



TE HUAPAE MATAORA MO TANGAROA
THE FUTURE OF OUR FISHERIES



VOLUME II:
THE FISHERIES MANAGEMENT
SYSTEM REVIEW

CONSULTATION DOCUMENT 2016

Publisher

Ministry for Primary Industries
PO Box 2526, Wellington, 6140
New Zealand
0800 00 83 33
www.mpi.govt.nz

MPI Discussion document 2016/28
ISSN No: 2253-3893 (print)
ISSN No: 2253-3907 (online)

ISBN No: 978-1-77665-417-8 (print)
ISBN No: 978-1-77665-418-5 (online)

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Purpose

This document provides information on the Fisheries Management System Review and how it sits within the Ministry for Primary Industries' (MPI) Te Huapae Mataora Mo Tangaroa: The Future of our Fisheries programme.

An overview of the programme is available in Volume I. Additional details about other aspects of the programme are available in the following supporting documents:

- Volume III: Integrated Electronic Monitoring and Reporting System
- Volume IV: Enabling Innovative Trawling Technologies

Submissions

MPI welcomes written submissions on the proposals contained in this document. All submissions must be received by MPI no later than **5.00pm on Friday 23 December 2016**.

Submissions should be sent directly to: **fisheries.review@mpi.govt.nz**

Or, should you wish to forward hard copy submissions, please send them to the following address to arrive by close of business on **Friday 23 December 2016**.

Future of our Fisheries
Ministry for Primary Industries
PO Box 2526
Wellington 6140
New Zealand

We will consider all relevant material made in submissions, so you are welcome to provide information supporting your comments. Please make sure you include the following information in your submission:

- the title of the consultation document;
- your name and title;
- your organisation's name (if you are submitting on behalf of an organisation), and whether your submission represents the whole organisation or a section of it;
- your contact details (such as phone number, address, and e-mail).

Submissions are public information

Please note that your submission is public information. Submissions may be the subject of requests for information under the Official Information Act 1982. The Official Information Act specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the Official Information Act. Submitters may wish to indicate grounds for withholding specific information contained in their submission, such as if the information is commercially sensitive or if they wish personal information to be withheld. MPI will take such indications into account when determining whether or not to release the information.

Introduction

Vision

Abundant fisheries and a healthy aquatic environment that provide for all our people, now and in the future

Objective 1:

Abundant fisheries in our seas and a healthy aquatic environment

Objective 2:

Everyone plays their part in managing New Zealand's shared aquatic resources

Objective 3:

Everyone can share fairly in the social, economic, cultural and environmental benefits of our aquatic resources

Objective 4:

The fisheries management system is widely trusted in New Zealand and internationally

Volume I also noted some of the improvements that were suggested during MPI's initial engagement in 2015, and the other pieces of work and events that have occurred over the last year.

These factors led to the development of three strategic proposals for the Future of our Fisheries programme, along with two related regulatory change proposals. These would form the priority for MPI's fisheries work programme.

The strategic proposals are:

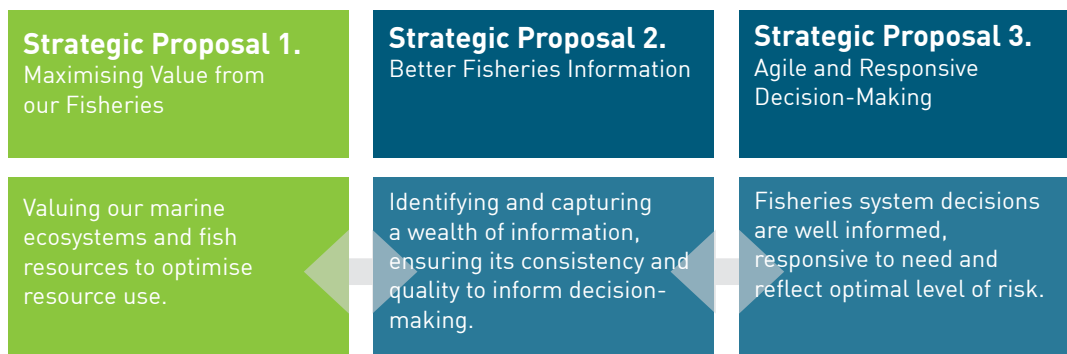
- maximising value from our fisheries;
- better fisheries information;
- agile and responsive decision-making.

Volume II (this document) takes a closer look at the options that sit within each of these areas (Figure 1), which we are proposing to progress over the next two years. They include a range of initiatives, varying from amendments to regulations that could be implemented in the shorter term, to the development of strategies that would be implemented over several years. This volume refers to the integrated electronic monitoring and reporting system (IEMRS) and enabling innovative trawl technology (EITT), but does not detail proposed regulatory amendments to implement them. These details are contained in Volume III and Volume IV, respectively.

Figure 1: Outline of Volume II



Strategic Proposal 1: Maximising Value from our Fisheries



This proposal considers the value of fisheries in terms of their contribution to aquatic ecosystems, their cultural significance, and their overall capacity to contribute to the well-being of all New Zealanders, now and in the future, as a source of enjoyment, sustenance, and economic opportunity.

New Zealanders benefit from fisheries through their own direct access to, and use of, fish stocks. They also benefit from the flow-on effects of the economic activity generated by the use of fisheries resources by others, or through the non-extractive economic value resulting from viewing wildlife and experiencing the marine environment.

The efficient and sustainable use of fish stocks enables New Zealanders to derive value from fisheries in the long term. Central to our vision is reducing waste, like discarding, to maximise value from fisheries.

Applying new technology to assist the monitoring of fishing activity at sea, through IEMRS, is critical to achieving that vision (see Volume III). The options put forward here to address discarding all rely on IEMRS to improve compliance through better monitoring and recording of day-to-day operations on board fishing vessels.

We propose five options that we would like you to consider. These options are not mutually exclusive and can be considered individually, in any combination or as a package. The options are:

- **Option 1:** Address discarding of fish;
- **Option 2:** Encourage and enable innovative harvest technologies;
- **Option 3:** Maximise the value of shared fisheries;
- **Option 4:** Build the market position of New Zealand seafood;
- **Option 5:** Deliver value from new and underdeveloped fisheries.

Option 1: Address discarding of fish

Discarding of dead fish or fish that are unlikely to survive, because they are considered too small or damaged, or because the cost of landing them is too high, is waste. MPI proposes to eliminate, or at least minimise, that waste by ensuring that the lost value of discarded catch is recognised through the Quota Management System (QMS), and that the costs are carried by those who create the problem.

Discarding of fish in commercial fisheries is a world-wide problem. Different countries have management regimes that address the problem of discarding in distinct ways, ranging from tight regulations on gear that may be used (for example, northern European states around the Baltic Sea) through to strict regulations for reporting and landing all catch of particular species (for example, the European Union).

New Zealand relies on controls under the QMS. These controls, which allow discarding only under limited circumstances, shape the behaviour of individual quota owners, commercial fishers, and licensed fish receivers, and affect the level of discarding and illegal dumping in New Zealand fisheries.

In this Strategic Proposal we discuss three approaches for tightening regulatory controls to better manage discards in commercial fisheries. These are:

- allow minimal discarding;
- allow approved release of live fish if they are likely to survive;
- allow approved release of live fish if they are likely to survive and approved discarding of dead fish of low commercial value.

We also discuss additional measures that could be used, either singularly, in any combination or collectively, to complement these approaches. These additional measures are:

- the use of Total Allowable Commercial Catch (TACC) setting to discourage discarding;
- clear accountability between quota owners and Annual Catch Entitlement (ACE) fishers;
- discouraging catches of small fish.

