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

6. RED GURNARD – GUR3

6.1 Red Gurnard Recreational Fishery

Red gurnard is a shared fishery of high significance and fond memories of the non commercial sector. Gurnard were targeted regularly by non commercial fishers. The declining CPUE today sees gurnard as a welcome, if occasional catch.

6.2 Biological Information

We have not had the opportunity to review any recent technical information available on this species. 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. We have no anecdotal evidence to offer in addition to what the Ministry has currently available itself.

6.3 Known Issues and Problems

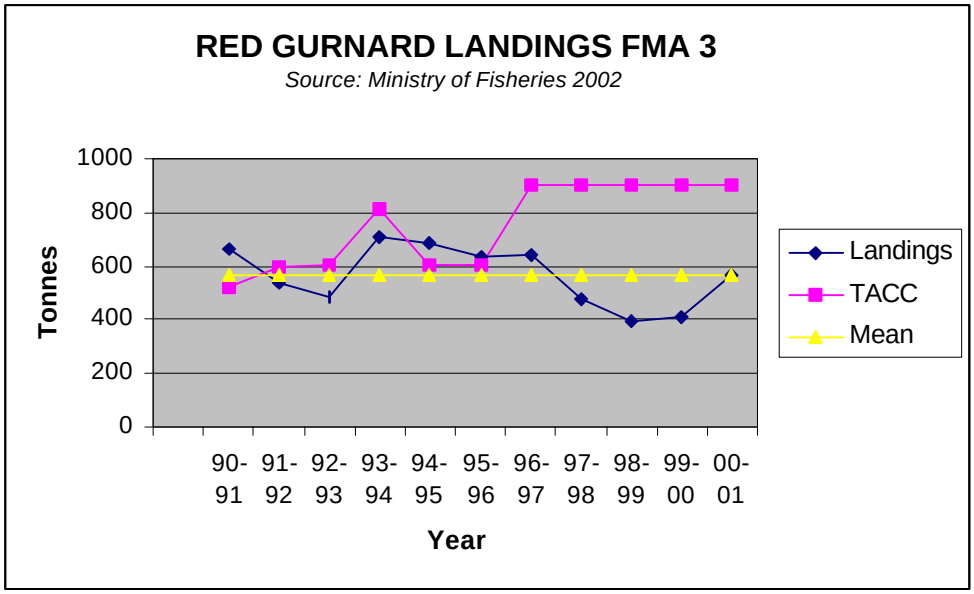
option4 is not aware of any recreationally related issues with gurnard, apart from noting that they are vulnerable in GUR3 as a by-catch to the hoki fishery, and have a relatively low port price. The regular appearance of skinned and boned gurnard fillets in the supermarkets weighing less than 40 grams each is of some concern. The green weight of the gurnard to yield two 40 gram fillets is approximately 240 grams. The green weight of a 25cm snapper is approximately 440 grams. The trawl gear being deployed that is capable of killing the 240 gram gurnard must also have negative effects on juvenile snapper and trevally populations. We have been unable to locate any readily available data profiling the complete catch of this trawl method that kills 240 gram gurnard. We believe that a disclosure of all bycatch be appropriate when trawling for fish species in shared fisheries where there is no Minimum Legal Size.

6.4 Commercial Catch Data

We have reviewed the commercial catch data for GUR3 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 6.1 below.

We do not have access to Catch Per Unit Effort (CPUE) information, nor do we have any fisheries modelling tools to refer to, so our comments below on trend analyses are necessarily restricted to observations made on first principles.

Figure 6.1 : Gurnard Landings GUR3



We observe from Figure 6.1 above that:

(1) Gurnard landings show a wide (26-45%) fluctuation (high variability) around the arithmetic mean of 564 tonnes for the ten year period of record.

(2) The stock has not responded well to significant increases in TACC in 1993/1994, or from 1996 onwards, with a significant downward trend present. Reported increases in CPUE around 1996-1997 do not appear to have been borne out by the stock's response to a higher TACC. No information is provided to indicate the factors behind the stock's recovery in 2000-2001, or whether this will be sustained.

(3) Overall, the ten year catch trend is downward, it remaining to be seen whether the recent recovery will be sustained.

(4) At this stage, it would appear that the GUR3 fishery is *not* exhibiting a sustainable commercial catch pattern (given that CPUE data from 1997 onward is not available to us). That is, the commercial catch is trending downward, rather than a sustainable approximately level straight-line trend around a reasonably stable (low variability) average catch tonnage.

