



# Regulations to eliminate shark finning in New Zealand fisheries

## Regulatory Impact Statement

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# Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Ministry for Primary Industries (MPI). It provides an analysis of options for prohibiting shark finning in New Zealand fisheries waters. Shark finning is defined as the removal of the fins from a shark and the disposal of the remainder of the shark at sea. The removal of the fins from a shark where the trunk is also retained for processing is not defined as “shark finning”. The Minister for Primary Industries and the Minister of Conservation committed the Government to eliminate shark finning with the adoption of the National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks) in January 2014.

The key constraints with regards to the analysis presented in this paper are:

- timeframe for implementation;
- uncertainty in estimating operational impacts;
- uncertainty in estimating financial impacts.

The NPOA-Sharks commits the Government to banning shark finning for a first tranche of species by 1 October 2014, and to the remainder by 1 October 2015, with the exception of blue shark (to be brought under the ban by 1 October 2016). This creates a relatively tight timeframe for implementation, and is reliant on the process for making regulations proceeding without any delays. Work is underway that will provide an information base to support specific aspects of implementation.

The difficulties in predicting the operational changes fishers will make in response to new regulations complicates the calculation of any financial impacts of regulations. There is also limited information on how fins naturally attached and fins artificially attached<sup>1</sup> requirements would each impact fishing operations. All options are assessed with regards to the expected impacts on fishing operations based on prior knowledge of fisheries and submissions received.

Uncertainty around financial impacts is mostly in relation to the limited information available on actual value of shark products and the operational changes that may result from new regulations. It is also difficult to quantify any impacts new regulations may have on the value of quota for shark species.

The analysis provided is based on expert knowledge of New Zealand’s fisheries and submissions received during the public consultation periods on the NPOA-Sharks and on the specific regulations to implement the ban on shark finning.

Scott Gallacher, Deputy Director-General

Regulation and Assurance Branch

/ /2014

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<sup>1</sup> Fins artificially attached refers to where some limited processing of a shark is allowed at sea but the fins must be re-attached (i.e. tied on, or stored in the same sack) to the remainder of the shark.

## Executive summary

It is proposed to prohibit shark finning in all New Zealand fisheries by 1 October 2014, in line with an objective in New Zealand’s National Plan of Action for the Conservation and Management of Sharks (NPOA-Sharks).

Shark finning is defined as the removal of the fins from a shark and the disposal of the rest of the shark at sea. The practice has raised concerns both domestically and internationally for animal welfare, wastage, and sustainability reasons. The proposals outlined here are intended to address wastage concerns and improve New Zealand’s ability to demonstrate its commitment to international shark conservation and management objectives.

Animal welfare concerns are addressed under the Animal Welfare Act 1993, which makes it illegal to remove the fins from a shark and return it to the sea alive. The existing management framework addresses sustainability matters, including through catch limits under the Quota Management System (QMS) for most commonly-caught shark species (Table 1). In addition, other objectives in the NPOA-Sharks more specifically cover sustainability.

Table 1: Summary of QMS and non-QMS shark species

QMS Species	Non-QMS species
Spiny dogfish	All other species of Chondrichthyans (excluding Batoidea)  e.g.: Carpet shark Seal shark Shovelnose dogfish Longnose chimaera
School shark	
Rig	
Dark ghost shark	
Pale ghost shark	
Elephantfish	
Mako shark	
Porbeagle shark	
Blue shark	

The proposed finning ban would take the form of a general regulation stating it is unlawful to land just the fins of any shark species. Fishers could continue to land fins as a secondary landed state alongside another primary state such as dressed trunks, but could no longer land just the fins. The two main regulatory approaches to a finning ban are:

- 1) through a ratio approach:
  - shark fins landed must weigh no more than a specified percentage of the greenweight (whole weight of the fish) determined from the main product; or
- 2) requiring sharks to be landed with fins naturally or artificially attached (‘fins attached’):
  - some processing is allowed for sharks to be bled and gutted and have the head removed, however fins to be retained must be folded against, tied onto or otherwise attached to the trunk of the shark.

The preferred option for the timing and method of shark finning regulations is outlined in Table 2 below. The preferred approach is a combination of fins attached and ratio requirements that can be targeted to specific fishery characteristics. This is considered to provide the best balance between eliminating shark finning and minimising disruptions on fishing operations, including those that already fully utilise shark catches.

Non-regulatory approaches were considered, but as compliance would rely on voluntary codes of practice and likely require self-policing by the fishing industry, it would be unlikely

that non-regulatory measures would provide sufficient confidence that shark finning was no longer occurring.

It is recommended that irrespective of the option selected to implement the ban on shark finning, amendments be made to Schedule 6 of the Fisheries Act 1996 to allow fishers a legal option to deal with unwanted incidental catches of sharks that are dead when brought on board the vessel. This will address one driver of shark finning in New Zealand related to the QMS requirement to retain some part of all fish that are caught dead.

The overall objective for the proposals is outlined in the NPOA-Sharks, and is to eliminate shark finning in New Zealand fisheries by 1 October 2015, with one exception (the exception being blue shark, for which an additional year was allowed for implementation). Specific objectives are that the regulations that are put in place:

- 1) meet public and international expectations for reducing wastage in shark fisheries;
- 2) provide a high degree of confidence that shark finning is no longer occurring; and
- 3) minimise the impact on commercial operations, including those that already fully utilise shark catches (i.e. those where no shark finning is taking place).

Table 2: Summary of preferred approach for prohibiting shark finning

Option and description	Rationale
<b>Means of implementing finning ban</b>	
Apply ratio approach to QMS species with current or potential for high utilisation (rig, elephantfish, dark and pale ghost shark, school shark, porbeagle, mako (with review after two years)); and a fins naturally or artificially attached approach for spiny dogfish, blue shark, and all species not managed under the quota management system (i.e. non-QMS species) and	<p>A fin ratio approach was accepted by both industry and some environmental stakeholders as having the least impact on industry. Environmental groups in support saw this as appropriate in fisheries where existing utilisation is high (i.e. limited or no fin-only landings). Industry submitters note a ratio approach would also enable them to improve utilisation in fisheries where some fin-only landings occur at present (with the likely alternative being such sharks would be discarded).</p> <p>This option provides an appropriate balance between allowing utilisation to improve (through a ratio approach), but retaining greater surety that no finning is occurring (i.e. retaining a 1:1 ratio between shark bodies and fins) in higher risk fisheries.</p> <p>There may be limited scope to improve utilisation through allowing processing at sea, and limited impact on at-sea processing, for blue shark and spiny dogfish respectively. This means there may be less of a need for a ratio approach to be applied in these fisheries. Having a fins attached requirement would give greater certainty that no fins were retained without the corresponding bodies (although in reality at least for blue shark few sharks are likely to be landed). Allowing fins to be artificially (rather than naturally) attached may give fishers some additional options and help to overcome some of the industry concerns about the need for processing at sea in order to maintain the quality of the product.</p> <p>It is also considered there is less need for processing at sea to occur for non-QMS species, where catches are lower in volume and more intermittent. Baseline monitoring is also lower for non-QMS species leaving less scope for monitoring compliance with a ratio approach.</p>
<b>Timing</b>	
Implementation for all species from 1 October 2014	The shortened timeframe for implementation is feasible for all species and will promote New Zealand's image overseas as well as providing comfort domestically that finning has been banned. This date also provides two years to adjust regulations as required to ensure finning is eliminated within the timeframe set in the NPOA-Sharks. This option is also consistent with the public expectation expressed during consultation that finning would be eliminated beginning in 2014 and be progressed as quickly as possible.

Dealing with unwanted shark catches	
Amend Schedule 6 of the Fisheries Act 1996 to allow dead returns as well as live releases for blue shark, mako shark, porbeagle shark (subject to conditions including dead releases being covered by ACE).	Amending Schedule 6 for mako, porbeagle and blue sharks will help maintain the integrity of the QMS by providing an option for fishers who catch dead sharks for which there is limited or no market. The need to cover dead (but not live) releases with annual catch entitlements provides an incentive for sharks to be released alive, while providing fishers with a legal option for discards makes it more likely that such discards will be reported, so data quality can be maintained.



