



Ministry of
Fisheries
Te Tautiaki i nga tini a Tangaroa

National Fisheries Plan for Highly Migratory Species (HMS)

Approved by the Minister of Fisheries under s.11A of the Fisheries Act 1996
2010–2015



New Zealand Government

Foreword

*Tēnā tātou kātoa e whai nei i ngā tapuwae o Tangaroa-whaiariki
me ōna tini me ōna mano.
Heoi ano te mihi atu ki te Kaihanga o Ngā Mea Katoa.
Te Timatanga me te Mutunga.
Rātou ki a rātou, tātou ki a tātou.
Tihēwa mauri ora!*

*Greetings to those who follow in the footsteps of Tangaroa and his myriad
descendants of the sea. We acknowledge the Great Creator of all things,
the beginning and the end. We farewell those who have passed on to the spirit world. To
those who remain, we rejoice in the breath of life.*

Our fisheries provide valuable cultural, social, and economic benefits for all New Zealanders. We need to ensure these valuable natural resources are managed in an environmentally sustainable way. We also should aim for New Zealanders to get the best value from these resources.

To this end, the Ministry of Fisheries is leading the development of Fisheries Plans. Fisheries Plans will make management more transparent and accountable by setting out objectives, describing how these objectives will be achieved, and how levels of achievement will be monitored. This will provide more certainty for everybody with an interest in these fisheries.

The Ministry of Fisheries has developed the National Fisheries Plan for Highly Migratory Species (otherwise known as 'HMS') in conjunction with a Fisheries Plan Advisory Group. The plan outlines an overarching goal, outcomes, and management objectives for New Zealand fisheries for HMS including large tunas and billfish; skipjack tuna; albacore tuna; and oceanic shark species that are of great importance to many fishers, as well as those who value the marine environment. This group of species is unique in that we need to work with other nations to secure the sustainable management of these resources.

I have approved this plan under section 11A of the Fisheries Act to guide fisheries management of highly migratory species for the next five years. I commend the efforts of those stakeholders involved in its production.



Hon Phil Heatley

Minister of Fisheries and Aquaculture

September 2010

Tau mai ko te mauri
Ko te mauri o Ranginui ki runga

Ko te mauri o Papatuānuku ki raro

Ko te mauri o Tangaroa-whaiariki e hora nei!

Whakarongo! Tītiro!
Ka hikimata te tapuwae o Tangaroa-whaiāriki
Ka whaimata te tapuwae o Tangaroa-whaiāriki
Ka teretere te tapuwae o Tangaroa-whaiāriki
Ka whakawhiti atu e Tangaroa-whaiāriki
Ki Te Moana Tapokopoko a Tāwhaki!

Tangaroa! Ka haruru! Ka haruru!

Here rests the life-force
The life-force of Ranginui, the sky
father above
The life-force of Papatuanuku, the
earth mother below
The life-force of Tangaroa, guardian
of all seas!
Now listen! Now look!

As the eager, bounding strides of
Tangaroa

Cross relentlessly to and fro
Across the rough, turbulent ocean of
Tāwhaki
Tangaroa! Resound! Rumble!

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List of Abbreviations

6 th schedule	A schedule of the Fisheries Act 1996 that outlines provisions for the return of specified quota management species to the sea
ACAP	Agreement on the Conservation of Albatrosses and Petrels
ACE	Annual Catch Entitlement
B _{MSY}	The biomass level that can produce the maximum sustainable yield from a fish stock.
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on Migratory Species
CPUE	Catch per unit effort
DOC	Department of Conservation
EEZ	Exclusive Economic Zone
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organisation of the United Nations
FFA	Forum Fisheries Agency, a pan-Pacific body that provides expertise, technical assistance and other support to its members on tuna resources and their management.
<i>Fisheries 2030</i>	'Fisheries 2030 – New Zealanders maximising benefits from the use of fisheries within environmental limits' is the Government's strategy for the fisheries sector. See www.fish.govt.nz
HMS	Highly migratory species
MFish	Ministry of Fisheries
NPOA—Seabirds	National Plan of Action to Reduce the Incidental Catch of Seabirds in New Zealand Fisheries
NPOA—Sharks	National Plan Of Action for the Conservation and Management of Sharks
NZSFC	New Zealand Sports Fishing Council (formerly New Zealand Big Game Fishing Council)
NZRFC	New Zealand Recreational Fishing Council
QMS	Quota Management System
RFMO	Regional Fisheries Management Organisation
TAC	Total Allowable Catch
TACC	Total Allowable Commercial Catch
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission

Overall Goal

New Zealanders maximising benefits from the use of fisheries within environmental limits

Outcomes

Use Outcome: Fisheries resources are used in a manner that provides greatest overall economic, social, and cultural benefit

Environment Outcome: The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for future and current use.

Governance Conditions: Sound governance arrangements that are well specified, transparent, and which support cost-effective and accountable decision-making

Management objectives

Use Outcome	1	Promote a viable and profitable tuna fishery in New Zealand
	2	Maintain / enhance world class gamefisheries in New Zealand fisheries waters
	3	Deliver fair opportunities for access to HMS fisheries
	4	Minimise wastage and promote humane treatment
	5	Maori interests (including customary, commercial, recreational and environmental) are enhanced
Environment Outcome	6	Maintain a sustainable fishery for HMS within environmental standards
	7	Implement an ecosystem approach to fisheries management, taking into account associated and dependent species
	8	Protect, maintain, and enhance fisheries habitat
	9	Allow for HMS aquaculture development while ensuring the ecosystem and wild fisheries are protected
Governance conditions	10	Recognise and provide for Deed of Settlement obligations
	11	Influence international fora and ensure New Zealand interests are taken into account
	12	Maintain an effective fisheries management regime

Summary of management objectives and strategies over timeline of the national fisheries plan for HMS
(for further description of the priority ratings see page 11)

HMS management objectives	Strategies	Five year prioritisation				
		2010-11	2011-12	2012-13	2013-14	2014-15
Use Outcome						
1 Promote a viable and profitable tuna fishery in New Zealand						
1.1 Reduce administrative barriers to profitability in the HMS fishery	Annually assess costs and cost-effectiveness of required services, and key economic indicators including catch rates. Characterise development opportunities and drivers of profitability in the surface longline fishery in conjunction with industry (P3). Other possible actions include amending cost recovery rules and/or reviewing TAC/Cs (P2).	Annual review of services				
			P2			
			P3			
1.2 Negotiate favourable country allocations for New Zealand fishers	Advocate allocations that take into full account New Zealand interests. Review management arrangements including catch limits as required to take into account international agreements.	P1				
2 Maintain / enhance world class gamefisheries in New Zealand fisheries waters						
2.1 Maintain / enhance recreational catch rates for HMS gamefisheries	Monitor trends in recreational catches, and review management if trigger reached. Investigate recent low catches of yellowfin tuna (P1), and assess the value of the gamefishery for Pacific bluefin tuna (P2).	Annual monitoring of catch trends				
		P1		P2		
3 Deliver fair opportunities for access to HMS fisheries						
3.1 Sector groups develop coordinated, collaborative responses to potential spatial conflicts	Establish a process to identify and manage any areas of inter-sector conflict as required.		P3			
4 Minimise wastage and promote humane treatment						
4.1 Encourage full use of catches of HMS and live release of fish that will not be used	Monitor catches including discards of sharks in the commercial fishery, and landings and releases in the gamefishery for Pacific bluefin (P1).	On-going monitoring				
		P1 Establishment of charter reporting				
5 Maori interests (including customary, commercial, recreational and environmental) are enhanced						
5.1 Take into account the unique differences between individual iwi and hapu in management of HMS	Identify specific relationships of iwi and hapu with HMS (P1), including through iwi fisheries plans in the longer term (P3).	P1		P3		
5.2 Ensure abundant HMS for customary use	Encourage collection of information on customary catches of HMS, and consideration of HMS when customary tools are used.	P3				

HMS management objectives		Strategies	Five year prioritisation				
			2010-11	2011-12	2012-13	2013-14	2014-15
Environment Outcome							
6 Maintain a sustainable fishery for HMS within environmental standards							
6.1	Encourage management of HMS at specified target reference points	Identify targets and limits for southern bluefin tuna, yellowfin tuna and bigeye tuna by 2012, and for skipjack, swordfish and albacore in subsequent years	P1 Southern bluefin, yellowfin, bigeye		P1 Skipjack, swordfish, albacore		
6.2	Comprehensive reporting framework for New Zealand flagged vessels fishing outside the New Zealand zone that allows for independent verification of catch	Actions to achieve this objective include improving estimation and reporting of bigeye and yellowfin bycatch by New Zealand-flagged purse seine vessels (P1); improving management of data on high seas fishing (P2); and reviewing regulations for fishing on the high seas (P4).	P1				
				P2			
							P4
6.3	Improve knowledge of HMS fisheries	Develop medium-term research plans. Characterise New Zealand fisheries for HMS as required. Active participation by New Zealand scientists and support for science-based decision-making by RFMOs.	P1				
7 Implement an ecosystem approach to fisheries management, taking into account associated and dependent species							
7.1	Avoid, remedy, or mitigate the adverse effects of fishing on associated and dependent species, including through maintaining foodchain relationships	Monitor availability of information on this topic and undertake desktop studies as appropriate, particularly in association with international science processes.	P3				
7.2	Minimise unwanted bycatch and maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach	Participate in international science processes; review domestic management to ensure alignment with international and national standards; audit performance against agreed standards.	P1				
7.3	Increase the level and quality of information available on the capture of protected species	Monitor incidental catches of protected species (P3), including comparisons of observer and fisher reports of non-fish bycatch (P2). Annual operational plans will specify target observer coverage levels.	On-going (P3)				
				P2			
7.4	Recognise the intrinsic values of HMS and their ecosystems, comprising predators, prey, and protected species	Maintain a watching brief on international processes that identify species at risk, and implement the prohibited utilisation standard as required (P3).	On-going watching brief				
					P3		
8 Protect, maintain, and enhance fisheries habitat							
8.1	Identify and where appropriate protect habitats of particular significance to HMS, especially within New Zealand waters	Monitor availability of information collected by other agencies (P3), and if necessary undertake a desk top study to consolidate the habitat information relating to HMS (P4).	Monitor availability of information (on-going) (P3)				
							P4
9 Allow for HMS aquaculture development while ensuring the ecosystem and wild fisheries are protected							

HMS management objectives	Strategies	Five year prioritisation				
		2010-11	2011-12	2012-13	2013-14	2014-15
9.1 Monitor HMS aquaculture development, its potential, and potential for disease transfer and stock depletion	Maintain a watching brief on aquaculture development.	On-going watching brief (P4)				
Governance Conditions						
10 Recognise and provide for Deed of Settlement obligations						
10.1 Implement Deed of Settlement obligations as they relate to HMS	Annually review Deed of Settlement protocols, iwi fisheries plans and other documents as they become available to identify items of relevance for incorporation into management as appropriate.	Annual review (P2)				
11 Influence international fora and ensure New Zealand interests are taken into account						
11.1 Decisions taken by relevant RFMOs and associated bodies take into account New Zealand interests	Hold briefings and debriefings with fisheries stakeholders as required (P1), and influence RFMOs to take into account New Zealand interests (P3). This work is on-going; a short term focus is development of the International Fisheries Strategy collaboratively with industry and others (P1).	On-going (stakeholder meetings – P1); influence RFMOs (P3)				
		P1 International fisheries strategy				
11.2 Build strong relationships with other fishing nations, in order to influence international fora	Attend international meetings as required, including engaging in regional processes (e.g. FFA, Te Vaka Moana – P1). Opportunistically hold bilateral and multilateral meetings.	On-going (P3)				
		P1 (Te Vaka Moana work)				
11.3 Improve Maori capacity to engage with other stakeholders in international fora	Make opportunities to participate in New Zealand delegations available to Maori with interests in HMS, and explore potential funding sources for such participation.	On-going (P3)				
11.4 Monitor new and existing fisheries in the vicinity of New Zealand fisheries waters and identify potential threats and opportunities	Annually monitor new and existing fisheries in the vicinity of New Zealand's EEZ, and undertake compliance actions as required. In time, the compliance strategy outlined below will include activities aimed at achieving this objective.	P1				
12 Maintain an effective fisheries management regime						
12.1 Develop a specific compliance strategy for HMS	Develop a specific domestic compliance strategy and a strategy for input into international compliance regimes.	P1				
12.2 Ensure foreign vessels know and abide by the relevant rules and voluntary agreements for HMS fishing in New Zealand	Develop policies on relevant controls on foreign vessels (e.g. conditions of licensing and registration) (P2), and set appropriate observer coverage levels (on-going).	Annual review of charter applications received				
			P2			
12.3 Enable public assessment of how HMS fisheries are managed	Produce opportunistic media articles on HMS management, and meet annually with the fisheries plan advisory group to review implementation of the plan.	On-going (P3)				

1. Introduction

This national fisheries plan for highly migratory species (HMS) establishes objectives for the management of New Zealand fisheries for HMS, and identifies strategies for achieving the objectives. The plan covers the period 2010 to 2015.

This plan, along with supporting processes, will provide an integrated, transparent way of working out what management and services should be provided in HMS fisheries, including those services required to meet relevant legislative obligations and standards.

Consistent with its Treaty obligations, the Ministry of Fisheries has developed this plan in conjunction with Maori, and the Ministry has tried to bring together the views of tangata whenua, commercial and recreational fishers, and those who value the marine ecosystems in which HMS are found.

The goal and outcomes outlined in the National Fisheries Plan for Highly Migratory Species reflect *Fisheries 2030* – the Government’s 20-year plan for the fisheries sector. The goal, outcomes, and management objectives outlined in this national plan are common to all HMS fisheries. Additional operational objectives have been developed for specific HMS fisheries, and are included in fishery-specific documents rather than in this national plan.

Structure

The National Fisheries Plan for Highly Migratory Species describes the overall strategic direction for New Zealand’s fisheries for highly migratory species, including:

- 1 Introduction;
- 2 Background – legislative and policy context for the National Fisheries Plan for Highly Migratory Species;
- 3 Management objectives – description and status; and
- 4 Profile of HMS fisheries sector (appendix 1).

