% overrun). However, the varying assumptions lead to large differences in estimated levels of recruitment and hence to future biomass trajectories. The Working Group concluded that it needs to consider the assumptions more fully before proceeding into the risk analysis phase of the assessment.

#### 3.1.4. Yield Estimates

101. **Maximum Constant Yield (MCY)** is the maximum constant catch that is estimated to be sustainable, with an acceptable level of risk, at all probable future levels of biomass. It does not therefore take into account the current level of biomass or any future levels of biomass. MCY estimates for each substock included non-commercial catch and were based on commercial catch history with under-reporting which is assumed to continue at 10% in future years. For East Northland, MCY was estimated for the basecase from the equation  $MCY = MSY$  as the stock is at about  $B_{MSY}$ . MSY is estimated to be 1 870 tonnes (range 1 570 to 2 380 tonnes).

102. For Hauraki Gulf/Bay of Plenty, MCY was estimated for the basecase from the equation  $MCY = \text{Current Surplus Production (CSP)}$  as the stock is below  $B_{MSY}$  and CSP is the equilibrium surplus production at the 1997–98 biomass level. Equilibrium CSP is calculated assuming average recruitment. MCY is estimated to be 6 470 tonnes (range 5 800 to 7 070 tonnes).

103. **Current Annual Yield (CAY)** is calculated by determining what proportion of the biomass can be caught each year that would give, within an acceptable level of risk, the Maximum Average Yield (MAY), which is a close approximation of MSY, from the fishery. For SNA 1 this was calculated by multiplying the start of year biomass in 1997–98 in the model by a reference fishing mortality ( $F_{ref}$ ).  $F_{ref}$  was set equal to  $F_{MAX}$  (the exploitation rate (fishing mortality) that would produce MAY). These estimates included non-commercial catch and are based on commercial catch history with under-reporting which is assumed to continue at 10% in future years.

104. For East Northland the basecase  $F_{MAX}$  corresponded to a catch to biomass ratio of 11.7% and the start of year biomass in 1997–98 was 16 418 tonnes. CAY<sub>97–98</sub> was estimated to be 1 920 tonnes (ie 11.7% of 16 418 tonnes).

105. For Hauraki Gulf/Bay of Plenty, in the basecase  $F_{MAX}$  corresponds to a catch to biomass ratio of 11.8% and the start of year biomass in 1997–98 was 34 331 tonnes. CAY<sub>97–98</sub> was estimated to be 4 050 tonnes.

106. **Equilibrium Current Surplus Production (CSP)** is calculated as the catch that would sustain the stock at its start of year 1997–98 biomass assuming constant recruitment at the estimated mean value. These estimates included non-commercial catch and are based on commercial catch history with under-reporting which is assumed to continue at 10% in future years.

107. For East Northland, equilibrium CSP<sub>97-98</sub> was estimated to be 1 865 tonnes, and for Hauraki Gulf/Bay of Plenty equilibrium CSP<sub>97-98</sub> was estimated to be 6 470 tonnes.

108. **Predicted CSP** is calculated as the catch that would sustain the stock at its start of year 1997-98 biomass using the predicted recruitment for 1997-98. Because predicted CSP for a particular year depends on the recruitment for that year it is highly variable.

109. Predicted CSP for 1997-98 is estimated to be 1 390 tonnes for East Northland and 5 207 tonnes for Hauraki Gulf/Bay of Plenty. The predicted CSP for 1997-98 are less than the equilibrium CSP estimates as recruitment to the exploited populations in 1997-98 is predicted to be **below** average.

110. **Maximum Sustainable Yield (MSY)** was calculated as the maximum catch that could be sustained by the stock in equilibrium. This is achieved with a catch to biomass ratio (exploitation rate) of 11.7 to 11.8% at  $B_{MSY}$  based on the assumptions of the assessment model.

111. For East Northland, MSY is estimated to be 1 870 tonnes (range 1 570 to 2 380 tonnes). For Hauraki Gulf/Bay of Plenty, MSY is estimated to be 6 800 tonnes (range 6 320 to 7 390 tonnes).

### 3.1.5. Other Sources of Mortality

112. No new information is available to estimate illegal catch. For modelling SNA 1 an assumption is made that non-reporting of catch was 20% of reported domestic commercial catch prior to 1986 and 10% of reported domestic commercial catch since the QMS was introduced, to account for all forms of under-reporting. No quantitative estimates are available regarding the impact of other sources of mortality on snapper stocks.

### 3.1.6. Summary

113. The current status of the two substocks differs. The **East Northland** substock appears to be at about  $B_{MSY}$  (103%  $B_{MSY}$  at the beginning of 1997-98). However, because of poor year classes recruiting to the fishery the stock is expected to **decline** between 1996-97 and 1997-98 at current catch levels, which assume a 25%-75% split between the two areas.

114. The **Hauraki Gulf/Bay of Plenty** substock is currently below  $B_{MSY}$ . The substock is expected to **decline** from 1996-97 to 1997-98 at current catch levels due to poor recruitment to about 60%  $B_{MSY}$  at the beginning of 1997-98. In tonnage terms, the biomass of this substock at the start of 1997-98 is predicted to be about 34 000 tonnes, 23 000 tonnes below  $B_{MSY}$ .

115. Overall, the SNA 1 fishery (both substocks combined) at 1 October 1997 is estimated to have a biomass of 50 700 tonnes.  $B_{MSY}$  is estimated to be 73 580 tonnes. Table 5 below summarises the biomass and yield estimates for both substocks and for the fishery overall (both substocks combined).

**Table 5:** Biomass and yield estimates from the basecase assessment for both substocks and the total fishery. Yield estimates include non-commercial catch and are based on commercial catch history with under-reporting which is assumed to continue at 10% in future years.

	East Northland	HG/BOP	Total Fishery
<b>Biomass<sub>96-97</sub></b>	17 500 t	36 700 t	54 200 t
<b>Biomass<sub>97-98</sub></b>	16 400 t	34 300 t	50 700 t
<b><math>B_{MSY}</math></b>	15 930 t	57 650 t	73 580 t
<b><math>B_{97-98}/B_{MSY}</math></b>	103%	60%	69%
<b><math>(B_{96-97}/B_{MSY})</math></b>	(110%)	(64%)	(74%)
<b>MCY</b>	1 870 t	6 470 t	8 340 t
<b>CAY<sub>97-98</sub></b>	1 920 t	4 050 t	5 970 t
<b>Equilibrium CSP<sub>97-98</sub></b> (assumes average recruitment)	1 865 t	6 470 t	8 335 t
<b>Predicted CSP<sub>97-98</sub></b> (uses predicted recruitment for 1997-98)	1 390 t	5 267 t	6 597 t
<b>MSY</b>	1 870 t	6 800 t	8 670 t

116. When the assessment for SNA 1 this year is compared to the assessment made in 1996, several differences are apparent:

- the 1997 assessment is much less certain than the assessment prepared in 1996;
- yields are similar to those estimated in 1996, despite considerable amounts of catch have been added to the assessment through the inclusion of the Japanese longline catch;
- the stock status of the east Northland substock is similar to that estimated in 1996 (about equal to  $B_{MSY}$ ) while the stock status of the Hauraki Gulf/Bay of Plenty substock is higher than that estimated in 1996 (60%  $B_{MSY}$  compared to about 48%  $B_{MSY}$  in 1996);
- the varying assumptions do not substantially change the present stock status, but would give different stock projections.

117. Stock projections into the future and risk analyses have not been carried out for this year's assessment (as was the case in 1995 and 1996) because:

- there have been considerable modifications to the assessment model which have taken time to develop and have not yet been investigated sufficiently for the Working Group to have complete confidence in the projections and risk analyses;

- b) there is considerable **uncertainty** in the model concerning **future** recreational catch levels and agreement within the Working Group on how to proceed with the projections has not yet been achieved; and,
- c) the varying assumptions used in the different model runs lead to large differences in estimated levels of recruitment and hence to future biomass trajectories. The Working Group concluded that it needs to consider the assumptions more fully before proceeding into the risk analysis phase of the assessment.

OFFICIAL INFORMATION ACT  
RELEASÉ UNDER THE  
ACTE OFFICIEL DE L'ACCÈS À L'INFORMATION

## 4. INDUSTRY VIEWS

### 4.1. Main Industry Submission (FIB/SeaFIC)

#### 4.1.1. New Context for the 1997 Decisions

118. Industry believes the factual and legal landscape for this year's TAC and TACC decision is very different to that which existed in each of the last two years. In particular, it is of the view that this year's decision needs to be made in the context of:

- a) the new Fisheries Act 1996;
- b) the Court of Appeal's decision overturning the former Minister's 1995 and 1996 decisions;
- c) the High Court's decision overturning part of the 1995 area closure; and,
- d) the new stock assessment advice.

##### 4.1.1.1. Fisheries Act 1996

119. Industry notes that from 1 October 1996 a number of important sections in the new Fisheries Act 1996 (the '1996 Act') came into force. While the TACC is still fixed under the 1983 Act, the 1996 Act has it believes considerable significance. In particular, industry states the following.

##### Purpose of the 1996 Act

120. Industry believes it is important to recognise that the purpose of the 1996 Act is not only to ensure sustainability of our fisheries resources. Fundamentally, the Act is a utilisation statute. Section 8 of the Act states that the purpose of the Act is to "provide for the utilisation of fisheries resources while ensuring sustainability". 'Utilisation' is defined as meaning "conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic and cultural wellbeing". In turn, section 2 states that 'conserving' can mean restoring (herein termed rebuilding) fisheries resources, as is being considered in the current SNA 1 TACC deliberations. Accordingly, industry contends that the Act provides for utilisation (through the TACC) to include conserving or rebuilding the SNA 1 resource in a way and at a rate that continues where possible to enable people involved with the SNA 1 commercial fishery to provide for their social, economic, and cultural wellbeing.

121. Industry believes a drastic TACC reduction for the purpose of rebuilding the SNA 1 stock (more particularly the Hauraki Gulf/BOP substock) cannot, at the same time, reasonably satisfy the dual purpose of enabling the people associated with the SNA 1 commercial fishery to continue to provide for their intended wellbeing. In the absence of some real impending threat of fisheries collapse (which industry believes is not suggested by anyone), the purpose provisions of the Act do not contemplate fisheries resources being utilised for rebuilding in such a manner that cannot generally enable people in commercial fishing communities to continue

to provide for their intended wellbeing. Industry is of the view that the approach adopted to restoring or rebuilding the SNA 1 stock must be both measured and finely balanced if it is to achieve the purpose of the Act. Any decision to restore SNA 1 to  $B_{MSY}$  in a manner that has the effect of ruining the social and economic livelihoods of many SNA 1 commercial fishing interests is simply not one that can enable those people to provide for their intended wellbeing, either now or in the future.

122. Industry states that the only qualification of the way in which the SNA 1 resource can be utilised to restore or rebuild the resource is that it must ensure sustainability. In this context, ensuring sustainability is defined in section 8 as meaning “*Maintaining the potential of fisheries to meet the reasonably foreseeable needs of future generations*”. It believes if the SNA 1 resource maintains, on average, during a rebuild period the potential to be fully restored to  $B_{MSY}$  then this need is met. In this context industry states it is also of particular significance that little (if any) additional yield will be obtained at the higher stock size. As such, it is of the view that rebuilding the biomass will do little to meet the needs of future generations.

123. Industry believes it is clear therefore that social and economic factors do not only arise in a tangential way via section 13(3). They arise directly in the context of the primary ‘purpose’ set out in section 8 of the Act. It believes the advice being given to you to date does not appear to acknowledge the dual components to this key purpose provision of the Act—but rather is focusing improperly on the need to ensure ‘sustainability’ in isolation. Industry states that this can be seen for example in a recent interview given by you (Morning Report: 13 August 1997, copy attached as Appendix 1 of the industry submission) where you stated “*Under the legislation I am required to look at sustainability above all else...*”. Industry believes this statement mis-states the legal position and fails to recognise the careful balancing task required of the Minister of Fisheries when exercising his/her many discretionary powers under the Act.

#### *New Focus on the Total Catch and Comprehensive Management*

124. Industry states that the primary means of “*utilising fisheries resources while ensuring sustainability*” for the purposes of Part II of the Act, is through the imposition of sustainability measures under Part III of the Act. It believes those measures focus on constraining total catch, rather than the catch of any one sector alone. Industry notes that none of the sections in Part II or III relate to the limitation of only commercial take. To the contrary, the new and direct focus of the Act is on the management of the total catch, as exemplified in both sections 13 and 14.

125. Industry seeks the introduction of a management plan for the SNA 1 fishery which provides for the comprehensive management of the catch of all sectors. It believes a clear directive and mandate required by the new legislation is for comprehensive management of the total take, with a proportionate focus required on the catch of all sectors rather than the commercial sector alone.

Sustainability Measures and Reporting Requirements for Recreational Catch

126. In relation to the charter vessels and true recreational catch, industry contends that, consistent with the focus on total catch, the 1996 Act now facilitates:

- a) the ability to implement 'sustainability measures' (ultimately through the wide regulatory powers under both sections 297 and 298) to achieve the control of the recreational catch to their allocated share of the TAC;
- b) the ability to require both charter vessel operators and recreational fishers to keep records of, and report, their snapper catch, to both help in implementing 'sustainability measures' and to overcome the lack of information currently collected by the Ministry in relation to the recreational catch. This is expressly provided for in sections 189(g) and (h) and 297(1)(h) (both of which are currently in force).

Movement to  $B_{MSY}$

127. Industry states that parliament has now adopted a more stringent requirement than exists in international law in respect of the need to move a fishstock to  $B_{MSY}$ . However, it believes the obligation in section 13(2) has to be read in light of the very broad discretionary powers in section 13(3). It states that four points emerge in that regard.

- a) social, cultural and economic factors can be used to alter the rate of restoration. That rate can be as fast or as slow as the Minister considers appropriate having regard to those matters. Industry states that importantly, when considering these factors and generally when exercising this discretion, it must be exercised in a manner which is aimed at achieving the purpose of the Act, as set out in section 8 of the Act. As such it would be inconsistent with the purpose of the Act to exercise this discretion in a manner which substantially destroys the ability of people to provide for their social, economic and cultural wellbeing, if that restoration can be achieved more slowly or in a different manner which enables their social and economic wellbeing to be preserved;
- b) the Court of Appeal (without coming to a final conclusion on the matter) made it fairly clear that they consider this obligation requires the Minister to consider matters beyond those affecting the fishing industry in a narrow sense. Industry believes consideration therefore needs to be given to the socio-economic implications for related communities and the economy more generally as a result of a significant TACC reduction (see page 15 of the judgment);
- c) consistent with this broad discretion, industry contends there is no requirement to have any fixed timeframe within which to rebuild. It would be permissible for the stock to be simply moving, on average, in that direction;



- d) the discretion not only relates to the 'rate' but also to the 'way' in which the stock will be moved. Industry believes this contemplates an additional element to the discretion, recognising the variable nature of fisheries, and hence yield and stock size fluctuations. This discretion to take into account the natural variability of the stock, and hence consider average recruitment and growth conditions, is recognised and provided for in section 11(1)(c) of the Act. Industry states that it is sufficient that on average the fishery is moving towards  $B_{MSY}$  over a period of time, rather than trying to look at the matter on an artificial year by year basis. Industry refers to the *Greenpeace* case, where Justice Gailen held that it was not necessary for the stock to be moving towards  $B_{MSY}$  in each and every year, so long as that was the ultimate objective of the management plan.