## BACKGROUND

### *International context*

Internationally, management of shark populations may be seen as an “iconic” marine conservation issue, reflecting concerns about declining shark populations globally. Many countries, including New Zealand, have revisited their national policies to reflect the international momentum towards more comprehensive shark conservation and management measures.

Members of the United Nations’ Food and Agriculture Organisation adopted the International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks) in 1999. Since then, a number of countries, including 18 of the top 26 shark fishing countries, areas and territories, have adopted an NPOA-Sharks.<sup>2</sup>

Key issues raised both internationally and in New Zealand with regards to sharks include the overall sustainability of shark fishing, and issues related to the use of sharks. Attention has focussed in particular on the issue of shark finning – the removal of the fins from the shark before returning the carcass to the sea.

### *New Zealand’s National Plan of Action for Sharks*

New Zealand adopted its first NPOA-Sharks in 2008, and a revised plan in 2014. The revised NPOA-Sharks was drafted through a collaborative process involving industry and environmental group stakeholders as well as the Department of Conservation and the Ministry of Foreign Affairs and Trade.

The NPOA-Sharks, drafted in accordance with the IPOA-Sharks, establishes the direction and management principles to guide New Zealand’s management of sharks using the existing fisheries management system. The NPOA-Sharks implements a risk-based approach to the management of sharks allowing resources to be directed to the populations most in need of active management.

In recognition of the international and domestic focus on shark finning, New Zealand’s NPOA-Sharks also includes a goal to ‘Encourage the full use of dead sharks, minimise unutilised incidental catches of sharks, and eliminate shark finning in New Zealand.’ The NPOA-Sharks defines shark finning as the removal of the fins from a shark and the disposal of the remainder of the shark at sea. The removal of the fins from a shark where the trunk is also retained for processing is not defined as “shark finning.”

### *Issues raised in relation to shark finning*

On a broad scale, perceptions around shark finning may impact New Zealand’s international reputation, especially in international conservation and management fora. A lack of a defined ban on finning may also have impacts on market access as both consumers and eco-labelling schemes are beginning to consider a ban on shark finning as a requirement for purchasing or certifying a product. Examples of this may be found in the US, where supermarkets have announced they will only stock seafood that is certified as sustainable by an independent third party. In future, discerning consumers may avoid any fish products from New Zealand if they consider that New Zealand allows shark finning. More specifically, shark finning generally raises concerns about animal welfare, sustainability, and waste.

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<sup>2</sup> As at an FAO review in 2012; a further five of the top 26 countries were in the process of developing such a plan. Source: Fischer, J., Erikstein, K., D’Offay, B., Barone, M. & Guggisberg, S. 2012. *Review of the Implementation of the International Plan of Action for the Conservation and Management of Sharks*. FAO Fisheries and Aquaculture Circular No. 1076. Rome, FAO. 120 pp.

Concerns about animal welfare are addressed in New Zealand through the Animal Welfare Act 1993 which makes it illegal to remove the fins from a shark and return the rest of the shark to the sea alive. Broader shark finning legislation will support this provision by making it illegal to retain only the fins of any shark, regardless of life status.

Sustainability concerns arise because of the biological characteristics of sharks that make them relatively vulnerable to fishing pressure. In some international fisheries, which are subject to few controls, retaining just the fins of the sharks allows fishers to catch large quantities of sharks, leading to concerns about population-level impacts. In New Zealand, sustainability concerns are addressed under the existing management framework which includes species-specific catch limits, robust reporting requirements and active monitoring of catch levels.

Wastage concerns arise where just the fins of a shark (constituting around 3 to 5% of its total weight) are retained while the rest of the shark is discarded. In New Zealand, this is the main relevant concern, as animal welfare and sustainability are generally addressed through existing legislation. There are no fisheries in New Zealand which target shark species for only fins and the majority of sharks caught in New Zealand are fully processed for their meat.

### New Zealand shark fisheries

All marine fisheries in New Zealand are managed under the Fisheries Act 1996 (the Act) and associated regulations. Provisions for the conservation and protection of wildlife under the Wildlife Act 1953 may also be used to protect specific shark species where required. The Department of Conservation is the lead agency for administration of the Wildlife Act.<sup>3</sup>

Sharks are taken as a target or bycatch in a range of New Zealand fisheries. Total reported whole weight catches of shark<sup>4</sup> species have averaged around 18,000 tonnes over the last five years. Up to 70 species have been reported caught in commercial fishing activity, although nine shark and chimaera species managed with catch limits under the Quota Management System (QMS) have made up, on average, 88% of catches over the most recent five years. Overall, a large majority of catches are fully processed to the dressed or headed and gutted state. In some cases, the fins of the shark may be retained alongside a separate primary processed state.

A number of factors contribute to only the fins of sharks being retained, as summarised in Table 3.

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<sup>3</sup> Shark species protected under the Wildlife Act 1953 and the Fisheries Act 1996 are white pointer or great white shark, basking shark, and oceanic whitetip shark. Species protected under just the Wildlife Act include deepwater nurse shark, whale shark, and manta and devil rays. The Wildlife Act protects species in New Zealand fisheries waters, whereas the powers of the Fisheries Act can be applied to New Zealand-flagged fishing vessels and nationals to extend protection to the high seas.

<sup>4</sup> Species proposed to be covered by the shark finning regulations (i.e. Class Chondrichthyes – excluding skates and rays (Batoidea) but including chimaeras).

**Table 3: Factors contributing to shark finning in New Zealand fisheries**

*Market considerations*

Shark meat from some species is known to have very low market value, and in some cases, no market value at all even if it is sold at a loss to the fisher.

Markets that exist may be for a particular type of product (e.g. fresh but not frozen product).

Some species have been identified as containing high concentrations of heavy metals in their meat, rendering them unsafe for consumption and limiting available markets.

*Storage and processing*

Shark flesh can ammoniate rapidly and fishers may not be set up to process and store it appropriately to avoid contamination of both the shark meat and of target fishery catches (e.g. valuable tuna catches).

With limited hold space on small vessels, fishers are reluctant to hold large products that are less valuable than their target species.

*Costs associated with catching sharks*

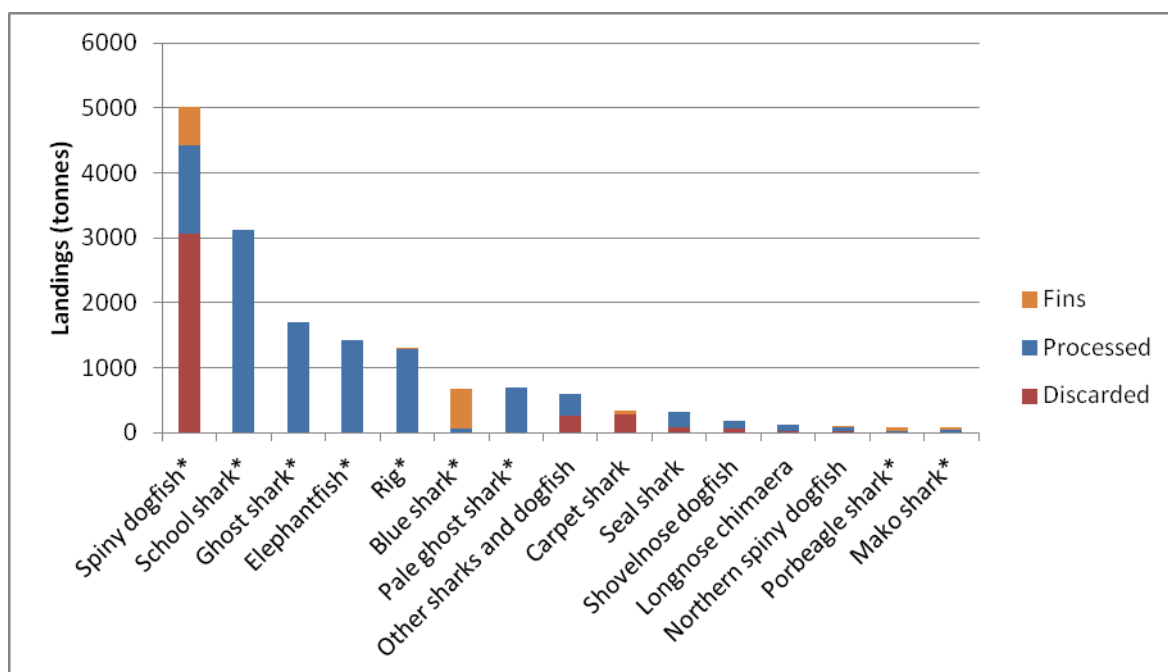
Catching sharks incurs a cost on fishers (annual catch entitlement (ACE) costs, lost gear and time, reduced target catches). Retaining shark fins can be seen as a means of recouping some of these losses.

