Fisheries New Zealand
Tini a Tangaroa

Fisheries Amendment Bill: Strengthening Fishing Rules and Policies

Regulatory Impact Statement

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New Zealand Government

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Coversheet: Fisheries Amendment Bill: Strengthening Fishing Rules and Policies

Advising agencies	Ministry for Primary Industries
Decision sought	Agreement to policy proposals to strengthen the integrity and effectiveness of the New Zealand fisheries management system.
Proposing Ministers	Hon David Parker Minister for Oceans and Fisheries

Section A: Summary Problem and Proposed Approach

Problem Definition

What problem or opportunity does this proposal seek to address? Why is Government intervention required?

The principal regulatory mechanism for managing commercial fishing, the Quota Management System (QMS), is not operating as effectively as it could. Disincentives for good fishing practice to reduce catch of unwanted fish exist within the system, contributing to fish wastage, illegal activity and lost future economic opportunity.

To support a holistic, integrated approach to managing oceans and fisheries, the fisheries management system needs to be strengthened to ensure commercial fishing is sustainable, productive and inclusive.

By taking a strategic approach with a package of legislative changes there is an opportunity to ensure New Zealand remains a world leader in fisheries management and respond to:

- Changing public expectations about how the marine ecosystem is managed
- Growing demand for high quality, ethically harvested seafood
- Advances in information capability and fishing innovations
- Improvement in knowledge about the environment and potential effects of fishing on the environment, and
- Better understanding of science and fisher behaviour

Collectively, the changes set out in this paper coupled with the proposals to expand on-board cameras across the inshore fishing fleet will deliver significant change and will more strongly incentivise fishers to catch only those fish they value.

Proposed Approach:

How will Government intervention work to bring about the desired change? How is this the best option?

To enhance the fisheries management system and better support the incentives for good fishing practice, information, reporting, decision-making and penalties a package of legislative changes are proposed including:

- amending the rules for commercial fishers that set out what fish must be brought back to port and what can be returned to the sea;
- changes to the corresponding offences and penalties;
- changes to the decision-making process to enable decisions on catch limits to be more responsive to changes in the abundance of fish stock;
- technical fisheries management changes to support new technology, including on-board cameras.

These proposals, detailed in two Cabinet papers, are inter-related and work to confirm New Zealand's marine environment is well managed, fishers are investing in innovation, and local communities are empowered to have greater involvement in the decisions that affect them.

This package of proposals to strengthen fishing rules and policies sits within a broader fisheries reform agenda, which includes the introduction of electronic catch and position reporting and on-board cameras across the inshore fleet. Collectively, they will deliver significant change. By simultaneously improving the level of monitoring and verification of catch with on-board cameras, reducing the ability of fishers to dispose of unwanted catch and providing for proportionate and flexible offences and penalties we will strongly incentivise better practice.

Section B: Summary Impacts: Benefits and costs

Who are the main expected beneficiaries and what is the nature of the expected benefit?

The main expected benefits of the preferred options are a healthier marine ecosystem, better environmental outcomes, and opportunities for Treaty partners and stakeholders to have a greater say in how fisheries are managed, increased market confidence and strengthening of New Zealand's international reputation, reputation with customers and all New Zealanders. These benefits will be enhanced by the future implementation of improved monitoring and verification methods, including on-board cameras.

Oceans and fisheries are central to New Zealanders' cultural identity and are important to our communities, environment and economy and the proposed changes will benefit all New Zealanders. A key goal of the legislative changes is to provide the transparency and accountability necessary to give all New Zealanders the reassurance and confidence that our fisheries and the impacts of fishing on the marine environment are properly and responsibly managed.

General public: Through improved productivity and sustainability of stocks, New Zealanders' wellbeing (living standards) will benefit from the wealth created by the commercial fishing sector. As more flexible decision-making becomes normalised, the ability for the public and communities to have a greater say in how fisheries are managed and at what scale will improve. As noted above, proposed changes will provide all New Zealanders with the reassurance and confidence that our fisheries and the impacts of fishing on the marine environment are properly and responsibly managed.

Commercial fishers: Benefits include improved clarity in the rules about what fish can be landed and returned to sea. Over time, fishers will be incentivised to adopt more selective fishing practices, reducing the amount of unwanted fish caught. This will improve the quality of fish caught, improving catch value, and productivity of stocks.