Fishery-specific plans provide additional detail on how the National Fisheries Plan for HMS will be implemented in specific HMS fisheries. Fisheries for HMS are grouped as follows, based on biological and fishery characteristics.

Fisheries for **large pelagic species** include commercial surface longline fisheries for southern bluefin tuna, bigeye and swordfish, and recreational fisheries for marlins, swordfish, and large tunas. Recreational fishers also take both skipjack and albacore tunas. Commercial purse seine fisheries for **skipjack tuna** occur both within New Zealand fisheries waters and in the western and central Pacific (on the high seas and by agreement in other countries’ zones). Commercial troll fisheries for **albacore tuna** occur within New Zealand fisheries waters. Elsewhere in the Pacific, and to some extent in New Zealand, albacore is also the target of longline fisheries.

An **annual operational plan** and an **annual review report** will be developed to implement and monitor the operation of the National Fisheries Plan for Highly Migratory Species.

Annual operational plans

The National Fisheries Plan for Highly Migratory Species provides an overarching framework for the management of HMS fisheries for a five year period. Details of the day-to-day management measures that will be implemented for each individual fishery will be specified in an annual operational plan. The annual operational plan will also consider the required services, delivery mechanisms and service prioritisation issues.

The annual operational plan will set out:

1. How individual fisheries will be managed during the fishing year.
2. Key tasks that will be undertaken to support the successful delivery of the operational tasks specified in the individual fishery chapters.
3. The core services (field operations, research and regulatory) that will be required in each fishing year to deliver fisheries objectives. In situations where there are limited business group resources and competing tasks and objectives, the operational plan will also prioritise which services should be delivered including a rationale for this prioritisation.

The annual operational plan will be produced before the start of each financial year. Its production will be aligned with planning and prioritisation processes within the Ministry of Fisheries.

Annual review reports

A formal annual review process will be used to monitor the successful delivery of these tasks. An annual report will outline the performance of the HMS fishery against that year's operational plan.

The annual review report will be completed by December for the fishing year ending in September. The annual review report will be used as a resource for mid-year reviews of the annual operational plan, to ensure tasks and services continue to be prioritised appropriately given the results of the annual review.

Both the annual operational plan and the annual review report will be publicly available, and will be provided to the Minister of Fisheries.

Legal status

The Minister of Fisheries (the Minister) has approved this national fisheries plan under section 11A of the Fisheries Act 1996. It is intended to apply for the period 2010 to 2015 unless reviewed earlier. The approval of this plan does not preclude consideration of a stakeholder-developed plan that may provide additional guidance on the management of New Zealand fisheries for HMS.

Section 11A provides general guidance on what a fisheries plan may contain. Section 11A(2) states that a plan may relate to one or more stocks, fishing years, or areas or any combination of these things. Section 11A (3) states that the plan may include various things including fisheries management objectives to support the purpose and the principles of the Act.

In approving this plan, the Minister has agreed to the following:

- The management objectives and strategies that will guide the management of all New Zealand fisheries for HMS over the next five year period; and
- The proposed implementation of the plan, including the development of fishery-specific chapters, Annual Operational Plans, and Annual Review Reports

Although the Minister will be provided with an opportunity to consider the fishery-specific chapters, the Annual Operational Plan and the Annual Review Report, these components will not be approved under section 11A.

Section 11A provided the legal basis for development of the National Fisheries Plan for HMS and will guide its implementation through the Annual Operational Plan and Annual Review Report. None of the management objectives and strategies, or the tasks to support operational objectives, will diminish the legal requirement to ensure the purpose and principles of the Fisheries Act 1996 are met. Over time, if there are conflicts between any part of the National Fisheries Plan for Highly Migratory Species and legislative obligations as set out in the Fisheries Act, then the legislative requirements unequivocally take priority.

Section 11(2A) specifies that the Minister must take into account this approved fisheries plan before he or she sets or varies any sustainability measure for HMS under Part III of the Act (sections 11–16) or when making decisions or recommendation to regulate or control fishing for HMS (as outlined in section 112A). Although the Minister takes into account the content of the fisheries plan when performing various functions under the Act, the Minister may make a decision that is different to what is set out in the fisheries plan, provided that in making that decision the content of the fisheries plan was clearly taken into account.

Under section 12 of the Fisheries Act, the Minister is also required to consult fisheries stakeholders and allow for the input and participation of tangata whenua if the national fisheries plan for HMS is amended or revoked. In doing so, the consultation process should include reasons for the proposed changes.

Nothing contained in a fisheries plan changes the Crown's obligations to Maori under the Treaty of Waitangi. The Crown's obligations are specified in legislation such as the Maori Fisheries Act 2004, the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, individual iwi treaty settlement protocols, and the Fisheries Act 1996. One way in which the Crown aims to give effect to its obligations is through iwi fisheries plans. In turn, fisheries plans will incorporate relevant objectives and prioritisation information from iwi fisheries plans.

2. Background

Legislative context

Parts 1 and 2 of the Fisheries Act outline broad principles and obligations under which the Ministry of Fisheries operates. In particular, Part 1, section 5 draws attention to the following obligations:

- New Zealand's international obligations relating to fishing; and
- The provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

Some additional information is provided below on the obligations outlined in section 5.

Part 2 of the Fisheries Act sets out the broad purpose and principles of the Act. The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability (section 8). Section 9 establishes the following environmental principles that shall be taken into account:

- Associated or dependent species should be maintained above a level that ensures their long-term viability;
- Biological diversity of the aquatic environment should be maintained; and
- Habitat of particular significance for fisheries management should be protected.

Section 10 of the Act outlines information principles for decision makers as follows:

- Decisions should be based on the best available information;
- Decision makers should consider any uncertainty in the information available in any case;
- Decision makers should be cautious when information is uncertain, unreliable, or inadequate;
- The absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.

International obligations

Highly migratory species are specifically defined in Annex 1 of the United Nations Convention on the Law of the Sea of 10 December 1982 (see annex 1a below). To enable New Zealand to meet its obligations under this Convention and its associated agreements¹ to ensure the conservation and optimum utilisation of such species, HMS are further specified in Schedule 4B of the Fisheries Act 1996 (the Act) (see annex 1b).

General obligations relating to highly migratory species arise because New Zealand is a signatory to various international agreements on management of marine resources. Specific obligations also arise because of New Zealand's participation in relevant regional fisheries management organisations.

¹ In particular the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

This fisheries plan establishes key principles for how New Zealand fisheries for highly migratory species shall be managed. In general, these principles can be applied directly to domestic management of highly migratory species. In addition, New Zealand may advocate for the regional fisheries management organisations that develop conservation and management measures for these stocks to also apply these principles.

International context and influences on New Zealand HMS fisheries

International law attributes sovereign rights (but not 'sovereignty') to coastal states over marine living resources within their exclusive economic zones (EEZs). These rights include the right to manage, explore and exploit those resources to the exclusion of other states.² However, a coastal state does not have complete freedom to do as it chooses with respect to those marine resources. A wide range of obligations seek to safeguard the interests of the international community. Depending on the type of species, coastal states must provide for optimum utilisation of stocks within their jurisdiction, and must cooperate with other states in the management of trans-boundary and highly migratory fish stocks.³

While the majority of regional fisheries management organisations (RFMOs) were established prior to its finalisation, the 1995 United Nations Fish Stocks Agreement outlines the respective roles of coastal states and flag states in the management of highly migratory fish stocks, and sets out the framework for cooperation and management within RFMOs.

The right to fish for highly migratory fish stocks both on the high seas and within exclusive economic zones is increasingly subject to obligations of cooperation with other countries in the management of those stocks throughout their range. RFMOs are the primary vehicle for cooperation between interested countries in the management of HMS.

Two RFMOs are of direct relevance to management of New Zealand fisheries for HMS:

- i. The Commission for the Conservation of Southern Bluefin Tuna (CCSBT); and
- ii. The Western and Central Pacific Fisheries Commission (WCPFC)

The mandate of the Commission is to ensure, through appropriate management, the conservation and optimum utilisation of southern bluefin tuna. New Zealand is a foundation member of the CCSBT, and a signatory to the convention. The CCSBT does not encompass any specific convention area, and measures apply throughout the range where southern bluefin tuna is caught.

Management of other HMS species in the western and central Pacific is the responsibility of the Western and Central Pacific Fisheries Commission. The WCPFC convention area is shown below (figure 1).

As a member of these conventions, New Zealand is responsible for ensuring management measures applied within New Zealand fisheries waters are compatible with those of the two RFMOs, and fishing by New Zealand flagged vessels both within and beyond the New Zealand EEZ is carried out in accordance with any measures put in place by the relevant RFMO. From a proactive point of view, as an active participant in both organisations New Zealand is able to have its say and influence the manner in which HMS are managed by both RFMOs. In addition, where New Zealand takes proactive measures to manage HMS within the New Zealand EEZ that are consistent with broader international obligations, there is arguably an onus on the RFMO to ensure any specific measures it applies are compatible with those national measures.

² United Nation Convention on the Law of the Sea 1982. Articles 61, 62.

³ United Nation Convention on the Law of the Sea 1982 Articles 61 to 64. Agreement for the implementation of the provisions of the United Nation Convention on the Law of the Sea of 10 December 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks. Article 8.

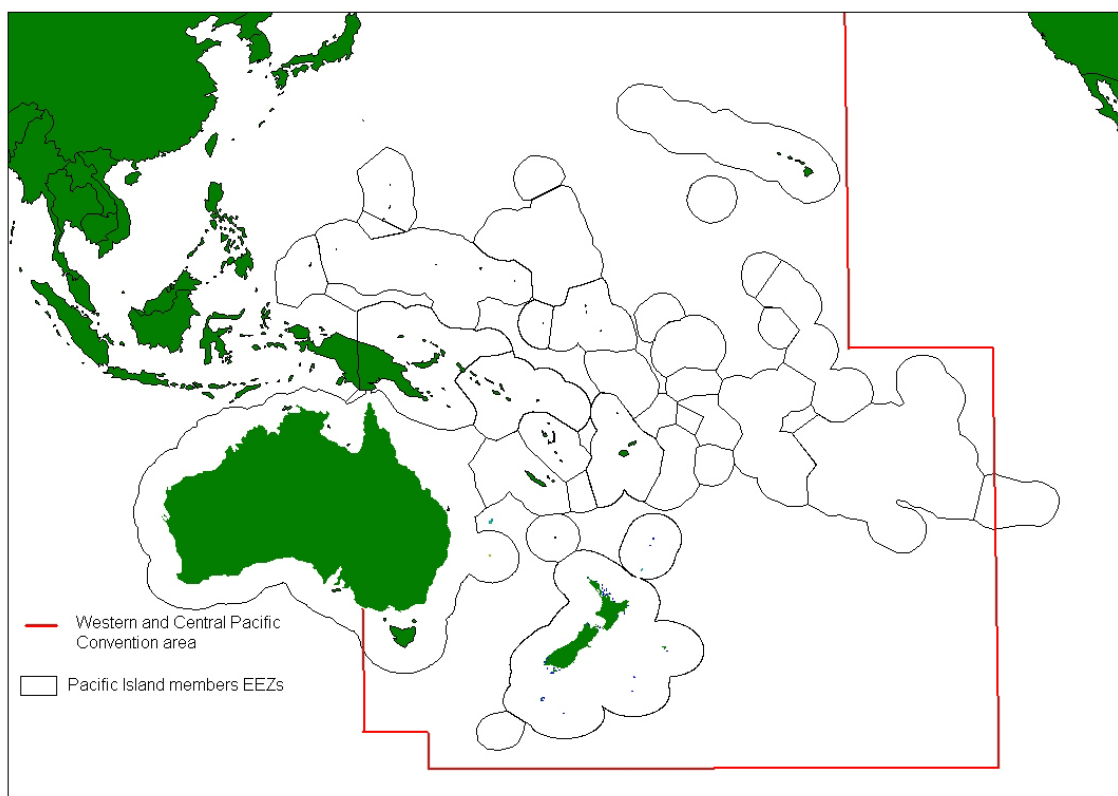


Figure 1: Western and Central Pacific Fisheries Convention Area

Treaty of Waitangi settlement obligations

Obligations under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (and individual iwi Deeds of Settlement) can be considered in two broad categories:

- Specific obligations relating to use (both commercial and non-commercial); and
- More general obligations relating to the right of tangata whenua to participate in fisheries management decisions and have their values and aspirations (kaitiakitanga) given particular regard.

Fisheries management decisions provide the framework for the exercise of the specific use rights.

Specific Treaty obligations in the Fisheries Act provide for commercial elements of the settlement (through 20% of quota as new species enter the Quota Management System – QMS) and non-commercial elements (through regulations providing for customary use). The more general obligation to provide for tangata whenua participation and have particular regard to kaitiakitanga⁴ requires the development of processes which allow:

- 1 tangata whenua to express kaitiakitanga, particularly as it related to fisheries management, and then

⁴ This obligation is contained in s12(1)(b) of the Fisheries Act 1996. The Ministry considers that obligation to “provide for the input and participation” is a more active duty than consultation generally requiring earlier engagement with tangata whenua (at the option definition stage, rather than the evaluation of options). It implies some responsibility to help build the capacity of tangata whenua to participate in fisheries management processes, rather than just supplying information on those processes.

- 2 tangata whenua expressions of kaitiakitanga to be given particular regard when determining what issues should be on the fisheries management agenda, and what the response to those issues should be.

The Ministry decided in 2009 that it would support tangata whenua to develop iwi fisheries plans as a vehicle for them to express their kaitiakitanga aspirations and objectives relating to fisheries (the first point above). These iwi fisheries plans would then be given regard in fisheries management decisions (the second point).

Kaitiakitanga is a broad notion that is intimately connected to other Maori values and principles that together make up tikanga. To enable Maori to express their views and values, fundamental components of tikanga such as rangatiratanga, manaakitanga, and kaitiakitanga need to be considered in the development of fisheries plans (see appendix 2 for further discussion of Maori principles and practices). Each iwi (including their hapu) may express these values in different ways.

