

ALBACORE TUNA (ALB) – INITIAL POSITION PAPER

Summary of Proposals

- 1 The Ministry of Fisheries (MFish) proposes that:
 - a) Albacore tuna (*Thunnus alalunga*) be introduced into the quota management system (QMS) on 1 October 2007;
 - b) The quota management area (QMA) be ALB 1 (Fisheries Management Areas 1-10 combined);
 - c) The fishing year be 1 October to 30 September; and
 - d) The unit of measurement be greenweight.

Background

- 2 Albacore was previously considered for introduction into the QMS on 1 October 2005. Stakeholders expressed widely divergent views in submissions on the proposal, with strong opinions being expressed both for and against the introduction.
- 3 The Minister is required to introduce a species into the QMS if satisfied that the current management of the species is not ensuring the sustainability of the species, or is not providing for the utilisation of the species. In considering the information presented on albacore and the submissions received, the Minister was not satisfied that those requirements were met and decided not to introduce albacore at that time.
- 4 The Minister acknowledged that the QMS is the preferred long term management regime for albacore but decided there was no urgency to introduce the species. He considered that there was no sustainability risk to albacore within New Zealand's exclusive economic zone (NZ's EEZ) and access was available to any fisher who chose to apply for a permit to fish for albacore.
- 5 In making the decision not to introduce albacore into the QMS, the Minister indicated that albacore would be reconsidered for introduction when and if new information came to hand. He wished to avoid the creation of any expectation as to the date of introduction and no timeframe was indicated.
- 6 Substantial changes have since occurred in the albacore fishery. Importantly, concerns about the future of the stock in the south Pacific have been identified and regional management measures are likely to be introduced shortly. In addition, the albacore fishery in NZ's EEZ is changing. The changes involve rationalisation of the tuna fleet so that there are now fewer fishers in the fishery; albacore catches by both the longline and trolling fleets have also declined.
- 7 As a result of this new information, MFish is now proposing that albacore be introduced into the QMS on 1 October 2007.

Assessment of Legislative Criteria

- 8 Section 17B of the Fisheries Act 1996 (the Act), requires the Minister to make albacore subject to the QMS if he is satisfied that the current management is not ensuring the sustainability, or not providing for the utilisation of the species. He may, however, determine that the purpose of the Act would be better met by using general sustainability measures.

Ensuring Sustainability

Harvest of species

Fishery information

- 9 Albacore tuna (*Thunnus alalunga*) is a member of the family Scombridae, which includes tuna and mackerel species. There are five tunas of the genus *Thunnus* known in New Zealand waters: albacore, bigeye, yellowfin, southern bluefin and Pacific bluefin tuna; and five other Scombrids: skipjack, slender and butterfly tuna, and blue and frigate mackerel.
- 10 Albacore found in New Zealand waters are part of a single south Pacific stock and are widely distributed around New Zealand on a seasonal basis, mostly between the lines of latitude of 34° S to 44° S. They are targeted by trolling, and are caught in surface longline fisheries both as a target species and as a bycatch of target fishing for southern bluefin and bigeye tunas.
- 11 The maximum recorded fork length for albacore is 127 cm. Female albacore mature at about 85 cm fork length and spawn from November to February in tropical and subtropical waters, between the lines of latitude of about 10°S and 20° S, west of the line of longitude of 140°W. Males mature at about 71 cm fork length. Juveniles recruit to troll fisheries in New Zealand coastal waters and in the vicinity of the sub-tropical convergence zone at about 2 years of age, at 45–50 cm fork length.
- 12 The New Zealand troll fishery is operated by domestic vessels and occurs mostly in coastal waters off the west coasts of the North and South Islands. Troll catches ranged from 1437 to 5180 tonnes for the period 1991 to 2000. Peak years in the troll fishery were from 1994 to 1996. Catches have declined in 2003 and 2004, as have the number of vessels participating in the troll fishery.
- 13 Most of the longline catch of albacore comes from the north east coast of the North Island, particularly from the area between Napier and East Cape. The proportion of the total albacore landings taken by tuna longlining progressively increased since the early 1990s as the domestic longline fleet expanded, from around 4% in the 1991 calendar year to 63% in 1999 and 41% in 2000. However, this proportion has significantly decreased to less than 20% since 2003 as the number of vessels participating in the longline fishery has substantially declined. It is expected that this rationalisation in the longline fishery is due to the introduction of other tunas into the QMS, in particular southern bluefin tuna.