#### 4.1.1.2. Information Principles

128. Industry states that the information principles contained in section 10 apply in all circumstances and in effect cut both ways. In particular, industry believes:

- a) **Absence of defined benefits means must proceed cautiously:** Industry contends that the absence of cost/benefit information on the social and economic effects of a TACC reduction is not a reason for postponing or failing to take measures that can achieve the purpose of restoring the stock to  $B_{MSY}$  in a way that enables people associated with the commercial fishing industry to still provide for their intended wellbeing. Industry states that in the absence of articulated and demonstrated *benefits*, there is no need to reduce the TACC, particularly given that the best information available at present indicates the stock is, on average recruitment, going to rebuild over time at present levels of extraction, even if the TACC is left at its current level (see discussion later).
- b) **Precautionary approach requires controls on recreational catch:** Industry states the *precautionary approach* implicit in this section (in addition to international law) requires the Crown to face up to its obligation to properly manage and control both the charter vessel and true recreational catch. Industry believes the absence of, or any uncertainty in, any information available on the quantum of the charter vessel industry's snapper catch should not be used as a reason for postponing or failing to take any measures now to mitigate any further growth in this sector's activity so as to conserve the SNA 1 stock. It is of the view that the intention to merely undertake further policy development work on the management of the recreational sector, and particularly to gather information on charter operations through a voluntary logbook programme, are not measures that can achieve the purpose of providing utilisation while ensuring sustainability. The precautionary approach, both reflected in section 10 and more generally at international law, requires you to act now to control the expanding charter vessel and recreational catch, and to properly record, research, manage and enforce it to its allocated share of the TAC.

### Repeal of Section 28D(1)(b)

129. Industry states that the repeal of section 28D(1)(b) of the 1983 Act has made little practical difference to the decision-making process. In particular, it believes:

- a) the Court of Appeal has made it clear that in undertaking any cost/benefit analysis it is necessary to carefully consider any alternative management measures. This must inevitably include other measures which could mitigate against the need for a TACC reduction;
- b) notwithstanding the repeal of section 28D(1)(b)(ii), relating to the Crown shelving quota, other provisions of the 1983 Act still enable the Crown to acquire the quota itself and not fish it (see section 28U). In addition, the Crown has an express power under section 28U(5) to cancel any quota it has acquired, which has the effect of reducing the TACC. Industry believes the Crown is therefore able to acquire quota as a means of:
  - i) mitigating against the devastating consequences of a significant TACC reduction by providing for the resource to be utilised for restoration in a manner that still enables people to provide for their social, economic, and cultural wellbeing;
  - ii) achieving a reallocation between sectors without commercially disadvantaging the Industry or damaging the integrity of the QMS.

#### **4.1.1.3. Court of Appeal's Decision**

130. Industry states that the Court of Appeal gave advice in relation to how the TAC and TACS process should be conducted under the 1996 Act. Industry believes matters of relevance emerging from that decision are as follows.

##### Movement to $B_{MSY}$

131. Industry contends that the Court confirmed the breadth of the discretion under section 13(3), its relationship to the higher level purpose of the Act, and in particular, that it is not narrowly confined to impact on quota holders or fishers.

##### Integrity of QMS

132. Industry contends that the Court of Appeal took a considerably more circumscribed approach to the property rights issue than occurred in the High Court. It believes the Court of Appeal expressly recognised that the Minister not only needed to take into account the impact on individual quota holders, but also the impact on the 'QMS generally' (see pages 16 and 23 of the judgment). The integrity of the QMS ultimately relies on the self-policing support that it enjoys in the fishing community. The viability of the QMS as an effective management

regime for SNA 1 must be put at risk if compliance with the harvesting obligations comes to increasingly depend on external enforcement, rather than the wider fishing community's belief in the integrity of the system.

#### Allocation Between Sectors

133. Industry states that while the Court of Appeal recognised that the proportions between the commercial and non-commercial catch could be varied by the Minister when making an allowance under section 28D, it is clear from the Court's judgment that this must occur in the context of an explicit process. Industry believes this is one of the most important consequences of the Court of Appeal's decision. The effect of the Court of Appeal's decision is to require a Minister to say expressly that he is adjusting the proportions.

134. Industry is of the view that if the decision to reduce the SNA 1 TACC is to be justified on sustainability grounds, both the High Court and Court of Appeal judgment state clearly that "*the Minister must act reasonably to seek to stop the saving resulting from TACC reductions being lost to recreational fishing*". Moreover, the Court of Appeal said the Minister must "*seek to prevent the commercial sacrifice being caught on recreational hooks*" (see page 18 of the judgment). Industry believes it is clear that the current management of the recreational fishery by the current individual daily bag limit can not prevent further growth in overall recreational catch, particularly as the stock rebuilds, as it is expected to do irrespective of whether the TACC is reduced.

135. Industry states that the recent growth of charter vessel operations in prime recreational fishing localities throughout SNA 1 is the type of threat to the stock rebuilding that you must now act reasonably to stop. It calculates that the charter fleet has now grown to well in excess of 150 vessels. Many of the new charter operators are ex-commercial fishermen who can see that their skills in exploiting the SNA 1 resource now better serve them in a sector where their total catches are largely unregulated. Attached as **Appendix 2** of the industry submission is a letter dated 20 June 1997 from the NZFIA relating to this issue, which attaches a list of approximately 170 current charter vessel operators. Industry states that in some cases, existing commercial fishers are leasing out their snapper quota and using their deregistered vessels to continue snapper fishing as charter operators. A TACC reduction would inevitably lead to an increase in this type of activity as yet more commercial fishers will seek alternative ways of continuing to earn a living from fishing the SNA 1 resource.

#### **4.1.1.4. Cost/Benefit Analysis and Reasonableness**

136. Industry believes another very important component of the Court of Appeal's decision is the clear direction to future Ministers that they must, when contemplating significant TACC reductions, explain and rationalise any such decision after completing a proper analysis of the costs and benefits which will flow from such a decision and generally the impact that any such decision will have on the integrity of the QMS. This issue is considered in more detail later this summary of industry's submission.

### Notice

137. Industry states that while the Court of Appeal found there was no direct legal requirement to give any particular notice of a TACC reduction, the Court stated:

While there is no implied requirement, we consider the Minister should always strive to give as much notice as possible, particularly when a significant change in the TACC is involved. However such notice will usually occur, we imagine, from the consultation process which the Minister must follow. In an extreme case a last minute unheralded notification of a major change, although not unlawful per se could be susceptible of challenge for unreasonableness/irrationality unless there was some very convincing explanation for it.

138. Industry notes that in past situations such as the ORH 3B decision in 1993–94, the Minister did give notice of his intention to reduce the TACC in future years if the position did not change significantly. If short notice of a TACC reduction is to be employed then it would be reasonable for any cut to be staged and measured over a number of years, particularly given the Ministry's previously expressed view that there should be no great concern about the timeframe for a rebuild.

### High Court Decision Relating to Area Closure

139. Industry notes that the separate judicial review proceedings brought by the Leigh Fishermen's Association relating to the area closure were also successful in part (for industry). It believes in procedural terms that that decision highlights the need for the consultative process to be kept open and transparent right through to its conclusion, and for the Minister to fairly and frankly indicate to the parties his thinking as early in the process as possible.

### Changes in Stock Assessment

140. Industry is of the view that the 1997 SNA 1 stock assessment position for the Hauraki Gulf/Bay of Plenty substock can be contrasted with the assessments considered by the Minister in 1995 and 1996. For a summary of industry's views see next section.

#### **4.1.2. Fishery Assessment Considerations**

141. In its submission of 13 July, industry makes a number of points in regard to the 1997 fishery assessment for SNA 1. It states that there were considerable changes in the input assumptions used in 1997 to underpin the 1997 stock assessment. These changes include:

- **Petersen biomass estimates:** The Snapper Stock Assessment Working Group (SAWG) revisited the assumptions which were involved in the 1993 tagging biomass estimates. The SAWG agreed that all the assumptions of the method had not been met, but did not want to discard the results. However, the SAWG

agreed to discard the 'all method' biomass estimate (which included the Hauraki Gulf Danish seine recoveries) which was used in the 1996 assessment. This resulted in an 5% increase in the estimated biomass relative to 1996 (from 49 050 to 51 525 tonnes).

- **Re-estimation of natural mortality:** The parameter value used for the 'natural' mortality of snapper was revised upward from 6% per year to 7.5% per year (for the basecase). Industry states that this effectively results in a 25% increase in the underlying productivity rate of SNA 1, which should speed the expected time to rebuild.
- **Unreported Japanese catches:** During the 1996 TACC deliberations, industry states that it suggested that a substantial amount of unreported historical catch by Japanese longliners had not been included in the stock assessment. After some discussion and presentation of documentation, the SAWG accepted that it was important to include this catch in the stock assessment. However, since the size of these unreported catches is unknown, three possible levels of total additional catch were investigated in the stock assessment (20 000, 30 000 and 50 000 tonnes) over the entire period that this fishery was thought to be operating (1960–77).
- **Shift to average recruitment prior to 1971:** Industry states that it also proposed during the 1996 TACC deliberations that there were potential biases in the way that the historical recruitment indices were calculated by converting a time series of air temperatures from Albert Park into estimates of water temperatures at the Leigh Marine Reserve. After much deliberation and modelling, it notes the SAWG decided to discard this aspect of the model and shifted to using average recruitments (ie, no year to year variation) prior to the beginning of the time series of water temperature measurements at Leigh.
- **1996 estimate of recreational catch:** Industry notes that the 1997 stock assessment was provided with a third estimate of the annual recreational catch in SNA 1. Data was only available for the first six months of 1996, but these were used to estimate the total 1996 recreational catch. The estimate of the 1996 recreational catch was 2 052 tonnes, considerably lower than the 1994 estimate of 2 850 to 3 250 tonnes. Industry believes it is not correct to compare directly the 1994 and 1996 recreational catch estimates because there had been regulation changes between the two years: the daily bag limit had been dropped from 15 to nine snapper per day and the snapper size limit had been increased from 25cm to 27cm. Industry states that the SAWG estimated the change in catch associated with these two regulation changes was about 300 tonnes and estimated that the 1996 recreational catch would have been 2 347 tonnes if the old regulations had still been in force. This revised estimate of the recreational catch was then incorporated into a model of recreational growth which estimated that the recreational fishery grew by 3.8% per year in the Hauraki Gulf and at 5.9% per year in East Northland. Industry states this was a considerable increase in growth rate over the 2% per year used in the 1996 assessment.

142. Industry notes that besides the changes in the input data and assumptions, there were also changes made in 1997 in the way that the SNA 1 stocks were modelled. These changes included:

- catch at age data from the fishery were explicitly included in the stock assessment model for the first time. This allowed the model to estimate the recruitment from the observed year class strengths in the catch, rather than relying exclusively on the recruitment indices calculated from the Leigh temperature-recruitment relationship;
- new 'selectivity' curves were investigated in the stock assessment model. This is the estimate of the proportion of fish at any age which are vulnerable to the fishery. These curves are needed to interpret the catch at age data used in the stock assessment model. They also affect the interpretation of the recruitment indices as the number of small fish which appear in the fishery is dependent on the proportion vulnerable. It was determined that the 'selectivity' curves used in previous assessments probably overestimated the number of younger fish available to the fishery.

143. Industry believes there are important differences in the 1997 stock assessment results compared to the results presented in 1996. It states that these include:

- the 1997 stock assessment is much less 'certain' than the assessment presented in 1996. This is because error was introduced into the assessment in several ways that were not present in 1996. The 1996 stock assessment only introduced error into the analysis in the Petersen tagging biomass estimates. The 1997 stock assessment added error in the recruitment indices, the selectivities and in the estimate of natural mortality;
- the estimated yields in 1997 are very similar to the yields estimated in 1996, in spite of adding the additional Japanese catches into the calculations. Industry states this is mainly because by moving to average recruitments prior to 1971, the model estimates a relatively lower  $B_0$  than in 1996. Cold temperatures in the 1920s to the 1940s forced the 1996 stock assessment model to lift the estimate of  $B_0$ , otherwise the stock would go extinct in the 1970s. This feature disappeared when average recruitments were used and a lower  $B_0$  would fit the observed catch history and biomass indices;
- the estimated stock status of the Hauraki Gulf/Bay of Plenty stock increased from 46% of  $B_{MSY}$  in 1996 to 60% of  $B_{MSY}$  in 1997 in the basecase. This is probably caused by the drop in the estimate of  $B_0$  and from the increased estimate of natural mortality;
- the East Northland stock was estimated to be at  $B_{MSY}$  by both the 1996 and the 1997 stock assessments.

144. Industry notes that no risk assessment has been put forward by the 1997 stock assessment because the stock assessment modelling was not fully completed. It states that the new SNA 1 stock assessment model is complex and the SAWG did not have full confidence in the predictive capacity of the model. Some of the reasons for this lack of confidence are:

- the changes in the assumptions regarding historical catches and recruitments have had considerable effects on the way the stock assessment estimates the present situation;
- much work is needed to investigate the sensitivities of these estimates of present stock status to the different historical assumptions. This is important because the present stock status will have a large effect on the risk projections;
- finally, the SWG could not agree on a model to simulate the future projections of recreational catch. Given the relative size of this fishery, the underlying recreational model will have a substantial effect on the future risk projections.

145. However, industry states that it is unlikely that either SNA 1 stock is under any substantial risk, given:

- it is believed that there is no relationship between the parent stock size and the subsequent recruitment. The effect of this is to reduce the stock risk at low biomass levels;
- empirical evidence has shown that this stock has been extremely resilient to much higher exploitation rates than are currently present.

146. Industry notes the 1997 stock assessment indicated that there is a short term expectation of a small stock decline for both SNA 1 stocks. This is mainly due to the fact that the temperature-recruitment relationship predicted several below average recruitments in the most recent years (including 1997—which was low due to the abnormally cold February temperatures which then reversed as the remainder of the autumn was quite warm). Industry believes that too much reliance is placed on these indices and insufficient allowance is given to the potential variability in recruitment which may occur from the predicted levels at age one to the actual recruited levels at ages four and five.

147. In its 18 August submission, industry concludes that the current status of the SNA 1 stock is as follows:

- a) the Hauraki Gulf/Bay of Plenty substock at the beginning of 1997–98 is estimated to be at 60% of  $B_{MSY}$ . That is apparently 15% greater than was thought to be the case in both 1995 and 1996, when the assessments ranged between 42% and 46%;
- b) the East Northland substock remains at 3% above  $B_{MSY}$  at the start of the 1997–98 season, and has now been approximately at that level for a number of years;

- c) overall the total SNA 1 stock is now estimated as being at 69% of  $B_{MSY}$ , that being nearly 20% greater than was estimated in both 1995 and 1996, when it was thought to be approximately 50% of  $B_{MSY}$ ;
- d) this means that the biomass of the fishery now only needs to increase in size by 23 000 tonnes, rather than 40 000 tonnes, before reaching  $B_{MSY}$ ;
- e) the stock has been stable at this level for the past 10 years, as established by the tagging programme stock abundance estimates;
- f) at its current stock size the fishery is sustainably producing 96% of the theoretical MSY and on average over the last 20 years has been producing yields in excess of 100% of the theoretical MSY;
- g) that at the current stock size, and assuming only average long-term yields and control of the growth in the recreational catch, the fishery is not only sustainable without any TACC reduction, but is rebuilding slowly.

148. Industry states that average long term yields (MSY) for SNA 1 are estimated to be 8 670 tonnes in the basecase assessment (6 800 tonnes for Hauraki Gulf/Bay of Plenty and 1 870 tonnes for East Northland). The estimated total removals for this fishstock would be 8 032 tonnes under a TACC of 4 938 tonnes (including a provision of 494 tonnes for a 10% overrun and a current allowance of 2 600 tonnes for recreational and customary catch). Therefore, on average, industry estimates the SNA 1 stock will rebuild under a TACC of 4 938 tonnes. Further, industry believes the resource is currently rebuilding, on average, towards  $B_{MSY}$  and the requirements of section 13 of the 1996 Act are being met.