Fifty seven Mandated Iwi Organisations and Recognised Iwi Organisations are acknowledged in the Maori Fisheries Act 2004. At the time of writing the Crown also has individual iwi settlements with a fisheries protocol with eleven iwi. These individual settlements are part of the Crown's delivery of the general obligation to all Maori (stated in s10 of the Treaty of Waitangi Claims Settlement Act 1992). In the future, a commitment to develop an iwi fisheries plan will be a central feature in fisheries protocols.

Policy context



Government goals and objectives for the fisheries sector are set out in *Fisheries 2030 – New Zealanders maximising benefits from the use of fisheries within environmental limits*. *Fisheries 2030* identifies the key outcomes to be achieved from the fisheries sector, along with strategic actions that will help to achieve them. Objectives-based management through fisheries plans is one way in which the outcomes identified in *Fisheries 2030* will be achieved.

Fisheries 2030 provides increased certainty about the government goal for the fisheries sector as well as defining the Ministry's priorities in supporting the sector to achieve this long-term goal. The strategy addresses commercial fishing and aquaculture interests as well as the interests of tangata whenua and all other fisheries stakeholders.

Fisheries 2030 sets a long-term goal of New Zealanders maximising benefits from the use of fisheries within environmental limits. In turn this goal encapsulates the ideal or aspirational state for New Zealand's fisheries for HMS.

Additional guidance for the management of HMS fisheries comes from:

- International agreements such as the UN Fishstocks Agreement; the FAO Code of Conduct for Responsible Fisheries; and instruments related to the code of conduct, such as international plans of action and technical guidelines (for example plans of action on sharks and seabirds)
- New Zealand's International Fisheries Strategy (the Minister of Fisheries has approved this draft strategy for consultation, which will occur after the Minister of Foreign Affairs also approves the strategy for release)
- Standards adopted by the Ministry of Fisheries, including the New Zealand Harvest Strategy Standard

Fisheries 2030 outcomes

Fisheries 2030 specifies two outcomes that support the high-level goal and describe more specifically the results desired to maximise the sustainable use of our HMS fisheries resource and to ensure the health of the aquatic environment is maintained.

Each outcome is further specified through a series of supporting outcomes, as shown below. The *Fisheries 2030* goal, outcomes and supporting outcomes establish a broad framework for management of fisheries. The overall HMS management objectives and fishery-specific operational objectives discussed later in this plan provide operational definition to this strategic vision.

USE – Fisheries resources are used in a manner that provides greatest overall economic, social and cultural benefit, including:

- **An internationally competitive and profitable seafood industry that makes a significant contribution to our economy**
- **High quality amateur fisheries that contribute to the social, cultural, and economic well-being of all New Zealanders**
- **Thriving customary fisheries managed in accordance with kaitiakitanga, supporting the cultural well-being of iwi and hapu**
- **Healthy fisheries resources in their aquatic environment that reflect and provide for intrinsic and amenity value**

ENVIRONMENT - The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for current and future use, including:

- **Biodiversity and the function of ecological systems including trophic linkages are conserved**
- **Habitats of special significance to fisheries are protected**
- **Adverse effects on protected species are reduced or avoided**
- **Impacts, including cumulative impacts, of activities on land, air, or water on aquatic ecosystems are addressed**

Governance

Sound governance arrangements are necessary to ensure the successful delivery of these outcomes. Characteristics of sound governance include transparency, cost-effectiveness, and accountability of decision-making. The development of publicly-available annual operational plans and annual review reports will contribute to management that is accountable, responsive, dynamic and transparent.

GOVERNANCE CONDITIONS – Sound governance arrangements that are well specified, transparent, and which support cost-effective and accountable decision-making.

- **The Treaty partnership is realised through the Crown and Māori clearly defining their respective rights and responsibilities in terms of governance and management of fisheries resources.**
- **The public have confidence and trust in the effectiveness and integrity of the fisheries and aquaculture management regimes.**
- **All stakeholders have rights and responsibilities related to the use and management of fisheries resources that are understood and for which people can be held individually and collectively accountable.**
- **We have an enabling framework that allows stakeholders to create optimal economic, social, and cultural value from their rights and interests.**
- **We have an accountable, responsive, dynamic, and transparent system of management.**

As well as the national HMS management objectives outlined in the next section, an overall relationship aspiration is relevant to management of all HMS, and outlines how Maori and the Ministry of Fisheries will interact in the management of these species. This aspiration is to recognise that iwi/Maori have a relationship with highly migratory species, and to provide for such relationships to be maintained. This is reflected through a number of management objectives, including objective 5 (to enhance Maori interests (including customary, commercial, recreational and environmental); and objective 10 (to recognise and provide for Deed of Settlement obligations). Equally, it is relevant to considerations of other objectives, including implementation of an ecosystem approach to fisheries management, and maintaining a sustainable fishery for HMS within environmental standards. Both of these objectives can help to further the relationship of Maori with HMS, by ensuring they remain abundant within healthy ecosystems.

Draft International Fisheries Strategy

The International Fisheries Strategy provides further detail on how the *Fisheries 2030* outcomes and governance conditions will be achieved for international fisheries. The Strategy is intended to guide the New Zealand Government specifically in its work and interactions on international fisheries issues. The proposed goal of the International Fisheries Strategy is to: **Maximise economic and other benefits to New Zealand from our involvement in fisheries internationally, within environmental limits and consistent with our international obligations.**

Use – *Fisheries resources are utilised in a manner that provides greatest overall benefits*

The New Zealand seafood industry is internationally competitive and profitable and makes a significant contribution to New Zealand's economy. Economic benefits can be maximised through creating an environment where uncertainty is minimised. Long-term access rights to international fisheries resources provide greater security for investments by the seafood industry and will enhance the potential for economic return. The removal of measures which distort international trade, or unduly restrict trade, and securing of market access for New Zealand seafood product are also essential to maximising economic returns. New Zealand's strong international reputation is also central to our ability to influence outcomes in international fisheries fora.

Environment – *The capacity and integrity of the marine environment, habitats and species are sustained and protected*

Achieving this outcome includes ensuring the sustainability of fish stocks, avoiding and mitigating the adverse impacts of fishing on the environment, and protecting biodiversity. These obligations are fundamental and essential to achievement of the overall Strategy – without sustainability there is no long-term opportunity to realise benefits from fisheries, domestically or internationally, and the rights of future generations to enjoy benefits from healthy fisheries will have been denied.

Application of the precautionary approach consistent with UN Fish Stocks Agreement⁵ and ecosystem-based management⁶ are central components of achieving this outcome as are the strengthening and reform of governance arrangements over international fisheries.

Governance conditions – *Sound governance arrangements that are accountable, transparent, efficient and effective, and responsive*

Effective governance leads to robust and effective multilateral and regional organisations, frameworks and rules, which are critical to achieving sustainable fisheries and effectively managing the impacts of fishing on the environment. The OECD lists a number of principles that are essential to good governance, including accountability, transparency, efficiency and effectiveness, responsiveness, and forward vision. Participation of stakeholders in decision-making processes fosters legitimacy and creates enduring outcomes. Transparent and accountable implementation of international frameworks and rules, including adequate enforcement and sanctions, is also critical.

Effective governance is a precursor to creating secure and stable conditions and a level playing field where economic and other benefits to New Zealand and other countries, for example throughout the Pacific, can be maximised. Without effective governance, problems such as free-riding, ineffective flag state control and illegal, unregulated and unreported (IUU) fishing occur, compromising efforts to manage fisheries sustainably and to protect the marine environment, and undermining actions taken by responsible flag States and/or vessel operators.

⁵ According to Article 6 of UNFSA, to apply a precautionary approach States should be more cautious when information is uncertain, unreliable, or inadequate; and the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

⁶ Ecosystem-based management requires maintaining the integrity of the marine ecosystem while allowing sustainable harvest of fish stocks. It involves addressing a number of components: i) sustainability of target fisheries; ii) the effects of fishing on non-target species; iii) the effects of fishing on benthic habitats; and iv) the indirect effects of fishing on marine ecosystems such as effects on the food chain.

3. National HMS management objectives and strategies to achieve them

The *Fisheries 2030* goal and supporting outcomes directly influence the management of HMS fisheries by shaping the high-level management objectives that apply to all HMS fisheries. Operational objectives that apply to specific HMS fisheries provide additional detail on what needs to be done in order to achieve the objectives identified for HMS fisheries. At a fishery-specific level, operational objectives and review criteria allow an assessment of performance in relation to the objectives. Monitoring and reviewing the status of HMS fisheries is an integral part of the national fisheries plan.

This section provides the following information for the objectives identified:

- **Assessment:** What is the current status of the fishery in relation to the objective
- **Risk:** What is likelihood that current management will not achieve the objective?
- **Priority:** What is the priority associated with achieving the objective?
- **Performance criteria:** How will performance be measured?
- **Strategies:** what approach would be required in order to achieve the objective over time, bearing in mind the priority of the objective, and the cost-effectiveness of actions required to achieve it?

The priorities are based on the following criteria:

Priority	Description
P1	Management objectives that are considered a high priority for delivery. The focus in the early years of the National Fisheries Plan for Highly Migratory Species will be to deliver services and complete the tasks for the fishery-specific operational objectives that underpin P1 management objectives.
P2	High priority but longer term management objectives. Typically this is because the successful completion of more than one fishery-specific operational objective is required before the management objective can be achieved.
P3	Management objectives that have a high priority but successful implementation is influenced by external factors. The influence of external factors can mean that despite a priority focus, these objectives may not be achieved during the initial five year timeframe.
P4	Management objectives where the timeframe for the delivery will be during the latter part of the five year period. In some instances the management objectives may be achieved before the five year period has elapsed but in others successfully achieving the management objective will not occur until the second five year period.

Management Objectives to support Use Outcome

Fisheries resources are used in a manner that provides greatest overall economic, social and cultural benefit

Management Objective 1	Promote a viable and profitable tuna fishery in New Zealand
1.1	Reduce administrative barriers to profitability in the HMS fishery

Assessment:

Many determinants of profitability for New Zealand HMS fisheries are outside of direct fisheries management control (e.g. the cost of fuel, the value of the New Zealand dollar in relation to other currencies, the market or cannery price). Other factors may be open to influence but not direct control. For example, considerations of fishery profitability would generally favour maintaining biomass levels above the level that supports maximum sustainable yields (B_{MSY}) for HMS target fisheries (for further discussion see management objective 7.1).

Commercial fisheries are subject to government compliance costs from a range of sources, including not just the Ministry of Fisheries but also ACC, Maritime New Zealand, and food safety requirements. Ministry of Fisheries levies are charged for all key target and bycatch species (see Appendix 1).

Levies cover directed services such as research and generic services such as compliance and registry services. Generic levy charges are derived from a combination of total allowable commercial catch (TACC; for QMS species) or recent catches (for non-QMS species) and port price. Target species of the pelagic longline fishery are relatively high value and therefore attract a larger proportion of the costs than indicated by the scale of the fishery itself. Where TACCs are set higher than current catches, the levy is also higher than it might be if based on actual catches. Any change in this approach would require a review of Ministry policy, including potentially a change in cost recovery rules. Another alternative would be to review total allowable catches (TACs) and TACCs for those stocks that remain substantially under-caught (but attract high levies because of their high TACC). A variable TACC could be set that could be raised in-season in the event of increased availability of the stock. This approach could also be considered for non-species (skipjack, albacore).

Risk: Medium-high—some HMS fisheries attract high generic levy charges. Profitably is currently good in the skipjack fishery but is lower for large pelagic species, partly because of high costs (including government costs).

Performance criteria

- economic indicators such as catch per unit effort (CPUE)
- ratio of levies to returns from fishery is favourable
- stakeholders participate in high-level planning of service delivery to ensure its cost-effectiveness

Priority: P2 (cost recovery and/or TAC/C reviews); P3 (characterisation work)

Strategies

- Annually assess required services with respect to total fishery costs
- If necessary promote amendments to cost recovery rules for the Chief Executive to consider and/or contribute to any overall review
- Review TAC/Cs for under-caught fishstocks if industry support this approach
- Characterise drivers of profitability and development opportunities in the surface longline fishery in conjunction with industry
- Monitor fishery catch rates and key economic indicators

Assessment:

Country allocations for HMS stocks of interest to New Zealand can be set by CCSBT (for southern bluefin tuna) and by WCPFC (for other HMS including bigeye, yellowfin, skipjack, and albacore tunas, as well as swordfish and other HMS).

While New Zealand does and should continue to contribute to the sustainable management of HMS, key to New Zealand's engagement in the WCPFC is to ensure our domestic fishing interests are not undermined by overfishing in the equatorial Pacific. Fishing effort in this area has expanded considerably in recent years despite WCPFC endeavours to constrain it.

New Zealand is engaged with both the Forum Fisheries Agency (FFA) and the WCPFC to determine management measures for bigeye and yellowfin tuna in the Western and Central Pacific to address scientific advice that these stocks are close to or are being overfished. New Zealand is subject to a limit of 2,000t for bigeye in its longline fishery. The TACC within zone is 766t, of which only a proportion is caught. There is therefore considerable expansion potential in the New Zealand fishery, although this may be limited by fishery economics.

Likewise there is potential for expansion in the New Zealand skipjack fishery in at least some years. The New Zealand fishery targets free (unassociated) schools that do not create the problems with bycatch that occur in the tropical fishery based on Fish Aggregating Devices (FADs). However, the potential increased yields needs to be balanced against the possibility of dissipating returns per vessel if vessel numbers increase.

The WCPFC has criteria for future allocation of rights in HMS fisheries, but the current focus of WCPFC (with limited exception) is the implementation of effort controls. It is problematic for New Zealand to ensure that any measures agreed not only reflect our national interest but are also compatible with the current management framework for our fisheries. Work has also commenced with like-minded Pacific Island countries to find ways to improve the management of southwest Pacific albacore.

With respect to CCSBT, New Zealand has achieved recognition of its historical claims to an increase allocation of southern bluefin tuna. It was agreed at the 2009 meeting of CCSBT that its nominal allocation (which sets New Zealand's share of the fishery) would move to 1,000t, while its actual catches will be lower than this at least in the short-medium term to reflect the poor status of the stock.

