New Zealand Big Game Fishing Council

(Incorporated)

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NZ Big Game Fishing Council Submission on the introduction of new species to the Quota Management System October 2004

NZ Big Game Fishing Council

1. The NZ Big Game Fishing Council (NZBGFC) was formed in 1957 to act as an umbrella group for sport fishing clubs and to organise a tournament that would attract anglers from around the world. Club membership has grown steadily and we now represent over 33,000 members in 61 clubs spread throughout NZ. We still run New Zealand's only nation-wide fishing tournament, which has evolved over time and remains successful.

2. NZBGFC compile and publish the New Zealand records for fish caught in saltwater by recreational anglers and are affiliated to the International Game Fish Association who compile world record catches.

3. In the early 1980's the NZBGFC was instrumental in establishing and funding the NZ Recreational Fishing Council to ensure better representation of non-commercial fishers at a national level. The NZRFC continues to be recognised in this role.

4. In 1996 NZBGFC helped establish the NZ Marine Research Foundation, which aims to sponsor research on the interactions between people and marine ecosystems to the benefit of all New Zealanders, including participants in ocean recreation.

5. Many of our most established fishing clubs have a focus on fishing for large pelagic species such as marlin, tuna, and sharks. In recent years our membership has expanded beyond the traditional deep sea angling clubs to include many local clubs targeting inshore species.

BROADBILL SWORDFISH

Background

6. The Council has been concerned about the impact of an unconstrained longline fishery on billfish for the last 20 years. In August 1987 the Minister of Fisheries Colin Moyle announced a 3 year moratorium on foreign tuna longline vessels fishing around the top half of the North Island between 1 October and 31 May. Domestic vessels were required to release all billfish including broadbill swordfish.

7. There were annual review meetings of the moratorium and later the Billfish Memorandum of Understanding between commercial and recreational representatives from 1989 through 1997. As a result of agreement at these meetings regulations were changed in April 1991 to allow domestic commercial fishers to retain and sell swordfish caught in New Zealand waters (The Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986, Amendment No.4). Commercial fishers agreed not to target swordfish and to a voluntary minimum size of 50kg or 1.6m long (lower jaw to tail fork). Also commercial fishers agreed not to fish inside the 200 metre contour along the east coast of the North Island (North Cape to Cape Runaway) and not to set gear within the 1000m depth contour of four points of particular importance to recreational fishers. Also a regulation was passed in 1993 to prohibit the landing and sale of marlin (blue, black, and striped) by commercial fishers in all New Zealand waters (The Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986, Amendment No.8).

8. The Ministry were asked to monitor and report annual catch and the average size of commercial swordfish. The commercial minimum size was eventually dropped when markets were found for small fish. The Billfish MOU, last signed off in 1996, still contained agreement not to target swordfish (which was prohibited anyway) and to stay away from recreational areas of importance.

9. A meeting was held in 1997. No agreement was reached as commercial fishers wanted an arrangement to allow the harvest of some striped marlin which was strongly opposed by recreational fishers. Recreational fishers wanted the targeting of swordfish using chemical light sticks attached to the trace to stop and industry claimed that this method was used for targeting bigeye and southern bluefin.

10. It was about this time that recreational groups started appealing to the Minister of Fisheries to take note of the extremely rapid increase in swordfish catch and the international experience of boom and bust commercial fisheries for this species. This was the last open access non-quota fishery in New Zealand and it was felt that many

tuna longliners were illegally targeting swordfish. A catch limit or other management controls were required as soon as possible to ensure sustainable management of the stock.

11. MFish chaired a meeting on tuna and billfish in March 2000 between recreational groups, tuna fishers, industry representatives and TOKM. It was clear that the issues raised in 1997 were still present, the only thing that had changed was that the commercial catch had increased 330% from 283 tonnes in 1996/97 to 939 tonnes in 1998/99 (Table 2 IPP).

12. Several letters to the Minister followed this meeting and finally we felt that we were getting somewhere when Pete Hodgson said in his letter of 30 August 2000: "*The Ministry will also be developing a formal proposal(s) to review the sustainability measures for swordfish for the next sustainability review round. I believe that work towards a stock assessment will draw out the best available biological information on swordfish in the Pacific. Using the working group and the sustainability review processes, all interested parties will be able to discuss that information fully."*

13. MFish failed to put forward any proposal for the next sustainability review round and so the NZBGFC developed its own proposal for the review of management controls for the 2002-03 fishing year. Analysis of commercial catch data had revealed a dramatic decline in the average weight of swordfish landed in 2000 and 2001 and a levelling off of annual catch, which raised concerns that the stock was being over fished. The proposal simply asked the Minister to establish a commercial catch limit for swordfish.

