

New Zealand Sport Fishing Council

Area 2 Gurnard Policy & Manual

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Contents

Background and Recommendation	1
Gurnard 2 – Policy	2
Objective	2
Strategy	2
Gurnard 2 – Manual	3
Basis for Policy	3
Benefits of increasing biomass levels	3
Management context	4
Policy parameters	4
Harvest Strategy Standard	4
Associated or dependent species	4
Incentives to conserve	5
Research	5
Survival of released fish	6
Quota Management System	6
Policy and public perception	6
Legal imperatives	7
Policy development process	8
Glossary	9

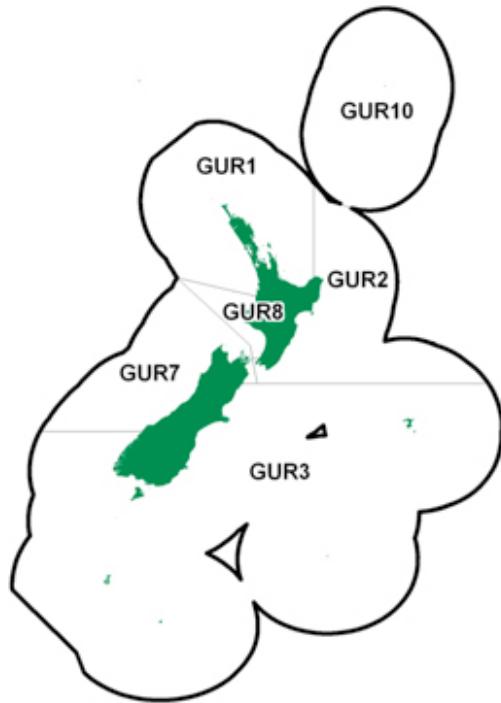
Background and Recommendation

This document was developed with the support of the Hawkes Bay Sports Fishing Club (HBSFC) and Zone 5 representatives of the New Zealand Sport Fishing Council (NZSFC) as a policy for rebuilding the Gurnard 2 stock (GUR2) in Fisheries Management Area 2 (FMA2). It is recommended that it be adopted by the New Zealand Sport Fishing Council at their 2013 Annual General Meeting (AGM). It is recommended that the detailed strategy within the New Zealand Sport Fishing Council manual be updated as required to progress the stated objectives of the policy.

The New Zealand Sport Fishing Council is a recognised National Sports Organisation with over 32,000 affiliated members from 54 clubs nationwide. It is recommended that this policy be widely distributed to other groups, organisations and individuals that have an interest in marine fishing, conservation and leaving a legacy of abundance for future generations.

Gurnard 2 – Policy

- Reduce the Total Allowable Commercial Catch (TACC) in Gurnard 2 to 460 tonne until:
 - The stock has been restored to the target level;
 - The stock is capable of meeting the reasonably foreseeable needs of future generations; and
 - Those needs have been adequately identified and allowed for.
- To improve yield per recruit by reducing the mortality of small fish.
- To regulate the trawl fishery making 125 mesh cod end and approved escapement panels mandatory for any trawl used in FMA2.
- To encourage a whole of the marine ecosystem approach in the management of our environmental impacts on the FMA2.



Objective

To rebuild the gurnard stock in Fisheries Management Area 2 to the target level of 40% of the original biomass ($B_{0.4}$).