Risk: High—there are significant and increasing competing interests for access/allocation in HMS fisheries in the region

Performance criteria

- maintenance of a country allocation for southern bluefin tuna based on the newly increased proportional share of the fishery (subject to sustainability)
- promotion of country allocations for key species managed by WCPFC, including output-based country allocations as appropriate
- effort and/or technical measures implemented by WCPFC are targeted, effective and compatible with New Zealand's management framework
- economic yields are maintained for New Zealand vessels operating in domestic waters, subject to sustainability requirements

Priority: P1

Strategies

- advocate allocations that take full account of New Zealand interests

- implement negotiated country allocations by reviewing domestic catch limits and other international catch and/or effort controls as required
- review management arrangements for albacore and skipjack as required

Management Objective 2	Maintain / enhance world class gamefisheries in New Zealand fisheries waters
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2.1	Maintain / enhance recreational catch rates for HMS gamefisheries
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Assessment:

Recreational catch rates are highly dependent on availability of HMS in New Zealand waters, which depends in turn on stock abundance and oceanic conditions that influence availability in temperate waters from year to year. Recreational fishers have also argued that their catches are affected by commercial fisheries for HMS. Maintaining stocks of HMS in the WCPFC area above B_{MSY} is likely to be in New Zealand's best interests (for both commercial and non-commercial sectors). There is a significant risk that stocks retract their range as they decline. New Zealand will advocate for the adoption of reference points that maintain the current distribution and range of HMS stocks.

Both recreational and commercial catches of yellowfin tuna have been very low in recent years; more information is required to ascertain the reasons for this. Effective management to benefit recreational fisheries relies on good information, not only on catch and catch trends but also on the value of specific fisheries to the nation. The newly developed recreational fishery off the west coast of the south island for Pacific bluefin tuna is a case in point.

Risk: Medium—recreational catch rates vary by season and may be difficult to actively manage.

Priority: **P1** (investigate yellowfin catches); **P2** (valuation of Pacific bluefin fishery)

Performance criteria

- subject to seasonal variation, recreational catch rates reported in New Zealand Sports Fishing Council (NZSFC) records are considered 'satisfactory' by the sector.
- for striped marlin, if CPUE drops below the long-term mean for 3 consecutive years, a management review will be triggered.

Strategies

- Monitor trends using landed catch from NZSFC records, tag and release data from the gamefish tagging database, information from charter vessel reporting, and CPUE from logbook schemes.
- If trigger for management review is reached for striped marlin, assess the need for further action.
- Further investigate possible reasons for low yellowfin catches, including any possible overlap with commercial fisheries for skipjack.
- Investigate the value of the Pacific bluefin tuna fishery.

Management objective 3	Deliver fair opportunities for access to HMS fisheries
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3.1	Sector groups develop coordinated, collaborative responses to potential conflicts
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Assessment:

Agreements between commercial and non-commercial fishers have been negotiated in the past in areas of inter-sector conflict (with varying success), including swordfish in various preferred recreational fishing areas, and yellowfin in the eastern Bay of Plenty. Similarly there is a history of intra-sector conflict resolution in HMS fisheries. Participants

in the fisheries plan advisory group have indicated their commitment to developing coordinated, collaborative responses to potential conflicts wherever possible.

The NZSFC has 60 affiliated clubs (30,000 members) and a relatively strong management structure with resources to advocate for the interests of their members. Many fishing clubs have compiled complete records of gamefish weighed or tagged by members. These records have been used in some instances for monitoring changes in the performance of recreational fisheries and to highlight the need for management change (e.g. the billfish moratorium).⁷

Some fishers are concerned about the decline in abundance of pelagic shark species in recent years. Concerns have also been raised about the availability of yellowfin tuna. It will be important when considering resolution of such issues to separate sustainability effects from those associated with the impacts of one fishing interest group on another. Disputes relating to sustainability are for government to resolve (for example these are specifically excluded from formal dispute resolution procedures determined under the Fisheries Act 1996) and in the case of HMS will rely on advocacy in either CCSBT or WCPFC. The advisory group has provided a forum for existing areas of conflict to be identified and actions have been developed to address these. The annual operating plan and annual review reports will provide vehicles to identify and report on any future conflicts. A generalised process for conflict resolution will assist in this regard (drawing on the approved disputes procedure). It may be appropriate for the Ministry of Fisheries (MFish) to facilitate discussions as required.

Risk: Low-medium—commercial and non-commercial fishers in HMS fisheries have a history of successfully negotiating outcomes, although this is not always easy. The recreational gamefishing sector is fairly well-organised and represented through stakeholder bodies that can negotiate outcomes on their behalf.

Priority: P3

Performance criteria

- Existing and/or potential inter-sector conflicts identified
- A process is set up to identify, manage and find solutions for any areas of inter-sector conflict as required
- Key criteria to trigger a need for management/review are identified (e.g. refer to dispute resolution criteria)

Strategies

- Establish a process to identify and manage any areas of inter-sector conflict as required

Management objective 4	Minimise wastage and promote humane treatment
4.1	Encourage full use of catches of HMS and live release of fish that will not be used

Assessment:

Blue shark, mako shark, porbeagle shark, southern bluefin tuna and swordfish may be released under the 6th Schedule. There is limited evidence to suggest whether 6th Schedule releases would be beneficial for the remaining HMS species (6th Schedule does not apply for Pacific bluefin, yellowfin or bigeye), although Pacific bluefin has been suggested as one for which it may be useful.

Only limited observer data is available to determine whether 6th schedule releases are limited to those fish likely to survive. Observer data from 2008 shows that 68.7% of blue

⁷ The billfish moratorium is the outcome of negotiated agreements between commercial and non-commercial fishers. A key feature is a prohibition on commercial fishers taking marlin in New Zealand fisheries waters or possessing for sale marlin taken from those waters. This is coupled with restrictions on foreign licensed and foreign charter access to the Auckland Fishery Management Area. New Zealand fishers may take marlin on the high seas and land these in New Zealand subject to conditions.

shark are retained; of those released, 95.1% are alive; for mako, 66.5% retained; 93.3% of discards are alive; for porbeagle shark, only 39.9% were retained in 2008 (the figure was 78.1% in 2007); of those released, 78.5% are alive. These figures suggest that particularly for mako and porbeagle, unauthorised discards are occurring (i.e. discards where the fish cannot be classified as likely to survive, as required under the 6th schedule), although the volume of fish involved is small.

Data is not available for non-commercial shark fisheries, but this objective applies equally to such fisheries, where fishers should be encouraged to release sharks alive where possible.

In the developing gamefishery for Pacific bluefin, it is thought around half to two-thirds of the catch is tagged and released, while the rest is retained by fishers. Tagging data shows good survival rates for released fish. Concerns have been raised about wastage of retained catches, because the size of the fish makes transportation and storage costly. Individual skippers are addressing these concerns through vessel codes of practice that set limits on numbers of fish to be retained per trip.

Risk: Medium—some risk in relation to discards of sharks, and in the recreational Pacific bluefin fishery

Priority: P1

Performance criteria

- Full reporting of discards and compliance with 6th schedule release conditions
- Either Pacific bluefin catches remain at relatively low level or, if catches are higher, anecdotal reports/evidence do not indicate wastage is occurring
- Anecdotal reports from non-commercial fisheries indicate live releases of shark species are common practice

Strategies

- Incorporate management of shark discarding into compliance strategy
- Monitor the Pacific bluefin fishery through charter boat reporting of catches and tag/release information
- Incorporate this topic into proposed code of conduct on shark handling for non-commercial fishers outlined in the chapter on large pelagic species

Management objective 5	All Maori interests (including customary, commercial, recreational and environmental) are enhanced
5.1	Take into account the unique differences between individual iwi and hapu in management of HMS

Assessment:

When developing a fisheries plan under section 11A of the Fisheries Act, there are statutory obligations to provide for the input and participation of tangata whenua with a non-commercial interest in the stock concerned and/or an interest in the effects of fishing on the aquatic environment in the area concerned. In doing so, particular regard should be paid to kaitiakitanga.

To date, little specific information has been collected on relationships of tangata whenua with HMS (e.g. species that are of particular importance in some regions). During development of the national fisheries plan, the following areas of interest were highlighted:

- Ecosystem and habitat values.
- Accessibility of fish for customary purposes.
- The relationship between Maori and the Crown.
- Values attached to specific areas and species (e.g. breeding grounds).

- The relationship with other peoples throughout the Pacific who also use these resources.
- Customary practices associated with various species e.g. the use of mako teeth for gifting or exchange.
- commercial interests as quota holders of species managed under the quota management system.

The development of iwi fisheries plans should contribute to meeting this objective.

Risk: High—interests may be varied and complex amongst iwi and hapu, and the extent of specific relationships with HMS is unclear. It is difficult to take into account individual interests until they have first been identified (whether through iwi fisheries plans or other means).

Priority: **P1** (identify relationships with HMS); **P3** (iwi fisheries plans)

Performance criteria

- Relationships of individual iwi and hapu with specific HMS identified.
- The number of iwi (and their hapu) with special relationships with HMS who accept and endorse the national fisheries plan.
- Number of iwi (and their hapu) with special relationships with HMS who participate in the implementation of the plan.

Strategies

- Identify specific relationships of iwi and hapu with HMS and how to incorporate such interests into management of HMS.
- Provide opportunities for Maori to share knowledge and build relationship between people and HMS through wananga (as required/appropriate).
- Encourage consideration of interests in HMS fisheries during development of iwi fisheries plans, and incorporate feedback from iwi fisheries plans into planning and prioritisation.

5.2	Ensure abundant HMS for customary use
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Assessment:

This objective relates both to overall availability of HMS (covered under other objectives), and to customary access to the species. Many iwi have a focus on inshore species when setting rohe moana boundaries, although some rohe moana may extend into areas in which HMS are seasonally present.

Risk: Medium—HMS are generally available for customary use (with the exception of some species e.g. yellowfin tuna that are currently limited in availability), but actual use remains low at present

Priority: **P3**

Performance criteria

- Iwi take into account interests in HMS (as appropriate to individual iwi) when fishing under customary permits and when setting rohe moana boundaries.
- Maori customary interest in HMS is taken into account when reviewing any need for more active management using customary tools

Strategies

- Work with iwi to increase consideration of any interests in HMS when customary tools are used (e.g. in setting rohe moana boundaries)
- Kaitiaki/tangata tiaki to report all HMS catches on fishing activity authorised by customary permits under the Fisheries (Kaimoana Customary Fishing) Regulations 1998

Management Objectives to support Environment Outcome

The capacity and integrity of the aquatic environment, habitats and species are sustained at levels that provide for current and future use.

Management objective 6	Maintain a sustainable fishery for HMS within environmental standards
6.1	Encourage management of HMS at specified target reference points

Assessment:

The New Zealand Harvest Strategy Standard outlines that where an international organisation or agreement has adopted harvest strategies and rebuilding plans that meet or exceed the minimum standards in the Harvest Strategy Standard, New Zealand will generally support those strategies. In other situations, New Zealand will encourage the international organisation or agreement to adopt harvest strategies that meet or exceed the standards set out in the Harvest Strategy Standard.

Explicit targets and limits for HMS managed under WCPFC have not been set either nationally or internationally. The WCPFC Convention provides for members of the Commission to determine stock-specific reference points and the action to be taken if they are exceeded (Article 6(1)(a)). WCPFC has not yet implemented this provision.

Fishing patterns can influence the available yield from a fishery. For example, harvesting juvenile bigeye and yellowfin tuna as bycatch in the skipjack fishery decreases the available yield from these fisheries (i.e. the maximum sustainable yield that could be achieved from the bigeye fishery would be higher if the fishery were largely based on mature fish caught by longline). This sort of analysis therefore makes clear the trade-offs involved between different fishing methods. A similar argument would apply with southern bluefin tuna, with trade-offs between catches of juvenile fish by purse seine and more mature fish by longline.

Work on a 'management procedure' within CCSBT is aimed at formalising the management responses to a given stock level, by setting objectives and parameters. It remains to be seen whether this approach will be successful at de-politicising catch limit negotiations. New Zealand engagement in the process to date has been based on the Harvest Strategy Standard.

Risk: Medium

Priority: P1

Performance criteria

- New Zealand identifies stock management targets and limits for key HMS that are consistent with the Harvest Strategy Standard
- New Zealand catch limits are consistent with identified targets and limits

Strategies

- Identify targets and limits for southern bluefin tuna, yellowfin tuna, and bigeye tuna by 2012 and for skipjack, swordfish and albacore in subsequent years
- Implement the targets and limits domestically as appropriate, and advocate for their adoption internationally

6.2	Comprehensive reporting framework for New Zealand flagged vessels fishing outside the New Zealand zone that allows for independent verification of catch
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Assessment:

Reporting of high seas catches is not well-integrated with domestic reporting requirements, and there is no system for independent verification (e.g. separate reporting from fishers and fish receivers) and error checking. Accurate recording of catches on the high seas is necessary to ensure sustainability, and potentially to provide the means for future allocations. New Zealand vessels with high seas permits will soon be trialling electronic data reporting.

The accurate determination of bycatch of bigeye and yellowfin in tropical purse seine fisheries is problematic because of the volumes of catch handled during the fishing operation and during unloading. Work to date has suggested that catches may be under-estimated/reported. Proposals considered by WCPFC include work with canneries to provide better records of purse seine catch. Accurate reporting of bigeye and yellowfin catches is necessary both to the scientific process and determining future allocations.

Risk: Medium-High—there is no system of independent reporting from fishers and fish receivers, so catch volumes are harder to verify. High seas and domestic data are not well-integrated.