- 14 Most of the fish caught by trolling are juveniles, ranging from 38–99 cm fork length with a mean of 63 cm. Surface longlining catches mostly adults and sub-adults, from 37–133 cm fork length with a mean of 83 cm.
- 15 Reported landings of albacore by all methods are shown in Table 1. Landings ranged between 4 960 tonnes and 6 579 tonnes between 1999-00 and 2003-04. Recent catches have been declining. Landings in 2004-05 were the lowest since the early 1990s.

Table 1: Reported New Zealand commercial landings and discards (t) of albacore from CELRs and CLRs, and LFRRs (processor records) by fishing year.

	Landed	CELR and CLR Discarded	Total Reported	LFRR
1988-89	20	0	20	5 000
1989-90	2 036	0	2 036	3 144
1990-91	2 295	0	2 295	2 451
1991-92	3 780	1	3 782	3 434
1992-93	3 506	<1	3 506	3 323
1993-94	6 375	0	6 375	5 315
1994-95	6 955	<1	6 955	6 195
1995-96	6 131	<1	6 131	6 316
1996-97	3 938	<1	3 938	3 728
1997-98	6 731	<1	6 731	6 525
1998-99	3 835	<1	3 835	3 727
1999-00	4 960	2	4 961	4 697
2000-01	5 611	<1	5 611	5 509
2001-02	5 830	1	5 831	5 638
2002-03	6 579	<1	6 579	6 354
2003-04	5 265	<1	5 265	4 977
2004-05	3 612	<1	3 612	3 400

Stock assessment and regional management information

- 16 South Pacific albacore is listed as a highly migratory species in Annex 1 of the United Nations Convention on the Law of the Seas (UNCLOS) and by reference in the Western and Central Pacific Fisheries Convention (the Commission). As yet there are no specific international obligations with regard to management of albacore tuna. However, participating countries in the Commission have urged states to exercise reasonable restraint in respect of any increase in fishing effort and capacity with regard to the reported status of highly migratory stocks.
- 17 A stock assessment for the entire south Pacific stock for albacore was undertaken during 2005 and is the first since 2003. The assessment indicated that total catches of albacore were relatively stable over the period from 1960 to 1995, but that they have increased in recent years. The key conclusions of the stock assessment were that overfishing is not occurring and the stock is not in an overfished state.
- 18 Overall, fishery impacts on the total biomass are low, although considerably higher impacts occur for the portion of the population vulnerable to longline. There is

evidence of localised depletion of albacore and this is a potentially important issue, particularly for small island developing states dependant on these resources.

- 19 The Commission's Scientific Committee has recommended that current levels of catch and effort for albacore appear to be sustainable. However, given the age-specific mortality of longline fleets, any significant increase in effort will reduce catch per unit effort to low levels, with only moderate increases in yields. Catch per unit effort reductions may be more severe in areas of locally concentrated fishing effort. The Scientific Committee also advised that estimates of maximum sustainable yield are highly uncertain, because of the extrapolation of catch and effort well beyond any historical levels. Furthermore, there are critical biological uncertainties for south Pacific albacore that need to be addressed in order to inform the next full stock assessment.
- 20 The Commission is meeting in December 2005. A number of management proposals will be put forward in the Commission relating to longline fishing effort, and to albacore in particular. The Commission will be considering these proposals and the advice provided by the Scientific Committee, and will determine a programme of action to implement agreed responses to the scientific advice received. Actions are likely to include the implementation of management measures related to albacore in the Pacific.
- 21 In summary, MFish considers the current management framework for albacore is not affecting sustainability in NZ's EEZ. However, it should be noted that there are regional concerns about future catch rates of albacore and the stock assessment is underpinned by highly uncertain estimates of maximum sustainable yield as well as biological uncertainties. It is likely that regional management measures for albacore will be implemented shortly.