149. In regards to the 1997-98 estimate of long term Current Surplus Production (CSP), which assumes average recruitment, industry provides the following calculation:

Long term Current Surplus Production	8 335 tonnes
Commercial Harvest (TACC)	(4 938 tonnes)
Under-reporting of 10% (or 0%)	(494 or 0 tonnes)
Non Commercial Harvest	(2 200 tonnes)
Annual surplus going to rebuild	703 to 1 197 tonnes

150. Industry states that if recreational fishers are constrained to the most recent 1996 estimates of about 2 200 tonnes, then the Hauraki Gulf/Bay of Plenty substock can rebuild to  $B_{MSY}$  in approx. 20 to 25 years, depending on future constraint of illegal catches. It believes is not unreasonable to expect that illegal removals can be reduced in the future and so help contribute further to a rebuild potential. Industry calculates at a rebuild potential of 1 000 tonnes per annum from surplus production,  $B_{MSY}$  for the Hauraki Gulf/Bay of Plenty substock will be reached in 21 years. It also expects that recreational catches will be constrained to current catch estimates



so as to ensure sustainability. If recreational catches are allowed to expand further then industry is concerned that this will threaten restoration of the SNA 1 stock.

151. Industry states that in 1997 the assessment showed a marked improvement in the current status of the stock, but are concerned that MFish is asserting that this current stock status is less certain. Industry disagrees that it is more uncertain and note that the stock assessment working group concluded that “...the varying assumptions did not substantially affect the modelling of the present stock status...” (see p328 of Plenary Report). Note that this view is in contrast to the industry’s 13 July submission in which it noted that one of the important differences between this years and last years assessment was that the 1997 assessment was “much less certain than the assessment presented in 1996”

152. Industry is of the view that one of the principal reasons that future stock projections were not undertaken in 1997 (as they were in 1995 and 1996) was because agreement within the working group on how to proceed with projections of recreational catch could not be achieved. It now contends that this is not uncertainty at all, but a difference of view on the obligation to ensure sustainability. It states that MFish was not willing to have the stock rebuild projected on the basis of a constraint on recreational catches because it contended that was not the Ministry’s current policy position. In turn industry was of the view that the 1996 Act did not provide for the Ministry to adopt the double standard of seeking to rebuild to  $B_{MSY}$  without further constraint of recreational catches as they were predicted to grow in the future. In light of both the High Court and Court of Appeal decisions, the Industry contends that its position is correct, if the intention of the assessment process is to determine the need for sustainability measures that can provide for stock restoration while constraining the catch of all sectors. If, however, predetermined reallocation strategies are to be factored into rebuild projections, then the Industry rejects this premise on grounds of failing to ensure sustainability.

153. Industry concludes that while the assessment has now improved significantly, yet more work needs to be done over the next 12 months in refining assumptions relating to future projections. In the face of that continuing uncertainty it believes you must move cautiously and any precipitous actions to reduce the TACC at this stage, with its attendant far reaching social and economic consequences, must be avoided.

154. In summary, providing the recreational catch is controlled, and assuming average long-term yields, industry calculates the Hauraki Gulf/Bay of Plenty substock will rebuild to  $B_{MSY}$  within 20–25 years without any TACC reduction.

#### 4.1.3. Management Plan for SNA 1

155. Industry is of the view that there is an urgent need for the implementation of a comprehensive management plan (under section 11 of the 1996 Act) to properly manage and control the anticipated growth in the recreational catch—being both the catch of true recreational fishers and that taken by the burgeoning charter vessel fleet.

156. Industry states that the Ministry's updated assessment now calculates that the recreational catch is increasing by between 3.8% (Hauraki Gulf/Bay of Plenty) and 5.9% (East Northland) per annum (compounding). It believes it is neither logical nor precautionary to allow this recreational fishery to continue to grow, and to remain largely unmanaged, unconstrained and unenforced, in circumstances where the Ministry is expressing concerns about the sustainability of the resource to that point where it is contemplating a significant TACC reduction. Good fisheries management practices, reinforced by the requirements of the *precautionary approach* (industry emphasis), require the proper and comprehensive management of the recreational fishery and in particular the ever expanding charter fleet.

157. Industry believes:

- a) recreational fishers should be licensed and required to report catches;
- b) bag limits should be reduced to three to five per person per day and group limits equating to the entitlements of five persons should be reintroduced;
- c) the snapper fishery in SNA 1 should be closed seasonally if the recreational share of the TAC is known to be taken;
- d) charter vessel operators and similar commercial operations (eg heli-fishing) should be licensed, required to hold quota or like catch entitlement and report catches.

158. Industry is of the view that further postponement, or failure, to immediately implement these types of sustainability measures will not ensure the sustainable restoration of the SNA 1 resource. As a result, the purpose of the 1996 Act will be defeated and you will have failed to act in a precautionary manner.

159. Industry takes the view that it is the Ministry's job to develop, and implement without further delay, a management plan which can constrain the non-commercial catch to its allocated share of the TAC on an annual basis.

160. It states that overseas experience shows that it is realistic to manage the non-commercial catch to an annual defined allocation with a considerable degree of precision, contrary to the often asserted position of the Ministry that it would simply be too hard to do so. Industry refers to the affidavits of Dr Gary Morishima presented to the High Court in the Judicial Review proceedings (see **Appendix 3** of industry's submission). Dr Morishima uses a case study of Pacific salmon in Washington State to illustrate how a recreational fishery is managed within specific constraints to achieve allocation and conservation objectives. Regulations on

recreational fishers include reduced bag limits (as low as 1 per day), gear restrictions, time/area restrictions, size limits and catch ceilings or quotas. Dr Morishima believes that the difficulties in implementing direct controls on recreational fishers is largely political, rather than technical or biological in nature.

161. Industry states that the Morishima affidavits demonstrate very clearly that in considerably complex circumstances on the West Coast of North America the fisheries managers successfully manage various salt water salmon fisheries. As in New Zealand, specific allocations need to be made in these North American fisheries to commercial, recreational and traditional users. As in New Zealand, these fisheries spanned hundreds of miles of coast line, but they have the added complication of needing to make a specific allocation for various salmon substocks or different species of salmon. Industry believes Morishima's affidavits provide clear evidence that proven management techniques are readily available, providing the political and institutional will exists to implement them. Given both the new requirements of, and the facilitating powers in, the Fisheries Act 1996, it states there is no longer any option but to implement with urgency such, or comparable, controls for the SNA 1 fishery. To do any less, and at the same time continue to promote an immediate TACC reduction as being a sustainability measure required to restore the SNA 1 resource to  $B_{MSY}$ , is, in industry's view, "to blow hot and cold" on sustainability, in the words of Justice McGechan.

162. Industry believes that while it is ultimately for the Ministry to develop this plan and decide these non-commercial management controls, the controls should include at least the following components:

- a) **Sustainability measure:** The structured management plan must be implemented as a sustainability measure under section 11 of the 1996 Act;
- b) **Licensing:** Recreational SNA 1 fishers should be licensed so that at the very least the Ministry can then be reasonably informed of the likely size and character of this fishery. Industry believes this is a precautionary approach required by section 10 and international law. Further the information available on the overall size of the SNA 1 recreational catch from national diary and boat-ramp surveys is uncertain, unreliable and inadequate. The uncertainty in this information is not a reason for postponing any longer or failing to licence recreational fishers so as to ensure that the SNA 1 resource is restored (which is to say utilised or conserved) to  $B_{MSY}$  sustainably. If restoration of the SNA 1 resource to  $B_{MSY}$  is to be sustainable, then the adverse effects of predicted further growth in overall recreational SNA 1 catches needs to be avoided or mitigated;
- c) **Reporting:** There must be a further requirement for recreational fishers to report their snapper catch. Industry states that Morishima's evidence provides examples of how this can be achieved through punch-card systems or the like. It contends that the 1996 Act now enables non-commercial fishers to be required to report their catch. Industry notes that customary fishers are to be required to report in some form under the customary fishing regulations in relation to all species. It believes

reporting will also further assist overcoming the uncertainty in the information which the Ministry currently has on this issue. Further, there is no better precautionary approach and more cost effective system for surveying catch than requiring it to be reported. In the commercial fishery it is a measure that helps ensure sustainability;

- d) **Enforcement:** Greater levels of enforcement are required. Industry states that in the High Court Judicial Review proceedings, Mr Hore in his affidavit dated 19 December 1996, para 7.11, confirmed that *“there are significant problems with compliance of the recreational sector in SNA 1 due both to the nature of the physical nature [sic] of the fishery and problems generally associated with enforcing management controls on fisheries.”* Industry notes that enforcement officers in the Auckland region went on public record earlier this year to say that thousands of recreational fishers receive warnings but very few are ever prosecuted. They recorded that the Ministry has only prosecuted 180 recreational fishers in the last two years for exceeding legal recreational limits. Industry believes the compliance regime needs to be made more meaningful if current and future restrictions are to be obeyed;
- e) **Bag limits:** The bag limit for snapper should be significantly reduced.

163. Industry believes a bag limit of nine snapper per day per person (with no group limits, particularly on charter vessels) is absurd. Industry contends that the only reason recreational fishers have not in the past agreed to significantly reduced bag limits is because of their desire to progressively have this fishery reallocated to the non-commercial sector. It believes there is no coincidence that in areas such as the Marlborough Sounds, where there is no commercial fishery, recreational fishers have recently accepted a bag limit of three finfish per day.

164. Industry is of the view that as individual daily bag limits only apply to one individual on a given day, they will not normally stop the overall growth in the total take by recreational fishers as they do not impact on:

- a) existing fishers increasing their effort by fishing on additional days to compensate for any bag limit reduction;
- b) new entrants to the fishery—given the population in the Auckland region is increasing at over 2% per annum, this factor is significant;
- c) the ability of fishers to share the catch amongst others in their fishing party.

165. Industry believes bag limits, if set low enough, can have an effect on controlling the total recreational catch, although more typically bag limits will simply result in the more equal spreading or sharing of the available resource amongst recreational fishers. That is because low bag limits tend to even out the 'playing field'—more expert fishers are constrained and so less expert fishers have a better prospect of reaching the bag limit.

166. Industry states that in popular recreational fisheries such as SNA 1, the bag limits which have been set to date have never provided, and are not now providing, any significant constraint on the growth of the recreational catch. It states that the reason is simply that the average number of snapper actually caught by recreational fishers per day has always been very significantly below the then bag limit. In other words, most recreational fishers never achieve a bag of fish anywhere near the legal limit. Industry states that results from the 1991 boat-ramp survey show only 370 fishers out of 22 000 surveyed (less than 2%) caught more than nine snapper. Similar results are evident from the 1996 National diary survey.

167. Industry believes the recreational catch in SNA 1 is not constrained by the bag limits, but rather by the fisher's ability to catch the fish. Notwithstanding that most individuals are not able to catch their bag limit of nine snapper each day, industry notes that the total recreational catch in SNA 1 is still predicted to grow at a rate comparable with the population growth of the region.

168. In summary, industry states that even on the Ministry's own assessment, the bag limit reduction (from 15 to nine in 1995) did not have, and was not expected or intended to have, any significant impact on the recreational catch. Therefore, industry requests that the bag limit in SNA 1 be set at three to five to ensure a sustainable restoration of the stock to  $B_{MSY}$ .

169. **Charter boats:** Industry believes there must be immediate controls placed on charter boat operators to ensure sustainability. The majority of these operators are former commercial fishers who are highly skilled fishermen and who derive significant income from their activities. More particularly, industry requests:

- a) regulations made in terms of section 11 of the 1996 Act need to provide for charter boat operators to be issued licenses, permits or some form of authority, thus enabling them to be levied with cost recovery levies in terms of section 262(g) of the 1996 Act;
- b) they must be required to keep proper records and report catch in the same way as commercial vessels;
- c) they should be required to hold an overall catch entitlement and steps should be taken immediately to establish a limit of no more than three fish per person per day on a charter vessel. Additional consideration should be given to an overall daily charter party bag limit, irrespective of the size of the group. In the past such measures existed, constraining group catches to the individual entitlement of five persons;
- d) **TAC Constraint:** Industry contends that sustainability measures for the

recreational SNA 1 fishery must be robust enough to provide for a closure of the recreational snapper fishing season if the non-commercial portion of the TAC has been reasonably determined to have been taken in any one year. It believes the 1996 Act provides for such a measure in section 11(3)(e). Further, such a measure is not impracticable. It notes that recent research results show that the majority of lip hooked snapper caught by recreational fishers survive when returned to the sea, so fishing for other species could continue while requiring snapper to be released during a closed season. It is also likely that such a seasonal closure would only be required in winter when there is naturally less recreational activity. Industry states that a non-commercial allocation can not be said to be a sustainability measure if the Ministry is willing to allow it to be exceeded, as appears to be the current policy position.

#### **4.1.3.1. No TAC or TACC Reduction Necessary Based on the Current Stock Assessment**

170. Industry believes that no TAC or TACC reduction is warranted on the current stock information. As discussed earlier, it states that the MSY of 8 670 tonnes for SNA 1 as a whole can, on average, sustainably support the current TAC of 8 032 tonnes, whilst still allowing 640 tonnes per annum to contribute to rebuilding. This TAC provides for a 4 938 tonne TACC, 494 tonnes of estimated non-reporting and a 2 600 tonne allowance for non-commercial catch.

171. Industry notes that the 1996 diary survey results suggest that the current recreational snapper catch in SNA 1 is about 2 200 tonnes, not 2 600 tonnes as has been allowed for. This estimate is also accepted as including current customary take that has not been separated out in the diary surveys. It calculates that assuming this to be the case, then currently there is about 1 000 tonnes per annum of average surplus production contributing to SNA 1 stock restoration. At this rate industry calculates that the SNA 1 stock will rebuild to  $B_{MSY}$  in about 20 years. It contends that as such:

- a) the section 13 obligation can be met without changing the TACC;
- b) this approach is precautionary, it is clear that the SNA 1 stock size was stable over the 10 year period between two tagging estimates despite higher commercial catches over that interval than are being taken under the present TACC;
- c) similarly, the robustness of the stock is demonstrated because it has produced over 100% of theoretical MSY yields over the past 20 years.

172. Industry states that in relation to a 20 to 30 year timeframe for stock rebuild, the FAO "*Guidelines on the Precautionary Approach to Capture Fisheries and Species Introductions*" released in 1995 explicitly provides that, if corrective measures (here an increase in the size of the biomass) can be completed within two or three decades, then they are still within the precautionary approach. Also the Guidelines state that if potential effects are reversible within two to three decades then the precautionary approach is complied with. Accordingly, and in reliance on

these criteria, it is consistent with the precautionary approach to maintain the current TACC which can allow the SNA 1 resource to be restored  $B_{MSY}$  over 20 to 30 years, assuming constraint of current recreational catches.

173. Industry is also of the view that as the non-commercial catch is now estimated at about 2 200 tonnes, that should be their allocation (rather than 2 600 tonnes), if the principal obligation of ensuring sustainability is to be met. It contends that if your concerns are indeed sustainability related then you should not be better providing for recreational fishers, by allowing opportunity for further growth in catches, at the same time.

#### **4.1.3.2. Factors to be Considered When Contemplating TACC Reduction**

174. Industry states that in the event that, notwithstanding its submission, a TACC cut is being contemplated by you, then the following issues become relevant as factors which need to be taken into account in the process of considering any potential reduction.

##### Section 13(3) of the 1996 Act and Definition of $MSY$

175. The industry's position, in relation to considerations relevant to any potential TACC reduction, is essentially that the Minister has a very broad discretion and can consider any matter affecting the national interest, and not just those matters strictly related to quota owners or the fishing industry. They believe this is consistent with the purpose of the Act, specified in section 8, which balances the need to provide for utilisation with ensuring sustainability. In addition to having a discretion as to the rate of progression, the Minister is also able to determine the 'way' in which the stock has moved over time towards  $B_{MSY}$ . This is a critical component of the discretion.