Priority: **P1** (estimation of purse seine catches); **P2** (data management); **P4** (high seas regulations)

Performance criteria

- High seas catches by New Zealand vessels are able to be independently verified
- High seas data is readily accessible and appropriately groomed

Strategies

- Improve reporting/estimation of bigeye and yellowfin bycatch of New Zealand-flagged vessels
- Review management of data on high seas fishing
- Review regulations relating to fishing on the high seas

6.3	Improve knowledge of HMS fisheries
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Assessment:

New Zealand collects and provides relevant data, and MFish scientists participate in the scientific committee of WCPFC and CCSBT. Characterisations of New Zealand fisheries for HMS (both commercial and non-commercial) are useful both for domestic and international management purposes. New Zealand also provides an annual report to both Commissions. Data for these reports is compiled under a research contract, with additional report writing work done internally. New Zealand has been an advocate for effective science-based decision-making, and has taken on additional projects or tasks where required (e.g. an ecological risk assessment for CCSBT; chairing of sub-committees or working groups).

Risk: Low—processes are already in place to meet these requirements.

Priority: **P1**

Performance criteria

- Data provided on time and to required specifications
- Science-based decision-making and management by RFMOs is supported

Strategies

- Prepare medium-term research plans for HMS fisheries

- Continue to contribute to international science processes, including continued active participation by New Zealand scientists in science working groups, and additional projects as required.

Management objective 7	Implement an ecosystem approach to fisheries management, taking into account associated and dependent species
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7.1	Avoid, remedy, or mitigate the adverse effects of fishing on associated and dependent species, including through maintaining foodchain relationships
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Assessment:

Limited work has been done in this area, although some diet studies have been conducted. These studies indicate HMS generally consume various species of crustaceans, fish and cephalopods. The relative proportion of these prey may vary with the size of fish, for example the smaller skipjack found in New Zealand waters appear to predominantly feed on crustaceans. Adult HMS are thought to have few natural predators apart from larger tunas and to a much lesser extent sharks.

To the extent possible this objective should involve consideration of inadvertent and unexpected effects.

Risk: Medium—New Zealand can incorporate such considerations into its development of reference biomass levels for target HMS fisheries (see objective 6.1), but other considerations may prevent RFMOs from adopting these targets

Priority: P3

Performance criteria

- Improved knowledge of effects of fishing on associated and dependent species

Strategies

- Monitor availability of information
- Undertake desk top studies as appropriate, in particular in association with international science processes (e.g. study of the role of skipjack in the environment based on existing scientific literature)

7.2	Minimise unwanted bycatch and maximise survival of incidental catches of protected species in HMS fisheries, using a risk management approach
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Assessment:

Current management allows for a combination of regulated and non-regulated approaches to minimising bycatch. Regulated measures to minimise seabird bycatch in pelagic longline fisheries include tori lines and either night setting or, if setting during daylight, line weighting. Additional measures fishers may use include offal management and dyed bait. These measures are in line with the WCPFC conservation and management measure on seabirds. Some fisheries e.g. the Australian tuna and billfish fishery use additional measures such as a maximum catch rate per thousand hooks, and both night setting and line weighting. Use of line weighting in the New Zealand fleet is limited, due largely to safety concerns.

The current approach to minimising turtle bycatch is to focus on maximising the chance of survival for any turtles that are caught during fishing (such captures are rare). Turtle bycatch is of particular interest to some member countries of WCPFC, with a focus on shallow-set swordfish fisheries in particular (suggested mitigation includes switching to circle hooks and/or fish bait). WCPFC's scientific committee has recognised that New Zealand has a minimal level of turtle bycatch. Turtles are also caught in purse seine fisheries from time to time (particularly in the tropical fishery). A code of practice for purse seine fisheries has been developed that outlines appropriate ways to avoid turtle captures and to maximise their chance of survival when released.

Other species that may be caught from time to time in HMS fisheries include protected sharks (e.g. great whites – in both longline and tropical purse seine fisheries); fur seals (longline fisheries) and marlin (both fisheries from time to time). The Marine Mammals Protection Act 1978 includes specific measures to minimise bycatch of marine mammals in purse seine fisheries. Current practices are considered to meet these requirements.

Purse seine fleets in the western equatorial Pacific are required to operate under a FAD management plan as of 1 July 2009; one objective of the plan is to minimise the bycatch of unwanted and or protected species.

Additional detail on management to achieve this management objective is outlined in the fishery-specific chapters, particularly for large pelagic and skipjack fisheries.

Risk: Medium-High—continued risk of large scale single/multiple incidents of seabird capture. For other species and fishing methods the risks are considered to be sufficiently mitigated at present.

Priority: P1

Performance criteria

- Standards and National Plans of Action implemented (when available)
- See also criteria outlined in fishery-specific chapters

Strategies

- Review species management in accordance with any protected species standards as appropriate, including the seabird standard and National Plan of Action for Seabirds
- Audit and report on the performance of vessels in relation to protected species
- Participate in relevant international processes

7.3	Increase the level and quality of information available on the capture of protected species
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Assessment:

Observers record interactions of HMS fisheries with protected species including turtles and seabirds, to the species level where possible. Observers also collect biological data (e.g. size and length distributions, age data, stomach contents analysis), and data on use of mitigation measures and gear configuration. Appendix 1 outlines observer coverage in recent years.

Amongst large pelagic fisheries, observer coverage is focussed more on vessels, areas, and times at which southern bluefin tuna are more likely to be caught, in order to fulfil New Zealand's obligations under CCSBT (including 10% observer coverage; this level is generally met, although coverage in domestic fisheries has traditionally been low). Observer planning is aimed at a similar level of coverage for the bigeye fishery. No formal observer coverage target has been set for charter vessels although generally the aim is to achieve 100% coverage. It is difficult with current resources to move observers between vessels, so coverage for an individual vessel is either 100% or nothing (ideally observer days would be spread between vessels).

Due to levels of observer coverage, it is not known how closely actual capture ratios reflect observed species ratios for seabirds. Information on turtle interactions with New Zealand surface longline fisheries is also limited, partly because of the rarity of interactions, but partly because of low observer coverage.

Fishers now report incidental captures on non-fish bycatch reporting forms. Prior to October 2008, this data was not effectively recorded unless an observer was onboard. The first step in using this data source would be comparing fisher- and observer-reported bycatch. Comparison of fisher and observer data would be a relevant factor for setting observer coverage targets (e.g. if there are significant discrepancies, observer

coverage targets may need to be higher). The delivery of fisheries services is planned 18 months in advance, so there will be a time lag between the decision to increase and/or decrease observer coverage in a fishery and implementation of the decision.

Risk: Low-Medium—fisher reporting of non-fish bycatch is a new system that fishers may take some time to adapt to.

Priority: **P2** (comparison of observer and fisher reports of non-fish bycatch); **P3** (ongoing monitoring)

Performance criteria

- meet specified target levels of observer coverage in each fishery
- % variance and number/scale of discrepancies between observer and fisher reports
- Observer coverage is representative across vessels, areas, seasons, target species and gives desired level of precision

Strategies

- monitor incidental catches of protected species (including comparison of observer and fisher reports of non-fish bycatch)
- specify target observer coverage levels in annual operational plans

7.4	Recognise the intrinsic values of HMS and their ecosystems, comprising predators, prey, and protected species
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Assessment:

Fisheries management focuses on extractive uses of HMS, in line with the approach of the Fisheries Act. However, non-extractive or intrinsic aspects are also of value to people. This objective includes recognition of the value of protected species and ensuring that fisheries do not adversely affect populations of threatened species. Further, a prohibited utilisation process standard will be developed by 2011 under the National Plan of Action for the Conservation and Management of Sharks (NPOA—Sharks). The standard will identify marine species where no level of utilisation is considered sustainable.

Use of great white sharks is already prohibited under fisheries and conservation legislation both within New Zealand waters and by New Zealand vessels on the high seas. Great white sharks are listed on Appendix I of the Convention on Migratory Species (CMS).

Whale shark is listed on Appendix II of both CMS and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and is currently being considered for protection under the Wildlife Act 1953. Four other shark and ray species are also being considered for protection under the Wildlife Act (deepwater nurse shark, basking shark, and two species of manta ray).

Other species listed on Appendix II of CMS include porbeagle, short- and long-finned mako sharks (as well as northern hemisphere populations of spiny dogfish). CMS recently adopted a non-binding Memorandum of Understanding for the conservation of migratory sharks, covering all shark species listed in either appendix. New Zealand is not currently a signatory to this agreement, which outlines various conservation and management measures for sharks. A recent proposal to list these shark species on Appendix II of CITES was discussed in 2010 but was not agreed.

A moratorium prevents the issuing of commercial fishing permits to target basking shark, hammerhead shark, sharpnose sevengill shark and whale shark (Fisheries Act Schedule 4C). These species will remain outside the QMS unless a decision is made to add them to the QMS or manage alternatively.

Risk: Medium-High

Priority: **P3**

Performance criteria

- As set out in prohibited utilisation standard
- Awareness of non-extractive values of HMS amongst officials, fishers and the public

Strategies

- Implement prohibited utilisation standard as required
- Maintain watching brief on international processes that identify species at risk (e.g. CMS, CITES), and participate in development of New Zealand position as appropriate (lead agency is Department of Conservation— DOC).

Management objective 8	Protect, maintain, and enhance fisheries habitat
8.1	Identify and where appropriate protect habitats of particular significance to HMS, especially within New Zealand waters

Assessment:

Habitats of significance include spawning, feeding, and nursery areas. Limited information is available on such habitats within New Zealand waters. Some HMS such as hammerhead sharks may use some harbours, but the key target species are not thought to spawn or pup within New Zealand waters. Although current knowledge is limited, the significance of habitats within New Zealand waters is likely low for most species. Nonetheless, it may be appropriate for New Zealand to support projects to identify and where appropriate protect habitats of significance outside of New Zealand waters. For example, some HMS stocks may benefit from protection at their spawning grounds.

Risk: Low-Medium

Priority: **P3** (monitor availability of information); **P4** (desk-top study)

Performance criteria

- Spawning, feeding and nursery areas can be described for HMS covered by this plan.

Strategies

- Monitor availability of information in this field including research undertaken by other agencies
- If necessary, undertake a desk top study to evaluate available information

Management objective 9	Allow for HMS aquaculture development while ensuring the ecosystem and wild fisheries are protected
9.1	Monitor HMS aquaculture development, its potential, and potential for disease transfer and stock depletion

Assessment:

This objective requires a watching brief on aquaculture development (including both potential risks and potential opportunities).

Risk: Low

Priority: **P4**

Performance criteria

- MFish and stakeholders aware of proposals for aquaculture development likely to affect HMS either directly or indirectly.
- Advisory group members and MFish share information

- Action plan developed where direct impact is likely.

Strategies

- Maintain a watching brief on aquaculture development (including both potential risks and potential opportunities)

Management Objectives to support Governance Conditions

Sound governance arrangements that are well specified, transparent, and which support cost-effective and accountable decision-making

Management objective 10	Recognise and provide for Deed of Settlement obligations
10.1	Implement Deed of Settlement obligations as they relate to HMS

Assessment:

The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 establishes both specific obligations relating to commercial and non-commercial use of fisheries, and more general obligations relating to the right of tangata whenua to participate in fisheries management decisions and to have particular regard given to their values and aspirations (kaitiakitanga). This framework also allows for the development of protocols with iwi as part of individual Deeds of Settlement. To date, no Deed of Settlement protocols include specific requirements in relation to HMS. Nonetheless, the protocols generally establish principles that govern interactions between the Ministry of Fisheries and iwi bodies.

Te Ohu Kaimoana has outlined its view that introducing remaining HMS species (notably albacore and skipjack) into the QMS would contribute further to implementation of commercial aspects of the Treaty of Waitangi (Fisheries Claims) Settlement Act.

In addition, many iwi (and their hapu) have "Iwi Planning documents" that represent their views as part of other planning processes (e.g. for local government). Such documents could also be reviewed to identify any items of relevance to this fisheries plan. In the future, iwi fisheries plans are likely to provide additional guidance, particularly if efforts are made to ensure consideration is also given to possible interests in HMS during the development of such plans.

Risk: Medium-High—those iwi with whom individual Deed of Settlement protocols have been agreed need to first be canvassed to determine whether or not they have specific interests in HMS, and would like to be involved more closely in their management. This step would likely lower risk associated with achieving this objective.

Priority: P2

Performance criteria

- Criteria set out in individual Deed of Settlement protocols are met

Strategies

- Annual review of Deed of Settlement protocols, iwi management plans, and iwi fisheries plans to identify any items of relevance to this fisheries plan, and incorporation of this material as appropriate into planning and prioritisation

Management objective 11	Influence international fora and ensure New Zealand interests are taken into account
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11.1	Decisions taken by relevant RFMOs and associated bodies take into account New Zealand interests
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Assessment:

RFMOs (WCPFC, CCSBT) and other international agreements (for example CMS – Convention on Migratory Species) can directly influence fishing in New Zealand's EEZ and by New Zealand vessels on the high seas. In order to successfully influence these bodies, it is generally necessary to attend all their annual and subsidiary meetings, although in some situations other ways of participating/influencing could be explored (e.g. a whole of government approach where other Crown agencies take the lead where appropriate).

New Zealand must also be well-informed about the range of domestic interests (commercial, cultural, environmental, and social) to ensure they are taken into account within international negotiations. Being well-informed also allows better assessment of the likely impacts of measures. To date, New Zealand domestic interests have been identified through regular contact, including briefings and debriefings for tuna commission and subsidiary meetings; and participation of stakeholders in delegations. There may be scope for further or more targeted engagement if stakeholders feel this objective is not fully met at present. The draft International Fisheries Strategy provides greater details on the framework in which New Zealand interests in HMS fisheries will be identified and implemented.

Risk: Medium

Priority: **P1** (stakeholder meetings; work on international strategy); **P3** (influence RFMOs)

Performance criteria

- Stakeholder views incorporated into New Zealand negotiating positions
- As established in delegation briefings for individual meetings

Strategies

- Hold briefings and debriefings with fisheries stakeholders before and after tuna commission and subsidiary meetings as required
- Finalise and implement International Fisheries Strategy
- Influence RFMOs and associated bodies to take into account New Zealand interests

11.2	Build strong relationships with other fishing nations, in order to influence international fora
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Assessment:

Opportunities to build relationships with other nations that fish for HMS occur at various international meetings and – for Pacific Island countries – through the Forum Fisheries Agency (FFA) and Te Vaka Moana.⁸ FFA provides the main basis for New Zealand to interact with Pacific Island countries and develop shared positions. Opportunistic meetings could also be used to advance this objective.

