

option4 Submission to the IPP (Fisheries Management Proposals) - 26/7/02

7. SNAPPER – SNA2

7.1 Snapper Recreational Fishery

Snapper is the most important recreational species in northern New Zealand. It is an important target species and a major component of catch for the customary and recreational fishers of East Coast, Poverty Bay and Hawke Bay.

7.2 Biological Information

Snapper is a well-studied species, however we have not had the opportunity to review any recent technical information available on this species in the SNA 2 area. Within the IPP there is no summary of the species' basic life history, recruitment, reproductive biology, fecundity, life cycle, geographical range, habitat preferences, and interactions with other species, as might be expected when considering fisheries management decisions, nor is a list of references provided in the IPP. We note here that this in itself is not satisfactory – a short summary, as provided for species in the *New Stocks into the QMS 2003* document, would have been helpful. We have therefore gone back to primary source information where available.

7.3 Known Issues and Problems

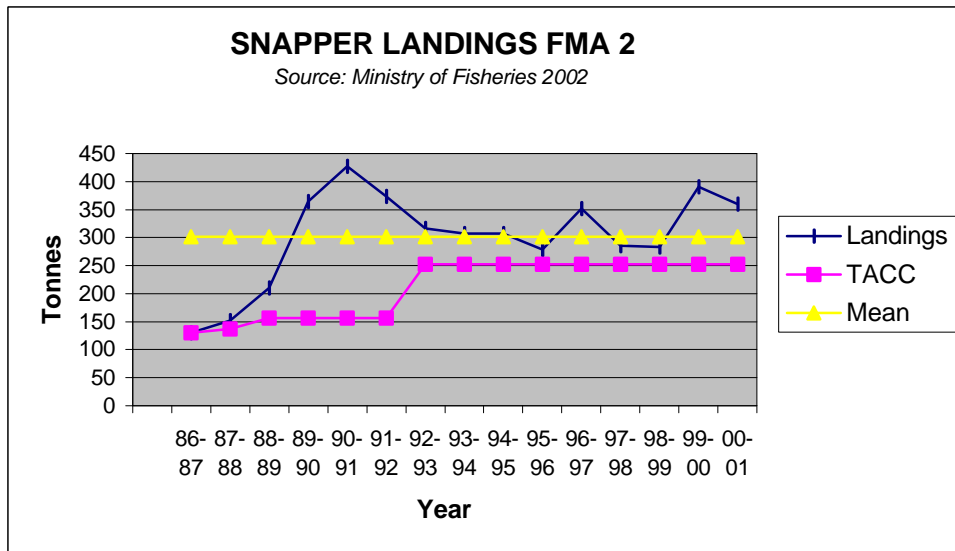
Snapper stocks are subjected to intense fishing pressure by all fishing sectors – customary, recreational and commercial, and because of its importance the species needs to be very carefully managed in all parts of New Zealand. Recreational fishers are very concerned that the TACC has been consistently over-caught for the past 14 years, and do not consider that the large over-catch (up to 155% recently) can be sustainable. They wish to remind the Minister that this fishery collapsed in the late 1970's due to over-exploitation by commercial fishers.

Our members have reported that they do not consider that SNA2 has rebuilt. Experienced recreational fishers who have fished for snapper in SNA2 over the last 30-40 years have noticed no significant improvement in their catch rates or the size of snapper caught. Certainly, recreational catch rates are nowhere near as good as they were in the 1960s before the fishery was raped by the industry's pair trawlers in Hawkes Bay in the 1970s.

7.4 Commercial Catch Data

We have reviewed the commercial catch data for SNA 2 provided in the IPP, and have plotted it simply as a time series with an arithmetic mean computed over the total record available. This data is shown in Figure 7.1 below.

Figure 7.1 : Snapper Landings SNA 2



We observe from Figure 7.1 above that:

- (1) Snapper landings have averaged 302 tonnes during the 15 year period of record.
- (2) If an average is taken excluding the years 1987-1989 when the stock was rebuilding from its late 1970's collapse, then commercial landings from 1989-2001 have averaged 337 tonnes.
- (3) The last 12 year's catch variability (around a mean of 337 tonnes) is in the order of plus or minus 17-27%. The fishery is not yet stable.
- (4) The fishery has always been significantly over-caught. Over-catch has varied from 172% (1990-1991) to 12% (1998-1999), with an average over-catch in the 15 year period of record of 143% (over-catch being reported landings divided by TACC).