14. The proposal was rejected. In answer to yet another letter Minister Pete Hodgson replied, "*You are concerned at delays in implementing controls to ensure the sustainable management of broadbill swordfish and ask for a review of sustainability measures for this species. I too am concerned to ensure that this species, and all others, is managed in a sustainable manner, and that the management regime put in place provides for all interests in the fishery."* He suggested that these issues would be addressed when swordfish was introduced to the QMS in 2004. <u>Therefore recreational fishers have an expectation that the IPP should provide for all interests in the fishery.</u>

Swordfish are important to recreational fishers

15. Catching a broadbill swordfish on rod and reel is still one of the great challenges in the sportfishing world. Despite the competition from tuna longliners on all the accessible seamounts in the north, the few fish we have been able to catch have been noticed by international anglers. Many of these anglers have lost the opportunity to catch large swordfish in their home waters and are coming here before the big fish disappear from New Zealand as well.

16. Numerous Charter boats have up-graded their surveys to include the option of fishing the close Swordfish grounds and there has been a prolific increase in suitably

equipped private game launches that attempt Swordfish targeting. We are acutely aware of commercial fishers claim that our stake in this fishery is minimal. However we do have a stake and believe that access to this fish species has been denied to us, as areas accessible by recreational craft are rapidly fished down.

17. The illegal targeting of swordfish by tuna longliners and the fact that commercial fishers have ignored the agreements made in the Billfish Memorandum of Understanding have been an issue for the NZBGFC for at least the last 7 years. The very rapid increase in commercial catch in the late 1990s was a great concern to many of our members and many feel strongly that the Minister has been stalling on effective management in this fishery.

Commercial catch and proposed TACC

18. Swordfish have been taken by tuna longline vessels in New Zealand waters for many years. Japanese and Korean vessels set millions of longline hooks each year around New Zealand in the 1980s. They often caught more bigeye tuna than swordfish because the Japanese in particular were targeting it by setting their lines deep and did not need chemical light sticks. In the early and mid 1990s New Zealand domestic boats started tuna longlining but their catch of swordfish was more than double their bigeye tuna catch (Figure 1, MFish IPP data). Their lines were set shallow at night with lightsticks increasingly used, just like all the swordfish target fisheries around the world.