Risk: Low-medium

Priority: **P1** (collaborative work with Te Vaka Moana); **P3** (on-going engagement)

⁸ New Zealand's close cooperation with other Polynesian countries (Cook Islands, Niue, Samoa, Tokelau and Tonga) on fisheries management and development has recently been formalised through an arrangement called Te Vaka Moana. Te Vaka Moana's future activities include further development of management frameworks for Polynesian longline fisheries, cooperative work on monitoring, control, and surveillance (MCS), and a Polynesian Fisheries Development Package.

Performance criteria

- Opportunities to build stronger relationships identified and utilised

Strategies

- Attend relevant international fisheries meetings as appropriate
- Engage with regional groupings including FFA and Te Vaka Moana
- Hold bi-lateral and multi-lateral meetings opportunistically

11.3	Improve Maori capacity to engage with other stakeholders in international fora
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Assessment:

There have been some opportunities for Maori to participate in international discussions, but few have had the resources to do so. Such opportunities could be a way of recognising that Maori have a relationship with Tangaroa and taonga of the sea that may be shared with others in the Pacific; a way of extending opportunities for input and participation; and a reflection of the range of Maori interests in HMS fisheries (including commercial and non-commercial interests).

Risk: Medium–high

Priority: P3

Performance criteria

- Opportunities to participate provided

Strategies

- Continue to ensure opportunities to participate in New Zealand delegations are made available to Maori with specific interests in HMS fisheries
- Explore potential funding sources for Maori participation

11.4	Monitor new and existing fisheries in the vicinity of New Zealand fisheries waters and identify potential threats and opportunities
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Assessment:

Informal monitoring occurs at present (e.g. through analysis of data submitted to regional forums). If fishing occurs outside New Zealand's zone, there is limited scope to directly control it although New Zealand can advocate for adequate controls within regional forums (e.g. advocacy for a conservation and management measure for swordfish within WCPFC; encouraging use of seabird mitigation measures). Fishers and MFish may both benefit from greater sharing of information on fisheries close to the New Zealand EEZ. Opportunities may also exist for expansion of New Zealand fisheries in the vicinity of our fisheries waters.

Maintaining the integrity of the New Zealand EEZ to vessels fishing for HMS is a key issue. Work is underway to gain New Zealand access to the WCPFC VMS (vessel monitoring system) data for vessels operating adjacent to our EEZ. This will substantially improve our monitoring ability.

Risk: Low

Priority: P1

Performance criteria

- MFish and stakeholders well informed about fisheries in the vicinity of New Zealand's EEZ
- Integrity of New Zealand EEZ maintained

Strategies

- Annually monitor new and existing fisheries in vicinity of New Zealand's EEZ

- Exchange information with stakeholders as appropriate
- Undertake compliance actions as required.

Management objective 12	Maintain an effective fisheries management regime
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12.1	Develop a specific compliance strategy for HMS
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Assessment:

No specific compliance strategy is in place for HMS, so compliance activities are planned at a more general level at present. Key compliance issues relate to the correct identification and reporting of HMS quota species. Southern bluefin tuna, in particular, is subject to international scrutiny and there is an obligation on New Zealand to ensure that it has a robust compliance regime in place to manage catches.

New Zealand has obligations that arise from its membership of CCSBT and WCPFC (e.g. implementing high seas permit conditions relating to shark finning; meeting the requirement for monitoring of tropical purse seine fisheries; implementing the Catch Documentation Scheme for southern bluefin tuna).

New Zealand also has compliance obligations as a port state to inspect vessels entering our ports to rebunker, reprovision and/or offload fish. Systematic inspection provisions that take account of the conservation measures of Regional Fisheries Management Organisations will be required.

New Zealand works actively with RFMOs on initiatives designed to strengthen their compliance regimes and ability to monitor HMS fisheries.

Risk: Medium—no specific compliance strategy in place, so compliance activities are planned at a more general level at present.

Priority: P1

Performance criteria

- As outlined in the compliance strategies (see below)

Strategies

- Develop a specific domestic compliance strategy
- Develop a strategy for input into international compliance regimes for WCPFC and CCSBT, including work to improve RFMO capabilities with respect to compliance

12.2	Ensure foreign vessels know and abide by the relevant rules and voluntary agreements for HMS fishing in New Zealand
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Assessment:

It is preferable to ensure rules are well understood in advance of fishing to avoid inadvertent breaches of New Zealand law or codes of practise. Generally it is the responsibility of the New Zealand operator to know and understand all the rules that relate to the operation of foreign charter vessels in New Zealand waters.

At present, the NZ Japan Tuna Company is the only company that charters vessels to fish for HMS. Vessels fishing under charter to NZ Japan Tuna Company operate under a Code of Practice approved under the National Plan of Action to Reduce the Incidental Catch of Seabirds in New Zealand Fisheries (NPOA—Seabirds). The Code of Practice is explained to skippers in English and Japanese, and outlines measures in addition to regulated requirements (e.g. additional tori line, offal management, use of thawed bait). Mitigation is also used during hauling (bird frighteners). The company has been provided with turtle mitigation equipment, and should ensure its charter vessels use it. If other companies do seek to charter vessels to fish for HMS in the future, it will be important to

ensure they are also aware of the importance of mitigating bycatch of protected species. Conditions can be placed on the vessels to achieve this objective.

Foreign charter vessels have not fished for skipjack for many years. Foreign licensing requirements for skipjack reflect the requirements of an access agreement between the United States and various Pacific nations including New Zealand (the US Tuna Treaty).⁹ While rules relating to skipjack fishing are clear the potential for foreign licensed vessels to interact with quota species, and how this would be managed or regulated, is less so.

Risk: Medium-High—for large pelagic species the level of risk depends on the timing and location of the fishery. Foreign vessels have not been a component of the skipjack fishery for some time; the current level of risk is low, but may increase if interest in fishing in New Zealand waters under the provision of the United States Tuna Treaty increases.

Priority: P2

Performance criteria

- Foreign charter vessels have correctly specified mitigation equipment on board and the skipper has demonstrated the correct use of this equipment prior to fishing in New Zealand waters.
- Information made readily available
- Fishing companies that use foreign charter vessels ensure the vessels have access to enough annual catch entitlements (ACE) to cover likely catches.

Strategies

- Develop policies on relevant controls (including conditions of licensing and registration for charter vessels, and policies for landing fish taken in New Zealand waters outside of New Zealand)
- Set appropriate levels of observer coverage for foreign-owned vessels operating under charter to fish for HMS

12.3	Enable public assessment of how HMS fisheries are managed
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Assessment:

The objective covers ensuring stakeholders have access to information that will allow them to assess how HMS fisheries are managed. At present information is available but may not be structured in a way that is easy for the public to assess. The annual operational plans and review reports proposed for implementing the national fisheries plan will make management more transparent.

Risk: Medium—the public is likely to have relatively low knowledge of how HMS fisheries are managed.

Priority: P3

Performance criteria

- MFish to provide information to the public on research developments, management measures or codes of practice for HMS as appropriate

Strategies

- Produce articles for MFish website, the Bite, and national media to publicise HMS research and management updates
- Fisheries plan advisory group to meet annually to review implementation of the fisheries plan and annual operational plan

⁹ The US Tuna Treaty provides access for up to 40 US purse seiners, with an option for 5 additional licenses reserved for joint venture arrangements, to fish for skipjack in the EEZs of Pacific Island Parties including New Zealand. The agreement was last ratified in March 2002, when the Parties agreed to extend the related Economic Assistance Agreement between the United States and Pacific Island states for a term of 10 years.

Appendix 1: Profile of New Zealand's HMS fisheries sector

This section provides an overview of the HMS fisheries sector, recent trends in the fishery, its current operation and its challenges.

Key trends

- A significant rationalisation of the pelagic longline fleet in recent years.
- A significant rationalisation in the quota asset value for HMS fisheries.
- A significant rise in the costs of fishing coupled with reduced returns
- A greater focus on the impacts of fishing on non-fish bycatch
- World renowned gamefisheries, and expanding interest in non-commercial big game fishing
- Management of highly migratory species is largely driven by regional fisheries management organisations, in which New Zealand participates and influences but does not have full control over outcomes. A recent trend is for increasing international conservation and management measures that impact on both domestic and high seas fisheries for HMS

Fisheries management context

New Zealand is subject to both general international fisheries obligations that arise because New Zealand is a signatory to various international agreements on management of marine resources; and specific obligations, that arise because of New Zealand's participation in RFMOs with competency over HMS found in our waters. A particular challenge for HMS fisheries management is the integration of New Zealand's management arrangements with those of other countries with which we have an obligation to cooperate.

Regional fisheries management organisations (RFMOs) are the primary vehicle for cooperation between interested countries in the management of HMS. A key principle covering the development and implementation of rules between states and RFMOs is a two way requirement for compatibility in those rules between EEZs and on the high seas.

Two RFMOs are of direct relevance to the management of New Zealand HMS fisheries:

- The Commission for the Conservation of Southern Bluefin Tuna (CCSBT)
- The Western and Central Pacific Fisheries Commission (WCPFC)

The area of competence of CCSBT is wherever southern bluefin tuna are found. The convention area for WCPFC has a geographical boundary (albeit only vaguely defined in the north-west).

The primary conservation and management measure adopted by CCSBT is a system of global and national catch limits. This is easily compatible with New Zealand management arrangements the national allocation being the basis for the TAC and TACC.

WCPFC currently relies on a mixture of capacity, catch and effort controls which vary in their effectiveness. While New Zealand advocacy in this forum is focussed on the development of measures that are effective in achieving sustainable fisheries, we are also concerned to ensure that we are able to implement those measures without substantial change to our domestic management arrangements which rely primarily on

output controls. Lack of certainty on allocation criteria and a determination amongst small island developing states and territories that historical involvement in the fishery will not drive future allocations are two factors that hinder a move to a catch-based allocation regime for WCPFC stocks in the short term.

New Zealand fisheries are at the limits of the range of many HMS and catches vary from year to year depending on seasonal variations in species' migrations. For example, the availability of juvenile albacore to the troll fishery in New Zealand waters varies from year to year with larger scale climatic events indicated by the ENSO index. The future prospects for New Zealand are strongly dependent on good management of tuna resources in WCPO, in particular on biomass of key stocks remaining at a sufficiently high level that no major changes in distribution occur. In the case of southern bluefin tuna a significant rebuild of the stock is required.

Good management includes not only putting in place the right management measures but also ensuring compliance with those measures. In contrast to many other nations that fish in the region, the New Zealand fisheries management regime is tightly regulated. We can be confident that when we implement measures we have a robust management control and surveillance system in place to ensure a high level of compliance.

A further specific obligation with respect to HMS is the multilateral treaty between Pacific states and United States that provides for up to 40 US flagged purse seine vessels to operate in our waters. A number of voluntary constraints apply should these vessels choose to operate here and in practice it is rare for a US vessel to seek a licence to fish in New Zealand waters.

Economic context

HMS fisheries have both a commercial and a non-commercial value. The marlin fishery is one of the few examples in New Zealand of a fishery indirectly allocated entirely to the recreational sector. There is total prohibition on taking marlin for sale throughout New Zealand fisheries waters. Big game fishing is not only popular domestically but there is also a major tourist fishery based on striped marlin in northern waters. Other HMS fisheries are shared between sectors to varying degrees.

Research reported in 2002 indicated that in 2000-2001 the billfish fishery generated significant economic benefits for New Zealand both regionally and nationally. Total expenditure by billfishers was \$65 million in 2000-2001, of which \$13 million was expenditure by overseas fishers.

The key revenue driver for the commercial fishery is export earnings (around \$40 million in 2008) and the limiting factors are fishing and export costs. The New Zealand fishery in the equatorial Pacific targeted at skipjack is valued at around \$60 million annually. Costs include government levies, fuel prices, cost of quota and processing costs. The large tuna species are generally exported fresh in gilled and gutted form for direct sale in Japanese markets. These markets set the price per fish and fish quality is the key determinant. Large tuna in prime condition can realise exceptional prices on the Japanese markets.

Albacore and skipjack tuna on the other hand are caught primarily for the canning market. There is little to no value adding in these fisheries, although some scope to do so does exist, particularly for albacore.

Quota value

The capital worth of fish stocks (value of the fishing quota asset) can be estimated using quota trades (and in some cases ACE trades). The QMS provides a comprehensive source of market information, and quota trade analysis can provide an estimate of the

natural asset value of all QMS fish stocks.¹⁰ This information is available in the Fish Monetary Stock Account 1996 to 2008 produced by Statistics New Zealand. The asset value for the key HMS species has declined significantly over the past five years (Table 1).¹¹

Table 1: Quota Asset value for key HMS species for 2004 – 2008 (\$ million)

Species	2005	2006	2007	2008	2009
Bigeye tuna	28.8	12.9	8.6	5.0	1.1
Pacific bluefin tuna	16.0	1.1	2.2	6.7	0.2
Southern bluefin tuna	48.6	14.1	10.6	12.7	15.4
Swordfish	13.8	4.6	13.1	8.8	2.9
Yellowfin tuna	4.3	0.6	0.8	0.5	0.1
Total	111.5	33.3	35.4	33.8	19.6

This decline in asset value (rationalisation) is not associated with changes in TACC levels over the period. The initial enthusiasm of quota trading post-QMS entry (all stocks were introduced on 1 October 2004) waned rapidly and from 2006 was more stable from year to year. More recent values potentially reflect the difficulty of the fishery as a whole in fully catching the TACC, and the realisation of the ongoing costs of quota ownership regardless of whether fish is actually caught (refer cost recovery section). With the exception of southern bluefin tuna and swordfish, TACCs were originally set on a prospective basis to provide for expansion in the fishery. This expansion did not occur, rather a significant restructuring of the pelagic longline fleet occurred post-QMS introduction. In some cases the capacity does not exist to catch up to the TACC. In others (yellowfin tuna) there have been significant downward trends in availability in both commercial and non-commercial fisheries.