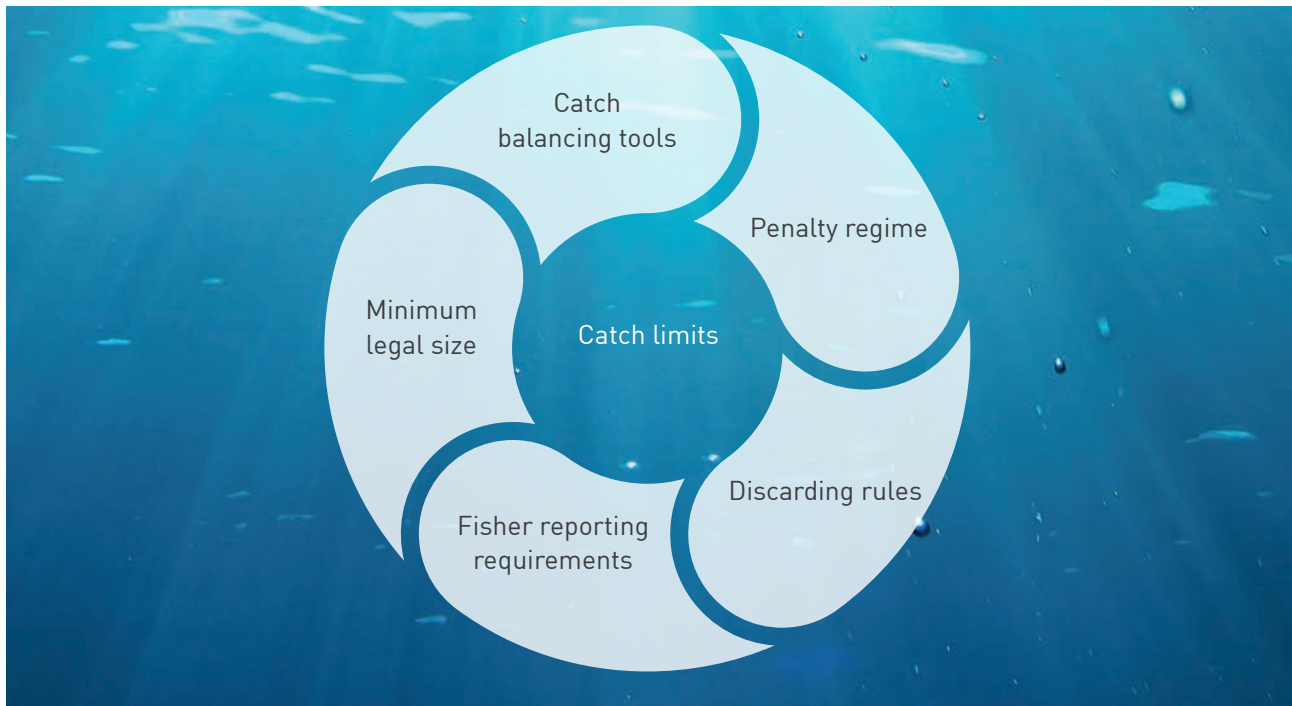
To better understand how each of the approaches and additional measures would work in practice, in the following section we provide background on the current regulatory controls available to incentivise fishers to land

catch and to control the level of discarding. The central control is the establishment of sustainable catch limits under the QMS. The remaining controls act collectively to ensure actual catch is constrained within these limits and is accounted for lawfully.

Existing regulatory controls to combat discarding

The regulatory controls available to manage commercial discarding behaviour is discussed further below.

Figure 2. Regulatory controls that influence commercial discarding behaviour



Catch limits

Catch limits for QMS stocks are made up of a Total Allowable Catch (TAC), within which there are allocations made for each sector. There is a TACC for the commercial sector, and allowances for the customary and recreational fishing sectors. Catch allowances for non-commercial fishers are taken into account before the TACC is set as are illegal catch and other sources of mortality (such as unreported catch).

ACE can have a significant influence on the discard of catch. This is especially so for mixed-species fisheries, where limited ACE availability for some species may constrain the ability of fishers to fully catch the ACE they hold for other species. When a fisher still has ACE for some species in these mixed fisheries, there is an incentive to continue fishing and discard the catch of those species for which they no longer have ACE available.

Discarding rules

Currently, there is a general prohibition on discarding QMS catch, but with provision for both required and permitted discarding. A limited number of species (13) are subject to minimum legal size limits. Any fisher who catches an undersized fish is required to discard that fish, whether it is alive or dead¹. Discarding is permitted in the following general circumstances:

- accidental loss or discarding to ensure the safety of the vessel;
- return of viable fish of specified species, subject to conditions;²
- supervised discarding of dead fish – discarding must be observed by a fishery officer or observer, and catch must be included on the monthly harvest return (see below);

¹ Snapper is an example of a species subject to minimum legal size limits. These limits, which pre-date the QMS, were imposed to reduce the incentives to catch small fish, on the assumption that harvest at that size would damage the sustainability of the fishery.

² Species and conditions are specified in Schedule 6 of the Fisheries Act 1996.

- returning parts of processed fish.

Fisher reporting requirements

There is a system already in place for commercial fishers to report their catch and fishing activity through catch effort returns. These returns primarily inform stock assessment and TAC/TACC decisions. They cover a range of fishing activities and are required to be completed for each fishing trip.

Each commercial fisher is required to submit a monthly harvest return that reports the total catch for that month, by QMS stock. The monthly harvest return is key to the balancing regime (described below), as the catches it records are assessed against the fisher's ACE holdings.

Monitoring fisher activity at sea, to check accuracy of reports, is currently undertaken by observers³ and through compliance operations. There are penalties for supplying false information.

The introduction of new independent monitoring tools under the IEMRS project will greatly improve confidence in catch and effort information.

Catch-balancing tools

Constraining catches within the TACC is achieved through catch-balancing requirements that apply to each commercial fisher. These requirements influence commercial fishers mainly by imposing financial penalties (called deemed value payments) where a fisher's reported catch exceeds their ACE holdings. Deemed values can be set at different levels for different stocks, and can be "ramped", so that the financial penalties increase in proportion to the degree the catch exceeds the ACE holding.

ACE is created at the start of each fishing year, and issued to quota holders in proportion to their share of the TACC. ACE can be freely traded. Generally, ACE may only be used in the fishing year for which it was issued; but up to 10 percent of unused ACE may be carried forward to the next year.

Fishers must pay an interim deemed value (typically 90 percent of the full deemed value rate) after the end of each month if they do not have enough ACE to cover their catch taken in this month. The interim payment is refunded if the catch does not exceed ACE purchased later in the fishing year. At the end of the fishing year, unless all catch has been balanced by ACE, a final deemed value payment must be made. The balancing regime provides a sanction that will apply at a future time. The fisher, armed with that knowledge, has clear incentives to adjust either their fishing activities or ACE holdings to avoid incurring that sanction. The fisher must manage the risk.

³ A Fisheries Observer, or Fisheries Officer, is stationed on board a fishing vessel to observe and record fishing activity.

Overfishing thresholds provide an additional catch-balancing tool that can directly control a commercial fisher through permit conditions. They can be used to stop fishing where reported catch is more than a specified percentage above ACE holdings.

A limited number of fisheries require minimum ACE holdings, where a fisher needs to hold a specified amount of ACE before starting fishing. In most cases, however, ACE is only relevant for the purpose of "balancing" catch each month.

ACE is traded on a market, so the availability, price, and other conditions of sale or supply are negotiated between the buyer and seller. Quota and ACE trading can be conducted completely separate from fishing activity; currently, the person who sells ACE is under no regulatory duty or liability for the actions of the fisher who buys it.

Minimum legal size

Some species are currently subject to a minimum legal size limit. Any fish caught that are smaller than the minimum legal size must be discarded and are not required to be reported or balanced against ACE.

Penalty regime

Misreporting catch through catch effort and monthly harvest reporting forms and illegally discarding fish (dumping) are offences that can result in prosecution. Misreporting penalties increase with the seriousness of the breach, but this is not the case with penalties for dumping where the same maximum penalty applies regardless of the severity of the breach.

Future approaches to manage discards

A number of approaches have been identified to address discarding issues in the commercial sector. Each approach would use the improved reporting and catch verification available from IEMRS. These approaches focus either on tighter regulatory controls to manage discarding or providing economic incentives to reduce discarding. We welcome your feedback on these approaches, and any other ideas on how this issue could be addressed.

Tighter regulatory controls to manage discards

Three approaches are considered:

- **Approach 1:** Allow minimal discarding;
- **Approach 2:** Allow approved release of live fish if they are likely to survive;
- **Approach 3:** Allow approved release of live fish if they are likely to survive and approved discarding of dead fish of low commercial value.

Approach 1: Allow minimal discarding

In this approach:

- all QMS fish that are caught would have to be retained and landed;
- the only exception allowed would be for discards that were necessary to ensure crew or vessel safety (safety discards);
- fishers would be required to report all catch and safety discards. All catch and safety discards would need to be balanced against ACE;
- all minimum legal sizes would be removed;
- the ability to release fish under Schedule 6 of the Fisheries Act would be removed.

Eliminating all opportunities to return unwanted catch to the sea maximises the incentives to generate value from catch and avoid waste. It simplifies monitoring and enforcement tasks as any QMS species observed being returned to the sea is by definition an offence, unless there was a documented risk to health and safety.

Despite incentives to create value, there may be occasions when the value available on shore is insufficient to cover the cost of transport of fish to port and subsequent disposal. Although a complete discard ban on dead fish might encourage the development of markets, it would not guarantee them.

This option has the disadvantage that it requires the death of fish that might otherwise be released live, and the transport of uneconomic fish to shore, even where there is no market.

Approach 2: Allow approved release of live fish if they are likely to survive

In this approach:

- all QMS fish that are caught would need to be retained and landed;
- the only exceptions allowed would be for discards that were necessary to ensure crew or vessel safety (safety discards), and for specified species that were able to be released alive with a good chance of survival;
- fishers would be required to report all catch, safety discards, and catch released alive;
- all catch and safety discards would need to be balanced against ACE;
- fish released alive would not need to be covered by ACE;
- all minimum legal sizes would be removed.