*Quota Management System*

Fishers are required under the Act to retain all QMS species they catch, with the exception of those listed on Schedule 6 of the Act, which may generally be released if alive and likely to survive. For QMS species that are dead, fishers are required to retain at least part of the shark for catch accounting purposes (with the exception of spiny dogfish, which may be returned to the water dead or alive). For the reasons outlined above, it may not be desirable to retain the meat of the shark, so just the fins may be retained.

Figure 1 below shows catch volumes and processed states for the top 15 shark species caught in the 2012-13 fishing year. Fin-only landings occur in only a small number of fisheries and in most cases, other forms of processing take place.

Figure 1: Landings, discards and processing information for QMS and some non-QMS species for the 2012-13 fishing year.



\* QMS species. Note: discards data includes spiny dogfish returned under Schedule 6 provisions, but does not include any live releases of other shark species under Schedule 6.

Not all non-QMS species are shown.

Around 1,500 tonnes of sharks caught in 2012-13 were subject to shark finning, including around 600 tonnes each of spiny dogfish and the highly migratory blue shark (Table 4). Public and environmental group concern has also focussed on two other highly migratory shark species, mako and porbeagle (with fin-only landings of 40 and 47 tonnes respectively).

Table 4: Total landings and % of landings as fins-only for individual QMS species and of all non-QMS species combined for 2012-13 fishing year.

Species	Total landings (t)	% landed fins-only
Spiny dogfish	5,017	12%
School shark	3,150	<0.01%
Dark ghost shark	1,710	<0.01%
Elephantfish	1,427	<0.01%
Rig	1,299	0.01%
Blue shark	717	86%
Pale ghost shark	700	<0.01%
Porbeagle shark	82	58%
Mako shark	82	50%
Non-QMS species (all)	1,911	4%

## PROBLEM DEFINITION

The proposal to ban shark finning in New Zealand seeks to address two related problems:

- 1) domestic and international concerns about wastage or under-utilisation of sharks if just the fins are retained; and
- 2) the need to be able to clearly demonstrate New Zealand's commitment to the objectives contained in the IPOA-sharks and its own NPOA-Sharks, in order to maintain our international reputation as well as market access.

Public concerns often extend beyond the few fisheries in which shark finning actually occurs, to a broader and more general concern about shark fishing. MPI intends to address broader public concerns through other aspects of its management system as well as through other NPOA-Sharks objectives. One such objective is to improve communication so that there is greater public awareness of how New Zealand's shark fisheries are managed.

In addition, regulatory changes are proposed to provide fishers with legal options to deal with unwanted incidental captures of sharks that are dead when captured. This is intended to address the driver of shark finning in New Zealand related to the QMS requirement to retain some part of all fish that are caught dead.

## OBJECTIVES

The overall objective for the proposals is outlined in the NPOA-Sharks, and is to eliminate shark finning in New Zealand fisheries by 1 October 2015, with one exception (the exception being blue shark, for which an additional year was allowed for implementation). Specific objectives are that the regulations that are put in place:

- 1) meet public and international expectations for reducing wastage in shark fisheries;
- 2) provide a high degree of confidence that shark finning is no longer occurring; and
- 3) minimise the impact on commercial operations, especially those that already fully utilise shark catches (i.e. those where no shark finning is taking place).

## Options and impact analysis

The two main regulatory approaches to a finning ban are:

- 1) through a **ratio approach**:  
shark fins landed must weigh no more than a specified percentage of the greenweight (whole weight of the fish) determined from the main product; or
- 2) requiring sharks to be landed with fins naturally or artificially attached (**'fins attached'**):  
some processing is allowed for sharks to be bled and gutted and have the head removed, however fins to be retained must be folded against, tied onto or otherwise attached to the trunk of the shark.

Different combinations of these approaches could be used for different species, depending on the balance between the objectives, and consideration of associated risks. The options considered for introducing a shark finning ban are summarised in Table 5 below.

Table 5: Summary of options for implementation of shark finning ban

Option	Title	Description
Option 1	Status quo	This option makes no changes to the current situation until 2015
Option 2	Non-Regulatory measures	This option includes no regulatory changes and relies on self-governing and voluntary arrangements within the fishing industry
Option 3	Single regulation and removal of reporting codes	This option was proposed in industry submissions and consists of a ban on landing only the fins of a shark, accompanied by the removal of the landing codes for fins.
Option 4 (Recommended)	Combination of ratio and fins attached requirements	This option implements a ratio requirement for seven QMS species (school shark, rig, dark ghost shark, pale ghost shark, elephantfish, mako and porbeagle) and a fins attached requirement for the remaining two QMS species (spiny dogfish and blue shark) and all non-QMS species
Option 5	Fins attached requirement only	This option would implement a fins attached requirement for ALL shark species
Option 6	Ratio requirement only	This option would implement the ratio approach for ALL shark species

The *status quo* includes some voluntary actions already being taken by industry. It is considered that the *status quo* or additional non-regulatory options would not meet the overall objective. All other options would meet the overall objective of banning shark finning, but some may do so more effectively than others, and some options may have unintended consequences.

One possibility that emerged during consideration of submissions is for sharks to be landed with fins artificially – rather than naturally – attached. This would allow removal of fins to optimise processing and reduce the risk of ammoniation of the meat – one of the main concerns raised by industry. Fins would be required by way of regulation to be attached to the shark body, for example by being tied to or stored in a sleeve with the shark body, thus retaining the 1:1 ratio of fins to bodies which is a key concern for environment groups.

No matter what option is selected for implementing the finning ban, MPI considers subsidiary changes should be made to the provisions for the return of quota species to the water (Schedule 6 of the Act), to ensure better compliance with shark finning rules and to provide fishers with a legal avenue for unwanted catches.

Table 6: Summary of assessment of options against objectives and risks

Key: ✗ = the objective is not likely to be met; ? = the outcome is unknown; ✓ = objective is likely to be met

Summary of Options	Meet public and international expectations for reducing wastage in shark fisheries	Provide a high degree of confidence that shark finning is no longer occurring.	Minimise the impact on commercial operations, including those that already fully utilise shark catches.
Option 1 – <i>Status quo</i> Given the pre-existing decision to ban shark finning, the <i>status quo</i> implies adoption of a ban in 2015.	✗ In the interim, some reduction in shark finning is likely given current market conditions, but practices may alter again in the future.	✗ This does not meet the NPOA-Sharks commitment to ban finning in some fisheries in 2014.	✗ Although the <i>status quo</i> might minimise the impact on commercial operations in the short term, industry is increasingly being required to demonstrate controls on shark finning in order to meet market preferences.
Option 2 – Non-regulatory option: additional voluntary restrictions on the landing of shark fins unless the rest of the shark is also retained	✗ Voluntary measures would likely not be effective enough to achieve the overall objective. A reduction in shark finning may occur but a total stop would be hard to achieve on a voluntary basis, and could be subject to change if market conditions change.	✗ Monitoring of voluntary measures would be the responsibility of the industry and would not provide a high degree of confidence that shark finning is no longer occurring.	✗ Fishers that already land both shark trunks and fins could continue to do so, but market access may be impaired because of the perceived lack of regulatory controls.
Option 3 – Ban on landing fins and removal of associated landing codes (as per industry submissions)	✗ A ban on landing only the fins of a shark would outlaw the practice of shark finning, however it would likely not meet public and international expectations for reducing waste	✗ Monitoring of a ban without additional regulations would not be effective and would not provide a high degree of confidence that finning is no longer occurring.	✓ A ban in this form would allow current at sea practices to continue, with the exception of fin-only landings which would be illegal.
Option 4 – Fins Attached requirement for non-QMS and lower utilisation species; ratio for high or potentially high utilisation QMS species [preferred]	✓ Would reduce wastage by ensuring fishers cannot retain just the fins; options would be tailored to fishery circumstances to maximise utilisation of sharks and live releases would be encouraged.	✓ The current rigorous monitoring regime for QMS species can be drawn upon to effectively monitor compliance with the ratio. Other species would be landed with fins attached, which can readily be monitored in port.	✓ Provides an appropriate balance between workability of rules and the need to ensure no finning takes place. Allowing fins to be landed artificially rather than naturally attached may also make the rules more workable for fishers.
Option 5 – Fins Attached for all species	? This option may increase wastage for some species that are already fully utilised, because processing on land is less efficient than at sea, leading to a lower quality product and potentially more discards.	✓ 'Fins attached' may be viewed as best practice where catch limits and strict controls on landings are not in place. A requirement to land fins attached would give a high degree of confidence that finning is no longer occurring.	✗ Operations that do not undertake shark finning would likely be subject to additional costs and the quality of their product would decline if required to land all sharks with fins attached. Operations where finning currently occurs may be more likely to discard sharks instead of incurring costs to land the sharks with fins attached. Allowing fins to be landed artificially (rather than naturally) attached may alleviate some fisher