These quota value estimates provides a useful indicator to assess trends in economic value in the major HMS species taken in the pelagic longline fishery. A proportion of HMS fishers, particularly pelagic longliners, are ACE fishers. These fishers have benefited from a rationalisation of quota values and the free availability of ACE.

Export earnings

While New Zealand is a small producer, supplying less than 1% of global seafood production and less than 2% of global seafood trade, the New Zealand seafood sector is the fifth largest exporting sector in the New Zealand economy. Total export revenues in 2008 from tuna and swordfish fisheries were around \$40.1 million. International markets provide about 99% of total revenues for the sector as there is only a limited domestic market for most HMS species. Skipjack and albacore are nearly all exported for the canning market and the value of these fisheries is derived by volume rather than price (\$17.0 and \$10.1 million respectively in 2008). The highest prices for large tunas are realised on the Japanese market (for example in 2008 southern bluefin tuna exports realised an average FoB value of \$30/kg, or around \$2,500-\$3,000 per fish) but there is also a high cost of getting fresh fish to that market (not included in free-on-board export figures). At times fishers make no return (or a net loss) if fish do not meet Japanese quality standards.

¹⁰ The United Nations System of Integrated Environmental and Economic Accounting framework advises that wherever possible, market values should be used to estimate natural capital.

¹¹ In the first instance the Fish Monetary Stock Account relies on quota transactions to estimate quota asset value. Where there are an insufficient number of quota trades, the Account uses ACE transactions to estimate quota value. Quota value is estimated as the discounted sum of the future net income stream (the rent). The discount rate applied by Statistics New Zealand is nine percent, which is consistent both with the range of discount rates used by other countries to prepare their fisheries asset values, and with the return on similar assets in the New Zealand economy over the period measured.

Government costs

The New Zealand fishing sector does not receive any Government subsidies, and some governance and service costs are recovered directly from the commercial fishing industry (see Tables 2–4 below). In comparison, many international competitors do receive direct subsidies or cost-reducing transfers. Government currently recovers approximately \$1.41 million from the HMS sector per year (from a total of \$31m across all fisheries including both fisheries and Department of Conservation costs). This is a relatively high proportion in relation to the catch from the fishery, an issue that is elaborated elsewhere in this summary. In significantly undercaught fisheries, fishers bear the cost of quota ownership without the benefit of income to offset that cost (for uncaught tonnage). Concerns regarding a change in the basis for cost recovery (from a pay as you catch non-QMS model to one in which monthly payments are made based on quota ownership) was one of a number of obstacles to the introduction of albacore into the QMS.

Table 2: Total levy charges per fishstock (2004/05 to 2009/10) (\$000) (after allowing for under- and over-recovery adjustments).

	TACC	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
ALB	N/A	0	0	341.22	383.3	214.59	44.31
BIG1	714	507.6	279.60	738	355.2	386.4	387.04
BWS1	1860	51.6	13.21	15.61	14.4	14.4	15.66
MAK1	406	13.2	10.80	9.6	3.6	3.6	3.79
MOO1	527	42	33.60	39.6	19.2	19.2	20.28
POS1	215	6	0	13.2	1.2	1.2	1.82
RBM1	980	39.6	32.40	33.6	14.4	15.6	17.22
SKJ	N/A	0	0	581.56	213.84	49.38	200.07
STN1	413	1,292.40	1280.40	1,183.20	274.8	280.8	268.98
SWO1	885	0	0	0	294	300	279.51
TOR1	116	345.6	73.20	86.4	78	80.4	87.90
YFN1	263	166.8	64.80	124.8	72	88.8	85.06
Total		2,464.8	1,788.01	3,166.79	1,723.94	1,454.37	1,411.64

Table 3: Annual cost recovery levies (\$/tonne) 2004/05 to 2009/10 (after allowing for under- and over-recovery adjustments).

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
ALB	0	86.01	164.96	105.56	95.56	15.96
MFish	0	86.01	161.39	105.56	95.32	15.96
DOC	0	0	3.57	0	0.24	0
BIG1	710.92	391.6	1033.61	497.48	541.18	539.52
MFish	710.92	337.82	966.39	468.91	489.08	519.36
DOC	0	53.78	67.23	28.57	52.1	20.16
BWS1	27.74	7.1	8.39	7.74	7.74	8.39
MFish	27.74	7.1	8.39	7.74	7.74	7.74
DOC	0	0	0	0	0	0.65
MAK1	32.51	26.6	23.65	8.87	8.87	8.88
MFish	32.51	26.6	23.65	8.87	8.87	8.88
MOO1	79.7	63.76	75.14	36.43	36.43	38.76
MFish	79.7	63.76	75.14	36.43	36.43	34.2
DOC	0	0	0	0	0	4.56
POS1	27.91	0	61.4	5.58	5.58	5.64
MFish	27.91	0	61.4	5.58	5.58	5.64
RBM1	40.41	33.06	34.29	14.69	15.92	17.16
MFish	40.41	33.06	34.29	14.69	15.92	15.96
DOC	0	0	0	0	0	1.2
SKJ	0	0	54.04	20.05	10.54	20.61
MFish	0	0	53.61	20.02	10.54	20.61
DOC	0	0	0.43	0.03	0	0
STN1	3129.3	3100.24	2864.89	665.38	679.9	647.88
MFish	2867.8	2885.23	2658.6	645.04	615.98	615.96
DOC	261.5	215.01	206.3	20.34	63.92	31.92
SWO1	0	0	0	332.2	338.98	314.52
MFish	0	0	0	332.2	321.36	309.12
DOC	0	0	0	0	17.63	5.4
TOR1	2979.31	631.03	744.83	672.41	693.1	755.16
MFish	2627.59	631.03	713.79	672.41	693.1	703.44
DOC	351.72		31.03	0	0	51.72
YFN1	634.22	246.39	474.52	273.76	337.64	324
MFish	625.1	205.32	460.84	273.76	314.83	314.88
DOC	9.13	41.06	13.69	0	22.81	9.12
Total	7662.02	4499.78	5320.71	2514.55	2665.35	2659.91

Table 4: Detailed levy information for 2009/10 (\$000).

Stock	MFish Research		DOC Research		MFish Departmental		MFish Observers	DoC Observers	Sub-Total	MFish Over-Recovery	DoC Over-Recovery	Total
	Stock	Env.	Bycatch	Pop. studies	Compliance	Registry						
ALB	54.1	7.9	0	0	74.46	35.97	45.44	0	217.87	-173.56		44.31
BIG1	19.43	19.82	2.28	4.57	152.04	73.46	129.63	21.87	423.1	-23.84	-12.22	387.04
BWS1	0	1	0.14	0	9.46	4.57	0	1.36	16.53	-0.87		15.66
MAK1	0	0.25	0	0	2.32	1.12	0	0.33	4.06	-0.23		3.79
MOO1	0	1.3	0.18	0	12.26	5.92	0	1.76	21.43	-1.14		20.28
POS1	0	0.12	0.02	0	1.09	0.53	0	0.16	1.91	-0.10		1.82
RBM1	0	1.1	0.16	0	10.34	5	0	1.49	18.08	-0.87		17.22
SKJ	56.26	0	0	0	83.94	40.55	59.79	0	240.55	-40.47		200.07
STN1	38.13	17.84	2.05	4.11	136.88	66.13	74.98	19.69	359.82	-79.84	-10.99	268.98
SWO1	16.71	7.77	1.1	0	73.25	35.39	160.68	10.54	305.42	-20.29	- 5.64	279.51
TOR1	3.91	5.01	0.58	0	38.45	18.57	21.06	5.53	93.11	-5.21		87.90
YFN1	2.63	3.04	0.35	0.7	23.34	11.28	47.75	3.36	92.44	-5.50	-1.89	85.06
TOTAL	191.17	65.15	7.21	9.38	617.83	298.49	539.33	66.09	1,794.32	-351.92	-30.74	1,411.64

Third party certification

Supermarket chains in the USA and Europe are publicly committing themselves to 'responsible' sourcing policies for food generally, and seafood products are at the forefront of this strategy. This has led to requests or requirements for independent certification to confirm that fish was sourced legally and from well-managed and sustainable fisheries. At present the Marine Stewardship Council's standard dominates the independent certification market.

The financial return from environmental certification, particularly in terms of increased market prices, remains uncertain. However, it is increasingly apparent that third party certification is becoming the minimum standard for entry into certain markets.

As a precursor to certification, the albacore industry has initiated an assessment of the albacore fishery. An assessment meeting took place in July 2009 and the assessment process is expected to take 12-14 months and is scheduled for completion in or around June 2010. If successful the New Zealand albacore troll fishery will join other Pacific albacore fishers (eastern stocks). Achieving third party certification is an acknowledgement that the fisheries management regime in place for a stock can successfully meet international standards.

Environmental context

There is an increasing international and domestic focus on managing the undesirable effects of fishing. Pelagic longlining and trolling are not fishing methods that have a benthic impact. Accidental benthic contact may occur from time to time during purse seine fishing, but is limited (such contact impedes rather than improves the fishing operation). The focus in HMS fishers is therefore on the effects of fishing on non-fish and non-target species.

With respect to bycatch, international attention was initially focused through the development of international plans of action for seabirds and sharks. This has expanded in recent years to include the use of UN resolutions to encourage conservation action (sharks) and attempts to use terrestrial-based conventions (CITES and CMS) as tools to manage international fishstocks. The formation of a subsidiary body under the CMS (ACAP) is a further initiative to promote the conservation for seabirds.

The WCPFC has adopted conservation and management measures for sharks, seabirds, turtles and New Zealand has taken action to implement those measures for its fleet, which CCSBT members have also agreed to apply when fishing in WCPFC waters. There is ongoing work to improve the conservation status of bycatch species and to mitigate the impact of fishing on non-fish species through the WCPFC and jointly with other tuna RFMOs.

Industry seabird initiatives continue. Pelagic longline fishers participate in the work of Seabird Solutions, an independent trust formed to promote seabird mitigation both domestically and internationally.

Fishery Information

Annual catch by species and gear

The catch by species taken within and beyond New Zealand fisheries waters is summarized in Table 6 and catch by gear type for 2007 and 2008 is provided in Table 7. Since 2002, skipjack catches taken by purse seine have comprised the greatest part of the catch of all tuna species, both inside and outside New Zealand fisheries waters. Outside New Zealand fisheries waters, yellowfin catch (by purse seine) makes up most of the balance, but are rarely part of the purse seine catch inside New Zealand fisheries waters where the purse-seine fishery is exclusively targeted on free schools of skipjack.

Albacore are the second largest component of the tuna catch, and are taken mostly by troll gear, but also by longline. Troll gear also takes a small amount of skipjack with occasional catches of other tuna species. Although longlining has mostly targeted bigeye, southern bluefin and more recently swordfish, the greatest part of the catch consists of albacore. Pacific bluefin and yellowfin tunas are also taken in small numbers in longline sets, with skipjack only rarely taken. Blue, black, and striped marlin are caught in small numbers in the domestic longline fishery, but marlins may not be landed for sale when taken within New Zealand fisheries waters.

Over 150t of striped marlin were caught in 2007 in the recreational fishery, with well over half the fish tagged and released. Most world records for striped marlin are for fish caught in New Zealand. A recreational fishery for Pacific bluefin tuna has also recently developed, and preliminary estimates of catches are in excess of 10t per year. Several world records have been claimed.

Overall commercial landings of the longline and troll caught species have declined in each year since 2002 consistent with the decline in number of vessels operating in these fisheries.

Number of vessels by gear type, size

Approximately 170 domestically owned and operated vessels (mostly 15 to 25 m) make up the main part of the domestic commercial New Zealand tuna fishing fleet. These vessels fish using troll or longline gear, with some switching between gear types seasonally or operating for part of the year in non-tuna fisheries (Table 8). All surface longline vessels reported in Table 8 targeted a species complex including tuna and swordfish.

The New Zealand tuna fleet has significantly reduced since 2001; most of the reduction has occurred in vessels smaller than 50 gross registered tonnes (GRT), although some reduction is also seen in larger vessels.

Four New Zealand-flagged Class-6 purse seiners (vessels with over 4,256t combined hold capacity) have fished in the EEZs of Pacific Island States and on the high seas of the equatorial western and central Pacific Ocean since 2000. These vessels have traditionally also fished part of the year within New Zealand fisheries waters targeting free swimming (unassociated) schools of skipjack. The number of smaller capacity domestic-based purse seiners has decreased from seven to six vessels, reducing the total number of purse-seiners fishing over the reporting period from 11 vessels to 10.

No foreign licensed tuna longline vessels have fished in New Zealand fisheries waters since 1995. The only foreign licences issued since 1995 for fishing in New Zealand fisheries waters have been to US purse vessel operating under the Multilateral Treaty between the Government of the United States of America and the Governments of certain Pacific Island Countries (commonly referred to as the US Tuna Treaty).

A small fleet of foreign-owned longline vessels on charter to a New Zealand fishing company has operated in New Zealand fisheries waters since the late 1980s. These longliners have almost exclusively targeted southern bluefin tuna. In one fishing year two foreign owned vessels were chartered to target albacore tuna and in 2006, three Australian flagged vessels entered the longline fishery under charter arrangements, targeting bigeye tuna and swordfish. These vessels had all left New Zealand by August 2007.

Fishing patterns

The key target species in the longline fishery are southern bluefin and bigeye tuna. The southern bluefin tuna fishery occurs during the second quarter of the year, mostly off the east coast of the North Island and the west coast of the South Island. The remainder of

the year the fishery targets bigeye tuna and other minor target species off the east coast and northeast tip of the North Island. As a result of a change in management from a competitive to an individually-allocated regime for southern bluefin tuna, fishers are able to delay catching their quota until later in the season when prices are better. This has led to some changes in the seasonal distribution of the fishery before and after 2004.

The albacore troll fishery is based mainly on the west coast of the North and South Islands and operates between December and May each year. Catches can vary markedly from year to year, depending largely on the availability of albacore in New Zealand waters.