Customary and recreational fishers: There may be benefits over the longer term from the actions of commercial fishers in terms of the productivity and sustainability of shared fish stocks.

Government: MPI is expected to benefit from more efficient processes in the setting of catch limits and, potentially, in the reduced cost associated with a reduction in prosecutions as the use of infringement notices provide the ability to deal more effectively with lower level offending.

Where do the costs fall?

The primary costs from these changes fall to the commercial sector. Changes to landings and discards rules will have the greatest impact on commercial fishers. This includes the cost of landing fish, and balancing this against annual catch entitlements (ACE) that would have otherwise been returned to the sea, as well as the lost opportunity cost of storage constraints and having to land less desirable fish that previously were returned to sea.

While all licensed fish receivers, quota holders and ACE fishers will incur additional costs, the main costs are expected to fall on inshore mixed trawl fisheries because the methods

used and the species caught will be affected the most by the change in rules (for example, the removal of minimum legal size for species such as snapper and terakihi).

The preferred option imposes no additional costs for recreational or customary fishers.

For government, and MPI as the administrator/regulator of the fisheries management system, there are expected to be short-term costs during the transition period. This includes costs associated with research to develop criteria for assessing fish that can be returned to the sea and survive following capture (some of which may be cost recovered from industry) and costs associated with consulting on any proposed changes.

What are the likely risks and unintended impacts, how significant are they and how will they be minimised or mitigated?

These policy proposals are likely to cause short- to medium-term fluctuations in the commercial fisheries sector markets and could contribute to the ongoing rationalisation of the commercial fishing fleet. Rationalisation of the fleet is most likely to occur in inshore mixed trawl and set-net fisheries where it is more challenging to fish selectively without modifying methods or where fishing takes place.

Areas most likely to be affected are the south and east coast of the South Island and the east coast of the North Island.

MPI will monitor the progress and impacts of proposals using existing means of data collection, during and post the transitionary phase of their introduction. It is anticipated these impacts will disappear over time as fishers respond to the new regulatory environment and shift to innovative technologies that avoid unwanted catch.

Identify any significant incompatibility with the Government's 'Expectations for the design of regulatory systems'.

MPI has read and followed the Government's "*expectations for the design of regulatory systems*" prior to the development of the proposed statutory framework to ensure consistency and compatibility. The proposals in this RIA comply with the Government's Principles of Good Regulatory Management.

The options are linked to clear objectives derived from the governing legislation (the Fisheries Act 1996) and are designed in order to modernise and strengthen the New Zealand fisheries management system to improve the sustainability of fisheries for New Zealand's future.

Section C: Evidence certainty and quality assurance

Agency rating of evidence certainty?
The high-level policy underlying this proposal has evolved from earlier consultations on fisheries management in 2015, 2016 and 2019 and additional engagement with industry representatives (including Te Ohu Kaimoana) in 2019-20. Extensive consultation included numerous public meetings, hui and one-on-one meetings with key Treaty partners (including Iwi Fisheries Forums[1] and Te Ohu Kaimoana) and stakeholders (customary, recreational and commercial), and feedback from an independent technical advisory group. All highlighted that, while the fisheries management system was sound, there was room for improvement. MPI knows from its own data, international research, feedback from stakeholders and submissions received during consultations that more effective controls are needed on what must be landed and what can be returned to sea. The work is also informed by overseas developments in fisheries management, including the introduction of a landing obligation (also known as a discard ban) in European Union fisheries prohibiting the at-sea disposal of commercially valuable species.[2] MPI has a large body of case studies from recent years to draw on that reflect the shortcomings of the policy settings around landings and discards to sea (including those highlighted in the Heron report 2016; operations Achilles and Hippocamp).[3] Recent work focusing on governance and decision-making highlights the contentious interface between rights holders and other users of the marine space (such as Sea Change, the Sustainable Seas Science Challenge and Environmental Defence Society's 'Voices from the Sea').