Strategy

1. Promote achievable and affordable actions to restore gurnard abundance. This includes setting both a target stock biomass of 40% of the unfished stock size and a rebuild time frame.
2. Stop killing juveniles. For the past 25 years it has been common commercial practice, when targeting gurnard, to discard up to four small gurnard for each one kept for sale. This killing ratio of 4:1 is unacceptable. These discarded small fish are tomorrow's catch and wasteful practices must stop.
3. Reduce the TACC to 460 tonnes per annum. The average commercial gurnard landings over the past 25 years are an estimated 575 tonnes. This intense level of harvest has resulted in severe depletion in the availability of recreationally caught gurnard. An initial TACC reduction of 20% below the historical average is promoted as a sensible starting point. This reduction will be complimented by associated initiatives to minimize juvenile mortality and will lead to a rebuilding of the gurnard stock.
4. Initiate a research monitoring program that uses a trawl survey to establish a time series of data that can generate an abundance index, supported by catch sampling at sea and wharf-side.
5. Apply a precautionary approach when setting Total Allowable Catches (TACs) and Total Allowable Commercial Catches, to account for the mixed trawl fishery that dominates commercial catches.
6. Develop a “tick of sustainability” with certification from the Environmental Protection Agency for fishing methods that have a proven reduction in juvenile and non target species mortality.
7. Exclude all trawlers within the Hawke Bay from a line between Te Matau a Maui - Cape Kidnappers to Waikawa – Portland Island, until such time as the stock has recovered to a biomass of 40% of the unfished stock size target levels.
8. Promulgate regulations that define the escapement characteristics of all trawl nets deployed in Fisheries Management Area 2.

Gurnard 2 – Manual

Basis for Policy

1. This Gurnard 2 policy is consistent with the New Zealand Sport Fishing Council policy of fisheries management targets of 40% unfished original biomass, as a minimum. This policy was adopted in August 2011¹.
2. Best available information indicates that the last time Gurnard 2 was at 40% of unfished biomass ($B_{0.4}$) is prior to the 1960's.
3. The Gurnard 2 biomass is estimated to be less than a quarter of what is required to ensure sustainability and provide for the reasonably foreseeable needs of future generations, pursuant the Purpose of Fisheries Act 1996 (section 8(2)(a)). No conclusive recent scientific information is currently available to assist in the characterization of the Gurnard 2 fishery nor to assist in the development of this policy.
4. The GUR2 stock is estimated to be less than 10% of the original biomass $B_{0.4}$ and consequently is more vulnerable to high levels of juvenile mortality associated with trawl catch than was assumed in past management decisions.
5. Conservation from our generation is now required if we are to rebuild GUR2 stocks, the associated and dependent species, to original biomass target levels that provide for the reasonably foreseeable needs of future generations.
6. Recreational fishers continue to demonstrate their willingness to conserve fish, particularly when there are sustainability concerns. However the GUR2 recreational catch is so low that there are no meaningful constraints that can be applied to amateur harvest. The current HBSFC ramp survey information for 2012-2013 indicates less than 1.33 gurnard per day per angler are being landed while the daily catch bag limit remains at 20 fish per day per angler. This Policy recommends the cost of rebuilding the GUR2 fishery is apportioned to those responsible for the depletion, namely commercial trawl effort.

Benefits of increasing biomass levels

7. Achieving higher target biomass levels in Gurnard 2 will lead to the following benefits.

Outcomes	Benefits
Higher biomass with broad representation of year-classes i.e. old and young fish.	Improved certainty of sustainability for both gurnard and associated/dependent species.
Less juvenile mortality and increased recruitment of legal-sized fish.	Improved recruitment i.e. increased numbers of fish that reach legal size.
Better size and numbers of fish. Increase in average size at harvest	Improved yield per recruit.
More certainty about future Total Allowable Catches (TACs), Total Allowable Commercial Catches (TACCs) or allowances.	Improved management environment and potentially less litigation.
Better quality recreational fishing.	Improved lifestyle and recreational opportunities. More jobs in tackle, boat and tourism industries.
More successful customary fishing	Better delivery of the Crown's ongoing obligation to enable & provide for Customary non-commercial fishing interests.
Reduced conflict between fishing interests	Improved environment to encourage cross-sector management initiatives.
Improved catch per unit of effort (CPUE).	Higher profitability for industry.

¹ New Zealand Sport Fishing Council Management Policy. 26 August 2011. Para 7.