Summary of Options	Meet public and international expectations for reducing wastage in shark fisheries	Provide a high degree of confidence that shark finning is no longer occurring.	Minimise the impact on commercial operations, including those that already fully utilise shark catches.
			concerns about the practicality of this option.
Option 6 – Fin ratio for all species	<p style="text-align: center;">×</p> Fin ratios allow for full utilisation of sharks caught wherever possible, however they may not meet public expectations for species where utilisation rates are currently low and fin-only landings are high.	<p style="text-align: center;">?</p> Could allow opportunities for high-grading to occur in fisheries where routine monitoring is less rigorous (i.e. non-QMS species), and it may be harder to determine through physical inspections if excess shark fins had been landed.	<p style="text-align: center;">✓</p> Fin ratios would allow existing at-sea processing to continue. Fishers have identified this option as most practical for implementing a finning ban because it minimises disruptions to existing practices.

## WAYS TO IMPLEMENT A SHARK FINNING BAN

### Option 1 – *status quo*

As noted, as significant proportion of the New Zealand population considers retaining just the fins of the shark and discarding the remainder is unacceptable. In response, Ministers have committed to a ban on shark finning.

As shown in Table 4, some species are currently subject to shark finning (blue shark, spiny dogfish, mako and porbeagle sharks). In other fisheries, the fins are retained alongside the rest of the shark but the public desires some assurance that the whole shark has been retained and used (not just the fins).

Under the *status quo* it would remain legal for fishers to land shark fins as the primary landed state (i.e. fishers could choose to retain only the fins from any sharks they catch, with the exception of protected shark species). The circumstances outlined above would likely continue to provide incentives for fishers to fin some sharks. Given the apparent slow-down in global demand for fins, fewer fins may be landed over time, but this does not preclude future changes that provide additional incentives for fin-only landings. In fisheries where fishers need to retain at least part of the shark for QMS reporting purposes, retaining the fins would likely remain one of the easier options.

Analysis of the *status quo* assumes that if the finning ban is not implemented in 2014, implementation will occur in 2015 in order to meet the commitment to ban finning. The NPOA-Sharks indicates the overall framework for a shark finning ban will be adopted in 2014, and applied to a first tranche of species. The *status quo* would not meet this commitment.

The *status quo* may minimise impacts on fishers in the short-term, but given public and market demand for controls on shark finning, over time industry may find the need to more readily demonstrate a ban on shark finning in order to retain market access. Shark products are commonly sold on the domestic market and in Australia, with strong public support for a finning ban in both places. The NPOA-Sharks consultation attracted substantial numbers of form submissions from overseas, including from Australia.

#### *Objective 1*

The *status quo* includes a commitment to eliminate shark finning, but no decisions on how to do so outside of the timeline committed to in the NPOA-Sharks. Delaying implementation for a year would potentially provide additional time to collect data, meaning confidence in ratios and conversion factors would potentially be higher. However, more time would not necessarily lead to more available data. Under this option, finning would not be banned for most species until 2015 (and for blue shark no later than 2016), meaning that finning would continue for a year or two longer, with concomitant delays to meeting the objectives of reducing wastage and demonstrating commitment to international measures.

#### *Objective 2*

Without a ban on shark finning, there would be no confidence that shark finning has been eliminated in New Zealand fishing waters.

#### *Objective 3*

This option could give fishers longer to adjust their practices (and potentially to seek to avoid or mitigate shark catches). Despite this, in discussions to date, industry has indicated they are comfortable with the faster timeline, particularly in conjunction with efforts to make sure the rules are as workable as possible. Work on mitigation would continue regardless and findings



could be adopted as they become available. Much of the work will be over the medium term so it does not make sense to wait for results before implementing the finning ban where industry supports earlier adoption. The earlier option is also clearly favoured by environmental groups and the general public.

### *Risks*

This option is not consistent with objective to eliminate shark finning in the NPOA-Sharks. Further, public expectations of an accelerated implementation timeframe have been raised during the consultation process, and not adopting the ban until 2015 is likely to attract criticism from the public, interested stakeholders, and international fora at which shark conservation and management is discussed.

Analysis of all other regulatory options (options 3 to 6) assumes implementation will occur for all species on 1 October 2014. The NPOA-Sharks initially envisaged phased implementation (i.e. banning finning only in some fisheries in 2014, and the remainder over the following two years). A longer lead in time could allow for collection of more data on appropriate ratios, potentially leading to more accurate rules, as well as providing fishers with more time to adjust their practices. However, MPI now considers sufficient information is already available to develop regulations, and it makes more sense to put the rules in place now and closely monitor their implementation. Specific details like the mandated ratio of finweight to whole weight can be refined over time with the collection of additional data (for example a move from generic to species-specific ratios).

### **Option 2 – Non-Regulatory Approach**

Under this option, no regulatory amendments would be made to enforce a ban on shark finning. This option recognises that because of the weight of public opinion and market pressure to eliminate shark finning, including changes to eco-labelling requirements, industry would implement voluntary measures to eliminate shark finning. These may take the form of a code of practice which would be self-policed by industry.

However, MPI considers many of the drivers outlined above would continue to influence individual fishers, such that some finning would likely still take place. In addition, voluntary controls are unlikely to fulfil either the NPOA-Sharks objective, or the requirements of environmental certification bodies.

### *Objective 1*

This option would likely not meet public and international expectations, as it is not monitored and enforced by an independent third party (i.e. government). It also may not reduce waste, as operational practices and drivers to maintain the ‘ban’ on finning may change over time and reduce the priority for industry of ensuring that shark finning is not occurring.

### *Objective 2*

This option would not provide a high degree of confidence that shark finning is no longer occurring. There would be limited monitoring and the ability of the industry to self-police may be questionable (particularly if the financial returns for shark fins improve in future).

### *Objective 3*

This option would have minimal impacts on commercial operations, however it is possible that it will also not eliminate shark finning.

### *Risks*

MPI considers that this option is not consistent with the shark finning objective in the NPOA-Sharks and would not satisfy any of the objectives discussed above.

### **Option 3 – Regulation making it illegal to land only the fins of a shark and removal of associated landing codes only**

Several industry submissions suggested that the ban could be implemented solely through the introduction of a regulation making it illegal to land only the fins of a shark. They stipulate that this regulation coupled with the removal of the codes required to land fins, would serve to effect the ban on shark finning without further regulatory change. This option would not require either a ratio or a ‘fins attached’ requirement because the regulation would ban finning.

#### *Objective 1*

This option would not meet public and international expectations for reducing waste as there is no clear way to demonstrate or confirm that shark finning is no longer occurring and that sharks are being fully utilised where possible.

#### *Objective 2*

The legal framework outlawing shark finning is provided in this option. However, it does not provide any way for compliance with the ban to be monitored. Without additional regulations making it clear that fins need to be landed in a ratio with bodies, inspectors would have no way of detecting instances where fins are landed without the associated trunks, especially in high volume fisheries.