7.5 The Management Proposal

7.5.1 History

The history of this fishery is that it experienced a collapse in the 1970's, and then recovery when TACC was reduced to 130 tonnes in 1986-1987, with steady increases from that time on. The fishing industry gave an undertaking to constrain the snapper catch to the TACC in 1992/3 when the TACC was specifically increased to 252 tonnes (an increase of 95 tonnes/60%), on the absolute understanding that the commercial sector would constrain themselves to this TACC. This did not happen and catches have continued to exceed the TACC. Over-catches in the past 15 years have averaged 143% of TACC.

What is plainly obvious to us is that this fishery is a graphic example of:

- the QMS failing to constrain catch within the TACC; and,
- the refusal of the industry to constrain themselves to the TACC; and,
- the ongoing collusion between Ministry and industry allowing this overcatch to go on year after year after year; and,
- the Ministry's willingness to consider expedient solutions at the expense of sensible fisheries management strategies; and,
- the total disregard on the effects of the above on the rights of the public and Maori customary fishers' abilities to harvest their fish.

7.5.2 IPP Management Proposal

The IPP now proposes the following allowances for 2002-2003:

TAC	460 tonnes
TACC	360 tonnes (up from 252 tonnes – a 43% increase)
Customary Maori	20 tonnes
Recreational	40 Tonnes
Other/Mortality	40 tonnes.

It appears that while the Ministry is eager to cut recreational bag limits where mismanagement of the commercial fishery in shared stocks has led to grave concerns regarding sustainability (PAU5D for example), and claims the Fisheries Act demands this proportional cutting of users entitlements, it is eager to forget such policy when increasing the commercial TACC. The SNA2 proposal is one of the most blatant examples of the Ministry of Fisheries bias towards the commercial sector that we have ever seen.

If the Ministry of Fisheries was acting consistently and giving independent advice it would have acknowledged in the IPP that:

- Maori and recreational catches have been suppressed by historic commercial overfishing in the SNA2 fishery since the 1970's reducing their historic CPUE
All research we have seen to date avoids addressing this fundamental issue
- The current 40 tonne recreational allowance in SNA2 is based on out of date and flawed research

- The current actual recreational catch is likely to be in the order of 355 tonnes according to the latest research and this new figure is not necessarily indicative of increasing recreational catches, rather it is mainly due to inadequate or flawed past research
- The recreational catch was likely to have been much higher than the Ministries 40 tonne allowance in 1986 when the commercial sectors quota was set at 130 tonnes, possibly as high as 300tonnes
- The commercial sector promised to constrain their catches to a 252 tonne TACC in exchange for agreement from the recreational to allow the TACC to increase from the original 130 tonne TACC to 252 tonnes and then utterly failed to take the necessary action to do so
- Some of the snapper quota holders target fish for snapper in SNA2 leaving insufficient quota to cover unavoidable bycatch of snapper through unbalanced quota portfolios held by the rest of the fishermen. The Ministry fail to add that if targeting snapper in this fishery was addressed, it would go a long way to addressing the massive annual blowout of the TACC
- The recreational sector accepted cuts to their bag limits and increased size limits and also reduced recreational longline effort by reducing the number of hooks per longline from 50 to 25 to conserve in this fishery while the commercial sector consistently defeated these conservation efforts by blatantly overfishing their quotas by an average of 143%
- The TACC will have increased by 277% since 1986 while recreational catches are likely to have fallen during the same period due to the implementation of voluntary conservation measures such as, cuts to their bag limits, increased size limits and reduced recreational longline effort by reducing the number of hooks per longline from 50 to 25 in this fishery

7.5.3 By-Catch Claims

One of the key factors we believe contributes to the over-catch is the supposed reporting of snapper as a 'by-catch' in the tarakihi and red gurnard fisheries. We note that there are no observers on SNA 2 trawlers, and with the port prices of SNA 2 being significantly higher than TAR2 or GUR2 prices (see Table 7.2 below), we find it hardly credible that fishers are not targeting snapper in SNA 2.

Table 7.2 Port Prices of Target Species in FMA 2

SNA 2	\$2.18
TAR 2	\$1.87
GUR 2	\$1.78

Source: Port Price Survey 2002

option4 believes that there is no real by-catch problem in SNA 2. We believe that the trawlers can actually closely target their catch and when they want to catch tarakihi, they actually mainly catch tarakihi with little snapper bycatch. At the last meeting of the Napier Fisheries Liaison Committee the Ministry was told by highly experienced commercial fishers that some vessels target snapper in SNA 2.