Adverse effects on the aquatic environment

- 22 MFish considers that introduction of albacore into the QMS will improve stakeholder incentive to better manage the effects on the environment associated with fishing for this species. Fishing for albacore has two types of effects on the aquatic environment. There are impacts as a result of removing albacore from the ecosystem, and the fishing methods used have an effect on other species.

Effects on the ecosystem

- 23 Because tunas feed on a variety of fish and other marine species, their harvesting may have impacts with regard to predator/prey interactions and trophic dynamics. NIWA report that observer longline data show that albacore mostly consume fish and squid. Lancetfish and lantern fish are the most commonly consumed fish species. Albacore also consume small amounts of crustaceans and octopus. Further, albacore are found in the stomachs of blue and mako sharks caught by longline.
- 24 Our understanding of albacore-related food web relationships is still at an early stage and more information is needed on such relationships. If clear evidence emerges that albacore harvesting is having effects on biodiversity, MFish considers that it will be possible to apply appropriate management measures to avoid any adverse impacts. This could be done based on international cooperation, if required.

Impacts of fishing methods

- 25 In New Zealand waters, a substantial proportion of albacore tuna is taken by trolling. There are no known environmental impacts of this fishing method.
- 26 There are environmental impacts associated with use of longlines to target albacore, in relation to protected species (up to 60% of the albacore catch has been taken by longline in recent years). In general, environmental effects are common to the fishing method rather than specific to fishing for albacore species.
- 27 Tuna longline fisheries occasionally catch fur seals, cetaceans and turtles within New Zealand fisheries waters. There are therefore potential impacts on associated and dependent species, biodiversity and protected species that will require monitoring and possibly future management action.
- 28 Longline fishing vessels also capture seabirds that chase baited hooks, and drown as the lines sink. Seabirds are also caught in trawl and other fisheries, but longliners are considered to be the main threat to several vulnerable albatrosses and other seabird species. The risks of seabird capture vary geographically and by species. An active programme is underway to mitigate and monitor the capture of seabirds in surface longline fisheries.
- 29 MFish has established standard environmental controls on line and trawl target fisheries to mitigate the impact of these fishing methods on marine mammals and seabirds. These include prohibitions on net sonde monitor cables and compulsory reporting of bycatch of protected species. Longline vessels fishing for tuna are required to use tori lines of a specified standard. Vessels use a variety of practices to reduce seabird bycatch, including the use of artificial baits and the practice of setting longlines at night.
- 30 MFish and the Department of Conservation have developed a National Plan of Action for Seabirds. Voluntary codes of practice are being developed as a result, and these will specify appropriate mitigation measures.
- 31 One of the main reasons for introducing tunas into the QMS is that allocation of rights improves stakeholder's ability to identify and implement the most efficient solutions for mitigating adverse effects through collective action. Other key tuna species taken by longline (southern bluefin, yellowfin and bigeye) were introduced into the QMS on 1 October 2004. Albacore is the last remaining major tuna target species taken by longline not in the QMS. Leaving this fishery outside the QMS under open access has the potential to undermine both stakeholders' and MFish's ability to manage environmental issues across all tuna longline fisheries.

Providing for Utilisation

- 32 As discussed in the general issues section of this paper, MFish considers that two factors can be considered to determine whether the current management framework of a species is adequately providing for utilisation. The first factor is whether the current management framework is providing for utilisation by not inhibiting or preventing access. The second factor is whether the current management framework enables people to provide for their social, economic and cultural well-being.

Access is prevented or inhibited

- 33 MFish considers that the current management framework for albacore does not inhibit or prevent access to the fishery. Albacore tuna is currently managed under an open access fishery management regime whereby fishers can obtain access to the fishery via the holding or issuing of a fishing permit.