Not all fish that are caught are dead. A total ban on discarding under approach 1 would effectively require all catch to be killed, even though discarding of live fish may cause no increase in risk to the fish stock. Some species are robust and can be returned to the sea with little subsequent mortality. Provided the circumstances give sufficiently high survival levels, viable returns do not undermine stock management objectives and may improve them.

For this reason, returning live fish (with a high probability of surviving) to the sea would be allowed under approach 2. Those species considered to be robust and able to be released alive would be clearly identified. Schedule 6 of the Fisheries Act 1996 (Fisheries Act) serves a similar purpose now so the species included on this schedule would be reviewed and amended.

Returned fish must be reported, but would not need to be covered by ACE. To ensure that actual mortality was factored into catch limits, each stock and catch method would have a survivability probability applied to it. If fish were unlikely to survive post-release this would be factored into the estimate of "other sources of mortality" within the TAC. Because this estimated mortality would be deducted from the TAC it would not be available to commercial fishers through the TACC. This would incentivise quota owners to ensure that fishers adapt their fishing strategy or adopt new more selective fishing methods.

Allowing returns at sea increases the difficulty of monitoring. Those risks could be reduced by requiring the fisher to provide confirmation that the return of fish was carried out in accordance with relevant conditions. This might be achieved by requiring discards to be conducted only with prior approval from MPI, and subject to specified conditions. In addition to conditions covering relevant species and methods for live returns, there could be conditions requiring the fisher to report when the discarding occurred so that imagery collected through IEMRS could be used to enable verification.

Approach 3:

Allow approved release of live fish if they are likely to survive and approved discarding of dead fish of low commercial value.

In this approach:

- discards that were necessary to ensure crew or vessel safety (safety discards), and for specified species that were able to be released alive would be allowed;
- discarding of dead fish would be allowed under specific, defined circumstances and subject to conditions;
- fishers would be required to report all catch, safety discards, and catch released dead or alive;
- all catch, safety discards and discards of dead fish would need to be balanced against ACE;
- fish released alive and with a good chance of survival would not need to be covered by ACE;
- all minimum legal sizes would be retained.

Although a discard ban on dead fish might encourage the development of markets, it would not guarantee them. There may be occasions when the commercial value available from landing catch on shore is insufficient to cover the cost of transport of fish to port and subsequent disposal.

In such a case, an alternative approach would be to allow discards of whole, dead fish at sea as long as management objectives are not at risk (such as, total fishing mortality can be accurately estimated to support accurate estimation of other sources of mortality) and the fisher covers the catch with ACE. Similarly, provided catch is accurately declared and balanced against ACE, discharge of fish waste at sea allows a fisher to minimise costs of transporting commercially low-value fish, and returns biomass to the ecosystem.

As with approach 2, monitoring risks could be reduced by creating an approval mechanism for discarding of dead fish, subject to conditions.

Additional economic incentives to reduce discarding

The consideration of economic incentives on both commercial fishers and quota owners is important to changing fishing behaviour. The following sections discuss additional measures that could be introduced to better incentivise commercial fishers to reduce discarding. These measures could be applied in combination with each of the approaches above.

Use of TACC setting to discourage discarding

Although our fisher-based reporting system is a cost-effective way of obtaining a wide range of data, the information has to be checked for accuracy. The benefits of accurate reporting accrue to quota owners through the value of their quota shares in a healthy and sustainable stock and, in the shorter term; through the value of ACE that fishers purchase from them. However, they suffer no immediate penalty from inaccurate fisher information, as there is currently no regulatory obligation placed on quota holders regarding fishing activity, including reporting.

The price, and other conditions, quota owners place on the supply of ACE to fishers, and the receipt of fish by licensed fish receivers (who may also be quota owners), can have a significant effect on how fishers conduct their fishing activity, including reporting and discarding. Because of this, quota owners can hold significant economic power over fishers who rely on them for the provision of ACE. If quota owners received a more immediate impact from fisher misreporting and discarding, they would have greater incentives to use the economic power of ACE to improve fisher compliance.

One way to incentivise quota owners to influence fisher behaviour would be by ensuring that any waste of fish through discarding is reflected in reduced value of quota holdings. Estimates of unreported catch would be deducted from the TACC, reducing quota holders' income from the sale of ACE for that fish stock (because there is less TACC available to generate ACE). IEMRS will allow better detection of illegal activity and better estimates of the quantity of fish that is unreported by fishers.

By factoring estimates of this unreported catch into the setting of the TACC, quota holders for a particular fish stock would have a direct incentive to discourage those fishers who purchase ACE from them from undermining the value of the TACC through discarding.

To ensure this incentive is applied in a way that effectively influences fishers' behaviour, the following steps would be required:

- the TAC would remain as the limit on fishing mortality from all sources, including illegal (and unreported) catch;
- within the TAC, allowances would be made for catches by each sector; customary, recreational and commercial. An allowance would also be made for other sources of mortality, resulting from: illegal fishing, unreported catch (including discards) and "unseen" mortality of fish that escape from fishing gear without being landed;
- for the commercial sector, the two categories in their catch allowance would be:
 - TACC;
 - other sources of mortality;

- deemed values and other balancing tools would be used to keep reported catch within a defined percentage (overrun) of the TACC;
- fisher compliance with reporting and discarding obligations would be systematically monitored. Statistically robust estimates of unreported catch would be included in the other sources of mortality category and deducted from the TAC.

Clear accountability between quota owners and ACE fishers

Making quota owners more accountable for fisher actions requires changing the regulatory relationship between quota holders and fishers.

Quota ownership comes with a responsibility of stewardship of the resource and, by extension, on-water activities of those fishing a quota owner's ACE. Making quota owners directly accountable for fisher behaviour would enable that stewardship responsibility to be more clearly met. One possibility would be to create an enforceable legal obligation, which would require the quota owners to demonstrate that all practicable steps had been taken to ensure the fisher complied with relevant fisheries law. If those legal obligations were not met, the quota owners could suffer a penalty.

Such an approach would be a significant change in the legal obligations on quota owners, and would need to be carefully constructed to achieve a cost-effective incentive. There could be a reduction in the flexibility and administrative efficiency of the current ACE market. It could, however, improve alignment of fisher and quota owner actions towards achieving sustainable fisheries.

Discouraging catches of small fish

Removing minimum legal size limits for commercial fishers, and requiring small fish to be reported and balanced against ACE, could establish real incentives to limit catch of small fish. It would also assist in monitoring of fisher behaviour at sea, as it would mean that cameras of sufficiently high quality to enable people to differentiate between different sizes of fish would not be required.

There are other incentives that could be used to discourage the catching of small fish, whether there was a minimum legal size established or not. These could include a multiplier for the weight of a small fish when ACE requirements are calculated to create an inflated "green weight equivalent" for catches below a certain size. This would inflate the relative cost of obtaining ACE to cover catches of smaller fish.

Consultation Questions:

- Do you think it should be permissible to release live fish if they are likely to survive?
- Do you think it should be permissible to discard some dead fish, as long as they are balanced against ACE?
- Do you think that adjusting a TACC to take account of discarding would provide an incentive for quota owners to ensure commercial fishers reduce discarding?
- Do you think quota owners should be accountable for fishing behaviour?
- What measures do you think would help in discouraging catches of small fish? Is minimum legal size needed?

Option 2: Encourage and enable innovative harvest technologies

Seafood markets exhibit strong consumer preferences for particular species and sizes of fish, as well as the overall condition of fish. Ideally, fishers would catch only those species and sizes of fish that the market required, and land them in a state that maximised the potential for value-added processing. Achieving this sort of efficiency has proved challenging for fishers using conventional trawl gear, particularly on fishing grounds where a variety of fish species are present.

Conventional trawl technology results in unwanted bycatch of commercially low-value species and often damages high-value fish when the net is hauled on board.

The need to improve the efficiency of trawling is currently driving several initiatives by commercial fishers to develop and test new technology for harvesting fish, such as the Precision Seafood Harvesting programme⁴.

All of these initiatives are aimed at ensuring that the trawl selectively retains fish of an optimal size and also reduces the damage to catch when it is brought on board the fishing vessel.

These new trawl systems have been used only in experimental trials. To facilitate the commercial use of innovative fishing techniques, the existing commercial fishing regulations made under the Fisheries Act will need to be amended.

Proposed regulatory reforms that are required to enable the adoption of new trawl systems and encourage development of other innovative trawl technology are discussed in Volume IV.

⁴ Precision Seafood Harvesting: <http://www.mpi.govt.nz/funding-and-programmes/primary-growth-partnership/primary-growth-partnership-programmes/precision-seafood-harvesting/>

Option 3: Maximise the value of our shared fisheries

Managing shared fisheries⁵ in a way that maximises their overall value is an emerging challenge for governments around the world. Customary, recreational, and commercial fishers, and members of the public who do not fish, can have very different ideas about what constitutes value, as well as differing (and sometimes conflicting) aspirations for how the fishery should be managed.