² NEW ZEALAND RECREATIONAL FISHING COUNCIL INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 [28 May 2009]

Management context

Policy parameters

1. This policy has been developed within the following parameters:
 - a. It represents the least cost strategy to rebuild Area 2 gurnard stocks.
 - b. It does not give rise to any re-litigation of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, or the quota associated with this settlement.
 - c. Conforms to interpretations of the sustainability provisions within the Fisheries Act 1996, as defined by the Courts during the Kahawai Legal Challenge².
 - d. It attributes the cost of rebuilding the GUR2 stock to those most responsible for the depletion, specifically the Area 2 trawler fleet.
 - e. Advocacy of a greater conservation approach and ethos when setting TACC.
 - f. Seeks the reduction in non target mortality rates.
 - g. Seeks a greater regime for the management of the discarding of non target species.

Harvest Strategy Standard

2. The Ministry for Primary Industries' Harvest Strategy Standard (HSS) rates gurnard as a low productivity stock with a default target of 40% of original biomass. This 40% target conforms to international standards.
3. Stock management targets must take into account the views of all the fishery stakeholders in regards to the sustainability of GUR2. In the absence of an alternative Fisheries Plan objective, the 40% target serves as a default.
4. The most appropriate management target for GUR2 is no less than 40% of unfished biomass. This target for managing GUR2 is expected to best meet the needs of current and future generations of New Zealanders.

Associated or dependent species

5. The Fisheries Act 1996 defines 'associated or dependent species' as meaning "any non-harvested species taken or otherwise affected by the taking of any harvested species". [Part 1].
6. Environmental Principles in s9 (a) of the Act specify that, "*associated or dependent species should be maintained above a level that ensures their long-term viability...*"
7. Associated species and biological diversity need to be maintained and a healthy marine ecosystem needs protection. The high mortality rates, in particular of immature fish, inflicted on the interdependent species resulting from outdated and inappropriate trawl technology must end.
8. Most Quota Management System (QMS) stocks, including GUR2, are managed under s13 of the Act. There is no distinction made between target and by catch with respect to sustainability. Each and every species needs to be protected to the same standard.
9. Trawl net design and its use must not imperil the sustainability of any associated or dependent species.

² NEW ZEALAND RECREATIONAL FISHING COUNCIL INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 [28 May 2009]

Incentives to conserve

10. There are few incentives for fishers to conserve and enhance fish stocks, whether those fisheries are shared by commercial and non-commercial, or solely utilised by commercial fishers.
11. This is a fundamental flaw of the quota management system because there are:
 - ⇒ No incentives to avoid catching small fish;
 - ⇒ No penalties for catching or killing small fish;
 - ⇒ No enforced requirement to record mortality or discards; and
 - ⇒ No incentives to work towards improving the yield per recruit.
12. Due to the unconstrained freedom to waste and dump undersized fish, current fishing technology is designed to indiscriminately catch every fish including the non marketable fish.
13. By managing fisheries in tonnages, instead of counting the total fish numbers killed by fishing effort, the true fishing-related mortality is disguised and the recorded catch landing return are a superficial measure of mortality.
14. Managing fisheries by gross tonnes of legal sized fish extracted and subsequently reported fails to take into account two important factors:
 - ⇒ That recruitment is limited to a finite number of fish; and
 - ⇒ The young age-at-capture of those fish.

Table 1: Estimated number of gurnard per metric tonne.

Size (mm)	Estimated weight per fish (grams)	Estimated number of gurnard per tonne
< 250	-	4000 - 6000
250	320	3125
300	600	1660
320	710	1408

15. Incentives need to be developed to encourage both commercial and non-commercial fishers to conserve fish. Suitable codes of practise need to be agreed with all fishers on seasonal restrictions including limitations relating to known spawning seasons and associated fishing grounds.