Providing for well-being

- 34 MFish considers that the current management framework for albacore does not enable people to provide for their well-being.
- 35 As a target fishery, there is value in the albacore resource and therefore incentives to utilise the resource directly. The fishery is near shore and requires little capital investment to enter. In an open access environment with low entry cost there are strong incentives for fishers to enter the fishery. While the fishery may not be currently fully utilised, competition between fishers does occur in years when albacore abundance is low. This competition will result in diminishing rent from the fishery as fishers compete amongst each other for a share of the resource.
- 36 While there is development potential in the fishery, MFish considers that the current management framework does not provide the best basis for this potential to be maximised. Rights are not clearly defined under the current management. The only existing rights are those of access, granted by the fishing permit. Fishers have no ongoing security of access, nor a guaranteed share of the resource. Any development or investment undertaken by fishers is therefore not supported by long-term tenure.
- 37 Rights cannot be transferred, which means a fisher wishing to leave the albacore fishery will get no return on capital invested (to the extent that the capital is not transferable to another fishery). As such, the existing right within the current management framework does not provide a sound basis for investment, and therefore foundation for development of the fishery.
- 38 The QMS provides the best opportunity for commercial fishers to pursue economic wellbeing by allowing quota to be purchased by the most efficient users of the resource. Because quota is divisible, fishers can match quota holdings with their landings through buying and selling of quota or ACE. Similarly, the transferability of quota allows less efficient users to exit a fishery and receive a return on their investment. Lastly, quota's tradability provides the means for inter-generational transfers. The QMS allows for a smooth re-allocation of access rights, via quota trading, from one generation to the next without requiring government intervention.
- 39 MFish is aware of some industry views that further management measures for albacore should not be implemented until regional agreement on management measures, and in particular national allocations is reached. Some in industry consider that introduction into the QMS before this time may impact on their well-being by ultimately restricting the amount of allocation New Zealand interests will receive when any national allocations are agreed.
- 40 MFish does not believe that the industry needs to be concerned about restrictions in the allocations that New Zealand interests may receive under a regional agreement. There is no requirement following introduction of a stock or species into the QMS

that a constraining catch limit needs to be set if there are no sustainability concerns. The QMS provides a better and more secure framework for development of the fishery (and therefore to provide for well-being), and in so doing, to promote New Zealand's interests.

Catch history

- 41 The setting of catch history years is not a part of this decision on whether or not to introduce albacore into the QMS. If the Minister agrees to introduce albacore into the QMS catch history years will be set as a separate decision, when the total allowable catch, and total allowable commercial catch is determined. However, catch history was a significant issue raised during previous consultation when it was proposed to introduce albacore into the QMS on 1 October 2005.
- 42 The Minister of Fisheries has discretion to determine which catch history years will be set for albacore. Current management arrangements for albacore include a decision by the previous Minister of Fisheries, after consultation, that if catch history is used as a basis for allocation for tuna fisheries in the future then that catch history is in the past (pre 30 September 2002). The purpose of signalling these intentions concerning qualifying catch history years was to discourage fishers from increasing their fishing effort in order to build their catch history in anticipation of the possible introduction of tuna into the QMS.
- 43 Following a further review of long term management arrangements for highly migratory species the Minister made a decision in principle to specify qualifying catch history years for albacore as 1 October 2000 to 30 September 2002.
- 44 Some tuna industry organisations disagreed with the proposed catch history qualifying years and an opportunity for further input into this decision in principle was provided. There was however no strong consensus among permit holders for change. Having considered responses to the second review, the Minister confirmed his previous decisions regarding the qualifying catch history period for albacore. The Government's position is that this decision in principle continues to stand.
- 45 Submissions at the time noted the constraint and the change in investment in the fishery that resulted from the Minister's decision in principle. Fishers have little incentive to invest in expanding their interest in the fishery other than the annual returns from any additional catch, given that they will not accumulate catch history past 30 September 2002.
- 46 Likewise new entrants face the same barriers to investment. Their future participation remains at risk. It is accepted that in setting catch history years, some fishers will be disadvantaged. However, there has been a lack of consensus within industry as to which years would be best, and there has been no formal proposal to extend the qualifying period to include more recent years.
- 47 MFish considers that a decision to again defer QMS introduction will only further exacerbate the potential difficulties that fishers face in developing and investing in the albacore fishery. There is the possibility that deferral will create a situation where the existing participants in the fishery will mostly be fishers who were not involved in the fishery during the qualifying catch history period, particularly with the changing

economics of the fishery as well as fleet rationalisation. To prevent this happening, MFish considers that albacore should be introduced into the QMS as soon as possible.