Quality Assurance Reviewing Agency:
MPI Regulatory Impact Analysis Panel
Quality Assurance Assessment:
The MPI Regulatory Impact Analysis Panel has reviewed the Regulatory Impact Assessment "Fisheries Amendment Bill: Strengthening Fishing Rules and Policies" produced by MPI. The review panel considers that the information and analysis in the Regulatory Impact Assessment meets the quality assurance criteria.
Reviewer Comments and Recommendations:
Nil

1 Iwi Fisheries Forums are the principle platform for the input and participation of tangata whenua into MPI's planning and management processes

2 Since 2015 the European Union landing obligation is being implemented on a gradual basis where catches of quota-regulated species must be recorded and limited by species-specific total allowable catches. The purpose of the landing obligation is twofold: to create economic incentives for the industry to reduce the capture of unwanted species and undersized individuals through improvements in selectivity and to improve accuracy in recording catches.

3 Fisheries compliance report: https://www.mpi.govt.nz/news-and-resources/information-releases/fisheries-compliance-reports/.

Impact Statement: Fisheries Amendment Bill: Strengthening Fishing Rules and Policies

Section 1: General information

Purpose
MPI is responsible for the analysis and advice set out in this Regulatory Impact Analysis (RIA). This analysis and advice has been produced for the purpose of informing policy decisions to be taken by Cabinet on regulatory reform of the fisheries management system. Amendments to the Fisheries Act 1996 (the Act) and associated fisheries regulations are proposed to implement changes to policy settings for commercial fishing to provide incentives to adopt innovative fishing practices that avoid unwanted fish, find ways to maximise the value of fish that are landed, and find value for previously less desirable fish that are landed. Analysed in this RIA are those proposals requiring changes to the Act and with significant impact, including: • amending the rules for commercial fishers that set out what fish must be brought back to port (landed) and what fish can be returned to the sea; • streamlining the process for adjusting catch limits; • introducing a graduated offences and penalty regime; • new defence to lawfully return fish to the sea to save protected species; • amendment to powers to install and maintain equipment (e.g. on board cameras) to observe fishing. This package of proposals sits within a broader fisheries reform agenda.

Key Limitations or Constraints on Analysis
While MPI is confident that it has scoped the problem effectively, and that there is sufficient evidence to support this, the analysis is impacted by: *Monetised and non-monetised impacts* • There are linkages between the proposals to strengthen fishing rules and policies, and the broader reform agenda. For example, without improvements to monitoring and verification proposed with the roll-out of on-board cameras, the risk of illegal discards to the sea could be higher under the landings and discards proposals in this RIA. • In the absence of a Cabinet decision on the roll-out of on-board cameras, the impact of change for these proposals have also been considered in isolation, although we acknowledge the linkages above. • Costs relating to the implementation of on-board cameras, will be considered in a separate RIA.

- Non-monetised costs and benefits for the programme to strengthen fisheries rules and policies are analysed in terms of environmental benefits, such as for the improved management of interactions with protected species, as well as less wastage and more sustainable practices. These benefits are closely related to the monetised impacts summarised above. This is because demonstrably improved environmental and sustainability practices have the potential to grow the New Zealand commercial fisheries sector's reputation and to maintain current access to fisheries markets and the potential to provide access to new market opportunities.

The quality of data

- Input and participation with tangata whenua and public consultation, undertaken in February and March 2019, provided little insight on the marginal impact to operational costs or any one-off costs that may be required as limited financial data was shared.
- MPI does not have access to data pertaining to the operational and administrative costs fishers incur from catching and processing fish, and there are varying complexities within each fishing operation, given the capital involved (such as, the type of vessels and equipment required), the range of fishing activities an individual fisher may undertake, and the diversity in species and value of fish caught.
- MPI has limited information about what fish is returned to sea illegally (and in some cases legally because while there is no cost to reporting these fish there is little incentive to report these fish). This makes it challenging to assess the impacts of any proposed measures that affect how fishers account for catch. Our best source of information is limited to vessels with observers on them – this is expected to change if improved monitoring and verification measures are adopted (for example, on-board cameras).
- Given data limitations, we assessed which direction income and costs will move (up, down or no change). Initial analysis of the impacts of the proposals on fishing quota and catch entitlements anticipates a direction change in ACE markets under each option, though it is difficult to predict at this stage what would be the actual quantum of the change when compared to the status quo.
- Initial analysis around markets for bycatch and less desirable fish has been carried out and indicates some opportunities, although it is difficult to assess the full potential of these markets.

Responsible Manager:

Chris Kerr

Director Agriculture Marine & Plant

Policy and Trade

Ministry for Primary Industries

Section 2: Problem definition and objectives

2.1: What is the context within which action is proposed?