#### *Objective 3*

This option would minimise the impact on commercial operations, especially those that already fully utilise shark catches.

### *Risks*

This option provides a legal framework which would make shark finning illegal. However it provides no ability to monitor or confirm compliance of fishers with the ban. Therefore, it becomes a major risk that shark finning would continue undetected in some fisheries and not result in the achievement of the overall objective to eliminate shark finning in New Zealand.

### **Option 4 – ‘Fins attached’ in non-QMS and lower utilisation fisheries; ratio in high or potentially high utilisation QMS fisheries (preferred)**

Under this option, the ratio approach would be implemented for seven QMS species: school shark, rig, dark ghost shark, pale ghost shark, elephantfish, mako shark, and porbeagle sharks. ‘Fins attached’ would be required for the remaining two QMS species: spiny dogfish and blue shark, and for all non-QMS species. Other combinations of species for each approach were considered, however analysis is only presented for this specific option as it is the preferred option presented.

While environmental groups describe fins naturally attached as ‘best practice,’ MPI considers the circumstances of finning bans elsewhere are often different from those in New Zealand’s domestic fisheries. For example, vessels in other jurisdictions subject to a finning ban may typically be fishing outside of national waters (i.e. on the high seas or in other jurisdictions), at sea for long periods of time, and unloading fins and shark trunks into different ports. In addition, many shark fisheries globally are poorly reported (e.g. catch reporting not down to species level) and not subject to catch limits. These features make monitoring more difficult

in comparison to the situation in New Zealand where all sharks are subject to strict reporting and landing requirements, and the majority of sharks caught are subject to catch limits.

For this reason, MPI aligns more with the definition of best practice adopted by the Marine Stewardship Council,<sup>5</sup> which is that sharks should be landed with fins attached (either naturally or artificially) unless there are comprehensive regulations in place governing the management of sharks, including documentation of the destination of all shark bodies and body parts, and appropriate monitoring of fishing activities.

Note that this option includes fins naturally or artificially attached rather than only fins naturally attached for spiny dogfish, blue shark, and non-QMS species. This is seen as a compromise between fins naturally attached and the ratio, as the artificially attached requirement allows additional processing to be completed at sea so long as the fins are re-attached to enable inspection and confirmation of the 1:1 ratio. It should be noted this option does not address all industry concerns, including the additional time it would take to process sharks (including to artificially attach the fins), the costs involved with bringing back a product (i.e. shark bodies) for which the markets may be limited, and the possible contamination of target catches.

#### *Objective 1*

The public expectation expressed during consultation was that a ratio approach would be appropriate for the five QMS species with high levels of utilisation (i.e. less than 1% of landings were fin only), but that a fins attached rule would be necessary in other fisheries where finning has been more prevalent in the past or where the fins attached rule would have more limited impact on fishers.

MPI considers that, while a fins attached rule will provide additional certainty that shark finning is not occurring in mako and porbeagle fisheries, wastage is likely to be increased under a fins attached rule rather than decreased, as per the goal in the NPOA-Sharks. Therefore, the ratio option for mako and porbeagle sharks allows fishers to maximise utilisation and minimise wastage.

#### *Objective 2*

For fisheries where finning is currently very rare (i.e. 1% or less of landings for five species of QMS sharks), it is considered that the ratio approach is able to provide a high degree of certainty that shark finning is not occurring. This is supported by monitoring tools which are readily available to ensure compliance with ratios and particularly to identify any systematic discrepancies, and by the fact that there are very few fin-only landings of these species, indicating that there is little incentive to land any fins without the associated trunk.

For fisheries where finning was previously common, including fisheries for the QMS species spiny dogfish and blue shark, a fins attached rule provides additional certainty that finning is not occurring as it is very easy to monitor through inspections both at-sea and in port, and there is no way for fishers to attempt to circumvent the rules (as there might be with a ratio approach). The fins attached requirement also provides additional certainty for species where regular monitoring and cross-checking of data is not as robust (i.e. for non-QMS species)

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<sup>5</sup> The Marine Stewardship Council is an independent eco-label which certifies fisheries worldwide as sustainable and works with retailers to source only sustainable seafood products. (<http://msc.org>)

### *Objective 3*

Fishers' preference is to have a ratio approach for as many species as possible, as this will minimise impacts on their operation (noting there will be an over-arching prohibition on shark finning, and landings of shark fins as a primary state will no longer be allowed).

Requiring some species to be landed with fins attached will have a greater impact on fishers. For example, MPI understands that the dressed landings of blue shark that are currently made (around 60 tonnes in 2012-13) will likely cease under a requirement to land with fins naturally attached, because of the additional costs involved and the reduced quality of the product if adequate at-sea processing cannot occur. The extent to which a fins artificially attached rule will alleviate these concerns is not known.

Current blue shark landings are predominantly in a fin-only state, with a smaller proportion of dressed landings (see Table 2). Once the finning ban is established, fishers are considered unlikely to retain the majority of their blue shark catches, particularly if a fins attached rule is put in place. An industry body has submitted that prior to the collapse in shark fin prices, blue shark fins had an estimated export value of well over \$400,000 per annum. With the collapse in prices, that revenue would have dropped to approximately \$40,000. The industry body submits that if a fins attached rule for blue sharks is put in place, fishers would have little option other than to release any blue sharks. The most practical means of releasing the sharks is to cut them off the line, leading to an annual cost of around \$100,000 in lost gear such as hooks. Industry submits that the additional \$100,000 cost comes on top of the \$400,000 reduction in revenue.

MPI notes that some loss of revenue has already occurred under the *status quo*, because of changing market preferences. There are difficulties in quantifying the additional impacts of the finning proposals because the precise impact will be determined by the operational decisions fishers make (i.e. whether to land or discard sharks, whether to retain the fins or just the bodies of the sharks etc), and because MPI has to rely on secondary sources of information on economic indicators of the value of fisheries. Relatively good information is available on export values, but few sharks are identified by species in these figures. In addition, many sharks are sold on the domestic market, for which MPI only has anecdotal figures from industry. Other proxies include an annual survey of port prices, and the trading price of annual catch entitlements, both of which rely on self-reported information and are known to be subject to inaccuracies.

Nonetheless, Table 7 below provides some additional information to quantify the impacts of different options on fishers – i.e. to provide some analysis of the options in relation to Objective 3.

### *Risks*

Allowing a fin ratio for some species, including some where finning currently takes place (i.e. mako and porbeagle sharks), may not meet public expectations for a finning ban. There is a risk of high-grading under a ratio approach, although MPI considers the risk can be managed through selecting a conservative ratio and using existing QMS reporting systems for targeted, risk-based monitoring.

The addition of the ability to land fins 'artificially' attached may be considered by environmental groups to open a potential loophole for fishers to 'high grade' fins, however MPI considers this risk to be low and will actively monitor compliance to ensure this is not a problem.

This option also poses a risk of reduced utilisation of blue shark fisheries, which may be more likely to be discarded whole than retained and processed under a fins-attached requirement. Although industry submitters also consider a fins-attached requirement would hinder utilisation in spiny dogfish fisheries, MPI considers there would be little change required to existing practices (with the obvious exception of halting fin-only landings). The predominant landed states at present aside from fins are whole (greenweight) and mealed, both of which could still be used.

Table 7: Impacts of different options on fishing operations. Options 1, 2, and 3 are not included because they do not meet management objectives. Unless otherwise specified, \$ estimates are based on most recent catch, port price and/or export data available.