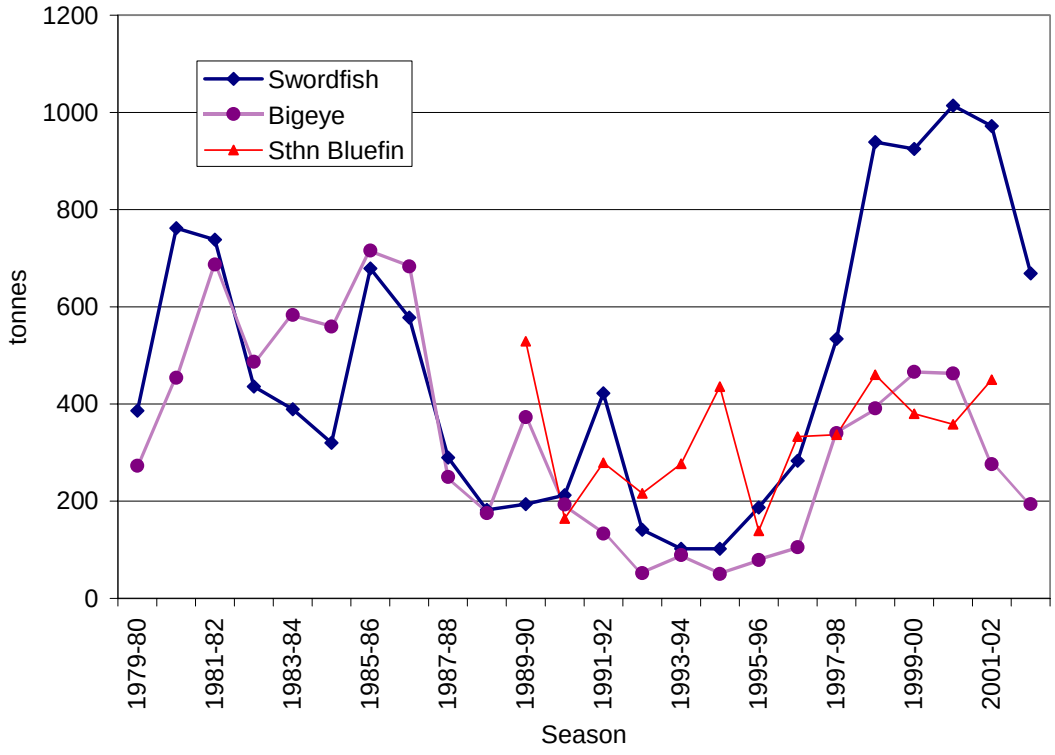

Figure 1. Surface longline catch by species and season.

19. The true bycatch level of swordfish by the Japanese tuna target fishery in New Zealand waters can be seen in the seasons 1979-80 to 1986-87. From 1988 on the billfish moratorium restricted access to northern waters over spring and summer. If the domestic fleet had been targeting tuna using the same methods, their by-catch of swordfish would be about equivalent to their bigeye tuna catch. The difference between bigeye and swordfish landings since 1995-96 is therefore mainly the result of illegal target fishing.

20. Since the domestic fishery started it has been illegal to target swordfish. Furthermore, industry leaders had signed a MOU with recreational representatives that commercial fishers would not target swordfish. The Minister and MFish have been asked on numerous occasions to stop fishers who are blatantly targeting swordfish but they seem unwilling or unable to prosecute.

21. MFish have received a number of research reports indicating that swordfish targeting has been occurring. The results of MFish project SWO2001-01 were crystal clear. "*Swordfish catch per unit effort (CPUE) increases with increasing use of lightsticks, moderate to high use is associated with CPUE levels about 4 times (400%) those sets not using lightsticks; low to moderate use increases bigeye CPUE about 40%, high levels of lightsick use reduces bigeye CPUE.*" [1]

22. The paper concludes that "*Our results point to the importance of light and shallow sets at night as major determinants of high swordfish CPUE in the EEZ, Evidence is also presented that indicates that the increase in swordfish CPUE and catches is likely to be due to the widespread use of lightsticks and that some level of swordfish targeting has been occurring since the mid-1990s and has likely increased despite a ban on swordfish targeting."* [1]

23. It is unacceptable for MFish and the Minister to turn a blind eye to this illegal fishing practice, yet again, and set the TACC at current catch levels. Furthermore the Fisheries Act does not permit it. Part IV of the Fisheries Act (1996) is titled the 'Quota Management System' and includes Section 34 (2). This section states "*For the purposes of this Part and Part XV of this Act, the term "eligible catch" means the total weight of all the catch of the relevant stock* ***lawfully taken*** *and lawfully reported as landed…. by a person eligible to receive provisional catch history under section 32 of this Act….*" So for catch to be recognised under the quota management system it must be recognised as lawfully taken.

24. Clearly a large proportion of the swordfish catch history MFish is basing it's TACC on is not eligible catch, as it was taken while illegally targeting swordfish. Although it may be difficult to determine what proportion of catch was taken while targeting by the domestic fleet MFish must not use illegally caught fish in setting TACCs. Surely they can't ask the Minister to publicly defend a TACC based on illegal catch history.

[1] Murrey, T. and Griggs, L. Factors effecting swordfish(*Xiphias gladius*) catch rate in the New Zealand tuna longline fishery.

25. The IPP proposal for the TAC is as follows.

Species	Customary Allowance	Recreational Allowance	Other Mortality	Commercial TACC	Total TAC
Swordfish	10	20	4	885	919

26. MFish considers that the TACC be based on the average of the recorded landings of the last three completed fishing years. Accordingly there is one TACC option proposed for the whole of New Zealand (SWO 1). Based on the average of the last three years commercial landings from this management area it is proposed that the TACC be set at 885 tonnes. NZBGFC believe that this tonnage is too high.

27. MFish is wrong to assume that the mortality of small swordfish is the same as large swordfish when arguing against the benefits of a minimum legal size (para 53). There is anecdotal evidence that small swordfish are more likely to be alive at the boat. It is unacceptable to our members that all swordfish have to be retained, regardless of size, because they are a QMS species when many small swordfish could be released alive.