One of the key challenges for New Zealand's fisheries management system is to secure a broad consensus on how shared fisheries will be managed.

Managing fish stocks for increased abundance

The current benchmark for assessing how well New Zealand's shared fish stocks are being managed is the stock's capacity to deliver the maximum harvest over the long term. This harvest is the maximum sustainable yield (MSY). Fishery managers are required by the Fisheries Act to manage individual fish stocks "at or above" a level of abundance (a measure of how many fish are in a population or a fishery) that can produce the MSY. All fish stocks fluctuate naturally but, if stock size falls substantially below the level that can produce the MSY, catches need to be reduced to allow the stock to rebuild.

Stocks that are maintained above the level that delivers the maximum sustainable yield are more abundant than they would be if managed to maximise total harvest. If stocks were managed for greater abundance, a smaller overall quantity of fish could be caught each year. However, catch rates for all fishers would improve.

For commercial fishers, an increase in catch rates could offer the chance to improve the efficiency of their fishing operations, by harvesting their catch allocation in a shorter period of time. This holds the promise of reducing fishing costs relative to fishing revenues, and maximising fishing profits. For this reason, the objective of maintaining fish stocks above a level that produces the MSY is receiving increased attention around the world.

In commercial fisheries, a strategy of managing for increased abundance and improved catch rates for higher profitability can include managing for maximum economic yield (maximum profit). However, because the management of New Zealand's shared fisheries needs to maximise their overall value to all sectors of society with an interest in our fish stocks, we refer more generally to "managing for increased abundance".

In addition, managing for increased abundance has the potential to better maintain the functional role of

fish stocks in marine ecosystems and bolster their resilience to environmental changes, such as shifts in the marine climate. It should also result in reducing the environmental impact of fishing (for example, reducing the number of seabirds captured and the area of seabed disturbed by bottom trawling). Maintaining the integrity of New Zealand's marine ecosystems is critical to ensuring that they can continue to support use across all fisheries sectors.

To realise the benefits of managing stocks for increased abundance, current catches or other sources of mortality in some fisheries would need to be reduced to allow stocks to build to "at or above" the level required for MSY. This means that before any of the gains of increased abundance could be realised, fishers may need to absorb reductions in the level of the TAC, and reduced opportunity to harvest fish. For shared fisheries in which different fishing sectors actively participate, this raises the challenge of deciding how any cuts would be allocated between different sectors. This issue is discussed in more detail later in this section.

Several stocks are already managed above maximum sustainable yield levels. Two examples are:

- KAH 1 (kahawai in the Hauraki Gulf): This shared stock is being maintained at well above the level needed for maximum sustainable yield, meaning there are more kahawai in the water, leading to higher catch rates and increased benefit for non-commercial fishers.
- HOK 1 (hoki): This commercial stock is managed above the level needed for maximum sustainable yield to improve performance: it improves catch rates, reduces fuel costs, and increases the average size of fish (larger fish return more value).

Optimising TAC allocation across sectors

Allocation of the TAC for shared fish stocks provides the opportunity to maximise their capacity to deliver improved value from use across all sectors of the fishing public (customary, recreational, and commercial). The Fisheries Act requires the Minister to allow for non-commercial fishing interests when setting or adjusting a TAC⁶.

However, the Fisheries Act does not address how the TAC should be divided and which fisheries sector should take priority when the TAC is allocated.

Allocating the annual TAC between recreational and commercial fishers could be done in a number of ways. The allocation could simply be made on the basis of the proportion of the TAC that each sector currently holds. However, this may not adequately recognise the potential for recreational fishing to generate extra value from shared fish stocks where growth in recreational fishing is strong.

⁵ Shared fisheries are fisheries of interest to customary and/or recreational users as well as commercial users.

⁶ Section 21(1) Fisheries Act 1996

As an example, the TAC for the SNA 1 (snapper in the north-east coast of the North Island, including the Hauraki Gulf) fishery is currently allocated 64 percent to commercial fishers and 36 percent to recreational. In recognition of the growing level of recreational participation in the fishery, the relative allocation of the TAC will be progressively adjusted as the stock is rebuilt, so that both recreational and commercial fishers ultimately each have a 50 percent share of the available TAC.

Consultation Questions:

- Do you agree with the objective of managing fish stocks for abundance, to achieve higher catch rates for all fishing sectors?
- What principles do you think should guide decisions on allocating the relative share of the TAC between non-commercial and commercial fishers?

Option 4:

Build the market position of New Zealand seafood

Commercial fishing is an industry where demonstrated commitment to good environmental stewardship, legal fishing practices and food safety practices is assuming increasing importance for access to high-value markets.

The current review provides an opportunity to develop a New Zealand seafood assurance framework to enhance the market profile of New Zealand seafood products, and help inform consumer purchasing decisions, based on greater confidence in the management of New Zealand's fisheries.

Such a framework would provide the consumer with the New Zealand government's assurance that the product had been sourced from a sustainable and environmentally responsible fishery. It could potentially build upon the existing government assurances for the safety and quality of our seafood products provided through MPI's Animal Product Electronic Certification (AP E-cert) scheme⁷.

A range of seafood certification schemes in place internationally provide assurances to consumers through certification of a fishery's performance. These range from individual companies self-declaring compliance with their own product standards, through to independent schemes

⁷ <http://www.foodsafety.govt.nz/industry/exporting/e-cert/animal-products/>

provided by governments or by non-governmental organisations like the Marine Stewardship Council⁸.

Some of New Zealand's largest off-shore fisheries have already achieved Marine Stewardship Council certification, including fisheries for hoki and southern blue whiting. This enables exporters of products derived from these fisheries to use the Marine Stewardship Council assurance framework as testimony of these fisheries' strong sustainability and environmental performance and to capture the enhanced market access and premium prices associated with the certification. There are several other high-value fisheries (like blue cod) which could benefit from the development of similar levels of customer assurance to help build their profile in key export markets.

Consultation Questions:

- Do you agree that government should provide certification of the environmental performance of New Zealand's fisheries?
- Do you prefer a non-governmental certification scheme such as that provided by the Marine Stewardship Council?

Option 5:

Deliver value from new and underdeveloped fisheries

Delivering value from low-information stocks

The commercial fishery for each fish stock is managed so that the stock is used sustainably. In situations where the status of a fish stock and its ability to support catches are uncertain, catch limits are set at low levels to ensure that fishing does not jeopardise the stock's sustainability. Delivery of greatest value from fish stocks requires sufficient information on stock status to ensure that catch limits are set at a level reflecting the fish stock's true potential to support fishery harvests. Where there is little information on a stock, a precautionary approach is taken, and opportunities to realise value may be lost.

Many of the fish stocks where there is limited information on stock status are species that are of little interest to fishers. In some cases, better information would improve the opportunity to develop targeted fisheries and secure better value from their use. This is particularly the case

⁸ The Marine Stewardship Council is a global non-profit organisation that has developed an environmental standard for the assessment of fisheries. It also provides third-party verification of fisheries performance relative to this standard, and has developed an ecolabel that is only available to companies that have met this standard.

for some inshore finfish fisheries, where the current approach to gathering information on stock status has restricted MPI's ability to manage low-information stocks for optimal value.

Implementation of IEMRS would improve the collection of some types of information for low-information stocks, and other opportunities to collect data on these stocks should be investigated. There is a range of approaches for using this information, including: risk-based assessments, developing new biological indicators of stock status, and using particular species as indicators of the status of mixed-species fisheries. Some of these approaches are being trialled by fishery managers overseas, and could help to deliver more value from low-information stocks here⁹.

Creating incentives to develop fisheries

Assessing the commercial potential of new fisheries, or those that may be able to sustain a higher rate of harvest, is a risky and economically uncertain endeavour. There is a trade-off between the initial costs of stock assessment research, used to set an initial or a revised catch limit, and the potential long-term value represented by the quota shares in that stock. There are currently few incentives for private investment in the research needed to develop fisheries.