176. In particular industry is of the view that:

- a) you must develop 'decision rules' in consultation with industry and other stakeholder groups. Industry contends that these decision rules should provide, as they do for example in the orange roughy and rock lobster fisheries, that average recruitment will be considered in deciding the TACC for a rebuilding strategy, rather than trying to narrowly manage the fishery on an artificial year by year basis. Natural fluctuations in environmental conditions mean that it is unreasonable and inappropriate to look at yields on a narrow annualised basis, and the Minister may take into account natural recruitment variability when varying sustainability measures (section 11(1)(c) 1996 Act);
- b) industry sees no justification for imposing any particular timeframe within which the stock should be rebuilt. If, however, a timeframe is preferred then industry believes some logical and reasoned analysis of the appropriate timeframe needs to be taken (as indicated by the Court of Appeal) to justify why this is needed. Industry is of the view that it should be sufficient that there is a greater than 50% prospect that the fishery is moving in the right direction;

- c) given that the current stock assessment places the fishery at 69% of  $B_{MSY}$ , industry sees no reason why a 30 year timeframe should not be adopted, particularly given that this still comes within the requirements of the FAO's analysis of the requirements of a precautionary approach.

Fishery Already Achieving Section 2 Definition of MSY

177. Industry states that this part of the submission is made on a standalone basis and should not be seen as being tied to any other parts of its submission.

178. Industry contends that, having regard to the definition of MSY in section 2 of the 1996 Act, the SNA 1 stock is already at a level that produces the MSY ( $B_{MSY}$ ). Industry's argument is based entirely on the new definition of MSY contained in the 1996 Act. That definition provides:

“Maximum sustainable yield” in relation to any stock, means the greatest yield that can be achieved over time while maintaining the stocks productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock.”

179. Industry contends that the definition of MSY which has been incorporated in section 2 of the 1996 Act (as set out above) is not the definition of MSY used by the Ministry in its SNA 1 stock modelling in 1995 and 1996. If this definition in section 2 is applied to the SNA 1 stock, it is akin to MCY. Industry believes that SNA 1 has been achieving the greatest yield for the stock at its current size for at least the past 10 years, while maintaining its productive capacity, having regard to its population dynamics and the environmental factors which have influenced the stock over that interval.

180. Industry further believes that had the definition of MSY been intended to embrace the approach to MSY which is being used by the Ministry in its current stock assessment, the definition would have replaced the word “maintaining” with the word “maximising”. That is, MSY would mean “the greatest yield that can be obtained over time while maximising the stocks productive capacity”. The requirement to maximise the stock's productive capacity was not included in the definition. All that is required is to extract the greatest yield which can be achieved, while maintaining the stocks productive capacity. The SNA 1 stock's productive capacity has been maintained for a long time now, and the yields being obtained at that level are the greatest yields which can be extracted while maintaining that level.

181. Industry notes that for SNA 1, it is accepted by the stock assessment working group that recruitment (a sizeable portion of the stocks yield producing capacity) is independent of current stock size. That being the case, industry believes there is no obligation to increase the stock size to that which will effectively maximise, rather than maintain, the stocks productive capacity through enabling biomass growth at a greater biomass to further contribute to yield. It is sufficient for the SNA 1 stock to simply not be permitted to decline over time. As such, the fishery is currently at  $B_{MSY}$  for the purpose of section 13. (Industry states that this argument is different from that advanced in the High Court by Professor Hilborn and Mr Starr, that actual the yields being produced were indistinguishable from the yields produced at the Ministry's theoretical MSY).



### Economic and Social Impacts of a TACC Reduction

182. Industry notes that the social economic impacts of a potential TACC reduction have been rehearsed at considerable length in its judicial review proceedings over the last two years. They note that these have not been disputed by the Ministry. Industry in its submissions refers you to and relies on a number (15 in total) of affidavits filed in those proceedings. The affidavits are from D Anderson, C Ward, M Barbarich, P Dawson, B Young, B Young, T Birdsall, D Cunningham, D Cunningham, N Lang, N Lang, J Williscroft, D Moore, D Browne, P Clow. In general they state that a significant TACC reduction for SNA 1 would result in: the restructuring of businesses; decreased turnover; fishers being forced out of business; job losses among deck crew and processing staff; decrease in the catch of bycatch species and the sale of vessels which would become surplus to requirements. They also state that fishers would be unable to diversify into other fisheries because of the cost of new gear, possibly new vessels, and of purchasing quota for other species.

183. Industry states that these affidavits indicate that the SNA 1 fishery is not only of great economic value in its own right, but that it drives the economies of the entire northern inshore fishery, and supports the families of many coastal fishing communities which are heavily, and in some cases almost exclusively, dependent on the fishing industry. Any significant reduction in the SNA 1 quota will also have major implications for a range of other target and bycatch species caught in this northern inshore fishery. The 20 large quota holders will need to significantly retrench their activities. They will no longer have any surplus quota to lease to the approximately 200 quota holders, with less than five tonnes of quota, who depend on the larger companies to provide them with additional quota to support a viable fishing operation. Industry contends that the impact of a significant reduction will be catastrophic.

184. Industry summarises the core economic data relating to the fishery as follows:

- a) the value of the SNA 1 quota on the balance sheets of individuals and companies has decreased from \$60 000 plus per tonne prior to the 1995 TACC decision to \$30 000 per tonne directly as a result of uncertainty, not over the state of the fishery, but uncertainty over the degree of intended political interference with the fishery;

- b) at the lower level the current market value of the current commercial fishing quota for SNA 1 is around \$150 million, and any significant reduction in the TACC will cause financiers to foreclose on many quota holders who purchased quota at the higher value levels, after the 1992 quota cut, to replace access to income earning capacity at that time;
- c) the primary annual revenue value of the fishery based around SNA 1 is around \$125 million, as set out in the table below which shows the value earned for the species converted to revenue per greenweight tonne from either export sales (C&F) or local sales;
- d) in many cases, the species harvested from the mixed species fishery in the Northern Region (FMA1) are sold in conjunction with species from other regions to make up economic parcels for exporting, and so there are cost savings and benefits to other FMAs from the FMA1 fisheries;
- e) similar synergies exist between the finfish fishery, detailed herein, and the crustacea and shellfish fisheries of the Northern Region. These synergies apply not only at the infrastructure level, but also at the international market level;
- f) the revenue to the seafood sector based around the SNA 1 fishery is, with the exception of Rock Lobster and Paua, the most valuable in the New Zealand fishery, generating its \$125 million from less than 30 000 tonnes of landings (an average of around \$4.40 per greenweight kilogram);
- g) the total landings from the New Zealand fishery of QMS and non QMS species is around 70 000 tonnes and generates earnings of around \$1.5 billion (an average of around \$2.15 per greenweight kilogram);
- h) in addition to the primary value generated by the Northern Region fisheries based around SNA 1, there are many socio-economic benefits derived from the existence of families associated with fishing, ie increased school rolls, sport and leisure club involvement, justification for the delivery of social services and attraction for outside commercial interests;
- i) a study on economic multipliers by economic consultants BERL (Business and Economic Research Ltd) found that, for every dollar generated in the seafood industry, another \$1.50 was generated in other industries, and an additional \$1.60 was generated by downstream effects—giving a multiplier of 3.1 for every dollar earned by the industry;
- j) approximately 500 people are employed directly in the SNA 1 fishery. For every person directly employed in the seafood industry, the multiplier study indicates that another 3.2 persons are employed as a result. This confirms the industry estimates that the jobs of between 1 500–2 000 are dependant on this fishery;
- k) small operators are very dependent on the leasing, and on the lease price, of quota which both in turn depend on the availability of quota.

185. Industry believes the impact on particular coastal communities cannot be understated. Industry states that in its 1995 and 1996 submissions separate case studies were provided in relation to the impact on three small fishing communities, and on Moana Pacific Fisheries Ltd. It is of the view that these analyses are as valid today as they were when they were initially prepared. Copies of these submissions are annexed as **Appendix 6** of industry's 1997 submission. Also included in that Appendix are four recent press releases summarising the individual circumstances of four commercial fishermen directly affected by this issue, and which industry claims explain the impact which any significant TACC reduction will have on them, their families and their employees.

*12/13 August 1997 Visit of Minister to Northern Region*

186. In August 1997 you accepted an invitation from the northern fishing industry to attend meetings in a variety of locations throughout the northern region. Meetings took place in Whitianga, Auckland, Leigh, Hikurangi, Mangonui and Houhora on 12 and 13 August. At the outset of each meeting participants were asked to provide their views on the state of the SNA 1 fishery and the impact of any significant reduction in TACC for SNA 1. Meetings were well attended and attendees included fishers, processors and representatives of local community and business groups.

187. The views expressed at each meeting are generally consistent with the industry submission that the fishery has improved substantially in recent years and that reductions in TACC of a significant scale would have a significant affect on employment and income in small communities in particular.

188. Consistent in submissions at all of the meetings was the view that the SNA 1 fishery had improved considerably in recent years. Catch per unit of effort was considered to have increased in all areas of the fishery. The nature of the fishery was submitted to have changed substantially with more fishing to markets rather just to catch as much fish as possible. Of note was the view that the East Northland fishery had also improved.

189. There was reference in submissions to the marginalisation of fishing operations that would result from any significant reductions in TACC, the effects on small fishing and business operations and local communities in particular. At some locations meeting attendees suggested that a significant reduction in TACC for SNA 1 would undermine the QMS forcing fishers to become dishonest to remain in the fishery. It was suggested that some fishers would respond to a reduction in this manner.

190. Industry notes that during your visit to Whitianga, Auckland, Leigh, Hikurangi, Mangonui and Houhora on 12 and 13 August, you were given a general overview of how a SNA 1 TACC reduction might affect the social and economic wellbeing of those persons dependent on, and associated with, fishing in these communities. Industry is of the view that this visitation can not reasonably substitute the need for a proper cost/benefit analysis of these impacts, and ought not to be seen as sufficient to discharge mandatory considerations in this regard.

#### **4.1.3.3. *Impact of a TACC Reduction on the Integrity of the QMS and Property Rights***

191. Industry accepts that, following the introduction of proportional ITQs consequential and non-commercial on the 1989 Accord and the Fisheries Amendment Act 1990, the Minister is entitled to reduce the TACC, without compensation, for sustainability reasons. However, it states that an important question remains as to how any such reduction should be implemented so as to not affect the integrity of the QMS, even if it is being done for sustainability reasons.

192. Industry contends that a second issue now also arises out of the Court of Appeal's decision, given their advice that the ratios between the commercial sectors can be altered by the Minister. The issue is how that should be achieved without fundamentally damaging the integrity of the QMS.

##### *Reductions Generally*

193. Industry states that many quota holders' confidence and trust in the integrity of the QMS has been eroded by what they contemplate as, the drastic approach adopted toward SNA 1 TACC decisions in recent years. Morale is low, and a number of quota holders remarked that a drastic TACC reduction would put them in a position where they would consider non-compliance with the QMS, rather than be ruined. Commercial fishers can not accept that it was considered reasonable for the recreational fishery, and particularly charter vessel operations, to be allowed to continue to grow largely unchecked when many of them were at the same time being asked to accept economic ruin. Industry states that it is imperative to the wider fishing community that the integrity of the QMS be maintained by exploring a range of staged and measurable rebuild strategies for SNA 1. This could enable them to adjust to change, and provide for their intended wellbeing, while at the same time avoiding devastating social and economic consequences.

##### *Reductions for Non-Sustainability Reasons*

194. In those circumstances where a TACC reduction is made for non-sustainability reasons, industry believes that the Crown should acquire the necessary quota on the open market. It believes that not to do so would be grossly unfair and would irreparably damage the integrity of the QMS.

195. Industry states that it was prepared to take on the economic risk of the resource (in biological terms) allocated with proportional ITQs, as it enhanced the QMS in terms of providing desirable incentives on quota holders to take a long term view of sustainability. Importantly, commercial fishers were able to substantially manage this biological risk, for example, through increased research

or decreasing levels of fishing effort, through changing their harvesting practices or developing new fishing techniques and the like. In that sense, while they were now going to carry significant economic risk, that risk itself provided a number of very positive incentives, and it was a risk which they were substantially able to manage.

196. Industry contends that by contrast, TACC reductions to cater for growth in the Auckland population, and more generally the growth in levels of recreational fishing, is something which industry has no ability whatsoever to control or influence. Recreational fishers, and particularly charter vessel operators, have every incentive to expand their catch in the knowledge that this will occur at the expense of the commercial fishing industry. Commercial fishers will lose their incentive to take a long term view of the management of this resource, as they know that over time they will lose the fishery to the non-commercial sector. Industry questions what integrity the QMS can have if it can be eaten away, without any form of compensation, to satisfy the increasing demands of recreational fishers and other commercial practitioners operating charter vessels.

197. Industry refers you to the affidavits by Dr John Yeabsley, which it believes explain how these incentives would, over time, defeat the fisheries management objectives which were intended to be achieved through the QMS. Copies of Dr Yeabsley's analyses are annexed as Appendix 7 to the industry submission.

198. In summary, industry believes that, if the integrity of the QMS is to be preserved following the Court of Appeal's decision, it is important for you to state that your present intention is to acquire quota on the open market, in the event that you wish to achieve any reallocation between the commercial and recreational sectors. Industry is of the view that this would preserve the integrity of the QMS, and honour the assurances given to the industry (by the Minister and Ministry) at the time the QMS was entered into. It would also be consistent with the intention of the Primary Production Select Committee in its deliberations on the Fisheries Bill, when it stated in its final report that it was not intending to prevent claims for compensation in circumstances where decisions were made under the Act for non-sustainability reasons.

#### TACC Reductions for Sustainability Reasons

199. Industry states that if a TACC reduction is to be made for genuine sustainability reasons, then the question of compensation or Crown acquisition of quota does not arise. Although it believes there is nothing in the Act that would prevent it if the Crown wished to do so, for example, because of the magnitude of the catch.

200. Industry is of the view that if a substantial reduction has to be made in a TACC, then, in the absence of some crisis, the reduction should ordinarily be undertaken in a staged manner to provide the industry time to adjust, thereby preserving and enhancing the integrity of the QMS as a credible and viable fisheries management regime. Industry contends that there is no such crisis in the SNA 1 fishery.

#### **4.1.3.4. Impact on the Treaty Settlement of a TACC Reduction**

201. Industry supports the submissions made by the Treaty of Waitangi Fisheries Commission in relation to the impact on the Māori Fisheries settlement of any decision to reduce the SNA 1 TACC for non-sustainability reasons. Industry accepts the Commission's contention that in converting the commercial component of their Treaty rights into QMS property rights, they had no appreciation that the value of those property rights could be undermined by the reallocation of quota from the commercial sector to the recreational sector, without compensation. Industry is concerned that any attempt to reallocate quota from the commercial to the recreational sector will call into question the durability of the settlement, giving the opponents of the Deed of Settlement the opportunity to reopen it.

#### **4.1.3.5. Other Management Controls as an Alternative to a TACC Reduction**

202. Industry contends that notwithstanding the repeal of section 28D(1)(b)(i), the Minister still has an obligation to consider what other management controls could be used as an alternative to a TACC reduction. It believes that the consultative process must, therefore, continue to look at alternative or allied management controls as a package, rather than TACC reductions in isolation. Industry suggests a number of alternative measures are available, and these are outlined below.

##### *Splitting the SNA 1 QMA by Agreement with Quota Holders*

203. Industry acknowledges that it may not be possible at this stage to implement an actual subdivision of SNA 1 into an East Northland QMA and Hauraki Gulf QMA, but suggest that a management agreement (which achieves the same objective) be implemented, as has occurred in relation to a number of other fisheries such as ORH 2A and 3B.