28. MFish is also wrong to suggest that a 90 kg size limit was in the Billfish MOU for swordfish. The 1996 Billfish MOU 90 kg minimum size related to recreational marlin only. Swordfish were covered by Clause 8 of the 1993 Billfish MOU which states '*No fisher should take any swordfish smaller than 50 kg greenweight or less than 1.60 m length measured from the bottom jaw to the fork of the tail*.'

29. We agree that swordfish grow rapidly in their first year to 12 kg (100 cm) but they also grow just as rapidly in the second year reaching 125 cm and 25 kg so NZBGFC believe that a compulsory minimum legal size for swordfish should be set at 25 kg and 125 cm lower jaw fork length, the same as set by ICCAT in the North Atlantic.

30. The MFish suggestion that swordfish that are alive smaller than 100 cm may be released alive will have almost no effect on the commercial fishery. There are very few swordfish caught that are less than 100 cm lower jaw fork length (Figure 2)

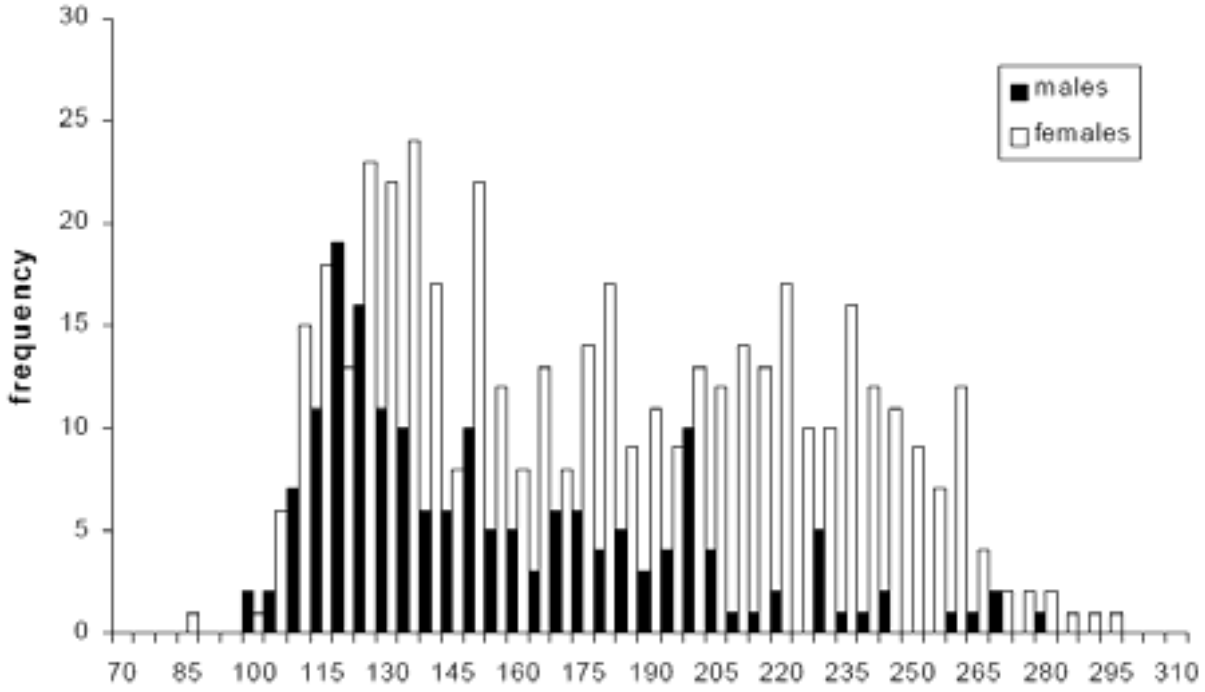

Figure 2. Length frequency distribution of male and female swordfish caught in New Zealand EEZ in 2001. Length in centimetres lower jaw fork length.[2]

International experience and obligations

31. An extensive report was recently produced by the Australian Bureau of Rural Sciences titled 'Broadbill Swordfish, Status of World Fisheries'. This is a migratory species so MFish and the Minister must take note of overseas experience. "*Broadbill swordfish fisheries often show a development pattern of rapid growth, with catches reaching a peak then declining as fishing effort overshoots sustainable levels. The pattern highlights the ability of commercial fisheries to rapidly expand swordfish catches and to create problems with overcapacity. The initial high catch rates probably reflect a fishing down of an accumulated biomass and resident components of the population*."[3] This is exactly what is happening in New Zealand. The swordfish catch has peaked and is now starting to decline.