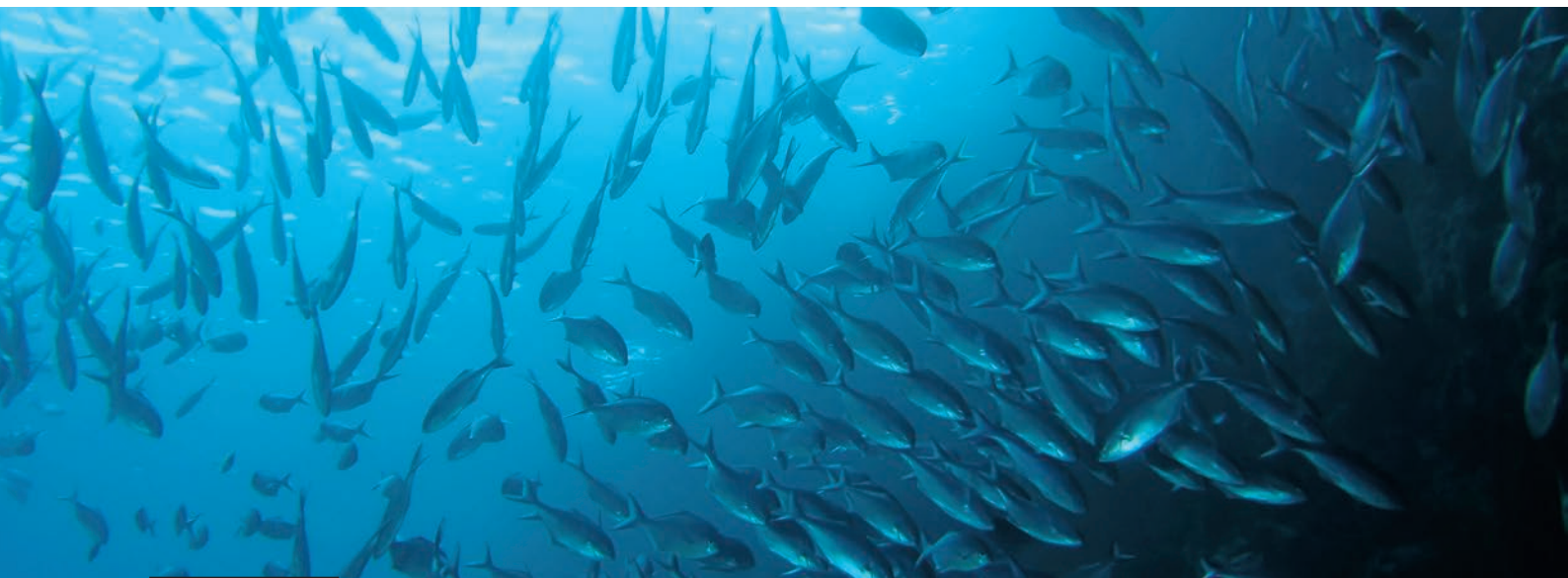
The government currently uses a competitive tender process to allocate quota holdings for most fish stocks introduced to the QMS. This process ensures that the Crown obtains some value of the fishery, based on market rate. However, it reduces the incentive on potential investors to develop new fisheries, because when the stock is introduced to the QMS they have to compete with other investors tendering for the available quota.

Similarly, individual quota owners have little incentive to privately fund stock assessment research, in an effort to secure an increase in the catch limit for a stock that has a low TACC, because the benefits of that increase would be shared by all quota holders, irrespective of whether they had contributed to the cost of the research.

This suggests that, to provide incentives to develop new or underdeveloped fisheries, the government may need to stimulate research, either by direct funding or by reflecting private research efforts in the subsequent allocation of quota.

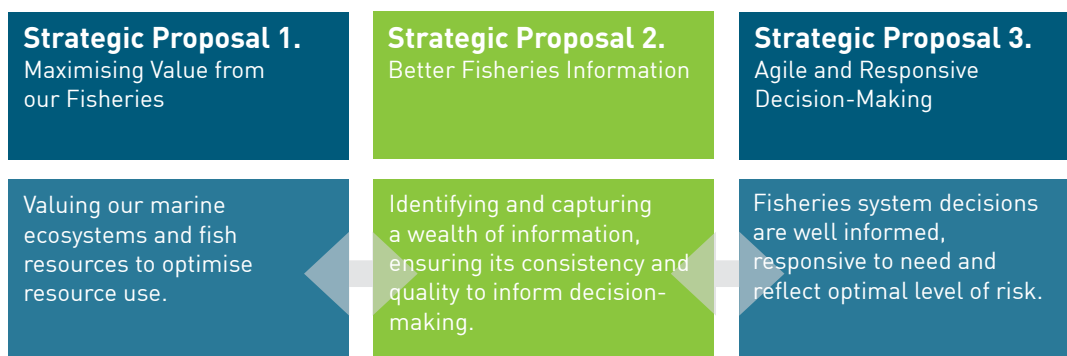
Consultation Questions:

- Do you agree that investment in better information on new and underdeveloped fisheries is needed?
- Who do you think should invest in such research: government or the private sector?
- Should quota owners' investment in research be reflected in the value individual quota owners get from any consequent increase in the TACC?



⁹ For example, in Western Australia managers of mixed-species fisheries have identified particular stocks as key indicators of the overall health of the fishery based on their knowledge of the ecosystem and the interactions between stocks.

Strategic Proposal 2: Better Fisheries Information



MPI invests about \$22 million on research each year, most of which is cost recovered from industry, to assess the status of major fisheries (stock assessments), as well as producing information on recreational and customary fishing, and the environmental impacts of fishing on other species and ecosystems. This information is shared with other government agencies and non-governmental organisations to inform related management issues, such as marine protected areas work co-ordinated by the Ministry for the Environment.

To achieve our long-term vision, government requires information that is timely and relevant. The better the information, the better the management decisions should be. Better information also enables users and communities to make informed decisions about how they realise value from the marine environment.

Research alone is not going to be enough. To meet the new information needs, MPI aims to collect a more comprehensive range of information in a more timely fashion to enable better decisions on sustainability, allocation, and compliance to achieve the best value for all New Zealanders. This section discusses a number of initiatives, and proposes actions on how MPI will meet this information need.

We propose four options that we would like you to consider. These options are not mutually exclusive and should be considered either individually, in any combination or as a package:

- **Option 1:** Implement IEMRS;
- **Option 2:** Gather more information to support decision-making and value-adding;
- **Option 3:** Invest in ecosystem-based management;
- **Option 4:** Use more externally commissioned research.

Option 1:

Implement Integrated Electronic Monitoring and Reporting System (IEMRS)

Electronic monitoring and reporting will be critical to getting additional information we need to improve the management of our fisheries. MPI is consulting with stakeholders regarding the implementation of a fully integrated electronic monitoring and reporting system (IEMRS) that provides verifiable, accurate, integrated and timely data on commercial fishing activity to inform fisheries management decisions. IEMRS will provide better fisheries information, including total catch information and more timely and accurate catch and effort information.

The government is proposing to move to mandatory electronic catch and effort reporting for commercial fishing. Other components of the IEMRS system are focused on monitoring and verification of catch reporting: automated geospatial position reporting and electronic monitoring using automated on-vessel cameras. Information provided by these three sources of information will be integrated, enhancing the existing compliance, monitoring and verification capabilities significantly beyond their current state.

Implementation is proposed in stages, with electronic reporting and automated geospatial position reporting implemented from October 2017, and electronic monitoring using cameras commencing from October 2018.

IEMRS is expected to contribute significantly to the resolution of key fisheries management issues that depend on robust information, including:

- reducing waste in commercial fisheries by monitoring discarding activities of fishers;

- managing the environmental impacts of fishing including protected species bycatch;
- fish stock management including setting catch limits and demonstrating sustainability;
- supporting effective and efficient compliance interventions;
- restoring public confidence in fisheries through improved information-based management decisions.

Further information on the regulatory change necessary to enable IEMRS is provided in Volume III.

Option 2:

Gather more information to support decision-making and value-adding

Monitoring of non-commercial fisheries (recreational and customary fisheries)

MPI's estimates of recreational catch at a QMA (fish stock) scale has been favourably reviewed by New Zealand and international experts, and has been accepted as best practice by recreational fishing groups¹⁰. We use a combination of National Panel Surveys, aerial counts of fishing boats, cameras at boat-ramps and interviews of fishers returning to these boat-ramps to develop these estimates. National surveys occur every five or six years, and in the years between, we monitor activity at selected boat-ramps using web cameras and interviews to give us information on trends. MPI also collects catch data from amateur charter vessels for some species in some areas. Data from these sources show us that recreational catch can vary dramatically between years.

Our understanding is best for finfish, and in areas where recreational fishing effort and catch are highest. So, for better monitoring of recreational fishers, especially in areas of less intensive fishing effort, MPI proposes to develop and publish guidance, standards, and specifications for recreational fishing organisations and clubs to collect useful information. A review of the effectiveness and utility of the current reporting systems for Amateur Charter Vessels would provide another opportunity to gather better recreational fishing information.

Currently, information provided to MPI by customary fishers can only be used by the Minister for the purpose of setting or varying sustainability measures or developing management controls. Tangata whenua have information needs that often respond to different objectives and are used at finer geographic scales than those required by the Crown or useful to recreational fishers.

MPI proposes to work more effectively with tangata whenua on how the information currently gathered on customary fisheries is used, and what additional information would support customary fisheries management.

Monitoring fisheries at finer geographic scale

The current fisheries research programme is directed at meeting the information needs of fish stock assessment and fishery management at a QMA scale. However, the same research also provides information at finer geographic scales, relating to the size of fish caught, the proportion of successful fishers, the size of bags of fish, and the spatial distribution of fishing. All of this information can be used to inform management decisions at the finer scales (a bay, harbour, or other area smaller than a QMA), which is of interest to most non-commercial fishers, and many commercial fishers too. In the future, IEMRS will also be able to assist with the gathering of this finer-scale data. Finer-scale information will also be required for the two recreational fishing parks proposed under the Marine Protection Areas reform process¹¹.