Determination about Current Management

- 48 MFish considers that the current management framework may not be adequately managing environmental effects of longlining for albacore. It also does not provide the best management framework to enable people to provide for their social, cultural and economic well-being, given that fishers would like to develop the fishery.

Use of Section 11 Sustainability Measures

- 49 MFish notes that regulatory measures currently require the use of tori lines to mitigate seabird capture in the tuna longline fisheries. However, MFish considers that introduction to the QMS will provide better opportunity to manage environmental effects and enable utilisation through allocation of rights than use of a measure or measures imposed under s 11. Allocation of rights will provide better incentives than exist currently for rights holders to collectively manage the albacore fishery. Allocation of transferable rights also provides the best opportunity to enable social, cultural and economic well-being in the fishery.
- 50 Accordingly, MFish does not consider that the purpose of the Act would be better met by setting, on their own, one or more sustainability measures under s 11, compared to the benefits of introduction to the QMS.

Highly Migratory Species Considerations

- 51 Albacore is a highly migratory stock. MFish is not proposing to introduce the species outside the EEZ into the QMS at this time.

Conclusion

- 52 There are no known sustainability issues for albacore in the NZ EEZ. The stock is not likely to be fully utilised. However, there have been substantial changes in the fishery in the most recent fishing years. There has been a significant reduction in the longline fleet, as well as a decrease in the number of boats trolling for albacore. Catches have also decreased, in line with this reduction in effort.
- 53 Importantly, there are concerns for albacore in the wider south Pacific region. There is a risk that anticipated increases in catches throughout the range of the species will reduce catch per unit effort to low levels, particularly in areas of locally concentrated fishing effort. Regional management measures are likely to be implemented for albacore shortly, in response to such risks.
- 54 There are environmental impacts associated with longlining for albacore (and other tuna species). The longline method generically takes a number of seabirds and some limited catch of associated rare or protected species such as turtles and marine mammals.
- 55 Environmental impacts on seabirds are currently mitigated via a regulatory measure requiring the use of tori lines and further voluntary measures implemented by the joint

venture tuna longline fleet. Further sustainability measures could be implemented under s 11 or voluntarily to mitigate additional impacts. However, MFish considers further sustainability measures imposed under s 11 on their own may not be successful in further mitigating effects, if albacore was to remain outside the QMS and be managed under an open access regime. Additional regulatory controls may inhibit people's ability to provide for their social and cultural well-being.

- 56 MFish considers that allocation of rights provides a better opportunity to create incentives for stakeholder management. Such allocation improves rights holders' ability to identify and implement the most efficient solutions for mitigating adverse effects through collective action. This in turn also creates an opportunity to better provide for utilisation which is not available in the current management framework.
- 57 There may be development opportunity in the albacore fishery. However, the existing open access management framework fails to produce an environment conducive for investment or development, and as such does not adequately enable well being.

Stock and Areas

- 58 Albacore tuna that occur in New Zealand fisheries waters are part of a south Pacific stock. NIWA has recommended a single QMA for New Zealand fisheries waters for a stock boundary for albacore tuna.