32. The Australian review of world broadbill fisheries concludes "*An important lesson from this review is the need to put into place a comprehensive suite of mechanisms to control fishing effort before geographical expansion and overcapitalisation commence. However precise limits are extremely difficult to define for developing fisheries…For Swordfish fisheries, effective 'output controls' (e.g. total allowable catches) need to be combined with 'input controls' such as limits on fishing effort*."[3] The open access surface longline fishery has resulted in over capitalisation and many owners are

[2] Murrey, T. and Griggs, L. Factors effecting swordfish(*Xiphias gladius*) catch rate in the New Zealand tuna longline fishery.
[3] Ward, P. & Elscot, S. 2000. Broadbill Swordfish, Status of World Fisheries

looking to exit the fishery now that the catch history years have been announced. The QMS alone is not adequate to manage the spatial conflict that has developed on the most accessible seamounts.

33. New Zealand is a signatory to the FAO 'Code of Conduct for Responsible Fishers' The development of a target fishery for swordfish is a recent development in New Zealand waters. The Code states that: "*In the case of new or exploratory fisheries, States should adopt as soon as possible cautious conservation and management measures, including, inter alia, catch limits and effort limits. Such measures should remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment should be implemented. The latter measures should, if appropriate, allow for the gradual development of the fisheries*" MFish has allowed the rapid development of an illegal target fishery for swordfish and is now asking stakeholders to support legitimising this fishery by issuing quotas at near maximum levels.

34. The IPP also mentions *"international obligations to exercise reasonable restraint in the development of HMS*" (highly migratory species). This relates to resolutions passed by the Preparatory Conference for the Commission for the Conservation of Highly Migratory Fish Stocks in the Western and Central Pacific. How can New Zealand ask other countries to show restraint in the development of their HMS species when it has promoted the unconstrained expansion of tuna fisheries (except southern bluefin) and allowed the illegal expansion of the swordfish target fishery. Many new entrants to the fishery have found it easier to decimate the swordfish population and fin sharks when the tuna fishing gets a bit hard.

35. The Australians have been aware of the problem of local depletion from target swordfish fisheries for some time. Leading researchers have said "*Local depletion occurs around underwater features when swordfish are removed at a greater rate than that which growth and immigration can replace them. It is not known for how long individual swordfish 'reside' around underwater features. It is clear, however, that mixing through swordfish populations takes several months if not years*" [4]

36. Recently a study looked at the effect of the number of years swordfish were caught in each one degree square area in the east Australian fishery. They found that though initial catch rates were high there was a steady decline in catch rate the longer the area was fished so new areas were fished and they in turn were fished down (this is sequential local depletion). The authors say "*If the pattern of 'localised decline' in the catch rates of swordfish off eastern Australia, especially in the inshore regions, continues to be observed in future years there may be negative consequences to the viability of the longline fishery and possibly for the swordfish populations in this region. In particular, the economic viability of smaller vessels (which are unable to venture out to the offshore regions where swordfish still apparently remain abundant) could be*

[4] Ward, P., Porter, J.M. and Elscot, S. 2000. Broadbill swordfish: status of established fisheries and lessons for developing fisheries. *Fish and Fisheries*

significantly impacted if catch rates inshore continue to decline. Furthermore, if sequential declines are seen in future years across the more recently fished regions offshore, this would have significant management implications and may raise the need for some form of spatial management." [5]

37. Like New Zealand, the east Australian fishery had a long history of mainly Japanese vessels tuna longlining in their waters which resulted in swordfish by-catch. Despite the fact that this fishery had been exploited at a lower level for some time the analysis of CPUE data shows the Australian domestic fleet could 'mine' an area and catch rates would not recover but continued to decline as long as fishing continued in that area (to date a 7 year time series) [5]. This is not the behaviour expected for what was thought to be a mobile, highly migratory species. Clearly local depletion is occurring and there is a lot about the residency and movement of swordfish that we do not understand.

38. There has been debate about how many swordfish stocks there are in the Pacific Ocean. For management purposes the southwest Pacific should be considered a separate stock. Recreational groups totally reject the view that New Zealand fishers catch just 5% of a single Pacific wide stock and any management measures we take would therefore be insignificant. This view is not supported by the facts. The Secretariat of the Pacific Community (SPC) compile catch statistics for all nations in the western central Pacific. There figures show the swordfish catch by longline in the southwest Pacific to be about 4,000 to 5,000 tonnes per year. New Zealand fishers have been a major extractor in the fishery with up to 25% of the southwest Pacific commercial catch coming from a relatively small area around the North Island. Figure 3 shows the distribution of longline swordfish catch by 5 degree square for 2001 (SPC data [6]).