There could be many advantages of managing fisheries at finer geographic scales. For that, we need to generate finer-scale fisheries data, and each fishing sector needs to consider its information needs and how these needs could be met. If new data collection standards and mechanisms were created, could users gain more value? Some potential examples include:

- surveys or extensions to existing surveys to generate finer-scale data for use by the government or stakeholders where this can be done cost effectively;
- investigate ways of getting better information and consider reporting for high-value shared fisheries where catch estimates are important to evaluations of stock status;
- tangata whenua having information at scales that relate to their management activities.

The benefits of managing at a finer geographic scale may be mostly captured by those people in the area. The costs of monitoring and managing a number of smaller areas will be greater than the cost of monitoring and managing one larger area. The challenge will be finding the balance between the benefits and the costs of finer-scale management and establishing how those costs will be met.

How fisheries management decisions at finer scales could work is discussed in the "agile and responsive decision-making" section of this document.

¹⁰ LegaSea Update: Busting the myth of unknown recreational catch <https://www.legasea.co.nz/documents/LegaSea-NZFW-Nov15.pdf>

¹¹ A new Marine Protected Areas Act: Consultation document: <http://www.mfe.govt.nz/publications/marine/new-marine-protected-areas-act-consultation-document>

Commercial socioeconomic information

Quota value represents the long-term asset value generating future economic returns for quota holders, while ACE value is a measure of current profitability for quota holders and a cost of access to fisheries for fishers who do not own quota. The markets where quota and ACE are traded provide important platforms for current and potential sellers and buyers. The transfer of quota and ACE to the most efficient operators who can obtain the most value from fisheries resources is, however, impeded by the lack of price information available. The transfer of ownership of quota and ACE must be registered, but there is no requirement to accurately report the price.

Similarly, information on landing price (the price fishers receive when they land their catch to a licensed fish receiver) is not reported to MPI. Landing price plays a critical role in setting appropriate deemed value rates, which provide a financial incentive for fishers to balance catch with ACE, and also helps to determine a fair allocation of shared management costs that MPI recovers through levies.

If MPI had access to these data, it could explore some of the economic drivers of fishing behaviour more deeply. Combining an understanding of economic drivers with fish biological information would help in finding a management approach that ensures sustainability, as well as maximum economic gains and other values.

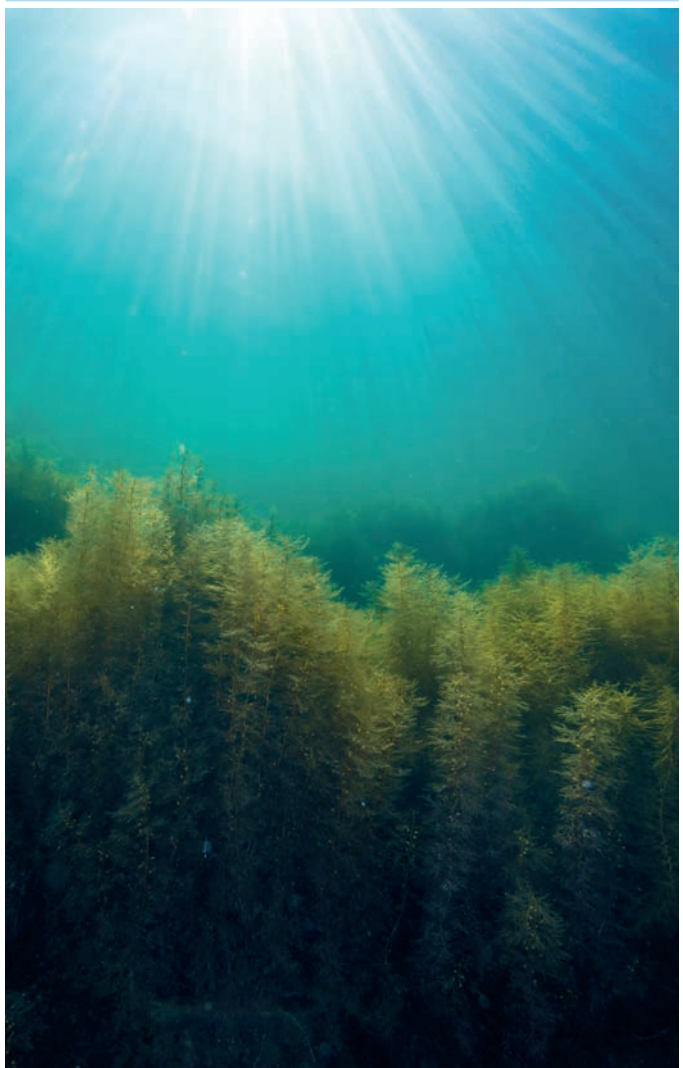
Non-commercial values

Catch is not the only measure of value for customary or recreational fishers. Fish catch rates and size are often more important and the experience of fishing itself (for example, time on the water) is also important to many non-commercial fishers. MPI also recognises that people value fisheries for their own sake (non-extractive or intrinsic value), not only for the resources that are harvested. Tangata whenua consider value across a wider range of drivers including social, cultural, and economic, which may differ from other sectors.

We are interested to explore how non-commercial and non-extractive values should be identified and factored into management decisions. MPI has commissioned some research in the past about what constitutes value for non-commercial fishers, and recreational fishing organisations have also commissioned their own studies, but there is little up-to-date information.

Consultation Questions:

- Do you agree that MPI should do more to collect information on non-commercial fisheries (for example, undertaking more aerial overflights, boat ramp surveys or reviewing Amateur Charter Vessel reporting)?
- What steps could you and other non-commercial fishers take to provide better estimates of harvest for better management of fish stocks?
- Do you agree that monitoring and management of fisheries should take place at a finer geographical scale than the current quota management areas?
- Who should contribute to the additional costs associated with monitoring and managing at finer geographical scales?
- Do you agree that MPI should invest in more socioeconomic information?
- How would you describe value for non-commercial fishers and for people who do not fish?



Option 3: Invest in ecosystem-based management

MPI manages fish stocks and the impacts of fishing on other species, marine habitats and ecosystems and has invested significantly in research to understand these diverse issues and support their management over recent decades. This management includes putting regulations in place to minimise capture of protected species such as seabirds and marine mammals by fishing vessels (for example, fishing restrictions in areas where Māui and Hector's dolphins are common) or to close areas to bottom-impacting fishing methods to protect certain sensitive seabed habitats. In addition, important forage species, like anchovy, are managed through conservative TACs, to ensure they can continue playing their role in the ecosystem's food web.

In our earlier engagement, we heard there is an increasing interest in habitat protection and building greater ecosystem resilience and fish abundance in the marine environment. Tangata whenua and stakeholders wish to see a stronger application of environmental principles and the adoption of international best practice like ecosystem-based fisheries management (EBFM).

New Zealand has committed to moving towards an ecosystem approach to fisheries management by 2020, as one of its targets under the Convention on Biological Diversity¹².

EBFM considers fisheries management in the broader context of the ecosystem and aligns with the principles of ecosystem-based management being investigated under the Sustainable Seas National Science Challenge (see Volume I). The key is to develop an integrated management approach that recognises the social, economic, cultural and environmental needs of all New Zealanders. EBFM will also enable MPI to better meet the increasing global expectations around sustainability (for example through the requirements of fisheries eco-certification) and provide a framework for MPI to incorporate the risks and opportunities from pressures like climate change.

EBFM requires more and different information than traditional fish stock management, such as biological, cultural and economic, all with multiple linkages and interactions. New Zealand has already invested in gathering information to support the application of EBFM through the Sustainable Seas National Science Challenge, but similar to finer-scale management discussed above, more investment into specific fisheries aspects is likely to be needed. This must be a consideration when assessing the optimal level of management, and how sectors can contribute to the additional costs of implementation.

EBFM will provide an enabling framework for MPI to meet its national and international obligations. If New Zealand wishes to continue to be recognised internationally as a good environmental manager, it needs to keep current with other countries investing in EBFM.

Consultation Questions:

- Do you agree that an ecosystem approach is needed for fisheries management?
- What principles and values would you like to see underpin an ecosystem-based approach?
- Who should pay for the additional costs of implementing ecosystem-based fisheries management?



¹² New Zealand Biodiversity Action Plan: <http://www.doc.govt.nz/Documents/conservation/new-zealand-biodiversity-action-plan-2016-2020.pdf>

Option 4: Use more externally commissioned research

MPI has a well-established and internationally recognised¹³ fisheries science process. Each year, research needs necessary to meet management objectives are identified. MPI does not conduct its own research but commissions science projects in a competitive tender process. Research providers are selected based upon objective evaluation criteria that include capability, capacity and value for money over the whole life of the contract¹⁴. Once a contract is signed, MPI's science review system covers the whole process from planning and design to reviewing the interim and final results. This is generally done through technical working groups, plenary reviews, and independent expert reviews which all assess fisheries research and information against five principles (as specified in the Research and Science Information Standard for New Zealand Fisheries (RSIS)¹⁵). The principles are: peer review; relevance; integrity; objectivity; and reliability.