The problem is that some large SNA 2 quota holders target snapper when fishing their SNA 2 quota, as is their right. By not making this quota available to other fishers the

TACC is unnecessarily blown out as a result of the target fishing. The logical solution is that while the SNA 2 TACC is being over-caught, there should not be any target fishing for snapper in this fishery.

This is in contrast to the approach that the Ministry currently proposes, which is to allocate more SNA 2 quota. This will allow the large quota holders to target more snapper, while the smaller players will still have massively unbalanced quota portfolios. The TACC will be exceeded again as the fishermen who actually need the quota to cover genuine by-catch will, at best, get very little of the new quota, and some will get none.

Clearly this is not a sustainable approach either for the fishery or for the commercial fishermen, and a more equitable and sustainable solution needs to be found. This proposal reeks of the worst kind of expediency. It seeks to undermine the QMS through increasing the TACC simply to prevent overcatch of the TACC under the ACE system. This approach circumvents the very intent of the ACE which is to constrain commercial catches within sustainable limits. We cannot allow this dangerous precedent to be set.

7.5.4 Fisheries Modeling

The IPP reports that there is a new stock assessment model for SNA2:

“A comprehensive stock assessment for SNA 2 was undertaken in 2001 using a Bayesian age structured model”;

but that:

“No estimates of stock abundance were available for inclusion in the model, which creates some uncertainty in the model results. However the model includes four years of age sampling information from the fishery which serves to mitigate this risk.” (IPP paragraph 19)

The base case projected Maximum Sustainable Yield (MSY) is higher than the Maximum Likelihood Estimate (MLE) and:

“the reasons for the differences between the two assessments have not been satisfactorily reconciled” (IPP paragraph 21).

This suggests that there is a lot of inconsistency in the model fit to the data. There is no index of relative abundance, there is no useful CPUE time series, and there is no absolute biomass estimate. The only significant data other than catch history used in the model was the three and a bit years' of proportions at age data. This data does not “mitigate risk” it is the cause of the uncertainty because it is not a sufficient foundation to base a model on. The model must be regarded as highly uncertain and at best a “look see” at the data available. Predictions of future biomass based on this model are clearly more uncertain again.

The Base Case of the new model calculates the biomass that will support MSY is 4,500 tonnes, but the biomass at the start of 2000-01 is estimated at just 4,000 tonnes

(page 548 Plenary Report). This fishery is still rebuilding and the industry case is wholly based on the model projections of what might happen in the next five years. The Plenary Report also recommends that the:

“As there are no indices of biomass available, model estimates must be treated with caution”.

However, not once in the IPP paper on SNA 2 is the word caution or cautious used, uncertainties are not specified, and correct tonnage and projection figures are not correctly translated across or interpreted in the IPP. This is contrary to the Information Principles (Section 10) of the Fisheries Act (1996), which say:

“Decision makers should consider any uncertainty in the information available in any case”, and:

“Decision makers should be cautious when information is uncertain, unreliable or inadequate”.

We conclude that the Ministry has done a very poor job of advising the Minister of the uncertainties in the Model estimates and that there is, at this stage, no reliable estimate for B_{MSY} available. Therefore, given the fishery’s history, the precautionary principle must apply, a conservative allocation of TACC be made, and firm steps should be taken by the Ministry to prevent the large over-catches continuing in SNA 2.

It appears to us that this is an example where the QMS is failing to constrain catch within the TACC, and this is having a negative effect upon the rights of the public and Maori customary fishers’ abilities to harvest their fish. A reduction in the quality and the quantity of the recreational experience is still reported by recreational fishers, with the consistent over-catch of the TACC, tolerated by the Ministry, no doubt forming the background cause to the reduced recreational experience. What compensation do recreational fishers receive for a steadily worsening recreational experience?

7.5.5 TAC Allowances

The Ministry have based their proposed TAC on two model estimates of MSY (that don’t even overlap) and *“considers the more conservative estimate of MSY to be appropriate”*. But the Ministry has missed the point that MSY cannot be harvested until the stock size has reached B_{MSY} !