Proposed Quota Management Areas

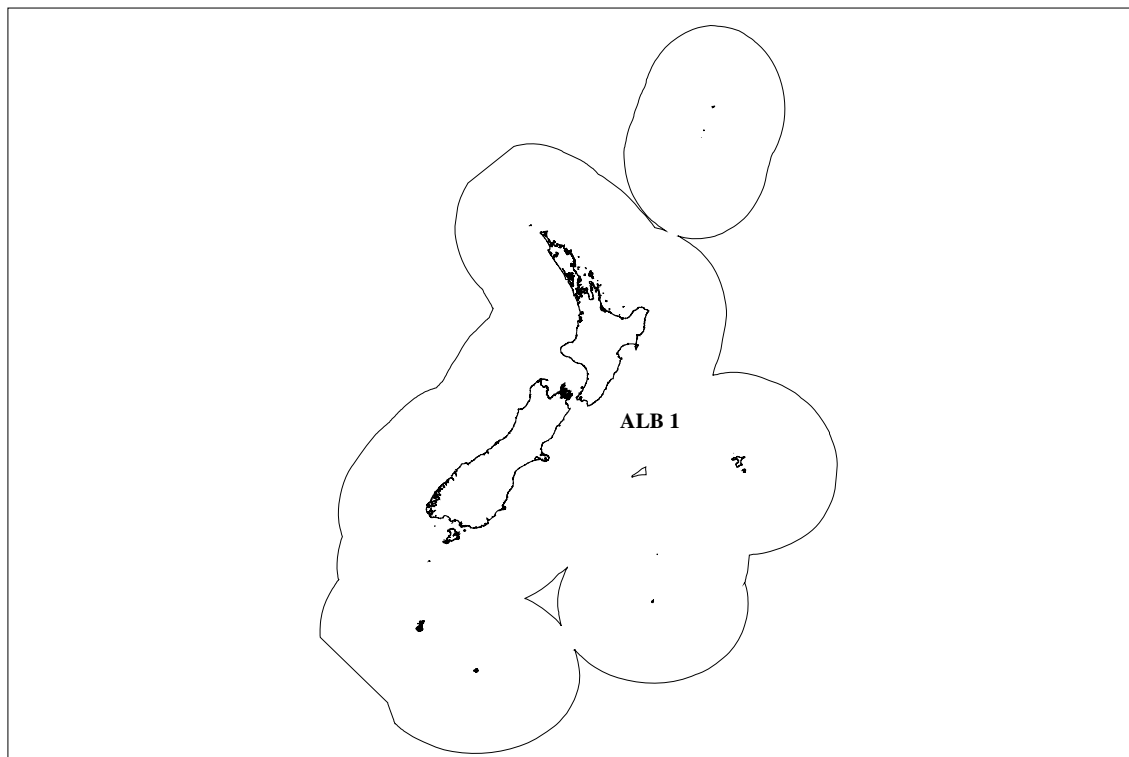
- 59 The Act requires that, as far as practicable, the same QMAs be maintained for different species. In this case it is most relevant to consider management arrangements that apply to other highly migratory species. In the absence of regional management measures, MFish has decided not to propose including the high seas in the QMAs for other highly migratory species at this time (an exception is for southern bluefin tuna). In effect, New Zealand fisheries waters are being used to define a unit for the purpose of management. A single QMA for New Zealand fisheries waters applies to other tuna (other than southern bluefin tuna) and related bycatch that is taken by surface longline. MFish's initial view is that the QMA for albacore should be the same as for these related species.
- 60 A single QMA for all of New Zealand fisheries waters would be efficient in that it would allow fishers to take their annual catch entitlement wherever the fish are most abundant and/or fishing costs are lowest. MFish policy principles indicate that stock boundaries should take into account the existing characteristics of the fishery (known fisheries, relevant fisheries management issues). There are no issues that would suggest an alternative QMA option for albacore, given the management arrangements for other tuna and highly migratory bycatch species.
- 61 The Act also requires that a separate QMA may be set for the waters surrounding the Chatham Islands if the stock can be managed effectively as a unit. Albacore tuna are not regularly caught around the Chatham Islands, and there is no reason to consider this area as a separate management unit. MFish concludes that this area can not be effectively managed as a unit.

Proposal

ALB 1 (FMAs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

62 The proposed QMA encompasses all New Zealand fisheries waters, including the Kermadec fisheries management area (refer Figure 1).

Figure 1: Proposed QMA for albacore tuna.



Fishing Year

63 The current fishing year for albacore is from 1 October to 30 September. The alternative fishing year is 1 April to 31 March.

64 Albacore is often taken in association with bigeye and other tunas. A 1 October fishing year is applied to these other tuna species, and MFish considers that albacore should be aligned with them.

65 Accordingly, should albacore be introduced into the QMS, MFish proposes that the fishing year be from 1 October to 30 September.

Unit of Measure

66 Greenweight has been used historically for management purposes in the tuna fisheries. MFish considers there is no reason to change this unit of measure should albacore be introduced into the QMS, and accordingly proposes that greenweight be retained as the unit of measure.