39. Fisheries managers in Australia have been concerned about the rapid expansion in their tuna longline fisheries. Recently new hook quotas were introduced to cap fishing effort in the east Australian fishery. In the 1990s blue marlin and black marlin were made non-commercial species in order to minimise mortality from commercial fishing and reduce conflict with recreational fishers for those species.

40. The north Atlantic fishery is an example of how quickly swordfish populations can be fished down and how hard they can be to rebuild. ICCAT promoted minimum size regulations of 25 kg (125 cm lower jaw fork length) in the whole of the north Atlantic. In 1999 the United States introduced time area closures in swordfish hot spots to reduce juvenile swordfish mortality without a major effect on fishing for other target species.[6]

41. The US Department of Commerce introduced a regulation banning imports of Atlantic swordfish less than 15 kg trunked weight (~20 kg green weight) to help implement the minimum size rule. The Food and Drug Administration regulations for mercury in

[5] Campbell, R. and Hobday,A. 2003. Swordfish – Seamount – Environment – Fishery Interactions off Eastern Australia. Report to the 16th meeting of the Standing Committee on Tuna and Billfish

[6] SPC Ocean Fisheries Programme public domain data

swordfish require that nations exporting to US markets reduce the number of very large swordfish in their shipments.[7]

42. There are also a number of reports in the literature that swordfish populations are quite resilient to over-fishing. Although mature females seem to be particularly susceptible to surface longline gear when fishing new areas, catch can be maintained by harvesting large numbers of juvenile fish. It seems likely that current catches across the whole southwest Pacific are sustainable if the precautionary approach is adopted. This does not however mean that the Minister can ignore the issues of local depletion and gear conflict any longer.