Species grouping	Option 4: Combination of ratio and fins attached (Preferred)	Option 5: Fins attached only	Option 6: Ratio approach only
<p><b>QMS species with high utilisation</b> (school shark, rig, elephantfish, pale and dark ghost shark)</p>	<p><b>Ratio:</b> impacts are likely to be limited; fishers will be required to store fins separately by species, which may add slightly to operational complexity.</p>	<p>Fishers would either not be able to retain fins anymore, leading to a total lost revenue of around \$2.2 million across all fisheries, or fishers would be able to undertake more limited processing at sea, with some decrease to the value of the product, and possible increases in processing times or decreased efficiency. Fishers would presumably choose the lower of the two impacts meaning the figure of \$2.2 million should represent an upper estimate of possible costs. In total, shark fisheries are worth around \$35 million including exports and domestic sales.</p>	<p>See option 3.</p>
<p><b>Mako and porbeagle sharks</b></p>	<p><b>Ratio:</b> Fishers in surface longline fisheries catching these species would likely retain those caught dead but release others alive, meaning a decrease in total landings. Almost all of these sharks are dead when caught in trawl fisheries. Landings in the dressed state would likely increase once fin-only landings are banned, leading to some increased value but likely not enough to off-set the loss of fin sales. Costs in lost gear have been estimated at \$100,000 for blue shark, but would likely be lower than this for mako and porbeagle given the lower volume of catches and the higher retention rates.</p>	<p>Fishers would be unlikely to retain porbeagle or mako sharks, including the 26-32 tonnes respectively that are currently landed in a dressed state (i.e. not subject to finning). This would lead to foregone earnings estimated at \$83,000, assuming most or all catches would be discarded. Costs associated with releasing sharks alive (i.e. lost gear) would be higher under this option, since more sharks would be released.</p>	<p>See option 3.</p>
<p><b>Blue shark</b></p>	<p><b>Fins attached:</b> Fishers would be unlikely to retain many blue sharks under a fins attached option, with estimated foregone utilisation of around \$400,000 per annum. Additional costs of around \$100,000 per year are estimated for releasing sharks alive (through loss of gear e.g. hooks). Fishers discarding dead sharks would be required to pay annual catch entitlements for an estimated 100-150 tonnes of dead sharks that would be discarded each year. Whereas existing purchases of catch entitlements are off-set by sales, there would be no off-set under this scenario, but the current price for annual catch entitlements averages around</p>		<p>Under a ratio approach, existing utilisation of blue shark could continue i.e. the small quantity of dressed landings would not be substantially affected. In 2012-13, around 60 tonnes of dressed landings were made, for an estimated value of \$34,200 based on port prices. This could represent</p>

Species grouping	Option 4: Combination of ratio and fins attached (Preferred)	Option 5: Fins attached only	Option 6: Ratio approach only
	\$50 per tonne for reported transactions, meaning this is a negligible cost.		a significant component of total income for the small number of operators making such landings. There would also be opportunities for dressed landings to expand in the future if markets are identified. Costs associated with releasing sharks alive would still be a factor since most sharks that are currently finned would now be returned to the sea.
<b>Spiny dogfish</b>	<b>Fins attached:</b> Total spiny dogfish landings were valued at around \$430,000 in 2012-13. Although industry submitters consider a fins-attached requirement would hinder utilisation, MPI considers there would be little change required to existing practices (with the obvious exception of halting fin-only landings). The predominant landed states at present aside from fins are whole (greenweight) and mealed, both of which could still be used.		A ratio approach would give fishers a greater range of options for processing their catches, and may provide more flexibility to respond to changing market demand in the future (e.g. development of a market that requires dressed landings).
<b>Non-QMS</b>	<b>Fins attached:</b> Fin-only landings are commonly recorded for only two non-QMS species (carpet shark and northern spiny dogfish, with fin-only landings of 45 and 15 tonnes respectively). Processing of non-QMS species varies by species, but some are commonly landed as dressed trunks (for which the fins might also be retained), including northern spiny dogfish, seal shark, thresher shark, broadnose sevengill shark, bronze whaler, and hammerhead shark (with processed catches ranging from 75 to 100 tonnes for northern spiny dogfish and seal shark respectively, to less than 20 tonnes for most of the remaining species). It is not possible to quantify the value of landings for these species since they are not included in annual port price surveys. While overall volumes are lower, non-QMS species may be an important component of the overall catch plan for individual fishers. Under a fins attached requirement, more returns to the sea are likely (both alive and dead), given the industry comments on how a fins attached rule would impact their operations. Allowing fins to be artificially attached may alleviate some concerns but there would likely still be an increase in discards. Note also that the ban does not preclude fishers from landing dressed trunks of sharks so long as the fins are not retained.		Although it is not possible to quantify the value of non-QMS shark catches, the current value is not considered likely to change much under a ratio approach. Total landings of non-QMS sharks in 2012-13 were around 1,000 tonnes (a similar amount of non-QMS sharks was discarded, but retention figures vary greatly by species and some are largely retained while others are predominantly discarded).

## Option 5 – Fins Attached only

Under this option, any shark fins to be landed would be required to be either naturally or artificially attached to the body of the shark. Some processing would be allowed at sea and fins removed from the body during this processing. However, upon landing, any fins must be attached to (tied onto, stapled to, or stored in a single sack) the remainder of the shark. This ensures the 1:1 ratio and is easy to monitor through physical inspections of all shark landings.

The operational ramifications of a fins attached requirement are significant, especially in those fisheries with high rates of utilisation (i.e. school shark) where current practices would become obsolete and fishers would either forego a sufficient economic benefit from fins landed alongside a trunk, or spend additional time processing each fish separately and re-attaching the fins.

### *Objective 1*

A fins attached requirement would meet the overall objective of banning shark finning, as well as the objective of meeting public and international expectations for reducing wastage by eliminating shark finning. Internationally, a range of administrations have fins naturally attached requirements in place as part of their finning bans, including the European Union and the United States. However, requiring fins to be attached may not decrease wastage overall, and in fact wastage may increase because higher levels of discarding of dead sharks are likely under a requirement to land fins attached. If amendments to Schedule 6 are made as proposed, this discarding would be legal and therefore reported. If amendments are not made, this would remain illegal and would likely therefore not be reported or monitored accurately.

### *Objective 2*

This option provides a high degree of confidence that shark finning is no longer occurring. Every shark and/or shark fin landed would be specifically attached to the remainder of the shark and could be confirmed by physical inspection.

### *Objective 3*

A fins attached requirement across the board would affect all fisheries taking sharks, including those in which finning occurs but also those in which it does not. Fishers who wished to retain shark fins as a legitimate secondary product would only be able to do limited at-sea processing (e.g. removal of the head and guts), because of the requirement to retain the fins intact. Fishers have submitted that this would substantially decrease the quality of their product, because processing at sea is critical to avoid ammoniation of shark meat. Allowing fins to be removed but subsequently attached to the body of the shark for storage may alleviate some of these concerns but would still decrease the efficiency of the operations.

Because of the impact of shark processing, requiring all sharks to be landed with fins attached would likely reduce the value of the landed catch. In some fisheries, these impacts may be justified because of the limited extent of at-sea processing, but in other fisheries where fin-only landings are rare (e.g. 1% or less of total landings), these impacts may not be justified and would not contribute to the IPOA and NPOA-Sharks goals of improving utilisation.

It is not possible to fully quantify the costs involved at this time, but costs would include increased processing time (because of a requirement for additional processing at the licensed fish receiver as well as at sea) as well as direct financial impacts (i.e. decreasing quality of the catch or catch not landed). Submitters on the draft NPOA-Sharks provided information on the potential economic impact of requiring sharks to be landed with fins attached. For example, one industry submission provided examples of the contribution of shark fins as a component of overall usage of shark species. In one example given, ghost shark fins were estimated to



provide an additional \$100,000 per annum to the fishing operation (landing 400–450 tonnes of ghost shark per annum and processing the catch at sea). This is estimated to be around 10% of the value of the ghost shark fishery. Table 4 above provides additional analysis of the possible impacts of the different options on fishing operations.

### *Risks*

Because of the substantial impacts on fishing operations (including those in which fins are retained alongside other parts of the shark already), requiring fins attached for all fisheries is likely to receive less industry support. This may in turn require additional resources for monitoring and enforcement. Monitoring compliance with a fins attached requirement relies more on physical inspections and less on existing systems of cross-checking and verifying information such as discrepancy analysis, so monitoring could potentially be higher cost although compliance could be more readily assessed.

## **Option 6 – Ratio approach only**

### *Objective 1*

The ratio approach requires that landed shark fins weigh no more than a specified percentage of the greenweight determined from the landed primary product. MPI currently uses comprehensive discrepancy analysis to monitor catches in New Zealand fisheries. This existing approach can be readily applied to sharks to verify compliance with ratios.