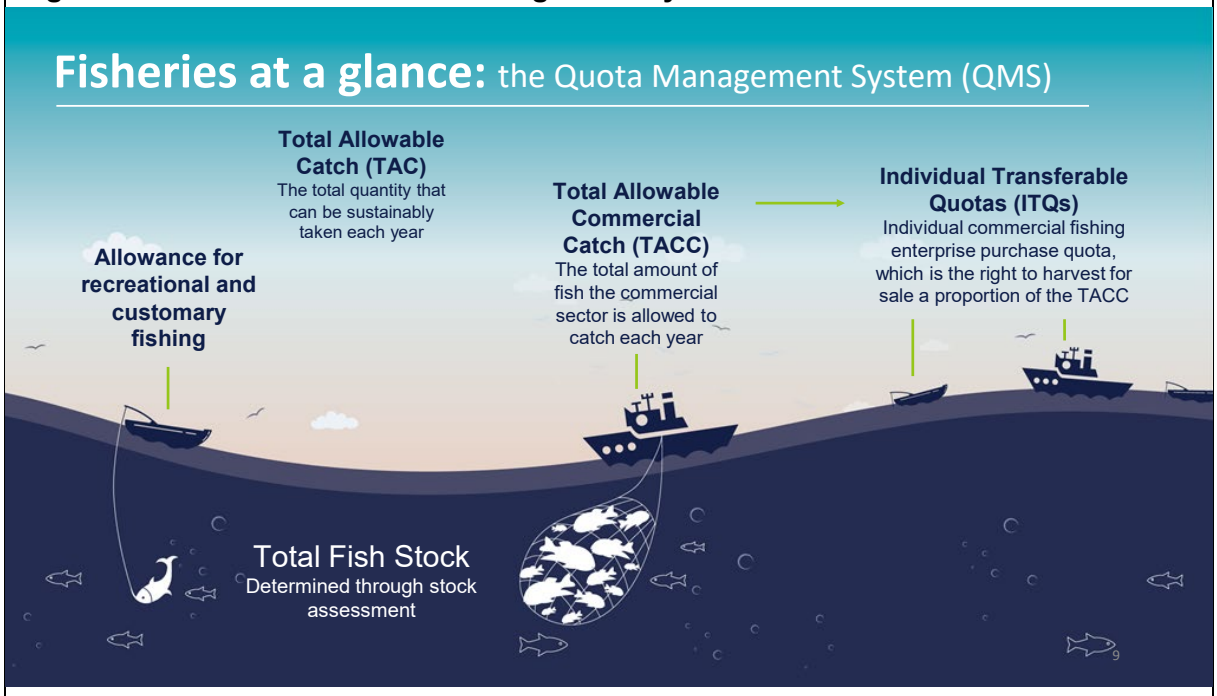
Fishing plays an important role in New Zealand's economy and society, across commercial, recreational, and customary interests. Commercial fishing contributes $4.2 billion per year in total economic activity, including $1.4 billion in export revenue for the year ended June 2020, and employs about 13,500 people. Recreational fishing is a popular activity for both New Zealanders and tourists – about 700,000 people fish each year and spend around $946 million on recreational fishing and related activities.[4]

The 1992 Deed of Settlement and the 1992 Treaty of Waitangi (Fisheries Claims) Settlement Act confirm the rights and interests of tangata whenua in fisheries. Tangata whenua have a central role in the sustainable use of New Zealand's fisheries resources, as managers/kaitiaki (guardians) and users of customary fisheries, and as recreational and commercial fishers.

The fisheries management system

New Zealand's fisheries management system is built upon the Fisheries Act 1996 (the Act) and the Quota Management System (QMS), which was introduced in 1986 (Figure 1). The purpose of the Act is to provide for the use of fisheries resources while ensuring sustainability (sustainable utilisation). The principles of the Act incorporate the long-term viability of fisheries resources, the aquatic environment and habitats.

Figure 1: New Zealand's Quota Management System



The QMS is a rights-based individual transferable quota system that supports the sustainable management of New Zealand's fisheries. It controls fishing activity through the setting of a catch limit, the total allowable catch (TAC). The TAC sets the quantity of fish that can be taken for each fish stock per fishing year. The total allowable commercial catch

[4] Derived from NZIER report to MPI: *Economic impact of the seafood sector; an input–output and CGE assessment and New Zealand Marine Research Foundation report: Recreational Fishing in New Zealand: A Billion Dollar Industry* (2016).