To maximise the value to stakeholders of MPI's science system, we provide the public with open access to all research data and findings, and support the usability of our research and science information.

Information to manage fisheries comes from a variety of sources. Independent from MPI, other government departments, recreational fishing groups, fishing companies, universities or other research institutes often conduct or commission research studies into fisheries issues. MPI welcomes this research, and recognises the value of the externally commissioned research to support the management of our fisheries and/or marine ecosystem. To increase the use of externally commissioned studies, research priorities could be identified jointly by MPI and any interested groups. External groups could thereby be encouraged to undertake research that contributes to meeting joint research priorities.

13 Boris Worm, Ray Hilborn et al. (2009): Rebuilding Global Fisheries. *Science* Vol. 325 (5940): 578–585

14 Government Rules of Sourcing: <http://www.procurement.govt.nz/procurement/pdf-library/agencies/rules-of-sourcing/procurement-government-rules-of-sourcing-v3.pdf>

15 Ministry of Fisheries (April 2011). Research and Science Information Standard for New Zealand Fisheries. available at: <https://www.mpi.govt.nz/document-vault/3692>

MPI considers that any externally commissioned research must be done to at least the same standard that is applied to MPI commissioned research, if this information is intended to inform decision-makers. To facilitate the use of externally commissioned research to meet MPI's identified research needs, we propose that any such research must be progressed through the same review processes and against the same criteria as apply to research commissioned by MPI. MPI considers it important that MPI holds any underlying data that is collected from externally commissioned research and all research results are made publicly available through published reports.

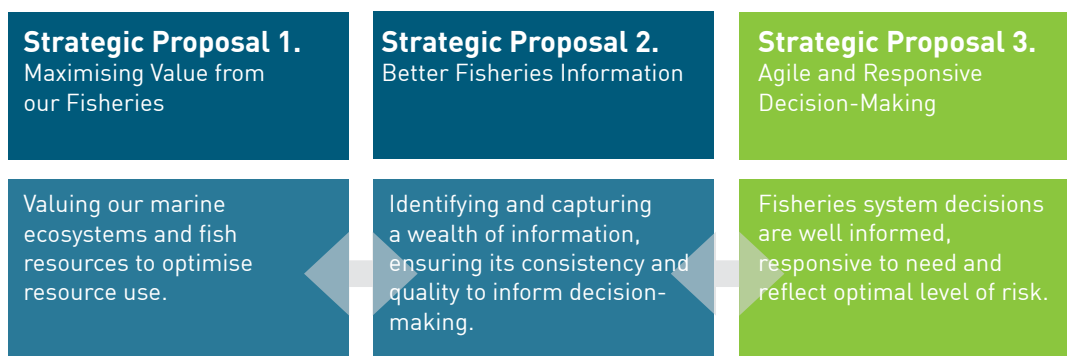
We would like to hear whether you consider that increasing the use of research commissioned by other government departments or by non-governmental groups to inform decision-makers would improve fisheries management decision-making.

Consultation Questions:

- Do you agree that MPI should make more use of externally commissioned research?
- Should the principles of the Research and Science Information Standard be applied to all research? Should any additional principles apply to externally commissioned research?



Strategic Proposal 3: Agile and Responsive Decision-Making



Management of the fisheries system requires frequent and technical decisions to ensure fish stocks are managed sustainably, based on the best available evidence.

Keeping decision-makers well informed will become increasingly challenging as more information becomes available and is delivered faster and at a finer geographic scale. While this will better support decision-making, the issue is how best to harness this to support decisions at the right level in a timely way. We consider that the flexibility provided for in the Fisheries Act could be better used as the fisheries system and its information sources change.

While many of the tools for conducting management address fisheries at a stock level, they are not always very good at addressing issues such as localised depletion or pressure between users at local levels. In addition, many of the tools for making these decisions rest with government and there is an increasing focus and desire from communities to have more input into local management issues.

The current framework

The Fisheries Act and its supporting regulations provide the framework for determining who makes decisions that affect fisheries and how these decisions are made. Decision-making is spread between the Minister responsible for Fisheries and the Director-General of

BOX 3.1: Description of some of the powers, functions and duties where decisions rest with the Minister

Fisheries Act 1996

- Setting sustainability measures including TAC and TACCs
- Approving fish plans
- Limits on fishing-related mortality of protected species
- Setting deemed value rates
- Introducing stocks into the QMS and setting qualifying years for catch history
- Altering quota management areas for stocks managed under the QMS
- Consent to hold quota in excess of aggregation limits
- Approval of new purpose for special permits
- Temporary closures to recognise and provide for the exercise of Māori non-commercial fishing
- Setting cost-recovery levies
- Transferring functions, duties and powers to an Approved Service Delivery Organisation
- Adding species and stocks to Schedules of the Fisheries Act (Schedules 5, 5A, 6, 8)

Fisheries (Kaimoana Customary Fishing) Regulations 1998 and Fisheries (South Island Customary Fishing) Regulations 1999

- Appointment of Tangata Kaitiaki and Tangata Tiaki/Kaitiaki
- Declaration of mataitai reserve
- Regulations and bylaws relating to fishing in mataitai

MPI, and tangata whenua and their kaitiaki in respect of customary fishing under various customary fishing regulations.

Currently, the Minister makes a wide range of decisions, including: setting harvest limits and sustainability measures, introducing a species into the QMS, and appointments under customary regulations (Box 3.1). Many of these decisions are made by the Minister following advice, although the Minister also seeks approval from Cabinet colleagues before recommending regulations. The Minister may also shift to the Director-General all or any of the Minister's functions and powers under the Fisheries Act, with very few exceptions, and many functions and powers have been delegated. Such delegation does not remove the Minister's responsibility. It is this responsibility that the Minister balances when deciding what should be delegated.

Compliance and enforcement decisions sit solely with the Director-General.

In addition, MPI makes use of a range of standards and decision rules that inform how some decisions can be made. These are intended to make the decision process more agile and to reduce the costs associated with decision-making.¹⁶ These are guidelines and do not limit the Minister's decision-making.

Areas where the current framework could be improved include: its responsiveness, scale that decisions are made at, support for collective action, transparency, administrative efficiency, and opportunities for increased input.

Responsiveness and flexibility

Under the current system, if scientific information is not available at the time a fish stock is identified for a review of catch settings, it takes 12 to 24 months to implement a formal decision to change a catch limit for many stocks. This timing is due to the need for cost-recovery consultation on fisheries research, time taken to do that research, develop management options, consult on them, and then make a decision. Even when the science is already available, it may take five to seven months to complete the consultation and decision-making process.

This is still the case when a fishery has a management procedure (such as with the pre-agreed rules about how the catch settings will be modified in response to changes in abundance for rock lobster fisheries). Changes to the decision-making framework could result in decisions on catch limits for stocks being streamlined, with shorter review times (because information is available sooner) at potentially smaller geographical scales.

¹⁶ An example of this is the QMS introduction standard which defines the standards and organisational procedures to be used to undertake an annual assessment of non-QMS stocks or species to determine whether they should be considered for introduction into the QMS.

Other areas that could benefit from a more responsive and flexible decision-making process are: setting deemed values, the development of multi-year TACs, and staged TAC reductions and increases as single decisions.

Scale of decision-making

The status of fish stocks is managed at large geographical and administrative scales, which is generally appropriate from a biological point of view and also cost effective. However, some stakeholders would like to see specific rules in place for fishing in particular locations.

Some stakeholders have told us they would like the ways in which management works to better support them to work together to achieve shared goals at different scales. For example, this might involve agreement among commercial fishers to not fish in a particular location. Part of this collective action should involve the ability of groups to make binding collective decisions and to recognise the trade-offs within and between groups to achieve this.

Obtaining and using better information presents the opportunity to manage local fisheries in a way that better meets community, recreational, commercial and customary expectations. The implications of finer-scale management, including who carries the likely increased costs, would need to be considered.

Administrative efficiency, input and transparency

Most decisions made in the current system are supported by a full consultation process. Delegated decision-making and a more targeted approach to consultation on some lower-risk or lower-impact issues may enable faster, more cost-effective decision-making. The statutory obligations to provide for the input and participation of tangata whenua would continue.

To make fisheries decision-making more effective will require determining who should make what types of decisions, how they should be made, and what would be required to give stakeholders and the public confidence that the decisions continue to be sound.

A more effective process should take full advantage of the proposed IEMRS project. This informs the nature, frequency and management options available to decision-makers. For example, if an issue is identified before it becomes significant, decision-makers would be able to use earlier interventions to take corrective actions.