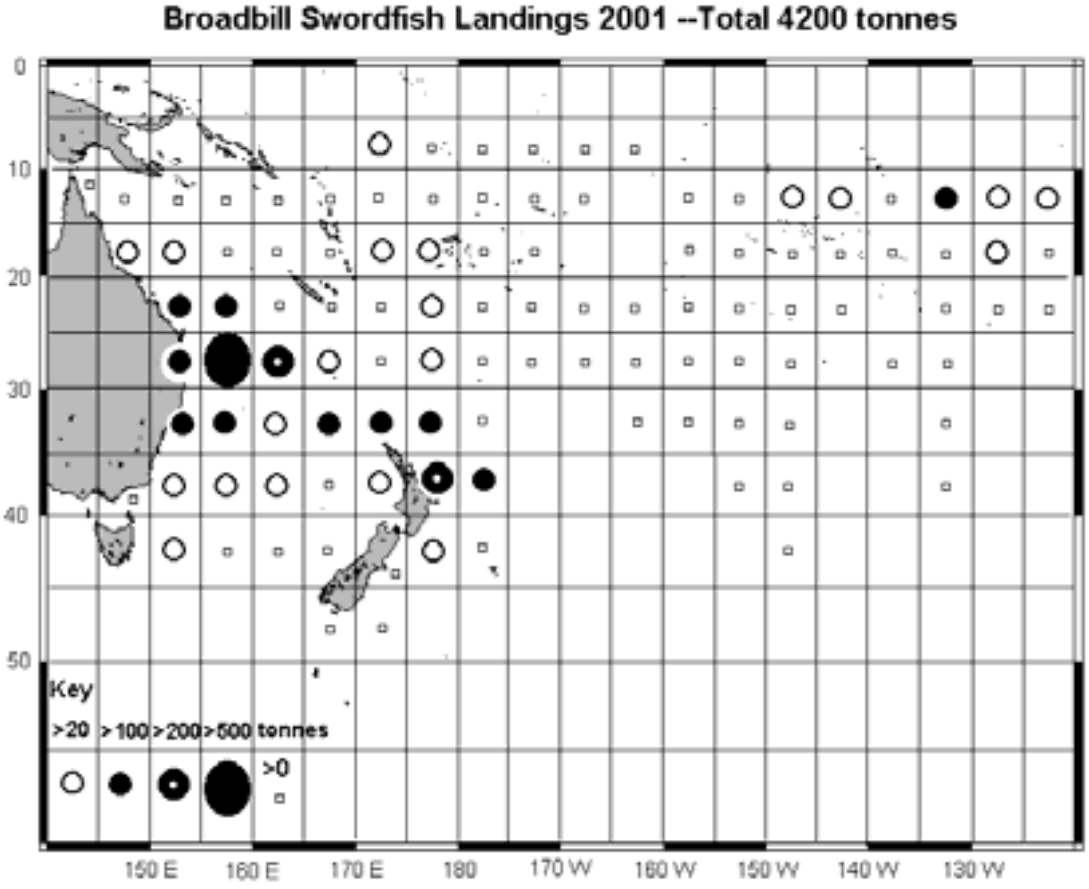

Figure 3. Distribution of commercial swordfish catch in 2001 by 5 degree square

[7] Ward, P. & Elscot, S. 2000. Broadbill Swordfish, Status of World Fisheries

Summary

43. NZBGFC has had a long involvement in the issue of billfish management and swordfish has been particularly contentious over the last 7 years. As you can see we have acquired an in depth knowledge of the performance and management of swordfish fisheries in New Zealand and overseas. We could expand on any area MFish or the Minister is particularly interested in.

44. What we haven't achieved over the last seven years, and what is clearly missing from the IPP, is any management action, whatsoever, that protects our interests in this fishery. The level of frustration is rising and the vast majority of our membership oppose the expansion of the tuna fishery as proposed by the suite of introductions proposed in this IPP. Frankly, the IPP proposal to discuss, "*undertaking a review of voluntary area restrictions at some time in the future*" is woefully inadequate and certainly doesn't measure up to the Minister's promise when he wrote "*I too am concerned to ensure …… that the management regime put in place provides for all interests in the fishery* " (Pete Hodgson 2002)

45. The main points of the NZBGFC submission on swordfish are as follows:
    - Catching a large swordfish is a pinnacle of achievement for billfish fishers worldwide
    - Recreational fishers and charter boat operators want the opportunity to access the swordfish fishery without competition from longliners setting 1000s of hooks a night in the same areas.
    - There is clear evidence of local depletion and serial depletion by target fisheries in Australia and the USA.
    - NZBGFC has been monitoring the catch of swordfish since we agreed to allow commercial access in 1991 and sign the Billfish MOU with industry.
    - As soon as there were calls for a commercial catch limit on swordfish and a stop to illegal targeting, the fishing industry walked away from the voluntary agreement we had.
    - NIWA research clearly shows that increased catches of swordfish were associated with widespread use of lightsticks and targeting which appears to have been increasing since the mid 1990's despite being prohibited.
    - MFish have calculated the average catch and recommend a TACC based on the catch history of many vessels illegally targeting swordfish.
    - For the purposes of the QMS, Part IV of the Fisheries Act (1996), catch history must be lawfully taken to be eligible.
    - There are legal and moral reasons for not including illegally taken fish in the swordfish catch history.
    - The Minister has obligations under Section 10 of the Fisheries Act and the international Code of Conduct for Responsible Fishers to apply the precautionary approach to managing this fishery where information is poor or absent.
    - Figure 1 shows that the foreign licence vessels, which where targeting tuna, caught bigeye tuna and swordfish in roughly equal proportions (1979 to 1987).
    - NZBGFC submit that the bycatch level of the domestic fleet would be about equivalent to their bigeye catch and that the **TACC for Swordfish should be 466 tonnes**, equal to the best year of bigeye catch.

- **Lightsticks** are primarily used for targeting swordfish and with a 466 tonne TACC would be unnecessary and **should be prohibited**.
- **Increases in commercial swordfish and tuna landings should be dealt with using the Adaptive Management Programme for new and developing fisheries**.
- Time area closures, improved data collection and environment standards for the surface longline fishery should be developed within the AMP.
- NZBGFC are opposed to the retention of all swordfish, regardless of size.
- Small swordfish up to 2 years old are fast growing and are often brought to the boat alive. There should be a compulsory **minimum legal size of 25 kg greenweight or 125 cm LJFL**.
- After 7 years of effort, and being proved right over the development of illegal targeting, NZBGFC believe that the Minister must do better than discussing proposals to "*undertake a review of voluntary area restrictions at some time in the future*" and implement some management of this fishery.
- It is largely irrelevant what tonnage the Minister allows for non commercial catch if the current commercial fishing practice is continued or expanded, as proposed in the IPP.