(TACC) is the tonnage portion of the TAC set aside for commercial quota once allowances for non-commercial (customary and recreational) interests have been considered, and allowance made for other sources of fishing mortality. The QMS has improved the sustainability of many of New Zealand's fisheries.

The activity of individual commercial fishers is controlled through an annual catch balancing regime to limit their catch to within the TACC. This regime requires fishers to cover all their catch of quota species with annual catch entitlements (ACE) or pay a deemed value (a payment made for catch exceeding ACE). ACE is generated from the quota share held for a particular stock. Quota is the property right of a stock represented as shares that can be bought and sold. Quota shares are generated when a stock is introduced into the QMS.

Providing long-term fishing rights via quota incentivises sustainable fishing practices and economic efficiency. In principle, the QMS creates an incentive for fishers to fish within sustainable limits in a way that maximises the value from their ACE and minimises any penalty payments.

Mortality of fish caused by fishing that is not fully reported or accounted for compromises the integrity of the QMS and the long-term sustainability and value of our fisheries. Accurate reporting allows for mortalities to be accounted for and, in the case of commercial QMS fisheries, costs to be attributed to fishers. These costs drive the incentives inherent in the system, encouraging sustainable and economically efficient harvesting.

Multiple international studies have ranked the New Zealand QMS and its management of particular fish stocks against a range of global indicators. While each study has had a somewhat different framing, New Zealand's rankings in all of these studies has consistently been at the higher end compared to other countries.[5]

Māori interests

The Act contains specific provisions that recognise Māori interests in fisheries:

- The Act requires the Minister to provide for the input and participation of tangata whenua into sustainability processes and to have particular regard to kaitiakitanga (guardianship) when making sustainability decisions.
- The Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (the Settlement Act) requires the Crown to develop policies and programmes to recognise and provide for the use and management practices of tangata whenua. The Minister must recommend regulations made under the Act to recognise and provide for customary food gathering by Māori and the special relationship between tangata whenua and important customary fishing grounds.

Features of the commercial fishing industry

As at January 2021, 1060 fishing vessels are registered to fish commercially in New Zealand waters. Of these, there are approximately 30 vessels operating solely in deep-water fisheries, and the remainder are either inshore, or fish in both deep-water and inshore.

[5] Retrieved from: https://www.nature.org/media/asia-pacific/new-zealand-fisheries-quota-management.pdf.

All registered vessels can fish within New Zealand's Exclusive Economic Zone (EEZ), and approximately 20 of these also have permits allowing them to fish outside the EEZ.

There are 926 fishing permit holders. Of these, 583 have just one registered vessel. Data for 2021 also shows that there are 1260 quota owners and 201 licenced fish receivers.

Managing the impacts of fisheries on marine life

There are many protected species within New Zealand's marine environment. The range of these protected species can overlap with commercial fishing activity. Fishing can affect protected species and their habitats through: incidental capture of untargeted species, competition effects (disturbing the balance of ecosystems), habitat modification and other indirect effects. MPI aims to manage our fisheries responsibly and sustainably, to avoid, remedy or mitigate any adverse effects of fishing on the aquatic environment.

Recent trends

There is growing demand for transparency and traceability in fishing practices, particularly in high-end markets such as Europe and the United States. The proposed changes to strengthen the fisheries management system have economic and reputational benefits for fishers and the general public. This includes increased trade potential and competitive advantage, as well as maintaining New Zealand's interests and standing regarding sustainably managed fisheries.

In 2018, the Marine Stewardship Council carried out its second study of seafood consumers globally which included more than 25,000 consumers in 22 countries.[6] Headline findings of this survey included the following responses which clearly demonstrate a growing expectation by consumers of demonstrable sustainable fishing practices in influencing their purchasing decisions:

- 72% of seafood consumers want sustainability claims in supermarkets independently verified;
- pollution and overfishing are consistently the most concerning ocean issues for seafood consumers in the 22 countries surveyed;
- 83% of seafood consumers globally agree that we need to protect seafood for future generations.