(5) However, the IPP notes that the fleet has fished further south in recent years, and this may account for lower gurnard landings. Bottom trawl is the predominate method used for GUR3.

6.5 The AMP Proposal

6.5.1 Original Purpose of AMP

option4 understands that the Adaptive Management Programme (AMP) process was introduced in 1991 as a way of allowing an increased commercial catch in Quota Management System (QMS) fisheries where there is limited information on stock size, in exchange for fishers collecting more detailed information (mostly catch and effort).

6.5.2 Key Aspects of the Proposal

This proposal requests the Minister to retain the TACC at 900 tonnes under a five year AMP. The Ministry does not support this proposal, rather recommending a TACC of 700 tonnes.

6.5.3 Lack of Scientific Data Supporting Proposal

We have not been provided with a copy of the Southeast Finfish Management Company's AMP proposal, and so we are restricted to an analysis of the GUR3 information summarised in Table 2 of the GUR3 section of the IPP (page 80).

Specifically we record that the following scientific information is either missing or unavailable:

(1) No estimate of current absolute biomass (B_{TOTAL}) or 'stock size' is available, despite winter and summer east coast trawl surveys being taken. We would be interested to review the data collected for GUR3, and we support the proposed upgraded new trawl surveys proposed in addition to those already underway (INT2001/01);

(2) No estimate of B_{MSY}, CAY, B_{MAY}, CSP, MAY, MCY, or any other essential, and related estimates are provided in the IPP;

(3) Biomass index, abundance indices, age structure, population-weighted length frequencies, and sex ratio information is limited. Abundance indexes are mentioned in the IPP, but we have had no access to them or related information;

(4) Limited data on Maori customary take –an estimate of Maori customary and non customary take would be of real value to enable us all to more accurately estimate the overall non commercial take. We must always bear in mind that the Maori customary take in most fisheries is only ever a small fraction of the overall Maori non commercial take.

(5) Recreational allowance based on an out-of-date survey – New Zealand's population has increased significantly in the last two Census periods, with the poor methodology used in the 1996 recreational survey suggesting that recreational fishery demand is likely to be under-estimated in the IPP.

6.5.4 Flaws within the Proposal

Apart from the above information gaps, we see two basic flaws in the proposal, firstly that it proposes a continuation of a 900 tonne TACC when 900 tonnes of GUR3 has never been caught in the ten year period of TACC record; and secondly that the overall trend of GUR3 catch is downward – this trend being (strangely) neither acknowledged nor explained adequately in the IPP.

6.5.5 Conclusions

It appears to option4 that the industry's proposal for 900 tonnes TACC and the Ministry's proposal for 700 tonnes TACC has been constructed without either party referring to the basic commercial catch data, or doing their arithmetic on it.

It appears obvious to us that the stock is currently below a sustainable catch level, but that might be starting to recover to around B_{MSY} now.

There may be other legitimate explanations why the TACC for GUR3 has not been caught over the past six years, but these are not provided in the IPP.

In our view, neither SEFML nor the Ministry has demonstrated that:

a) there is a reasonable probability that current biomass is greater than the size that will support the MSY; and,

b) on balance the new TACC and TAC level are likely to allow the stock to move towards a size that will support the MSY, or remain at or above the level that will support the MSY over the five year period of the programme.

We would like to emphasise here that option4 is not invariably opposed to increases (or decreases) in TACC *per se*. If industry or the Ministry can come back with an amended proposal, supported by independently-verified scientific information that the fishery can sustain the TACC proposed whilst maintaining the fishery above B_{MSY}, without unacceptable adverse effects upon other fishers or the environment, and with workable monitoring and policing proposals in place, we would be happy to support an AMP of this nature.

6.6 Preferred Management Option

The main problem that we have with both GUR3 proposals is that they appear to manage the fishery below B_{MSY}. The Fisheries Act 1996 specifically states that fisheries must be managed at or above a level that supports B_{MSY}. Option4 strongly urges the Minister to make your decisions in the matter of the GUR3 AMP proposal with this foundational sustainability principle in mind.

6.7 Decisions Sought

The decisions that we seek from the Minister regarding the GUR3 AMP proposal are:

That the Minister:

(1) Sets the TACC for the GUR3 AMP 2002-2003 at 600 tonnes; and
(2) Imposes a two-yearly review of this AMP.