204. Industry notes that it has in the past indicated its willingness to develop, in conjunction with the Ministry, an agreement amongst quota holders to split SNA 1 in the same way as occurs in ORH 3B and ORH 2A. It believes the large number of quota holders in SNA 1 does not make it impractical to achieve a subdivision by agreement. It notes that the ten largest quota owners hold 70% of the quota. A further 10 hold an additional 11%. As such, over 80% of the quota is owned by 20 companies. All of the other participants in the fishery fish into, and work very closely with, one or other of these 20 quota owners. Most of those small operators are dependent upon leasing quota from the larger quota owners to survive. Industry is therefore confident that such a catch-spreading agreement could be implemented in the coming year, and wants the opportunity to work with the Ministry to achieve this.

##### *Inner Hauraki Gulf Area Closure*

205. A submission on the above area closure is contained in **Appendix 8** of industry's main submission. This submission has been summarised as part of **Attachment D** of this advice paper.

### Further Reductions to Recreational Bag Limits

206. Industry contends that a further alternative to a TACC reduction, or a means of mitigating the size of any TACC reduction, is to implement more stringent bag limits on recreational fishers (as previously discussed in more detail above). It recommends the bag limit be reduced to three to five, that being comparable to the three limit which exists for snapper in the Marlborough Sounds. It is of the view that three to five snapper per person per day is a more than adequate daily allowance. The lower limit of three would also have the effect of spreading the available resource amongst recreational fishers more equitably rather than allowing a very small number of highly proficient recreational fishers to take the lion's share of the catch. Industry believes there is no reason to further postpone or delay the introduction of an effective bag limit.

207. Industry states that a further reason for a bag limit reduction relates to the levels of non-compliance in the recreational fishery. It believes material discovered in the judicial review proceedings indicates these levels of non-compliance are very high, and have not been incorporated into the Ministry's assessment of the amount recreational fishers are likely to be harvesting. A copy of the 1995 tables prepared by the Ministry, indicating the levels of non-compliance at different bag limits, is attached as **Appendix 9** of industry's submission.

### Seasonal Closure of the Recreational Snapper Fishery

208. Industry believes there is a mandatory obligation to constrain the recreational snapper fishery to its allocated share of the TAC. If this share can be determined to have been caught in any one year then the snapper fishery should be closed for recreational fishing for the remainder of that season. It contends there is sufficient powers in the 1996 Act for this purpose.

### Measures Listed in the Draft 1996 Memorandum of Understanding

209. Industry believes there is a range of other appropriate and effective management controls which can be introduced to enhance the SNA 1 fishery by reducing the current loss and wastage by both commercial and non-commercial fishers. In 1996, industry began the development of a 'Memorandum of Understanding on the management of the QMA1 Snapper Fishery'. The draft of this document was Appendix 3 to the Industry's 1996 submission. All the measures identified in that document are again relied upon by industry as alternative management controls which need to be considered this year. The measures are grouped under the following headings: minimising high grading or dumping of snapper, minimising wasteful fishing mortality, minimising black market activity, removing under-reporting opportunities, ensuring sectors remain within TAC limits, enhancement by release of reared snapper into the wild fishery, empowerment of a body to represent recreational fishing interests, and spatial conflict. (These measures are discussed in more detail in **Section 7, MFish Comment** of this advice paper.)

#### **4.1.4. Cost-Benefit Analysis**

210. Industry states that a central part of its case in the judicial review proceedings was the allegation that, in purporting to make a 39% TACC reduction for SNA 1, the previous Minister failed to undertake any rational cost/benefit assessment. Further, there was no weighing up of the social and economic costs being afflicted on SNA 1 quota holders, the northern inshore fishing industry generally and the communities which depended on that fishery, against the alleged benefits which would flow from such a massive reduction.

211. Industry states that its concerns were at three levels:

- a) **Costs:** the Ministry has repeatedly refused (and therefore failed) to truly attempt to assess the social and economic impact, and cost that would be inflicted as a result of the 39% reduction, and has also failed to look at ways in which those costs could have been mitigated by, for example, staged reductions;
- b) **Benefits:** the Ministry has failed to identify, and then quantify in scientific terms (rather than with rhetoric), any alleged benefits which it is said will flow from a 39% reduction, and what impact alternative reduction strategies would have had on those alleged benefits if adopted;
- c) **Weighing of costs and benefits:** the Ministry has failed to then stand back and weigh, in a reasoned and logical manner, the respective costs and benefits of alternative scenarios.

212. Industry states these issues were raised with the Ministry, and put in to evidence by Professor Hilborn and Paul Starr in their two joint affidavits filed in the judicial review proceedings (see **Appendix 5** of the industry submission).

213. Industry believes the decision to reduce the TACC by 39% could only be justified if there was some 'other benefit' beyond the increased yield. While a number of other benefits have been asserted by the Ministry and the previous Minister, industry contends that no attempt had been made to analyse the reality of those benefits or in any way to quantify them, let alone to undertake a reasoned assessment or to weigh those alleged other benefits against the cost of obtaining them. It states that the failure to undertake this assessment of the alleged benefits, and more generally to undertake any critical cost/benefit analysis, was emphasised in both affidavits of Professor Hilborn and Paul Starr (refer to pages 16–18 of their second affidavit).

214. Industry notes the Court of Appeal, in regard to cost-benefit analysis, stated:

All we wish to say for the future is that the Minister would be **wise to undertake a careful cost/benefit analysis of a range of options** available to him in moving the fishery to MSY. If the Minister ultimately thinks that a solution having major economic impact is immediately necessary, those affected should be able to see, **first**, that all **other possibilities** have been carefully analysed, and **secondly** why the solution adopted was considered to be the **preferable** one. (Emphasis added by industry).



215. Industry contends that there are indications the Ministry is unwilling to heed the comments by the Court of Appeal on the need to do cost/benefit analysis. In particular, it states that the Ministry has refused to meet with industry to discuss and work through this issue.

216. Further, industry states that the Ministry still maintains its stance of the past two years that it is unable to undertake any independent assessment of the economic and social impact of its significant TACC reduction. Industry does not accept this position. It believes that this stance is a convenient way for the Ministry not to have to come face to face with the reality of the costs it is imposing on industry, and the communities which that industry supports. Industry believes this suggestion is also surprising given that:

- a) the Ministry had insisted on retaining policy personnel in the regions;
- b) in the current cost recovery round, one of the key deliverables in strategic policy relates to "*assessing the economic, social and cultural impact of the purposes and principles of the Fisheries Act 1996*" (see p63, 1997/98 Nature and Extent Decision).

217. As a consequence of the Ministry's refusal to meet with the industry, the industry made a detailed request for the information necessary for it to properly participate in a consultant process. A copy of this letter dated 6 August 1997 is attached as **Appendix 10** of the industry submission. Industry states that no response had been received, other than the standard acknowledgement of receipt of the letter.

218. Given the absence of the information sought by the industry in its letter, industry believes that it can do little more in its submission than say that it:

- a) needed this information to be able to effectively participate in the consultative process;
- b) believes that when this analysis is completed it will show that the benefits of a significant reduction are minimal in comparison to the costs inflicted on the industry, and accordingly that a reduction can not be justified. It is industry's view that you can not comply with the purpose of the Act until a proper cost/benefit analysis has been completed.

#### **4.1.5. Concluding Position of Commercial Industry**

219. Industry recommends that you give consideration to the following actions:

- a) that the TACC be maintained at 4 938 tonnes. Industry does not believe that any reduction can be justified to ensure sustainability. The SNA 1 resource will rebuild to  $B_{MSY}$  at the current TACC and existing non-commercial extraction. The overall SNA 1 stock is at 69% of  $B_{MSY}$  and is producing 95% of the yield that will be produced at  $B_{MSY}$ ;
- b) that a proper cost benefit analysis of various restoration strategies be

completed, so as to provide an objective basis for deciding amongst options, before any TACC change is implemented. If such an analysis can not be completed for this year's decision making round, then the TACC should not be changed;

- c) that if the TACC is to be reduced, and it is industry's position that it should not be, then the reduction should be no more than 200 tonnes. If any further reductions prove necessary in future years then they can be introduced in a staged and measured fashion, as each subsequent years stock assessment will alert to the need for;
- d) that in tandem with maintaining the TACC, or implementing a staged reduction of no more than 200 tonnes, a further mark-recapture estimate of the SNA 1 resource be obtained in the near future. Industry states this tagging programme will be voluntarily resourced and supported by the SNA 1 quota holders;
- e) that a voluntary catch spreading regime between the East Northland and Hauraki Gulf/Bay of Plenty substocks be implemented. Major industry quota holders believe they can successfully manage such a regime;
- f) that the current TAC of 8 032 tonnes, will allow for further growth of existing non-commercial catch from about 2 200 tonnes to 2 600 tonnes. Industry believes this is a position that is inconsistent with ensuring sustainability;
- g) that there be no further delay, or postponement, in introducing a comprehensive management plan for the fishery, and with it meaningful controls to constrain the growth of the recreational fishery (eg licensing, bag limits of three to five, closed seasons when TAC allocation is taken);
- h) that commercial charter operations of all forms be licensed and required to report catches. Industry believes that ideally they should also hold quota or some form of like catch entitlement;
- i) that if the government, as a matter of policy, chooses to transfer catching rights from the commercial to the recreational sector, it must be transparent in deciding to do so. Industry contends government should consider achieving this purpose by the purchasing of ITQ catching rights;
- j) that there be continued development and implementation of an enhancement plan for the SNA 1 fishery. The 23 key elements of this draft plan were developed in negotiations between the commercial and non-commercial Sectors in 1996, and industry believes it includes many individual measures capable of saving hundreds of tonnes of annual extraction from the fishery;
- k) that at the previously proposed TACC of 3 000 tonnes industry estimates there is a rebuild potential of between 2 500 and 3 000 tonnes per annum. Industry calculates that at this rate the SNA 1 stock would rebuild, on average, to  $B_{MSY}$  in between 7.5 and 9 years.

#### 4.2. Leigh Fishermen's Association

220. LFA acknowledge the obligation to move the SNA 1 stock towards  $B_{MSY}$ . However, it does not consider that a large TACC reduction is necessary as the stock is not at risk. It believes a TACC of 4 300 tonnes would have been sufficient to move the stock toward  $B_{MSY}$ . LFA states that you should properly consider the economic and social effects of varying a TACC, and especially when the proposed variation is a large reduction. It strongly opposes any re-allocation of catching rights from the commercial to non-commercial sector without compensation.

221. LFA are of the view that the stock can be moved towards  $B_{MSY}$  by simply improving yield per recruit, which it states is currently well below optimum, and restoring the TACC to around 4 900 tonnes. It opposes the management option of removing the MLS for trawl methods because this may generate a market for undersize snapper. LFA believes proper consideration should be given to the interdependence of stocks when considering a change to the SNA 1 TACC.

222. LFA express concern at the growing dependence on numerical modelling for TAC and TACC setting. In particular, the reliance on the tagging results from the SNA 1 fishery which it believes has failed to satisfy some basic assumptions, such as that tags have been randomly placed in the population, and that the tagged and untagged fish are thoroughly mixed before sampling begins. It is of the view that the description of the fishery given by the statistical models do not match that held by the members of LFA. It urges you to seek an alternative basis for assessing the size and productivity of fishstocks, than simply continuing to rely on present population modelling methods. LFA believes the costs of the SNA 1 model outweigh the value.

223. LFA states that the refusal of government to specify the catch rights of recreational and commercial fishers in the same currency simply fuels the confrontational characteristics of this fishery. It believes that allocational issues are disguised as sustainability issues as sector groups seek to gain an allocation advantage over each other. All catch rights should be expressed as a portion of the TAC.

#### **4.3. Auckland Combined Fishermen's Association**

224. The Auckland CFA supports the industry requests for the TACC for SNA 1 to be maintained at 4 938 tonnes. It states that recent stock assessment information indicates that on average this will allow the stock size to increase. The effect of implementing a 3 000 tonne TACC will be the removal from the fishery of small owner-operator fishermen, who will be the first to lose access to the fishery. Further, the CFA states there will be a very high social and economic cost in the loss of their traditional livelihoods, while the return of an expected higher rate of rebuild is very uncertain and not necessary. For those who are able to remain in the fishery, including recreational fishermen, the extra yield obtained from a stock rebuild is small. Finally, the CFA states that a longer time frame for rebuild would allow them to retain their livelihoods.

## 5. TOKM (TREATY OF WAITANGI FISHERIES COMMISSION) VIEWS

225. TOKM states that it welcomes the opportunity you have provided to provide further submissions on SNA 1 but notes the time available has made it impossible for the Commission to consult in any detail with Iwi on the subject, bearing in mind the additional commitments of—

- a) final consultations with yourself on sustainability and other measures for the 1997–98 year on 31 July;
- b) consultations with officials of your Ministry on cost recovery levies on 5 August; and,
- c) completion of final submissions to your Ministry on cost recovery levies for the 1997–98 year by 8 August.

226. TOKM acknowledge that you have consulted generally on SNA 1 issues since June 1997. However, it states that in June you were acting on the basis that a TACC cut of 3 000 tonnes had been decided on but that it could not be implemented because of legal proceedings taken by the industry and the Commission. It believes that the effect of the Court of Appeal decision in the SNA 1 case means that the TACC is now back to 4 938 tonnes. Any decision to cut that TACC must be made de novo.

227. TOKM states that SNA 1 is a valuable fishery and is a key species for Iwi within the relevant area. It contends that you have not indicated to the Commission what position you now propose to take about the TACC in SNA 1, and it is thus difficult for the Commission to provide detailed comments. TOKM states that given the Court of Appeal's comments about notice and the desirability of demonstrating a balance between economic and environmental considerations, the complete lack of detail in your communications on SNA 1 it make it very difficult for the Commission to give detailed comments in reply. For these reasons, TOKM do not believe that real bona fide consultation has yet commenced, and reserve its right to contend at some later stage that there has been no real consultation on this issue or, alternatively, that consultation has been inadequate. Accordingly, its submissions rely solely on material already held by or available to the Commission and contain no further Iwi input.