The model Base Case clearly shows that B_{MSY} has not yet been reached in this fishery:

“In both run 1 (Base Case) and run 6, the MLE and the lower 5% bound of the posterior distribution estimate that the current (2000-01) biomass is about 90% B_{MSY} , except for run 6 posterior, which is less optimistic” (page 547 Plenary Report).

Harvesting MSY from a stock that has not rebuilt to a level that will support it is contrary to the Fisheries Act. We are amazed that the Ministry has proposed it, and submit that the Minister must clearly reject such flawed advice.

We consider that the recreational allowance of 40 tonnes is inadequate, as the Ministry knows that the execution of the 1995/96 telephone/diary survey was seriously flawed, and that it grossly underestimated the prevalence of marine recreational fishers in New Zealand. The Recreational Working Group has reviewed and accepted data from pilot surveys for the 1999/2000 project that show that fisher prevalence is close to 50%, not the 14% as estimated in 1995/96. The Ministry cannot support the claim that the 1996 harvest estimates are "*the best available information*" as required by Section 10 of the Fisheries Act (1996). Fortunately the Minister in his Initial Position letter has taken account of this error, and we support his assertion that the recreational allowance be set higher but do not think that 80 tonnes is the correct figure. It should be set at the more realistic level indicated by the latest research.

In May 2001 MFish and the Recreational Working Group were given draft harvest estimates for the main fish stocks in the 1999/2000 national marine recreational fishing survey. The preliminary estimate of snapper catch in SNA2 was 277,000 fish. Assuming an average weight of 1.282 kg as used in the 1996 survey for SNA2 this gives a recreational harvest of 355 tonnes. This estimate will benefit from the updated figures which we understand will be peer reviewed within the next month.. It would be far better that the SNA 2 model and the TAC take account of the most recent estimate of recreational harvest. The Ministry would have to change the TAC next year to take account of these the new harvest estimates. option4 formally requests a copy of the draft recreational harvest estimates from the 1999/2000 National Recreational Harvest Survey from the Ministry. These new estimates need to be considered by the Minister when making this decision.

7.5.6 Environmental Considerations

Problems with trawl gear configurations still negatively affect this fishery. For example, this fishery still uses 100mm mesh. The use of 100mm mesh and pair trawling are the two main factors that severely depleted all the snapper fisheries around NZ over the past 20 years. The problem with 100mm mesh is that it inevitably tends to catch small fish less than the optimal size for "Yield Per Recruit", which for snapper is around 33 cm in length. We believe the mesh size used in this fishery needs to be revisited and increased to 125mm as is mandatory in SNA 1. Increasing the mesh size will lead to a higher Yield Per Recruit (YPR).

Surely, if the industry want the non-commercial sector to agree to an increase to the TACC, it should look at ways to improve the YPR, such as increasing the mesh size, and introduce mechanisms to ensure all commercial fishers have more balanced quota portfolios so that any future TACC increase can be sustainable and will in fact solve any allocation problem they may have, if in fact a problem remains.

One of the good things that the Ministry has done over the years was to make the trawlers in SNA1 and SNA8 have to use 125mm mesh, albeit outside the 100-metre depth mark. This happened in the late 1990s. Prior to that we heard all sorts of excuses from the trawler men that they would not be able to catch the more elongated fish species like tarakihi, gurnard, and gemfish. Rather than a knee-jerk management response at bumping up the SNA2 TACC, the Ministry should do some real fisheries

management and find out what the optimal YPR is for these other species and regulate the methods that take us towards these goals.

We believe this IPP proposal does not adequately consider the interrelationship of all stocks affected by the proposal to increase the SNA 2 TACC.

The Ministry has not adequately considered the effects on associated and dependent species interactions, for example school shark. The MFish Plenary Report on school shark describes them as slow growing with females only breeding once every 2 or 3 years. There is concern about the over fishing that has occurred in Australia where the largest females have been fished out and “*a stock collapse is very probable*”.

“The most important conclusion from this for New Zealand is that fishing pressure on large mature females should be minimised to maintain the productivity of the species.” (Plenary Report page 515).

The fact that school shark landings have increased and have exceed the TAC in 5 of the last 6 years in SCH 2 is a concern. In one year the TAC was over-caught by 38%. Trawling is the main method of taking school shark in Area 2. The Minister cannot allow this increase to proceed if it threatens to over-fish adult school shark.

7.5.7 Flaws with the Proposal

Apart from the above critical information gaps, we see a number of flaws with the proposal as follows.