Research

Fishing smarter, restoring habitat and stock monitoring

16. The New Zealand Sport Fishing Council will initiate research and consultation on additional voluntary measures that could be embraced to reduce fishing related mortality, to better look after the environment and to accelerate the rebuild.
17. The NZSFC will initiate research on the effects of voluntary size limitations, bag limit changes, seasonal restrictions and method restriction considerations.
18. Careful handling at capture produces a better eating product; it improves the survival rate of released fish and means more fish will grow to the optimum size. A Code of Practice, practical advice and voluntary measures are the most effective ways to help recreational fishers achieve these outcomes.

19. The NZSFC supports increased public awareness of the link between high quality water, productive habitat, and improved fishing. The NZSFC supports community participation in marine habitat restoration and on-going monitoring of results.
20. The NZSFC supports well designed research into recreational harvest and trends in catch rate.
21. It is critical that the Ministry for Primary Industries collect good catch and effort information from commercial fishers, as this is used to monitor abundance and inform the stock assessments. It is also essential to maintaining the long time series of catch at age information from a fishery independent trawl survey. Stock assessment should be updated at least every five years to monitor performance against management targets.

Survival of released fish

22. Recreational fishers must be encouraged to reduce the fishing-induced mortality of small fish they catch by using larger hooks and bait, using circle or appendaged hooks, and moving away from locations where small fish are prevalent.
23. There have been many studies to establish the short and long-term effects on the survival of fish released after capture by recreational fishers although little information is available relative to gurnard.

Quota Management System

24. The Supreme Court has recognised the Minister's discretion, while being reasonable in a legal sense, to set the TACC at or to zero, pursuant to s20 (3) of the Fisheries Act 1996³.
25. TACC shareholder rights can be defined as shareholders who own a proportion of the TACC (determined by the number of shares owned) that can be set anywhere between zero and the Total Allowable Catch (TAC). The Minister has the discretionary power to choose the level of the TACC, after having regards to various matters.
26. The Quota Management System has failed to deliver the promised husbandry by quota-owning commercial fishers that would rebuild fisheries. Instead, the QMS has legitimised corporate rent-seeking behaviour, where owners lease their quota to low-cost fishing operators - both parties seemingly undeterred by the long-term impacts of their operations on the fishery, associated or dependent species, or habitat.
27. There is a conspicuous absence of juvenile mortality research results from both trawl and Danish seine methodologies. The amount of "by catch" or unwanted fish being regularly dumped overboard is unmeasured and unaccounted for. These juveniles are critical for the rebuild of our fish stocks.

Policy and public perception

1. A program must be developed for conducting research to monitor public support, opinion and concerns about the fisheries every three years. This information could contribute to the sustainability decisions made pursuant to section 13 and 21 of the Fisheries Act 1996. Funding for research, polling and analysis will be required.

³ NEW ZEALAND RECREATIONAL FISHING COUNCIL INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 [28 May 2009]. Para [61, 65].

2. Section 21 requires the Minister to set aside a tonnage of fish to ‘allow for’ both recreational and customary non-commercial interests. These interests span a broad spectrum of fishing, environmental, social, cultural and economic considerations. The Supreme Court has stated that:

“The notion of people providing for their wellbeing, and in particular their social wellbeing is an important element of recreational interests.
3. The degree that allowances provide for public wellbeing needs to be informed by these periodic research polls, particularly as population increases.