### *Objective 2*

In most instances, there would be limited incentives to try and retain additional shark fins, because the meat of the shark is also of value. However, allowing a ratio approach for all shark species would potentially provide opportunities for ‘high-grading’ to occur in fisheries where the value of shark fins is high relative to the rest of the shark. Such high-grading could occur where fishers take advantage of variation between shark specimens in terms of the ratio of fin to body weight, such that more shark fins than bodies could be retained in some instances. The ability to high-grade in this way would depend on the accuracy of the ratio or ratios set, and on individual variability against the ratio (e.g. body weight and morphology may vary by size, sex, or other characteristics). The ratio could be set in a way that mitigates against this potential (i.e. by erring on the side of setting a lower ratio rather than a higher one).

It would also be more difficult to determine through physical inspections if any excess shark fins had been landed (i.e. fins for which the body of the shark was not retained) compared to the fins attached approach. In some instances, identifying fins by species can be challenging, but genetic techniques are available to assist with monitoring. The ratio option would rely primarily on analysis of fisher and fish receiver reporting, along with observer data, to verify compliance with ratios.

### *Objective 3*

This option is preferred by industry (at least for all QMS species and any other non-QMS species that are currently predominantly processed at sea). This minimises impacts on fishers by allowing existing operational practice to continue where fish is processed at sea to the most saleable landed state, such as dressed trunks. In fisheries where at-sea processing commonly occurs, fins are frequently retained and landed as a secondary landed state alongside the primary state.

For most fisheries, current practices would not need to change much if a ratio approach were chosen. Fishers effectively already land shark fins and trunks in a ratio. Some minor

operational changes would need to be made such as complying with new requirements to store fins separately by species to allow for monitoring.

### *Risks*

A ratio approach may not meet public expectations for a finning ban, particularly for highly migratory sharks, which are the focus of considerable international attention. If the ratio were set inaccurately, it would be possible for fishers to 'high-grade' (i.e. landing more fins than trunks but still remaining within the ratio, taking account of varying ratios by species, size or other variables). MPI considers this risk can be addressed by setting a conservative ratio where necessary, but environmental groups are likely to disagree with this assessment.

## CONSULTATION

The NPOA-Sharks 2013 was developed in a collaborative process with industry and environmental stakeholders over the course of 2013, before being subject to a broader consultation process at the end of 2013. The initial consultation on the NPOA-Sharks attracted a lot of public interest, including over 45,000 form submissions as well as 78 substantive submissions. Many of the submissions commented not just on the overall goals and objectives of the NPOA-Sharks, but on specifics including shark finning and how it should be banned.

Discussions were also held with industry and environmental stakeholders during development of the proposals for shark finning regulations. Detailed implementation strategies that focus on addressing issues specific to certain fishery groupings have been made publicly available as companion documents.

Formal consultation on the proposed shark finning regulations took place from 21 May to 22 June 2014. Submissions were received from industry, environmental groups, the general public, and form submissions from Forest & Bird, Greenpeace, and NZ Shark Alliance.<sup>6</sup>

### *Summary of stakeholder submissions*

#### *Regulatory approach*

There was strong support from environmental groups and individual submitters for a fins naturally attached approach to apply to all species that are currently subject to finning (including the two highly migratory sharks proposed to be tried with the ratio approach on the grounds that utilisation of these species could be increased). Industry submissions continued to raise operational concerns about fins attached. Some industry submissions considered a general ban on landing just the fins, coupled with QMS controls, should be all that is warranted (i.e. no fins attached or ratio approach needed). There was a strong push from industry to keep the rules as simple and consistent as possible.

MPI agrees with industry submissions that the provisions established under the Fisheries Act for sustainable utilisation of fishstocks remain the appropriate approach for managing sustainability of shark fisheries. MPI agrees minimising the impact on existing operations is an important criterion, particularly where limited or no shark finning is currently occurring (i.e. in many QMS fishstocks). It is also important to provide opportunities for existing utilisation to be improved, including through application of a ratio approach as long as there is reasonable confidence it will achieve its objectives.

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<sup>6</sup> An additional 14 Forest & Bird form submissions and 179 Greenpeace submissions were received between the close of submissions on June 22, and the morning of June 26.

However, MPI considers the characteristics of non-QMS fisheries, and those QMS fisheries where fin-only landings are currently common (i.e. blue shark and spiny dogfish), lead to a greater need for an fins attached approach.

MPI has tried to accommodate operational concerns by adding an option for fins to be artificially – rather than naturally – attached. This is consistent with requirements of the Western and Central Pacific Fisheries Commission Regional Fisheries Management Organisation which have been applied to New Zealand vessels fishing on the high seas in this Convention Area. This option would still increase processing times somewhat, but would allow further processing at sea, in turn allowing a better quality product to be maintained. MPI considers its preferred option is the appropriate balance between meeting public expectations for a finning ban while still minimising impacts on fishing operations as much as possible. Industry is being provided options to improve utilisation, including in several fisheries where some level of shark finning previously occurred.

#### *Timing*

Most submissions supported implementation by 1 October 2014 rather than a phased approach. Various industry submissions made a link between earlier implementation and the other options that are chosen (i.e. support with some reservations).

## **CONCLUSION – FINNING BAN**

A ban on shark finning is required to meet Ministers' obligations under the NPOA-Sharks, and to meet the objectives of reducing wastage in shark fisheries, providing a high level of certainty that shark finning is no longer occurring in New Zealand, and demonstrating New Zealand's commitment to international shark conservation and management initiatives. In assessing the best way of implementing a ban, MPI has considered how the regulations meet public and international expectations, the likely effectiveness of the rules, and the impact of rules on fishers, noting in particular that many fishers landing sharks are already utilising the whole shark rather than just the fins and that the impact on these operations should be minimised.

MPI proposes a regulation combining the two approaches to balance effective implementation with impacts on fishing operations where sharks are fully utilised. The preferred option allows the ratio approach to be used for seven QMS species, five where utilisation rates are currently very high (school shark, rig, dark ghost shark, pale ghost shark, and elephantfish), and a further two where opportunities to improve utilisation have been identified (mako and porbeagle shark). A fins attached requirements will apply to the two remaining QMS species and all non-QMS species where either utilisation rates are low (blue shark), the impact on fishers is small (spiny dogfish), or regular monitoring is less rigorous (non-QMS species).

## **SCHEDULE 6 AMENDMENT – DEALING WITH UNWANTED SHARK CATCHES**

Sharks are often a bycatch in fisheries targeting other, more valuable commercial species. In some instances, there are limited or no markets for the sharks caught. For non-QMS species, it is legal for these sharks to be returned to the sea (and reported). For QMS species, fishers are required under section 72 of the Act to retain all catch, with the exception of those listed on the Schedule 6 of the Act which may generally be released if alive and likely to survive. The requirement to retain QMS species has been identified as a factor that contributes to the finning of sharks. Where a QMS shark (with the exception of spiny dogfish) arrives at the vessel dead, it must be retained, at least in part. Under the *status quo*, retaining just the fins may be an easy option for fishers seeking to meet their regulatory obligations.

## Option 1 – *status quo*

Currently, actions around unwanted shark catch are focussed on avoiding catches and maximising live releases where possible. However, with the exception of spiny dogfish, any shark that is dead when brought aboard the vessel may not be returned to the sea but must be retained in order for a fisher to comply with QMS requirements.

Where markets are not available, requiring the landing of the shark is not decreasing waste or increasing utilisation, as the product landed will likely be sent to a rendering plant or simply disposed of on land at a cost to the fisher.

At present fishers can return unwanted sharks (of particular species) to the sea if alive and likely to survive. The introduction of finning regulations will likely create incentives for more live returns to occur. However, fishers will have limited options for dealing with sharks that are already dead when brought onboard the vessel, and this will have a substantial impact on some fishing operations. Those most affected will be those who catch sharks in trawl fisheries where they are often dead when brought on board the vessel, and those who target tuna and other highly migratory species by surface longline.