Shifting some decisions from the Minister to the Director-General could improve efficiency, but should be within a framework that reflects and manages the risk of those decisions to achieving fishery objectives.

Principles for sound decision-making

Fisheries management, by its nature, involves decisions that need to take into account uncertain information, diverse values, multiple and, at times, conflicting objectives. This includes decisions about: catch limits, biodiversity protection and the sharing of resources among different users. Decisions need to respond to changes in natural systems as well as social, cultural and economic factors.

Fisheries management decisions have a hierarchy to ensure risks to achieving agreed management objectives are identified and appropriately managed. For example, a decision that allocates value should not be inconsistent with, or undermine, a necessary rule to maintain ecosystem capacity.

The risk associated with a decision is the most critical factor in determining the level at which that decision should be made (Box 3.2). Some decisions require the representation of full societal views because they have implications that extend across broad interests, and should rest with those who are elected to represent society. Other decisions are technical, have minor consequences, and may only have implications for a few users, and as such carry a lower risk or impact. Decisions are generally best made at a level that is both cost effective and commensurate with the level of risk to achieving clearly identified management objectives.

Future decisions should be made in a way that is timely, more responsive, provide greater clarity to all our stakeholders and tangata whenua, and provide confidence

to the public that our fisheries resources are being well managed. MPI's view is that the way to achieve this is to address not only the level at which decisions are made but also the ways in which they are made. We consider some fisheries management decisions could reside at a level aligned to the technical nature of the decision, the implications for users or the costs and risks associated in making that decision.

Options for improving decision-making

Options to improve decision-making include:

- **Option 1:** Shift decisions to a level of accountability that reflects the level of risk to achieving clearly identified management objectives;
- **Option 2:** Establish a National Fisheries Advisory Council;
- **Option 3:** Develop a more flexible decision-making framework.

These are not mutually exclusive and should be considered either individually, in any combination or as a package.

The options set out below would make more effective use of better information, enable stakeholders to seize value-adding opportunities in a timely way and support more dynamic decision-making. They would increase the speed of decision-making, and make it more responsive to information at finer scales.

The Crown would continue to meet its commitments to Māori, including the requirement for decision-makers to act in a manner consistent with the Treaty of Waitangi

BOX 3.2: What MPI considers makes a good decision

All of us are confronted with various decisions to make on a daily basis. Some are small and of minor consequence, while others are huge and potentially life changing. Some are simple and obvious choices; others are more difficult and painstaking.

Generally, **effective** decisions should be made by those **best placed** to make them at a level that is **cost effective**.

The "effectiveness" of a decision should be gauged by reference to:

- the quality and relevance of information it is based on;

- the degree to which it advances or supports management objectives;
- the degree to which it identifies and takes into account uncertainty and risk;
- the degree to which it identifies and takes into account the interests of those affected by it;
- the transparency of the process, including reporting on how the decision was arrived at.

Whether the decision-maker is "best placed" and at a level that is cost effective will be gauged by reference to:

- the cost of obtaining relevant information and making the decision;
- the manner in which the decision-maker is accountable for the decision, and its implementation;
- the extent of the impact of a decision (across users and resources);
- the amount of guidance or direction available.

(Fisheries Claims) Settlement Act 1992 (the Settlement Act) and provide for input and participation of tangata whenua in fisheries management processes. This may require MPI and iwi to work together to modify current engagement systems to ensure they are capable of continuing to provide timely and effective input by tangata whenua into decision processes.

Option 1: Shift decisions to a level of accountability reflecting the risk to achieving fisheries objectives

Some decisions could be shifted from the Minister to a delegated decision-making level (for example, the Director-General of MPI), within a framework that reflects and manages the risk of those decisions to achieving fisheries objectives. The benefits of this approach might include greater responsiveness of fisheries management settings to changing circumstances. This would be particularly important when operating at a finer geographical scale and/or within an ecosystem-based system.

In shifting decisions from the Minister, it would be necessary to maintain the confidence of the Minister, tangata whenua, stakeholders and the public, that the level of accountability reflects the level of risk to achieving the objectives that have been set.

Shifting more fisheries management decision-making to delegated levels requires:

- formal management objectives to be developed, with clear accountabilities and performance measures;
- a mechanism to address how delegated decisions are reviewed;
- a pathway for decisions to shift back to the Minister if and when required.

It is too early to propose a definitive list of the types of decisions that could be shifted to the Director-General. However, our initial view is that the following decisions could be shifted to the Director-General indefinitely or for a specified period of time:

- TACs for deepwater stocks: these are not shared fisheries and setting a TAC is an essentially science-based decision within an agreed harvest strategy;
- technical measures such as net mesh sizes;
- in-season increases for some stocks;
- appointment of kaitiaki, on the recommendation of the mandated iwi/hapū;
- temporary spatial closures under section 186A of the Fisheries Act.

Decisions relating to shared fisheries, sustainability measures, and the establishment of marine protected areas, would remain with the Minister.

There should be a mechanism for being able to review the types of decisions that are shifted. This could be done either by the Minister, on a periodic basis, or by an advisory council (see below).

Consultation Questions:

- Do you agree with a risk-based approach to determining what decisions could be delegated and to whom?
- What do you think about the approach we have suggested to guide delegation decisions?

Option 2: Support independent advice through a National Fisheries Advisory Council

All sectors of the fishing and non-fishing public have an interest in how our fisheries are managed. The performance of our fisheries could be improved by harnessing collective knowledge and capability to inform decision-making.

The Minister is able to establish a National Fisheries Advisory Council under Part 15 of the Fisheries Act, and appoint members to sit on it. This would allow Ministers and the Director-General to get advice on a range of issues, including:

- setting the TAC and other sustainability measures;
- frameworks for making decisions;
- legislative proposals;
- fisheries research, in particular the priorities and standards for research.

The benefit of the National Fisheries Advisory Council is that it would provide independent advice that reflects community, tangata whenua and stakeholder aspirations for fisheries. The National Fisheries Advisory Council could offer advice on decision rules and management objectives which would help guide decision-making.

The National Fisheries Advisory Council would not replace or lessen the input and participation of tangata whenua or the requirement for decision-makers to act consistently with the Settlement Act.

Legislative amendment would be needed for the National Fisheries Advisory Council to operate in a similar way to the National Animal Welfare Advisory Council (Box 3.3), with specific statutory functions.

BOX 3.3:

The National Animal Welfare Advisory Committee (NAWAC)

NAWAC was established under the Animal Welfare Act 1999 to provide independent advice on animal welfare to the Minister for Primary Industries.

Section 57 of the Animal Welfare Act 1999 lists all of NAWAC's functions. NAWAC gives the Minister for Primary Industries

advice on a range of issues (like the welfare of animals in New Zealand, animal welfare research needs, legislative proposals and codes of welfare) and must be consulted on specified matters. NAWAC produces an annual report which covers all of its operations for the year, including work on codes of welfare and regulations,

and updates on research. The Animal Welfare Act 1999 lays out requirements for membership. Members are chosen for their expertise and need a range of knowledge and experience.

Consultation Questions:

- Do you agree with the establishment of a National Fisheries Advisory Council?
- What do you think should be the purpose of a National Fisheries Advisory Council, and what skills should its members have?

Option 3:

Develop a more flexible decision-making framework

A more flexible and responsive decision-making framework means thinking not only about who makes a decision, but also how that decision is made, particularly at geographic scales on which many stakeholders place a high value.

The benefit of flexible decision-making is efficiency of process. Tangata whenua and stakeholders should benefit from more timely interventions that leverage off the improved flow of information (including IEMRS) and through improved responsiveness of decision-making to stakeholder input. Customary and recreational fishers should benefit from the ability of decision-makers to respond quickly to signals of localised change.

To make the process more efficient, MPI could explore a number of changes. For example, it could take a more flexible approach to consultation. Targeted consultation may be more appropriate for issues that are locally discrete or that only affect a few users. MPI could also help groups to work together to make binding collective decisions, that take account of the trade-offs between groups to achieve fisheries management objectives,

which are recognised by the government. Such changes should realise benefits that are more aligned to the expectations of fishers and communities.

In some fisheries, there may be an opportunity to adopt multi-year decision-making on measures like TACCs, spreading ACE across various spatial scales or increasing the minimum harvest size incrementally over a number of years for fisheries. Such an approach would be challenging, but could work in fisheries with well-developed stakeholder sector groups or community organisations.

Standards and decision rules could play an important role in enabling a more flexible and responsive framework, as they would set the boundaries within which specific decisions are made. This could be implemented through a two-tier approach. For example, tier-one decisions on matters such as setting a decision rule may involve full consultation, because they have implications for a range of users and other decisions. Tier-two decisions, such as those made in accordance with an agreed decision rule, may require less consultation, targeted at directly affected parties.

Consultation Questions:

- Do you agree that a more flexible and responsive decision-making framework is needed?
- What do you think would make the decision-making process more efficient?
- What do you think the role of standards and decision rules should be in guiding decisions in fisheries management?

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