### 5.1. The MSY Concept

228. TOKM state that the concept of maximum sustainable yield ('MSY'), its use as a reference point in fisheries biological analysis and its use in the SNA 1 fishery was discussed at length in the joint affidavit of Prof R W Hilborn and Mr P J Starr, dated respectively 26 November and 3 December 1996, filed with the High Court in the SNA 1 proceedings. The Commission refers you to that affidavit (it is attached as **Appendix 5** of the main industry submission). TOKM state that the conclusions of Hilborn and Starr are set out in paragraphs 8 and 9 of the affidavit, as follows—

- 8 *The purpose of this evidence is primarily to explain the concept of 'maximum sustainable yield' ('MSY'), as that concept is used in fisheries management and science and then to apply that concept in the context of the SNA 1 Fishery. In particular, we will endeavour to explain that:*
- 8.1 *MSY is a theoretical concept only and that in practice it is not possible to precisely calculate the stock size that will produce MSY given the imprecise nature of the knowledge about the fishery, the associated fish biology and the natural fluctuations in the environment;*
  - 8.2 *in practice, MSY is achieved within a band of stock biomass levels (rather than a single point biomass) as within that band of biomass levels, the average yields that are obtained will be equivalent (that is to say they will be indistinguishable from the theoretical MSY);*
  - 8.3 *a fishery is capable of being managed on a sustainable basis at any number of potential stock sizes. Every stock size can be managed so that it remains stable at that stock size and will produce a sustainable yield. Therefore the yield at one stock size is as sustainable as the yield at any other stock size and the fishstock will remain at that biomass level;*
  - 8.4 *the concept of MSY is to achieve the stock size which maximises the yield from the stock without compromising the sustainability of that yield. Therefore, the concept of MSY is primarily about maximising yield, not maximising sustainability.*
- 9 *Each of these features of the MSY concept is aptly demonstrated by the model which is currently used to represent the characteristics of the SNA 1 fishery. In particular:*
- 9.1 *the population model used in the MFish stock assessment states that the SNA 1 biomass level is currently at a stock size which is approximately one-half of the stock size which is expected to produce the theoretical MSY but will nevertheless produce 93% of the theoretical MSY at that stock size;*
  - 9.2 *the stock assessment estimates that the average yield since 1950 (when the model predicts that the SNA 1 stock went below the theoretical biomass that produces the MSY) has been 96% of theoretical MSY and that the average yield since 1970 has been 106% of the theoretical MSY;*
  - 9.3 *during the 25 year period since the early 1970s, the SNA 1 biomass level has remained stable and nearly constant according to the model despite significant natural fluctuations in environmental conditions during that time and despite very large catches which have been taken during those years;*

- 9.4 *the stock assessment accepts that altering the stock size does not affect subsequent recruitment of juvenile snapper and that environmental constraints on survival will have by far the greatest effect on the eventual recruitment to the fishery;*
- 9.5 *the stock assessment predicts, based on the underlying mathematical relationships in the population model, that it is possible to extract an additional 8% (which equates to about 650 tonnes per year) of yield from the fishery by doubling the size of the present biomass. However, the conditions required to achieve this increase in yield are entirely hypothetical (they require average recruitment and a stable age structure) and the natural underlying environmental variability is so large that it will be impossible in a practical sense to distinguish between the actual yields which are produced by a broad range of biomass levels. Some of the contributing causes for this include the imprecision of the model inputs, the large scale variation in recruitment, and the inability of the model to describe the reality of the SNA 1 situation. The SNA 1 stock biomass is presently within that band of biomass levels and therefore is producing MSY, given the estimated yields which have been produced since 1950;*
- 9.6 *the choice of where to manage within the target range of biomass levels (all of which will produce the MSY) should be made on the basis of considerations other than those of maximal yield. These considerations could include economics, the likelihood of stock decline, the allocation of catch between stakeholders, or other management goals. The driving principle, however, is that the expectation of yield will be the same in practice as long as the biomass level remains within the target range of biomass levels. Therefore, some other explicit management goal must be provided to move the biomass level within the target range, rather than the expectation of maximising the yield.*

#### 5.1.1 TAC/TACC

229. TOKM states that the 1997 stock assessment suggests (basecase) that the long term yield (MSY) from the SNA 1 fishery is of the order of 8 670 tonnes, comprising 6 800 tonnes from the Hauraki Gulf/Bay of Plenty ('HG/BOP') substock and 1 870 tonnes from the East Northland ('EN') substock. That assessment also indicates that the HG/BOP substock is currently at a level of 68%  $B_{MSY}$  and the EN substock at 103%  $B_{MSY}$ .

230. TOKM calculate that using the 1996–97 year removal estimates of non-commercial catch (recreational and customary Māori) equal to 2 600 tonnes, illegal catch (10% of commercial catch) equal to 494 tonnes, commercial catch (TACC) of 4 938 tonnes, the TAC is therefore 8 032 tonnes. TOKM conclude that where the estimated removals are less than the estimated (equilibrium) current surplus production (CSP) available of 8 335 tonnes (HG/BOP—6 470, EN—1 865), thus contributing some 300 tonnes towards a stock rebuild towards  $B_{MSY}$ . TOKM

recommend therefore on the basis of the 1997 SNA 1 stock assessment that there is no need to adjust the TACC from its 4 938 tonne level re-established by the SNA 1 case.

### 5.1.2. Recreational Take

231. TOKM state that the long-established problem of increasing recreational catch in the SNA 1 fishery was also discussed at length in affidavits filed in the SNA 1 case—(it refers to for example the affidavits of Mr V H Wilkinson dated 11 October 1995, of Mr I T Clement dated 20 November 1996 and of Mr R O Boyd of the same date). TOKM contend that all three affidavits make the point that increasing recreational take was recognised as a risk to the SNA 1 stock in 1984 and 1985, prior to the introduction of the QMS; that Crown interests, the commercial sector and the recreational sector all recognised the problem; and that the Crown through its agents undertook to institute constraints on recreational SNA 1 take as one of the ‘trade off’ components required to gain industry acceptance to a substantial reduction in the SNA 1 TACC (as it is now called) at the time of QMS introduction.

232. TOKM believe the rapid rise in recreational take since 1986 in the fishery is clear evidence that the Crown has failed to discharge the undertakings given in the mid 1980s. It acknowledges that some ‘control’ measures were implemented at that time in an abortive attempt at limitation and that two minor changes to recreational take regulatory controls were made in the past two years, namely—

- a) an increase in the minimum legal size to 27cm of snapper allowed to be taken, from 1 December 1994; and,
- b) a reduction in the daily bag limit of snapper to nine, from 1 October 1995.

233. The Commission notes, however, that both of these recent changes were estimated in the 1997 stock assessment to reduce recreational take only by 8% each and that no actual evidence of a reduction from either change was produced. Further, both changes were minor and are unlikely to significantly impact on the 3.8% (compounding) annual rate of recreational take growth recorded in recent years. Recreational catch survey data suggests that, as few recreational fishers take their daily nine fish bag now, the bag limit reduction will have little or no effect—that is, the stock assessment 8% reduction estimate for this change is unduly optimistic.

234. The Commission contends there is an absolute need to introduce and enforce effective limits on the recreational take of snapper in the SNA 1 fishery if the HG/BOP substock is to continue its movement towards  $B_{MSY}$ . TOKM states that its concern is that enforcement of recreational controls is uncertain and appears

virtually ineffective, despite the dramatic increase in Honorary Fishery Office numbers authorised by the Government in the 1996–97 year. Without effective enforcement, it states that even the existing generous regulatory limits become a farce and the stock is put at risk.

235. TOKM recommends that you reduce the recreational daily bag limit for snapper in area SNA 1 to six fish per day and enforce all recreational fishing regulatory constraints both at sea and on land.

### **5.1.3. Customary Take**

236. TOKM state that despite all efforts by Māori to promote Customary Fishing Regulations the Crown still refuses to agree on the text, to implement the Regulations or to join in efforts to resolve differences. It believes that once again Māori interests, and fishstocks, suffer from Crown inaction. Māori customary rights in the SNA 1 fishery are significant and it contends must not be treated in the offhand way that has happened to date. Without the Regulations those rights cannot be protected (except perhaps through the Courts or the Waitangi Tribunal) and the extent of annual take for customary purposes cannot be assessed.

237. TOKM believe the figure of 300 tonnes plucked from the air by your predecessor as Minister for the 1995–96 year (and used in the 1997 stock assessment) is neither accurate nor a valid selection. The Commission states that its continued use both places the SNA 1 stock assessment at risk and seeks to cover an illegitimate action with a cloak of respectability.

238. TOKM recommend that you cease using a figure of 300 tonnes as an assessment of Māori customary take rights in SNA 1 stock assessments, and implement the Customary Fishing Regulations without further delay so that Māori customary rights in the SNA 1 fishery can be protected and take assessed.

### **5.1.4. Primacy of Māori Non-Commercial Fishing**

239. The Commission states that in all respects it recognises the primacy of Māori non-commercial fishing interests in access to all fisheries. That recognition includes a first priority of access to the TAC in the SNA 1 fishery and acknowledges both the settlements reached between the Crown and Māori and Māori customary rights under Article II of the Treaty of Waitangi.

### **5.1.5. Māori Interest**

240. TOKM state that Māori have always had both a customary and a commercial interest in fishing, particularly so in the SNA 1 area and fishery. It believes that the report of the Waitangi Tribunal on the Muriwhenua fishing claim (WAI 22) gives an excellent historical account of fishing in the north and was a substantive component in the Māori /Crown negotiations which ultimately resulted



in passage of the Māori Fisheries Act 1989—the interim settlement—and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992—the final settlement of Māori commercial fisheries claims. The latter Act following the negotiated 1992 Deed of Settlement between Māori and the Crown.

241. It states that therefore the 1989 Act, the 1992 Settlement Act and the Fisheries Acts of 1983 and 1996 form a corpus of statutes relating to Māori commercial fishing and to the exchange by Māori of their traditional rights in the commercial fishery for access to that fishery via the QMS and quota. It notes that in the course of its judgment the Court of Appeal made certain obiter comments about section 5 of the Fisheries Act 1996, which provides that the 1996 Act shall be interpreted, and all persons exercising or performing functions, duties, or powers conferred or imposed by or under it shall act, in a manner consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

242. TOKM notes the Court said that the asset obtained by Māori under the settlement had within it the capacity of diminution, and that if the capacity was lawfully realised there could not be any complaint on the basis that the settlement had been broken or not proved durable. However, it believes that because the decisions of the two previous years were quashed and the comments about section 5 of the 1996 Act were obiter (the previous decisions having been determined by your predecessor under the 1983 Act), there is little to be gained by seeking leave to appeal to the Privy Council. It states that you should note, however, that the decision is not accepted by the Commission as being correct, and furthermore that the Commission will at an appropriate time in the future be inviting the Court of Appeal to reconsider the position.

243. In the meantime, TOKM states that you should be aware that it believes, and if necessary will be arguing, that your duty to act in a manner consistent with the principles of the 1992 Act means much more than that you shall have regard to that Act, or take that Act into account, or not act in a manner inconsistent with the 1992 Act. It considers your actions must be compatible and harmonious with the principles set out in the Settlement Act. They must not contradict them. It believes you have a positive duty to ensure that your acts are harmonious, and that means more than simply consulting with the Commission. Moreover, any decision made by you must not undermine the 1992 settlement as set out in the Act.

244. TOKM is of the view that to reduce the SNA 1 TACC when it is not absolutely necessary to do so, or to do so by more than is absolutely necessary, undermines the 1992 Settlement. In addition, it contends that any decision made about the SNA 1 TACC is only one aspect of the management of the SNA 1 fishery. Section 5 should apply to all management decisions you make regarding SNA 1 (and should apply to all decisions under the 1996 Act).

245. It adds that apart from these points you should recognise that Māori will not benefit from the first 580 or so tonnes of any subsequent TACC increase because of the operation of sections 28N and 280E of the 1983 Act. Hence the need to take special care in making any TACC reductions in the SNA 1 fishery. In particular, it believes sections 28N and 280E implications should be incorporated into any cost/benefit analyses made.

#### 5.1.6. Māori Commercial Interest

246. TOKM state that the scope of Māori commercial fishing interests, including in the SNA 1 fishery, have been debated at length before both the Courts and the Waitangi Tribunal. It gives the following examples: **Courts:** *Te Runanga o Muriwhenua Inc. v Attorney-General*; *Ngai Tahu Māori Trust Board v Attorney-General*; *Te Runanga o Wharekauri Rekohu v Attorney-General*; and the SNA 1 cases; **Waitangi Tribunal:** Muriwhenua Fishing Report (WAI 22), Ngai Tahu Sea Fisheries Report (WAI 27), Fisheries Settlement Report (WAI 307).

247. The Commission believes the detail of these cases and reports should be well known to you as Minister and therefore need not be canvassed in its submissions. However, it adds that it is sufficient for it to say that it is now well-recognised the Crown has both a legal and a moral duty to protect Māori fisheries interests and both the Crown and Māori have a positive duty to act in good faith fairly and reasonably one to the other.

248. It states that as at 31 July 1997 the Commission, its fully-owned subsidiary and its associated Moana Pacific Group had a very substantial involvement in the SNA 1 fishery. The Commission and its subsidiary own 9.93% of the quota on issue (490.424 tonnes) and the Moana Pacific Group held a further 17.63% or 870.399 tonnes—combined figures of 27.56 % or 1360.823 tonnes. The Commission has a shareholding of approximately 74 % in the Moana Pacific Group.

249. It notes that during the SNA 1 case hearing in the High Court evidence was presented by Mr P F Jones of NZ Quota Management Services Ltd, Tauranga that SNA 1 quota as valued at some \$30 000 per tonne in October 1996 and by Mr T P Robinson of First NZ Capital Ltd, Wellington that the TACC reductions proposed by your predecessor as Minister would have resulted in a financial loss to the Commission from lease revenue of some \$14.7 million on a discounted present value basis. It notes that the MFish publication *Quota Monitoring System* for the month of June 1997 reports the average market value of SNA 1 quota as being \$45 000 per tonne—50% higher than the Jones estimate in October 1996—which it states means that the affidavit figures cited above are conservative in the extreme for both the Commission and the Moana Pacific Group.

250. TOKM is of the view that should you decide to ignore the recommendations elsewhere in these submissions relating to TAC and TACC levels and relating to the respective shares in the TAC for Māori customary fishing; recreational and black market taking; poaching; and commercial fishing; the Commission draws your attention to the requirements of section 13(3) of the 1996 Act and to the requirements of section 28D of the 1983 Act, including the provisions of section 28D(1)(c) of that Act. The Commission especially expects

that detailed cost/benefit analyses would be prepared by MFish analysing the social and economic effects of any such reductions or redirection of shares, that such analyses would be provided to you prior to your making decisions, and that the analyses subsequently would be made available to interested parties.

251. It draws your attention, and that of MFish, to the material contained in the affidavits of Mr R Dargaville on behalf of Ngapuhi Fisheries Ltd and the Area One Māori Fishing Consortium in respect of the economic and social effects of any reduction in the SNA 1 TACC level or redistribution of TAC access.

#### 5.1.7. Reallocation of TAC Access

252. TOKM state that it was argued at length by counsel for the Commission in the SNA 1 case that Māori had a legitimate expectation any reduction in access rights to that fishery would be borne on a pro rata basis by recreational and commercial interests. It believes that the effect of a TAC reduction for the fishery effectively would be to—

- a) maintain the quantum of Māori customary access, so increasing the proportionate share that access bore in the TAC;
- b) hopefully, by energetic enforcement action, to reduce both the quantum and share of the TAC allotted to poaching and black-market activities;
- c) reduce the quantum of both recreational and commercial takes in the same proportions, so maintaining unaltered their respective TAC shares.

253. TOKM note that this argument was dismissed by the Court of Appeal so proposed by the commercial industry but only superficially in respect of Māori claims of legitimate expectations under the Deed of Settlement. The Commission does not accept the Court comments on proportionality and states that it will be seeking to discuss the subject further with the Court. In the meantime, it is still the Commission's contention that proportionality must apply in any TAC/TACC access reductions.

## 6. NON-COMMERCIAL SECTOR GROUP VIEWS

### 6.1. NZ Recreational Fishing Council

254. The NZRFC has major concerns about how this years snapper stock assessment process was handled on two counts. Firstly, it states the NZRFC was not able to effectively participate in this years Snapper Working Group meetings because the \$100 000 that was promised to it to assist in consultation was not forthcoming. Secondly, it considers that this years SNA 1 (and SNA 8) assessments have been manipulated by the industry because the NZRFC was unable to fully participate in the Snapper Working Group process. It believes that as a consequence of its forced absence from the working group and other consultative forums, it is unhappy with the quality and reliability of the 1997 SNA 1 and SNAS assessments, which it is certain are excessively optimistic.

255. The NZRFC consider there are clear examples of where industry's influence was excessive, and on just about every decision, the industry tended to have its way. For example, the decision to use  $M=0.075$  in the 1997 assessment for both SNA 1 and SNA 8. It states  $M=0.06$  was used in all previous years assessments. Industry carried out new analysis, however, the Plenary Report states on page 318 "*Further analyses should be completed to determine the best estimate for snapper*". It believes this means that the industry analysis was not certain and that Section 10c of the new Act applies "*Decision makers should be cautious when information is uncertain, unreliable or inadequate.*" The RFC states the Snapper Working Group should have selected  $M=0.06$  as its preferred option. Not only do the rules of Section 10 apply to the Minister, but they also apply to the Snapper Working Group and should have been respected by this group.