Legal imperatives

1. The Purpose of the Fisheries Act 1996 is described in section 8 as, “*to provide for the utilisation of fisheries resources while ensuring sustainability*”. Sustainability is described in s8 (2) (a) as meaning, “*maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations...*”
2. Determining the “*reasonably foreseeable needs of future generations*” is an essential element of making a sustainability decision. Sustainability decisions include setting the Total Allowable Catch (TAC), making allowances for non-commercial interests and mortality, and setting the Total Allowable Commercial Catch (TACC) in Gurnard 2.
3. The essential attributes in meeting the reasonably foreseeable needs of future generations are abundance, diversity, and choice. This will be achieved by:
 - a. Restoring the GUR2 population to the $B_{0.4}$ state quickly.
 - b. Ensuring that all species in the ecosystem being fished are also maintained above the $B_{0.4}$ level of the main target species i.e. gurnard; and
 - c. Resisting the temptation to make laws and regulations that cannot be altered by future generations. Current institutional arrangements are designed to bind us; however, future generations must be able to change these to reflect the aspirations and values of their era.
4. Section 13 of the Fisheries Act directs those exercising statutory powers to maintain the GUR2 stocks at or above the biomass level that produces the maximum sustainable yield (B_{MSY}).
 - i) The decision-maker is obliged to restore the stock to B_{MSY} in a rational way.
 - ii) It could be argued that the Catch per Unit of Effort (CPUE) trends requires an immediate conservation response to ensure sustainability, and nothing else conforms to the purpose of the Act, regardless of s 13(3) factors.
5. The current Gurnard 2 biomass is estimated to be about quarter of that necessary to produce B_{MSY} . Continuing to manage at this level leaves open the risk of Judicial Review proceedings in respect of TAC and TACC decisions in Gurnard 2, because:
 - a. GUR2 must be above a level that provides the potential to meet the reasonably foreseeable needs of future generations. The default proxy for this is B_{MSY} , as supported by Part 3 of the Act.
 - b. If B_{MSY} does not conform to the B_{MSY} proxy then there needs to be an explicit policy identifying future needs and how to provide for them.
 - c. It is implausible that the Act enables stocks to be reduced below B_{MSY} , and not restored, given the provisions in Part 3 - Sustainability measures.

6. Ensuring sustainability is not discretionary – it is the fundamental Purpose of the Fisheries Act, and discretionary decisions made by Ministers when setting TACs and TACCs must conform to the purpose of the legislation.

Policy development process

1. The New Zealand Sport Fishing Council has established a transparent decision-making process to ensure robust outcomes are achieved in the attempt to seek a conservative approach in the management of the Gurnard 2 fishery and to leave a legacy of abundance in the Gurnard 2 fishery for future generations.
2. While the Gurnard 2 Policy will evolve as the further “best available” information comes to light, the process to develop this Policy and subsequent manual includes:
 - a. September 2012– A request made at the NZSFC AGM, to develop a Policy for Gurnard 2.
 - b. November – Policy and supporting Manual drafted.
 - c. December – Policy and supporting Manual distributed to Fisheries Management Committee for initial comments.
 - d. June 2013 – Final Policy and supporting Manual by Hawkes Bay Sports Fishing Club and Zone 5 of the NZSFC
 - e. July 2013 - Final Policy and supporting Manual submitted to NZSFC AGM.
3. The HBSFC and members of the Zone 5 NZSFC express their gratitude to all who have contributed to the development of this policy.

Glossary

ACE	Annual Catch Entitlement
Allowances	Tonnage set aside by the Minister to ‘allow for’ non-commercial fishing interests, both customary and recreational, and fishing related mortality in a stock. This decision is made when the TAC or TACC is set or altered.
BMSY	Biomass level, stock level that can produce the maximum sustainable yield
ITQ	Individual Transferable Quota
DOS	Deed of Settlement, Treaty of Waitangi (Fisheries Claims) Settlement Act 1992
KLC	Kahawai Legal Challenge, the judicial review of the Minister of Fisheries’ 2004 and 2005 management decisions for kahawai.
Minister	Minister of Fisheries, now Minister for Primary Industries
Ministry	Ministry of Fisheries, now Ministry for Primary Industries
MPI	Ministry for Primary Industries (ex Ministry of Fisheries)
MLS	MPI regulated minimum legal size of fish or shellfish
MPA	Marine Protected Area
MSY	Maximum sustainable yield. The greatest yield that can be achieved over time while maintaining the stock’s productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock. (Fisheries Act 1996)
Non-commercial fisher	Maori customary, traditional or amateur (recreational) fishing person
Non-commercial interests	Broad interests encompassing recreational, Maori customary, environmental, social, cultural and intrinsic values associated with the marine environment.
TAC	Total Allowable Catch
TACC	Total Allowable Commercial Catch