- (1) **Reliance on limited data** – there is no index of relative abundance, there is no useful CPUE time series, and there is no absolute biomass estimate. There are only three and a bit years’ of catch at age data and the catch history.
- (2) **Inadequate review of the stock assessment model and uncertainties** – the IPP does not adequately convey to the Minister and stakeholders the uncertainties in the B_{MSY} and MSY estimates and at no stage does it recommend caution when using the results. Instead the IPP bases its case for an increase in TACC on the projections of reaching B_{MSY} in the future which is highly uncertain.
- (3) **Inadequate review of alternative measures** – The IPP does not discuss any alternatives to the TACC increase such as restricting target fishing for snapper and encouraging industry to spread ACE more effectively. Nor did it consider increasing the net mesh size to reduce juvenile catch and increase Yield Per Recruit.
- (4) **No consideration of the effect on non-commercial users** – the proposal does not adequately consider the effect on the quality of customary and recreational fishing. Allowing 43% increase in the commercial catch will reduce the size of fish available to recreational fishers and decrease their catch rate. This is not consistent with the Ministers priority which is “*to enhance the value and enjoyment of New Zealand’s fisheries for all New Zealanders*”. A decline in the quality of the one of the most important

recreational species in FMA2 will have significant social and economic effects. There are many sustenance fishers and Maori customary fishers that rely on snapper as a regular food source.

- (5) **Underestimate of Recreational Harvest** – the unqualified use of a seven year old recreational harvest estimate from a survey that the Ministry knows is deficient is unacceptable. The 1999/2000 estimate is yet to finalised (the Ministry has had draft estimates for the last 14 months), but is likely be in the order of 355 tonnes. Therefore SNA2 will have to be revisited in next years IPP review of sustainability measures as the TACC would have to be reduced. Or will the Ministry just ask the Minister to increase the TAC again with little data as is the case with this proposal?
- (6) **Inadequate mitigation of Environmental effects** – specific proposals are required on mitigation measures to protect habitats of significance such as Freshwater Springs and the increase in catch of already stressed stocks such as school shark.

7.5.8 Conclusion

This IPP paper to the Minister provides no credible critique of the stock assessment model. There is also no mention of the uncertainty associated with the 1996 recreational survey. It is the Ministry's job to point out these uncertainties and the caution needed in the face of these uncertainties. The Act requires that the Minister take these into account. It should not be left to the recreational sector (that couldn't afford to attend meetings in Wellington) or the Minister, to do the Ministry's job for them.

The quality of this year's IPP papers clearly shows there is a lack of robust debate on the results and implications of TACC changes in key shared fisheries such as SNA 2, TAR 1 and PAU 5. This is a role that option4 has taken up, so that the recreational right to a quality fishery is not eroded further.

To propose an increase of 43% in a TACC based on a model which estimates in its' base case that the biomass is 10% below B_{MSY} is ridiculous. The available data indicates that the fishery is not yet stable, and that a precautionary approach is needed in the fishery.

For these reasons we are opposed to the proposed increase in TACC in SNA 2 for 2002-2003.

7.6 Information Requested

We request that the Ministry provide us with:

- (a) A copy of all records of Ministry consultation with the commercial and non-commercial sector representatives regarding the increase in the SNA 2 TACC that was implemented in 1992; and,
- (b) A copy of the draft harvest estimates from the 1999/2000 National Recreational Harvest Survey.

7.7 Decisions Sought

The decisions that we seek from the Minister regarding the SNA 2 proposal are:

That the Minister:

1. Rejects the proposal to increase the TACC in SNA2
2. Instructs the Ministry to implement a management strategy that constrains the commercial sector to the TACC as promised when quotas were last increased in 1992/3 to address this very same issue
3. Instructs the Ministry to conduct a robust fisheries assessment for SNA 2, and to advise on corrected recreational allowances following receipt of the latest recreational fishing survey
4. Instructs the Ministry to work toward an increased trawl mesh size that will lead to a higher Yield Per Recruit for snapper and other species in this fishery in line with SNA1.
5. Clearly indicate to the Ministry and commercial sector that no TACC increases in shared fisheries will be considered until the fishery is scientifically assessed to be at or above BMSY
6. Instruct the Ministry to incorporate more than just the fishing industries position when giving advice to the minister in shared fisheries
7. Instruct the Ministry be consistent in its advice regarding recreational allowances
8. Instruct the Ministry use current information regarding recreational allowances