256. The NZRFC contend that other examples of industry manipulation are that the catch scenarios used for the Japanese catches are excessively high in both SNA 1 and SNA 8. It states that had the NZRFC been able to financially afford to attend the snapper meetings, it would have insisted that the industry provide a far greater level of proof of what the Japanese catches were. It does not believe the industry when it states that it cannot get the information from Japan. The NZRFC believes industry has got the data, but that because it shows low catch levels by the longliners that they will not make the data available for everyone to inspect. Failure to provide the necessary proof, would have meant that the NZRFC would have respected the law and Section 10c and adopted a cautious approach.

257. In summary, the NZRFC consider that the snapper assessments this year are excessively optimistic because it could not financially afford to attend. Had it been at the meetings it would have insisted on more of a cautious approach as is required by the Fisheries Act. Finally, the NZRFC believes the snapper working group should have heeded the words of Judge McGechan on page 120 in relation to the overall approach of the fishing industry when he writes "There are limits to allowances the courts should make for incurable optimists." (NZRFC emphasis).

### 6.1.1. Current Biomass in Relation to $B_{MSY}$

258. The NZRFC states that this years 'basecase' assessment has SNA 1 at around 60% of  $B_{MSY}$ , but notes that the assessment it favours, and one in keeping with Section 10 and the precautionary approach, has the current biomass of SNA 1 at 49% of  $B_{MSY}$  (page 327 of the Plenary Report, Table 13, line 1). This is the assessment the NZRFC would have favoured because  $M=0.06$ , and the Japanese longline catches were at more reasonable levels (although in the view of the NZRFC possibly still too optimistic, until it sees more definitive proof) of 20 000 tonnes for the period from 1960–77.

259. On this basis, the NZRFC states that the 1997 SNA 1 assessment has basically remained the same as in 1996 with the current biomass still at only half of  $B_{MSY}$ . It now considers that the target should be to rebuild SNA 1 to about 30% above  $B_{MSY}$  (the same level it recommends for SNA 8). The NZRFC believes there needs to be a 20% safety factor over and above the 10% guaranteed to industrial only fisheries, because society cannot afford to let these fisheries go wrong, and there can be no doubt as to the ongoing health and sustainability of these fisheries. The Council states that the 30% threshold is also starting to recognise that society can extract a greater level of economic rent from these fisheries from them being fished by non-commercial fishers as opposed to fishing by the commercial sector.

### 6.1.2. Recreational Catch Estimates

260. The NZRFC notes that page 328 of the Plenary Report states that "...there is considerable uncertainty in the model concerning historical and future recreational catch levels". The NZRFC is fully supportive of the weather model that Todd Sylvester (MFish) developed in the working group meetings. His model supports the NZRFC view that the main factor governing the recreational catch through the 1980s and 1990s is the weather. If there is a bad weather year with a large number of easterly winds in SNA 1 (like 1985) then the recreational catch will be low—around 1 600 tonnes. If there is a good weather El Nino year, then the recreational catch will be high—around 2 800 tonnes as in 1994.

261. The NZRFC state that in 1985 and 1994 the state of the snapper stock was around half  $B_{MSY}$  and the number of people in the population had not increased that much. It believes the only realistic explanation for these changes is the weather and that 1985 was not good for recreational fishing, but that 1994 was good for recreational fishing. It is certain that when Elizabeth Bradford of NIWA examines this data in full she will be able to show that the relationship between weather and the recreational catch is correct. The NZRFC contends that if the weather model is correct, then it is likely that the recreational catch in the 1960s was around 4 000 tonnes.

262. The NZRFC states that when this happens, there will be serious implications for the SNA 1 model. It believes it will show that during the 1970s there was a reallocation of snapper from the Māori customary and recreational sector to the fishing industry. Effectively, the pair trawlers stole the non-commercial fish. The pair trawlers raped SNA 1 and SNA 8, and pushed the biomass down so low to probably just 20% of  $B_{MSY}$ . This meant that Māori and

recreational people could not catch snapper any more. It states that non-commercial catch rates decreased to almost nothing and they could no longer catch reasonable sized snapper the way they used to in the 1950s and 1960s.

263. However, the NZRFC states that it is not asking for a return to the fishing the way it use to be in the 'good old days'. What it would like to see is non-commercial catch rates improve to somewhere between the abysmal levels that they are now at, and the great fishing of the 1960s. It believes that non-commercial catch rates are definitely not at this in-between level that would allow for reasonable recreational satisfaction.

264. The NZRFC state that Minister Kidd consistently recognised that it was reasonable to allow for an improvement in recreational catch rates. Judge McGechan noted on page 89 that this recognition was lawful — *"It is not outside or against the purposes of the Act to allow a preference to non commercials (eg greater CPUE) to the disadvantage in fact of commercials and their valued ITO rights, even to the extent of the industry's worst case of a decision designed solely to give recreationalists greater satisfaction."*

265. The NZRFC asks that you recognise:

- a) the recreational and Māori traditional sector was disenfranchised;
- b) the pair trawlers stole the non-commercial snapper in the 1970s;
- c) this caused a reallocation of Māori traditional and recreational snapper to the trawling companies; and,
- d) these social injustices and begin to take the steps outlined below to rectify these misdeeds.

### 6.1.3. SNA 1 Uncertainty in Regard to Forward Projections

266. The NZRFC state that on page 327 of the Plenary Report there is some small recognition of the uncertainty in the SNA 1 model when it is stated *"the 1997 assessment is much less certain than the assessment prepared in 1996."* It adds that this theme is developed further on page 328, which because of the uncertainty, meant that the forward projections and risk analysis was not done. It is stated that the modifications and changes to the model *"... took time to develop and have not yet been investigated sufficiently to have complete confidence in the projections and the risk analysis"*.

267. It states that Minister Kidd decided that there should be a 20 year rebuild time frame for SNA 1. The Council would prefer that the rebuild was achieved in 10 years, because the industry did the damage to SNA 1 over a 10 year period in the 1970s when the pair trawlers massively overfished this shared fishery. The NZRFC recommends that the SNA 1 TACC should be set at 2 600 tonnes given that:

- a) there has now been a two year delay in the SNA 1 rebuild;
- b) that the industry has effectively stolen 3 800 tonnes of rebuild fish over the last two years; and,

- c) the likelihood of more legal action by the industry to stall the rebuild for another year.

#### 6.1.4. Government Should Legislate the SNA 1 TACC by Act of Parliament

268. The NZRFC states it is certain that now that the industry's lawyers are so up to speed with the Fisheries Act, and the snapper stock assessment, that it is now relatively cheap for the industry to get its lawyers involved in legal action. Essentially, industry legal challenges now pay for themselves as, because of their delaying tactics, the industry gets access to a 4 938 tonne catch level instead of being limited to their lawful 3 000 tonne TACC. The NZRFC believes the profits from the additional 1 938 tonnes, of which industry has no entitlement to, would easily cover its legal costs.

269. The NZRFC believes that the industry is making a mockery of the Government in the public arena. The industry is treating the Government with contempt, and the patience of the public is wearing out. In effect, the Government and the NZ public is being held to ransom by the fishing industry. It states that Minister Kidd considered that the TACC should be set by Act of Parliament if there were more legal challenges. The Council believes that there inevitably will be, and the only way out of this debacle is to set the TACC for SNA 1 by Act of Parliament so that the industry cannot challenge the Minister's decision in any of the three Courts. It contends that a SNA 1 Bill could be put through Parliament, and is sure it would have the unanimous support of all political parties, so that it could come into effect on or just after 1 October.

270. In summary, the NZRFC requests that you and your government start to prepare an Act of Parliament which will set the SNA 1 TACC at 2 600 tonnes.

271. Subsequent to the main submission from the NZRFC submitted to you on about 13 July, you received another submission from Mr Burstall, President NZRFC, dated 13 August 1997. The submission makes a number of points which are summarised below.

272. The NZRFC reiterates its view that SNA 1 should be managed above  $B_{MSY}$ . It also notes that El Nino weather patterns are forecast for this summer and note that the colder water conditions associated with such weather have an adverse impact on spawning success of snapper. It believes this will therefore impact on the future yield from the fishery and thus the rebuild.

273. The NZRFC make a number of points in regard to the 1996 draft 'Memorandum of Understanding' submitted to you by industry. It would like to make it clear to you that:

- a) the Council has not signed off, or ratified the Memorandum;
- b) the private meetings held with SNA 1 stakeholders were on the understanding that the proposals were in addition and in conjunction to a 3 000 tonne TAC;
- c) the Council discussed in detail industry's proposal to shelve the necessary

quota instead of the Crown decreasing the TACC, but this was not acceptable to the stakeholders present;

- d) any proposed rebuild technique initiated and eventually proven successful would instigate corresponding credits above the Council's recommended 2 600 tonne TACC.

274. Finally, while the Council sympathises with any real job losses that may occur with a TACC cut it believes industry has had the benefit of the excess fish caught that was required for a rebuild. It is of the view that industry has had sufficient time to address the depletion of stocks in SNA 1 (over four years). However, instead it has witnessed excessive harvesting, continuing procrastination by industry and extensive judicial actions that eventually did not address the real issue of sustainable management of SNA 1. The NZRFC believes industry has had more than ample time to prepare for the economic backlash as industry has brought it upon itself.

## 6.2. NZ Marine Transport Association

275. The NZMTA raise a number of concerns about comments and reports raised by industry in regard to the activities and catch of charter vessels. It believes the growth experienced within the local (Auckland area) charter boat fleets in recent years can be attributed directly to the decrease in the accessibility of inshore species in harbours and the inshore coastline. Land based fishers are finding it difficult to catch a reasonable bag from the shore and are therefore having to resort to using charter boats to gain access to the depleted inshore fishery.

276. The NZMTA notes that there is a research project this year to survey the catch taken by charter vessels. It emphasises that charter boats do not keep the fish, do not have rights to sell the fish, and are purely acting as transport for recreational fishers who are controlled within the amateur bag limit. However, there is increasing concern that the survey may lead to quota. The Association state that the previous Minister gave an assurance that this would not happen and would like you to reaffirm this position.

277. It also believes that an essential part of the survey will be to determine the economic worth of the charter boat fleet to the NZ economy and to the community at large. The NZMTA contends that with this information you will be able to determine the relative worth to the local community economy of recreationally caught fish compared to commercially caught fish.

278. The NZMTA take exception to the analysis of the potential catch by charter vessels presented to you by Mr Bruce Young. It disputes the facts (assumptions) used in the analysis. For example, there are probably more charter vessels operating than the 300 identified by Young. However, many operate in the social cruise, ferry, and eco-tourism sectors. Also it notes that full time operators are estimated to operate for 120 days per year on average, not the 150 days stated by Young.

279. The NZMTA believes that the average finfish weight of 2kg assumed by



Young is optimistic, given the average weight of snapper caught is less than a kilo and for blue cod only 380 grams. Other prime recreational species such as tarakihi, kahawai, gurnard and john dory would also average less than 2kg.

280. The NZMTA recommends that you implement the necessary measures to rebuild the SNA 1 within the next 10 years even if it means the commercial fishery must restructure its inshore fishing activities to other forms of work. It believes it is important to improve the accessibility of the fishery to the people of New Zealand.

### 6.3. Environmental Groups

281. The environmental groups (ECO, Greenpeace, and RFBPS) have provided a joint submission on the management of SNA 1 for 1997-98. They state that while this year's stock assessment is more optimistic, it is also more uncertain than last year. They believe the assessment confirms the need for reductions in the TACC for SNA 1 which were agreed in the last two years but not implemented due to ongoing legal action by the fishing industry.

282. They note that this year's assessment reviews a number of the industry concerns over the previous assessments including the historic Japanese longline catch in SNA 1. The value for natural mortality has been increased from 0.06 to 0.075 but further analysis is to be carried out to better determine which is the best estimate for snapper. They state that the biomass and sustainable yield estimates presented this year are more sensitive to changes in  $M$  than changes in the historic Japanese catch.

283. Environmental groups note the combined recreational catch (2 850-3 250 tonnes) and the commercial catch this year (up to 4 928 tonnes) of 7 778-8 178 tonnes is just below the current surplus production (CSP) (8 335 tonnes - basecase) and well above the estimated current annual yield (CAY) of 5 970 tonnes. They consider TACC cuts are needed as:

- a) the CAY estimate of 5 970 tonnes is well above the current catches of 7 778-8 178 tonnes;
- b) the Hauraki Gulf-Bay of Plenty stock is at around 60% of the  $B_{MSY}$ ;
- c) both stocks are predicted to decline at current catches due to recent poor recruitment resulting from relatively cold water temperatures which are unfavourable to strong snapper year classes;
- d) there is a strong likelihood of further poor recruitment due to colder El Nino-Southern Oscillation event predicted for the coming year.

284. They consider CAY is the appropriate objective for management of the snapper fishery. The estimate of CSP does not take into account future poor recruitment and it will vary between years due to changes in recruitment. The MCY estimate also does not consider the depleted state of the fishery and the need to rebuild the fishery over a fixed time period. They believe retaining the commercial catch at 3 000 tonnes and allowing for non-commercial and traditional catch of 2 600 tonnes would result in a TAC of 5 600 tonnes. If allowance is made for

overruns of 10% for the commercial fishery (about 300 tonnes) would result in a total catch (TAC) of around 5 900 tonnes. This is just below the CAY and thus should allow the stock to rebuild.

285. Environmental groups state that as there is no forward projections beyond 1998 it is difficult to determine how quickly the stock would rebuild at this level of catch. Last year stock projections out to 2005 indicate that it would fail to rebuild under the increased TACC of 4 938 tonnes. Last year a TACC of 3 000 tonnes plus a six fish bag limit would allow the stock to rebuild by a third by 2005 but further action may be needed to constrain recreational catch.

### 6.3.1. Separate Quota Areas

286. While the two areas have been assessed differently, environmental groups do not consider it possible to treat them separately for management purposes. They are combined in one quota management area and it would be difficult and take time to separate areas while management decisions need to be taken for the coming year. Bag limits or MLS could not be set for the different areas and be enforceable. They note the process of separating the paua 5 (PAU 5) stock into three areas has taken around four years.

287. They state there are also important enforcement issues to consider if the area is separated. With a large reduction in the Hauraki Gulf-Bay of Plenty population there would be a strong incentive to misreport catches between areas. They consider the two areas should be treated as a unit in any proposal to rebuild the Hauraki Gulf-Bay of Plenty stock and prevent declines in the Northland stock.

### 6.3.2. Legal Obligations

288. Environmental groups believe that decision makers when taking sustainability decisions under Part III of the 1996 Fisheries Act have to consider:

- a) International Obligations and the Treaty of Waitangi (Fisheries Claims) Settlement Act—section 5;
- b) Purpose—Section 8;
- c) Principles—Section 9;
- d) Information Principles—Section 10;
- e) Sustainability measures—Section 11;
- f) For total allowable catch—the provisions of section 13.

289. In addition the provisions of section 28D of the Fisheries Act 1983 applies to the setting of TACCs. They contend that by maintaining or raising the TACC to 4 938 tonnes the Minister could not meet his obligations under section 13 of the 1996 Act of “maintain[ing] the stock at or above the level that can produce the MSY” or “result in the stock being restored to or above the level that can produce the MSY”.