Sharks including blue, porbeagle and mako are a regular bycatch in trawl fisheries for many other target species. Fishers have undertaken to find markets for mako and porbeagle sharks where possible but have found that the main markets for these species are small and only accept 'fresh' meat (i.e. not frozen at sea). In addition, sharks caught in trawl gear are more often dead than alive when brought on board the vessel, severely limiting the options for fishers when there are little or no markets for the meat and the option to retain only the fins is removed.

Blue, porbeagle, and mako sharks are also a frequent bycatch in the surface longline fishery (the number of sharks caught may outweigh that of target species). Some markets have been identified but these are generally small and sensitive to factors like the size of the fish. All efforts to find a market for blue sharks (other than the fins) have failed to date. Under the *status quo*, fishers would incur a cost for landing all specimens that were dead when brought on board the vessel, even though there may be no market for them. In particular, if fishers are required to land blue sharks with fins attached, there will be a substantial cost to doing so (including finding space in the hold that could otherwise be filled by target species, and possible contamination of target catches).

### *Risks*

MPI considers that the costs associated with landing dead sharks for which there is no market creates a substantial incentive to illegally discard and misreport shark catches, which may reduce the ability to accurately determine actual levels of shark mortality. Under the *status quo* there is a risk that the quality of reported data on shark landings would decline, potentially making it more difficult to achieve other NPOA-Sharks goals including those relating to assessing population status.

## Option 2 – changes to Schedule 6 provisions

Making changes to the Schedule 6 provisions to allow dead blue, mako, and porbeagle sharks to be discarded – and closely monitoring compliance with the rules – is seen as a more effective and transparent outcome. Such returns would count against overall catch limits and individual fishers' catch entitlements. Good information is available on current live status of catches in the surface longline fishery, so monitoring could ascertain if any changes in reporting practices take place (e.g. if fishers record discards as live rather than dead).

This option would have a much lower impact on fishers, and would make it much easier for them to comply with other shark finning regulations, because they would have other options for any dead sharks that they catch.

#### *Risks*

One submitter suggested that allowing dead returns would reduce incentives for fishers to avoid shark catches. MPI does not consider this to be the case, because of the cost involved for fishers catching undesired shark catches. The fact that dead releases need to be counted against annual catch entitlements, while live releases do not, also provides an incentive to release sharks alive where possible. This submitter also suggested that changes to Schedule 6 provisions would lead to a risk of poor accounting of actual mortality (compared to the alternative of all dead sharks being landed). However, MPI considers the risk of misreporting is higher under the *status quo*, because fishers would be unlikely to land all dead sharks despite a requirement to do so.

## CONSULTATION

Consultation was completed as detailed above. Submissions relating to the Schedule 6 amendment are summarised below.

#### *Schedule 6*

There was strong support from industry for changing the rules to allow dead releases of certain species. There was conditional support from almost all NGOs, subject to a need for close monitoring (e.g. to avoid fishers killing sharks and discarding them but reporting it as a live release to avoid associated annual catch entitlement payments).

## CONCLUSION – SCHEDULE 6 AMENDMENT

MPI views the amendment of Schedule 6 as an integral aspect of the implementation of a finning ban as it provides a legal outlet for fishers where they catch dead sharks and have no market for the shark meat. Without the amendments as proposed, fishers who land dead sharks may be forced to return the entire shark to land at a cost to them, only to have it sent to a landfill, or may instead discard the shark at sea and not report it. This threatens the estimates of overall mortality of shark species and subsequent estimates of population size.

MPI recommends that, independent of the option implemented with regards to the ban on shark finning, Schedule 6 be amended to allow fishers to legally dispose of unwanted catches of dead sharks and maintain the strict reporting. MPI will continue to work with fishers to maximise the release of live sharks. Rigorous monitoring will be implemented to ensure compliance with new provisions.

# Implementation Plan, Monitoring, Evaluation and Review

## Implementation Plan

Successful implementation of the shark finning prohibition will require close collaboration with industry, and several industry submissions emphasised this point and indicated a willingness to work on the finer details of implementation. This collaboration is necessary to ensure the rules reflect existing practices as much as possible, so that there are no unintended consequences.

MPI will also work with industry on the development of educational programmes clarifying new regulations and requirements to ensure swift uptake of the finning ban and the amendments to the provisions of Schedule 6. If required, MPI officials will be available to meet with industry members to discuss the details of new regulations.

Industry has well-established networks for disseminating information to fishers, although many smaller-scale operations may be harder to reach. It will be important to also work closely with receivers of fish as this will be another important avenue for communicating the changes.

Reporting and data collection systems within MPI are currently being updated as required to implement the shark finning ban and associated reporting changes. This will allow officials to actively monitor compliance with ratios and to review and adjust settings if required in future. In addition, in the short term, monitoring activities will be focussed to measure the effectiveness of the finning ban and determine if fishers are complying with regulations.

MPI has also committed to carrying out research into methods to avoid unwanted catches of sharks and into best practice methods to maximise survival of sharks released alive after being caught. This research is an important aspect of the finning ban, most notably for blue sharks where they are caught in large volumes and often released alive.

Educational programmes for fishers will include the distribution of codes of conduct and operational procedures that provide information on best practice for releasing sharks alive, as well as avoidance of unwanted catches, better identification of shark species, and how to accurately report all catches and processing of sharks.

## Monitoring and evaluation

New Zealand's fisheries management system has comprehensive monitoring systems in place that include rigorous reporting requirements for fishers, at-sea observers, inspections at-sea, in port, and of fish receiving business, as well as retrospective analyses of data collected. Existing systems will be drawn upon to monitor new regulations, however future monitoring will need to be targeted appropriately and effectively.

Good information exists from these sources on current shark catches, including handling and retention or release practices. This will help to set a baseline for comparison to data collected after the implementation of the ban. Once the finning ban is in place, usual monitoring will continue, with additional focus on several aspects of the new regime including ratios of fins to total landings (if a ratio approach is established for some species), and the use of Schedule 6 provisions.

It is proposed that regular monitoring occur on the ratio of fins to converted greenweight for those species to be subject to a ratio requirement. Compliance will be assessed on a trip by trip basis, but could also be assessed over longer periods (e.g. a month) to help differentiate between minor fluctuations in the ratio that could be expected because of biological variability of shark catches, and any systematic patterns of behaviour (i.e. consistently landing too many shark fins in comparison to shark bodies landed). Checks on shark landings (including both those required to be landed with fins attached and those to be landed in a ratio) will be highlighted as a priority for observer and compliance services. Fishery-specific performance indicators could also be established that could reflect public expectations for certain fisheries (e.g. to differentiate between QMS species with high utilisation and others like mako and porbeagle).

Compliance activities will be consistent with the current approach taken in New Zealand fisheries. This includes the use of the 'VADE' (Voluntary, Assisted, Directed and Enforced) model, which operates on a collaborative basis and sees enforcement working with fishing vessels to comply. Action is taken where there is deliberate or gross non-compliance identified. Enforcement of compliance with the fin-greenweight ratio will be similar to that used for conversion factors in general, where there is expected to be some variation around the specified number. Sampling by observers at-sea will provide data on how wide the standard variation may be and allow for compliance entities to determine where a ratio is significantly different to that defined in regulation. In addition, statistical analyses can be used to identify potential systematic non-compliance.

### Review

The objective in the NPOA-Sharks 2013 to eliminate finning in New Zealand provided until 1 October 2015 to implement the ban for all species except for blue shark and one additional year to include blue shark. The preferred option is for the finning ban be implemented for all species for 1 October 2014. The intention is to use the additional two years allowed for in the NPOA-Sharks 2013 to actively monitor the finning ban and ensure that the settings are pragmatic, effective, and that finning is eliminated.

Review of all aspects of the regulatory package will be ongoing, with confirmation that conversion factors and ratios are appropriate, and that fishers are able to comply with all regulations. The regulatory framework may be amended to ensure that any problems identified as part of this review are addressed.

It is proposed that the regulation be drafted in a manner that allows the Minister, by Gazette notice or other tool, to move species between ratio and fins attached approaches as appropriate. This allows the regime to be flexible to changes in fishing practices and responsive if concerns are identified.

A full review of the NPOA-Sharks 2013 will begin in 2017. This will provide an opportunity for a high level review of the effectiveness and implementation of the shark finning prohibition and associated regulatory framework.