The purse seine fishery within New Zealand fisheries waters occurs on both the east and west coast of the North Island between January and May. The amount of catch / effort in a given year depends on the presence of the larger purse seine vessels that sometimes move down from the tropics to fish within New Zealand fisheries waters during the summer, as well as the availability of skipjack in New Zealand waters.

Fish and non-fish bycatch

The major bycatch species in the longline fishery are managed under the QMS. Blue shark is the most common bycatch species, followed by Ray's Bream. Large reductions in longline effort have resulted in reductions in landings of the major bycatch species. Specific provision has been made to allow the release of HMS sharks in the QMS, subject to the condition that they are alive and likely to survive release. This provision allows for the release of juvenile sharks which have little or no commercial value and large sharks that can be dangerous to handle.

Figure 2 provides recent estimates of seabird captures in surface longline fisheries. Estimated total captures in 2007-08 were 449 (range 127-862), while 37 captures were directly observed. Birds are caught both at the set and during the haul, which has implications for mitigation techniques. In order to mitigate the risk of seabird bycatch, longline vessels fishing for tuna or swordfish in New Zealand fishery waters may only set their lines at night (unless using line weighting) and must use tori lines while setting.

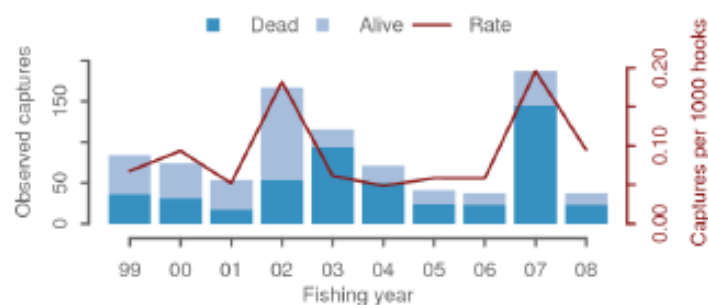


Figure 2: Observed seabird interactions for surface longline vessels based on observer records. (Source: Abraham, E.R., Thompson, F.N., and Oliver, M.D. 2010 Summary of the capture of seabirds, marine mammals, and turtles in New Zealand commercial fisheries, 1998–99 to 2007–08. New Zealand Aquatic Environment and Biodiversity Report No. 45).

Since 2001, 15 sea turtles have been reported by fishers and observers within New Zealand fisheries waters. Of these, 11 were leatherback turtles, one was a loggerhead turtle, two were reported as green turtles, and one was unidentified. All but one of the turtles were released alive. No turtles have been observed or reported from the purse seine or troll fisheries that operate within New Zealand fisheries waters.

Observer coverage is generally targeted at surface longline fisheries, with a focus on characterising interactions with protected species and other bycatch; meeting international obligations; and collecting scientific information. Observer coverage rates for surface longline fisheries are shown in Table 5 below.

Observer coverage has also occurred on domestic purse seine vessels since 2005 to determine levels of bycatch in the fishery that operates within New Zealand fishery waters. This coverage has confirmed that, since the fishery is based on free schools of skipjack, bycatch is minimal. No interactions with non-fish bycatch (e.g. seabirds, turtles, and marine mammals) were observed or reported. Bycatch in albacore troll fisheries is likewise limited.

Table 5: Observer coverage rates in surface longline fisheries, 2003-04 – 2007-08.

Year	No. hooks	Observed hooks	% observed
2007–08	2,241,839	391,307	17.5
2006–07	3,746,672	955,919	25.5
2005–06	3,687,569	636,796	17.3
2004–05	3,676,795	703,669	19.1
2003–04	7,382,293	1,464,465	19.8

Source: Abraham, E.R., Thompson, F.N., and Oliver, M.D. 2010 Summary of the capture of seabirds, marine mammals, and turtles in New Zealand commercial fisheries, 1998–99 to 2007–08. New Zealand Aquatic Environment and Biodiversity Report No. 45.

Fleet configuration

Following the development of domestic longlining in the early 1990s, the number of vessels in the domestic tuna fleet operating in New Zealand fisheries waters peaked in 2001 and has subsequently declined. The rapid expansion particularly in the late 1990s through to 2000 arose because tuna fisheries were among the few open access fisheries in New Zealand at that time. It is also likely to have been encouraged due to the potential for claiming an allowance of quota on the basis of fishing history when tuna species entered the QMS. As expected, the number of longline vessels targeting tuna declined following Government decisions on catch history years tuna and declined further after introduction of longline target and bycatch species into the QMS.

Recent economic conditions have also resulted in further decreases in participation in domestic longlining and trolling. These conditions include a variable New Zealand dollar, increasing fuel costs and a static market value for fish product.

Table 6: Estimated whole weight (t) of tuna and swordfish landed by New Zealand flagged vessels active in the WCPFC Convention Area, for years 2004 to 2008 (0 refers to catches < 500 kg). NZFW refers to catches within New Zealand fishery waters (200nm of the coastline), and ET refers to catches outside this area. The 2008 figures are preliminary.

		Calendar year				
		2004	2005	2006	2007	2008
Albacore	NZFW	4 459	3459	2541	2092	3739
<i>Thunnus alalunga</i>	ET	2	1	1	0	0
	Total	4 461	3460	2542	2092	3739
Bigeye	NZFW	185	176	178	213	133
<i>Thunnus obesus</i>	ET*	1 198	353	997	651	585
	Total	1 383	529	1175	864	718
Pacific bluefin [*]	NZFW	67	21	21	14	14
<i>Thunnus orientalis</i>	ET	0	0	0	0	0
	Total	67	21	21	14	14
Skipjack	NZFW	9 383	10656	7247	11392	10034
<i>Katsuwonus pelamis</i>	ET	10 003	10746	19588	22266	15211
	Total	19 386	21402	26835	33659	25244
Swordfish	NZFW	532	329	571	392	347
<i>Xiphias gladius</i>	ET	6	18	10	0	0
	Total	538	348	581	392	347
Yellowfin	NZFW	20	36	14	25	12
<i>Thunnus albacares</i>	ET*	2 658	2486	2679	2329	2897
	Total	2 678	2522	2693	2355	2910

* The ET estimates for yellowfin tuna also include some bigeye tuna as these are not always separated on purse seine logbooks completed by fishers.

Table 7: Percentage catch by gear type for 2007 and 2008 for major species taken in New Zealand tuna fisheries in the western and central Pacific Ocean convention area. Note: due to rounding some of these figures may add up to >100%.

2007	Longline	Troll	Handline	Pole & Line	Purse seine
Albacore	17	83	0	<1	0
Bigeye tuna	25	<1	0	0	75
Skipjack tuna	<1	<1	0	<1	100
Swordfish	100	0	0	0	0
Yellowfin tuna	<1	<1	0	0	99
2008	Longline	Troll	Handline	Pole & Line	Purse seine
Albacore	10	90	<1	0	0
Bigeye tuna	18	<1	0	0	81
Skipjack tuna	<1	<1	<1	0	100
Swordfish	100	0	0	0	0
Yellowfin tuna	<1	<1	0	0	100

Table 8: Number of vessels fishing for tuna in the WCPFC Convention Area by vessel size class (GRT) and gear type active in the WCPFC Convention Area, for years 2004 to 2008. Note that many vessels use more than one method (e.g. both troll and longline) and will be included in both totals. Troll data are presented by year and for the troll season separately

Fishing Method	Calendar Year	Total no. vessels	Vessels size range (GRT)			
			0 – 50	51 - 200	201 - 500	500+
Surface Longline	2004	99	55	39	5	0
	2005	57	30	25	2	0
	2006	56	30	24	2	0
	2007	44	19	21	3	1
	2008	35	16	15	3	1
Purse Seining			0 – 500	501-1000	1001 - 1500	1501+
	2004	11	7	0	2	2
	2005	11	7	0	2	2
	2006	11	7	0	2	2
	2007	10	6	0	2	2
	2008	10	6	0	2	2
Pole & Line			0-50	51-150		
	2004	4	4	0		
	2005	8	7	1		
	2006	2	1	1		
	2007	2	2	0		
	2008	0	0	0		
Troll			0 – 50	51 - 200		
	2004	251	213	38		
	2005	213	180	33		
	2006	178	157	21		
	2007	136	117	19		
	2008	168	143	25		
Troll season			0 – 50	51 - 200		
	2003-04	245	209	36		
	2004-05	211	177	34		
	2005-06	182	157	25		
	2006-07	134	115	19		
	2007-08	154	135	19		

Annex 1: Highly Migratory Species

1a). As listed in Annex 1 of the United Nations Convention on the Law of the Sea

The Western and Central Pacific Fisheries Convention applies to all species of highly migratory fish stocks (defined as all fish stocks of the species listed in Annex I of the 1982 Convention occurring in the Convention Area and such other species of fish as the Commission may determine) within the Convention Area, except sauries.

Albacore tuna: *Thunnus alalunga*.

Bluefin tuna: *Thunnus thynnus*.

Bigeye tuna: *Thunnus obesus*.

Skipjack tuna: *Katsuwonus pelamis*.

Yellowfin tuna: *Thunnus albacares*.

Blackfin tuna: *Thunnus atlanticus*.

Little tuna: *Euthynnus alletteratus*; *Euthynnus affinis*.

Southern bluefin tuna: *Thunnus maccoyii*.

Frigate mackerel: *Auxis thazard*; *Auxis rochei*.

Pomfrets: Family Bramidae.

Marlins: *Tetrapturus angustirostris*; *Tetrapturus belone*; *Tetrapturus pfluegeri*; *Tetrapturus albidus*; *Tetrapturus audax*; *Tetrapturus georgei*; *Makaira mazara*; *Makaira indica*; *Makaira nigricans*.

Sail-fishes: *Istiophorus platypterus*; *Istiophorus albicans*.

Swordfish: *Xiphias gladius*.

Sauries: *Scomberesox saurus*; *Cololabis saira*; *Cololabis adocetus*; *Scomberesox saurus scombroides*.

Dolphin: *Coryphaena hippurus*; *Coryphaena equiselis*.

Oceanic sharks: *Hexanchus griseus*; *Cetorhinus maximus*; Family Alopiidae; *Rhincodon typus*; Family Carcharhinidae; Family Sphyrnidae; Family Isurida.

Cetaceans: Family Physeteridae; Family Balaenopteridae; Family Balaenidae; Family Eschrichtiidae; Family Monodontidae; Family Ziphiidae; Family Delphinidae.

1b). As listed on Schedule 4B of the Fisheries Act 1996

Frigate mackerel (*Auxis thazard*)

Mahi mahi (*Coryphaena hippurus*, *Coryphaena equiselis*)

Marlin, sailfish, and spearfish:

Atlantic sailfish (*Istiophorus albicans*)

black marlin (*Makaira indica*)

blue marlin (*Makaira nigricans*)

Indo-Pacific sailfish (*Istiophorus platypterus*)

striped marlin (*Tetrapturus audax*)

white marlin (*Tetrapturus albidus*)

longbill spearfish (*Tetrapturus pfluegeri*)

Mediterranean spearfish (*Tetrapturus belone*)

roundscale spearfish (*Tetrapturus georgei*)

short billed spearfish (*Tetrapturus angustirostris*)

Ray's bream (*Brama brama*)

Sharks: bigeye thresher (*Alopias superciliosus*)

blue shark (*Prionace glauca*)

bronze whaler (*Carcharhinus brachyurus*)

Galapagos shark (*Carcharhinus galapagensis*)

longfin mako (*Isurus paucus*)

oceanic white tip (*Carcharhinus longimanus*)

Porbeagle shark (*Lamna nasus*)

shortfin mako (*Isurus oxyrinchus*)
silky shark (*Carcharhinus falciformis*)
smooth hammerhead (*Sphyrna zygaena*)
tiger shark (*Galeocerdo cuvier*)

Family Alopiidae

Family Carcharhinidae

Swordfish (*Xiphias gladius*)

Tuna: albacore tuna (*Thunnus alalunga*)
Atlantic bluefin tuna (*Thunnus thynnus*)
bigeye tuna (*Thunnus obesus*)
blackfin tuna (*Thunnus atlanticus*)
kawakawa (*Euthynnus affinis*)
little tuna (*Euthynnus alletteratus*)
Pacific bluefin tuna (*Thunnus orientalis*)
skipjack tuna (*Katsuwonus pelamis*)
southern bluefin tuna (*Thunnus maccoyii*)
yellowfin tuna (*Thunnus albacares*)

Appendix 2: Tikanga: Examples of Maori Principles and Practices

The suffix "tanga"	The suffix "tanga" added to a base word converts the base word into a process word changing it from a noun to verb.
Tikanga	The Maori way of doing things; correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, reason, plan, practice, convention. It is derived from the word tika meaning 'right' or 'correct'.
Kaitiakitanga	The root word in kaitiakitanga is tiaki, which includes aspects of guardianship, care and wise management. Kaitiakitanga is the broad notion applied in different situations. The prefix kai denotes the agent by which the tiaki is performed. Kaitiaki therefore stands for a person and/or other agent who performs the tasks of guardianship. Kaitiakitanga is the practice of guardianship.
Kotahitanga	Collective action and unity. Kotahi means one; with tanga added as the suffix it means oneness.
Manaakitanga	Manaakitanga implies a duty to care for others, in the knowledge that at some time others will care for you. This can also be translated in modern Treaty terms as "create no further grievances in the settlement of current claims."
Whanaungatanga	Whanaungatanga is the process through which Maori, through their kinship ties, meet their obligations towards each other and to the natural world. It is the basic cement that holds things Maori together.
Rangatiratanga	Rangatiratanga is the process of exercising mana at the level of Iwi or hapu depending upon the issue at hand. If an issue is of interest to the Iwi as a whole, then members of the Iwi, through their mandated representative structures, would expect to be involved. The same principle applies at the hapu and whanau level.
Mana	Mana can be described as the enduring, indestructible power of the gods. In modern times mana has taken on various meanings.
Mauri	Everything in the natural world possesses mauri, a "special power possessed by Io which makes it possible for everything to move and live in accordance with the conditions and limits of its existence. Everything has mauri, including people, fish, animals, birds, forests, land, seas and rivers: the mauri is that power which permits these living things to exist within their own realm and sphere."