290. Environmental groups note that the Court of Appeal in its decision on the

previous Ministers snapper decisions stated in regard to the 1996 Act:

*“It is thus made clear that in setting the TAC for a fishery whose yield is below MSY the Minister has an obligation to move the stock in questions towards or above a level which can produce MSY.*

*“In short, the Minister now has a clear obligation to move the stock towards MSY and when deciding upon the time frame and the ways to achieve that statutory objective the Minister must consider all relevant social, cultural and economic factors.”*

291. In addition the Court of Appeal stated:

*“... we are of the preliminary view that the economic factors of which s13(3) speaks need not necessarily be confined to matters directly affecting the industry. In our view wider considerations affecting the national economic interest are capable of being regarded as relevant. MSY is itself directed at the national interest as well as at sectional interests and this supports the view that national economic factors can be relevant to a TAC assessment under s13.”*

292. Environmental groups state that the Court also made it clear the quota property rights “are not absolute” and are “subject to the provisions of legislation... [that] contains the capacity for quota to be reduced”. The Court also found that the Minister could “be able to vary the ratio between commercial and recreational interests”. The Court of Appeal decision did not consider the issues in the purpose of the Fisheries Act. The environmental groups consider that relevant consideration include the definitions of sustainable utilisation:

- a) maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and,
- b) avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.

293. They state that future generations needs include having fishstocks restored to at or above  $B_{MSY}$ . The need to remedy the depleted state of the snapper stock from the adverse effects of fishing would also support a reduction in the TACC.

294. Environmental groups believe the Minister should also consider the information principle (section 10). They consider there is adequate information for the need to take action and reduce the TAC and TACC for SNA 1.

### 6.3.3. Rebuild Period

295. Environmental groups consider the Hauraki Gulf-Bay of Plenty Fishery should be rebuilt within 10–15 years. They note the previous Minister agreed to a 20 year rebuild but now consider this period to be too long. They acknowledge there will be impacts on the commercial sector of a cut required to rebuild the fishery in this period. However they state that this is in part self inflicted by the

commercial sector. Since 1992 the Minister has requested the commercial sector address the issues of a stock rebuild and work with other stakeholders to achieve this. It is the repeated denial of this need and refusal to accept the evidence of repeated stock assessments that lead to the need for a cut of the size required.

296. They recognise that the recreational sector has accepted and promoted cuts in their catch. The minimum legal size (MLS) was increased from 25cm to 27cm in 1994 and the bag limit was reduced from 25 to 15 in 1992 and to nine in 1995. Environmental groups state that they reluctantly suggested last year a rebuild over 10–15 years to 2010. They consider this time horizon would be consistent with the Ministers obligations under section 13(2)(ii) because:

- a) it would involve less drastic cuts on the commercial and recreational fisheries than a shorter time period of five years;
- b) it is a time horizon within which most fishers (commercial, recreational and traditional) today may see the benefits;
- c) it is the Government's horizon for environmental and economic policy which has been publicly consulted on, ie Environment 2010;
- d) consistent with the biology of snapper, including variable recruitment, caused by water temperature;
- e) longer time period would create uncertainty due to variable recruitment and any cuts may not result in the rebuild of the fishery; and,
- f) this time period is credible both to rebuild the fishery for future generations and to meet public concern over the state of the snapper fishery.

297. They do not support a 'staged reduction' which the Court of Appeal suggested could be investigated. A staged reduction would slow the rebuild time and create uncertainty, especially with poor recruitment as to whether there was any rebuild at all. The stock assessment results justify a TACC at 3 000 tonnes but indicate that further controls on recreational catch may be needed. These controls could include a reduced bag limit and changes to the MLS. Environmental groups consider a reduction in the bag limit to six could be justified.

298. They note that additional information on diary records and ramp surveys from the recreational fishing survey shows that there is little change in the total recreational catches until the bag limit is reduced to around six. This would reduce

the recreational catch to 2 365–2 565 tonnes based on both diary survey (17%) and ramp survey (10%) estimates. They state that once the results of this year's research is completed it may be possible to determine whether further changes in the current bag limit are warranted.

299. Environmental groups note that a preliminary estimate of 1996 recreational catch given in the working group report was of 2 052 tonnes (581 tonnes East Northland and 1 471 tonnes Hauraki Gulf-Bay of Plenty). Retaining the commercial catch at 3 000 tonnes would result in an initial total catch of over 5 050 tonnes with an additional allowance for traditional Māori catch. They note this is within the current TAC of 5 600 tonnes set by the Minister last year.

300. They state that to achieve a 10–15 year rebuild the recreational catch may need to be further constrained in the coming years. To do this they agree that the MLS should be reviewed next year once the results of the current research programmes are available.

301. They believe any projection beyond 2005 will be highly speculative. It may be that recreational fishing effort declines as people become more interested in snapper as fish to observe underwater without taking. The current research into the impact of weather conditions on recreational catch is an important input into any future stock assessment. They state that retaining the TACC at 3 000 tonnes and current bag limit are positive steps that can be taken to rebuild SNA 1 to  $B_{MSY}$ . Increased abundance should reduce the costs of catching snapper for commercial operators as the effort to catch a tonne of snapper will decline. They contend this is a positive economic spin-off to the industry.

#### 6.3.4. Economic Issues

302. Environmental groups state that the impacts and benefit of any TAC cut is a relevant consideration of the Minister under section 13(3) of the Fisheries Act 1996. They note that the Court of Appeal has indicated that the "*Minister would be wise to undertake a careful cost/benefit analysis of a reasonable range of options available to him in moving the fishery towards MSY.*"

303. They note that the fishing industry has opposed the Ministry of Fisheries improving the economic information it has at its disposal at all of the 'Nature and Extent' cost recovery plenaries. In recent meetings on research for the 1998–99 fishing year representatives of the commercial sector have continued this opposition. This then leaves the Minister relying on partisan information. Any consideration of economic factors should take into account the value of non-market services from the environment and from recreational and traditional benefits directly consumed which do not go through the market. Such a consideration should also take into account the joint products where for example recreation there are benefits gained in addition to the actual extractive benefits.

304. They believe recreational fishing take is likely to have much higher value added per fish than industrial commercial take. The results of the 1992 NRB survey of the value of recreational fishing supports this view. The benefits to the nation from tourism and much higher job multipliers attached to tourism in comparison to those attached to commercial fishing should also be considered. For example increased snapper numbers benefits recreational fishers and those wishing to see snapper in the natural environment without catching them.

305. Environmental groups state that it will be important in making the decision to look at the long term expectations and incentives created by the decision. In particular you must make it clear that if fishers over-fish over a period of years that jeopardy to economic interests will result so that they develop a greater sense of responsibility in future TACC setting rounds.

306. The environmental groups would like to see the value of the communities of small scale fishers acknowledged and preferential treatment given to them over industrial commercial fishers but not in such a way that there incentives to responsible behaviour or the environment itself are jeopardised. They believe the temptation to avoid hurt now by postponing necessary decisions is unfair on the future and indeed it is this failure to act over the last five to 10 years which is responsible for the current problem and the intensity of the problem we now face. They state that further delay simply digs us deeper into this particular hole of unsustainability. If cuts are not made the environment will continue to subsidise commercial fishers.

307. Environmental groups are of the view that a detailed economic assessment is likely to indicate that the recreational catch of snapper is more valuable to New Zealand than the commercial catch. Any analysis would have to consider the amenity values attached with fishing for and catching snapper. They note that there are several economic techniques that can be used to estimate these values, including the use of surrogate markets used in the NRB survey.

308. They state that the economic benefits of a reduction in the TACC are:

- a) increase in stock size will mean that fish are easier to catch so the costs of catching a tonne of snapper will decline;
- b) a rebuilt stock will have a higher TACC as the TAC could be increased to the MSY level;
- c) the recreational fishery will have increased satisfaction as bag limits will be easier to achieve;
- d) the increased ability of tourists to see snapper in the marine environment.

309. The environmental groups state that the community at large will strongly support a decision to place the snapper fishery on a sustainable footing. They note all three groups get strong feedback from members and the general public on the need to manage fisheries sustainably.

### 6.3.5. Recommendations

310. Environmental groups recommend setting the TACC at 3 000 tonnes, TAC of 5 600 tonnes and that you should look at reducing the recreational bag limit to six, as it should allow a rebuild in the Hauraki Gulf-Bay of Plenty population in 10 to 15 years. In addition they recommend that you review the MLS for recreational and commercial fishers next year when the result of current research is available.

#### **6.4. Other**

311. The New Zealand Trailer Boat Federation Inc. (member of the NZRFC) state that it represents about 8 000 boat owners, most of whom are amateur fishers. It expresses concern that the TACC will revert back to 4 938 tonnes. Further, it states that any increase to the MLS and/or reduction in the bag limit will not be well received by recreational fishers. It believes any further restrictions on recreational fishers will put many outside the existing law.

312. The Rodney Fishing Club (Warkworth) states that it is concerned about the decreasing stocks of snapper and kahawai and support the NZRFC's recommendation that the TACC for SNA 1 be set at 2 600 tonnes.

313. You have received a number of letters from individual recreational fishers on the SNA 1 fishery. Mr T McConkey, Mr C Robinson, Mr M Heke, Mr G Harrop, Mrs M Hellescoe, Mr A Hellescoe, and Mr S Akers express concern about one or more of the following: the status of the SNA 1 fishery, poor recreational catch rates, small size of snapper, dumping of snapper by commercial fishers, and request that a TACC cut be implemented for 1997-98 to rebuild the fishery. Mr R Harding expresses concern at the declining catch rate he is experiencing in SNA 1 and recommends that the daily bag limit be reduced to six. He believes this would not cause any hardship and be of benefit to the stock.

#### **6.5. Customary Māori Views**

##### **6.5.1. Northern Iwi Consultation**

314. Iwi that were consulted at the meetings that were part of the northern regional consultation round generally provided both a customary and a commercial viewpoint, and consequently a range of views was provided on the SNA 1 TACC and fishery. At the Kaitaia meeting there was concern about the estimated level of the customary take. It was questioned whether or not it was acceptable to set a TACC if the amount of the customary take had not been adequately established. It was also noted that the QMS had forced Māori kai moana gathering to be split into a customary/subsistence activity and a commercial activity, whereas previously both activities had been combined.

315. Iwi representatives at the Whangarei meeting preferred to reserve their judgment on the SNA 1 TACC. They considered it important to weigh the financial implications of a reduced TACC against their concern for the long term

sustainability prospects for the fishery. They wanted to see mechanisms in place to redistribute the benefits of a rebuild in SNA 1 fairly between commercial and non-commercial interests.

316. At the Tauranga meeting, Iwi commercial representatives generally accepted the need for a short-term reduction in the TACC but they wanted a guarantee that the TACC will be reinstated once the stocks have rebuilt. The 300 tonne allocation to customary fishers was also queried and was considered to be not enough. Another issue raised was changing weather patterns and the effects that this may be having on the fishery.

317. Iwi at the Opotiki meeting suggested that the existing SNA 1 QMA should be subdivided into Northland, Hauraki Gulf and Bay of Plenty areas because of the need to more intensively manage these stocks. Anecdotal information suggested that the snapper fishery in the Bay of Plenty may be improving. However, they were concerned about the level of recreational fishing occurring in the area, particularly where the use of new technology (fish-finders, GPS, etc.) is increasing the pressure on traditional sites. Iwi did not support a TACC increase for the fishery at this stage.

## 6.6. Fisheries Liaison Committee Views

318. Industry, Māori and recreational stakeholder representatives were also consulted about changes to the SNA 1 TACC at the mixed sector Fisheries Liaison Committee (FLC) meetings. At the Auckland meeting, industry stated that the initial reason for the TACC cut had been to allow for a stock rebuild to 62% of  $B_{MSY}$  by the year 2005. Industry noted that the 1997 stock assessment estimated that the SNA 1 stock was presently at about 60% of  $B_{MSY}$  and that the rebuild was ahead of the earlier suggested time frame, thereby allowing for a higher TACC.

319. It was questioned whether a drastic cut to a TACC may lead to a very rapid rise in biomass which could be in conflict with the ecosystem principles of the new Act. Discussion centred on the possible effects on the food chain and other ecosystem components which may result from a rapid increase in the snapper population in an area such as the Hauraki Gulf. The robustness of the stock assessment process was also questioned by industry and it was suggested that its results were very uncertain. The industry proposal to set the SNA 1 TACC at 4 938 tonnes was not supported by the recreational representatives as it would slow the rebuild significantly. They pointed out that the recreational bag limit was already cut by 40% and that the recreational MLS had been increased to 27cm.

320. At the Tauranga Fisheries Liaison Committee meeting commercial representatives pointed out that catches had been consistently at levels of about 10 000 tonnes throughout the 1970s. It was also stated that the under-reporting of snapper catches may have been greater (25–50%) than the 20% assumed in the stock modelling process prior to 1986. Commercial representatives suggested that snapper in the Bay of Plenty were relatively abundant and have been easy to catch in this winter.

321. Recreational representatives stated that snapper were not abundant in the



Hauraki Gulf, and that a zoning system to better differentiate between the Bay of Plenty and the Hauraki Gulf was required. It was also suggested that gangs had shown an interest in the fisheries business and that this would lead to an escalation in the illegal snapper catch.

322. Industry supported the reinstatement of the 4 938 tonne TACC. The recreational viewpoint concerned the legal action brought by industry and the delay which this had caused in the implementation of the fisheries management decision of the Minister. Recreational fishers also suggested that the industry had not accepted the decision because of the implications in terms of quota rights and that these should have been debated separately while accepting the quota reduction, thereby avoiding further depletion of the stock. Commercial representatives offered that a cut to 4 000 tonnes would have been acceptable, but that 40% was too drastic a reduction with too severe an impact on the fishers.

RELEASED UNDER THE  
OFFICIAL INFORMATION ACT

## 7. MFISH COMMENT

### 7.1. Background

323. The SNA 1 fishery extends from North Cape down to East Cape and includes the Hauraki Gulf (see map at front of paper). This fishery has a long history of exploitation and is one of the largest and most valuable coastal fisheries in New Zealand. Commercial catches peaked during the 1970s when a total of about 88 000 tonnes were landed. The largest annual catch of 10 737 tonnes was recorded in 1971. Prior to the introduction of the Quota Management System (the QMS) in 1986, commercial catches had declined to between 6 200 and 7 800 tonnes per year. Up until 1986 there was no effective restriction on the amount of snapper that could be taken by commercial fishers.

324. Based on the conclusions of the 1986 stock assessment, the initial TAC for SNA 1 was set at 4 710 tonnes. This was the level the then Minister considered necessary to allow the fish stock to rebuild to achieve its maximum sustainable yield (MSY). This stock assessment was based on the results from the 1983 and 1984 tagging programme. Results indicated that the fishery as a whole was below its optimum biomass and setting a TAC of 4 710 tonnes would allow rebuilding to occur. Biomass refers to the tonnage of snapper greater than 25cm in length which is the minimum legal size for commercial fishers.

325. The 1986 Amendment Act created an appeal system whereby commercial fishers who disputed their initial ITQ allocation could appeal to the Quota Appeal Authority (the QAA). The matters the QAA took into account were set out in Section 28E of the 1983 Act. These included examination of the commercial fisher's operation and whether his catch history was a fair reflection of his commitment and dependence on the fishery. There were many more appeals than the Ministry anticipated. Of the 1 800 fishermen notified of their catch histories, 1 400 appealed, and many of these had their allocations increased.

326. Under the 1983 Act a QAA decision to increase an individual commercial fisher's ITQ allocation increased the TAC for that stock. ITQ appeals before the QAA resulted in the TAC for SNA 1 increasing from 4 710 tonnes in 1986 to 6 010 tonnes by 1991, a total increase of 28% (1 300 tonnes) above the initial quota allocation. This catch limit was greater than the commercial catch in 1985-86, the year prior to the introduction of the QMS. As a result of the TAC increasing through QAA decisions, the Ministry had to manage the fishery at a higher TAC level than was originally intended and at a level above that calculated to allow a rebuild to occur.

### 7.2. Past Decisions

#### 7.2.1. The 1992 TACC Reduction

327. The 1992 stock assessment for SNA 1 produced a biomass estimate which indicated that the stock was about 50% of  $B_{MSY}$ . Further, it was determined that the level of total removals was not sustainable and would not allow the stock to rebuild.