A 2017 study 'New Zealanders' views of the primary sector', asked members of the public about its perceptions of the primary industries.[7] In response to the question: *What is your view of the fisheries industry*? 40% of the respondents had a positive opinion about the fisheries sector. The remaining respondents either had a negative opinion or were unsure.

Modernising and strengthening the New Zealand fisheries management system to improve the sustainability of fisheries for New Zealand's future sends strong signals to the public about sustainable fishing practices, both in terms of how the system is being regulated and fisher behaviour. Such signals are also likely to have a consequential positive effect on consumer purchasing patterns.

[6] Retrieved from: https://www.msc.org/media-centre/press-releases/press-release/seafood-consumers-want-less-pollution-and-more-fish-in-the-sea.

[7] *New Zealanders' views of the primary sector* Research survey undertaken by UMR Research Limited on behalf of MPI (2017).

Current work programme

The creation of the Oceans and Fisheries portfolio – expanded from the former Fisheries portfolio – signals a shift towards a more holistic, integrated approach to managing the oceans.

A key part of this shift is a focus on strengthening the fisheries management system to ensure commercial fishing is sustainable, productive and inclusive.

The package of legislative changes to the Fisheries Act 1996, together with electronic catch and position reporting and the rollout of on-board cameras, will reduce the scope for both legal and illegal discarding of unwanted fish, improve the effectiveness of on-board cameras and enable more responsive decision making.

.2: What regulatory system, or systems, are already in place?

Features of the regulatory system

The main building blocks of the New Zealand fisheries management system are the QMS and the Act. As noted earlier, the purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability and the QMS facilitates the realisation of this purpose. The regulatory system is a complex mix of regulatory controls including area and seasonal closures, gear restrictions, and limits on individual and collective catches.

Why government regulation is preferable to private arrangements

Regulatory change is needed to further incentivise changes in fisher behaviour to improve accountability, and to make improvements to our fisheries management system so that we maximise value and drive sustainability. Not making regulatory changes to the fisheries management system will mean that current issues of non-compliance with catch reporting, fish-wastage and a broader lack of trust in commercial fishing practices will continue.

The proposals in this RIA improve sustainability and use practices. The proposals will reduce the scope for both legal and illegal discarding of unwanted fish, improve the effectiveness of on-board cameras and enable more responsive decision making. The improvement of monitoring and verification with the implementation of electronic catch and position reporting and the rollout of on-board cameras will provide transparency and verification for these improved practices.

Overall assessment of the fisheries management system

An initial review of the fisheries management system by MPI took place in 2015.[8] The review included public consultation and looked at fisheries management processes, technology, research gathering, regulations and legislation. It was guided by five themes: ensuring sustainability, benefits for all New Zealanders, decision-making processes, monitoring and enforcement, and future challenges. While the consultation raised a number of issues, key findings were:

- that there is broad support for the QMS, particularly in the commercial sector;
- there is scope for improvement, particularly in strengthening regulatory and incentive structures and developing a broader approach, such as broader ecosystem considerations, to meet future sector needs.

[8] Retrieved from: https://www.mpi.govt.nz/protection-and-response/sustainable-fisheries/strengthening-fisheries-management/fisheries-management-system-review/.

Based on the findings of the review, a major work programme was developed in 2016. Public consultation on the work programme occurred in November and December 2016.

As a result of this consultation the following changes were progressed:

- electronic catch reporting via an e-logbook – to quickly and accurately measure commercial catch effort;
- electronic position reporting – to verify (when used with electronic catch reporting) where and when fishing is occurring;
- electronic monitoring (on-board cameras) – to verify what is being reported;
- trawl net restrictions to create a regime that enables the use of innovative trawl technologies.

Implementation of changes in relation to innovative trawl technologies, electronic reporting and electronic position reporting are largely completed.

Problem definition

The principal regulatory mechanism for managing commercial fishing, the QMS, is not operating as effectively as it could. Disincentives for good fishing practice to reduce catch of unwanted fish exist within the system, contributing to fish wastage, illegal activity and lost future economic opportunity.

To support a more holistic, integrated approach to managing oceans and fisheries, the fisheries management system needs to be strengthened to ensure commercial fishing is sustainable, productive and inclusive.

By taking a strategic approach with a package of legislative changes there is an opportunity to ensure New Zealand can be a world leader in fisheries management and respond to:

- Changing public expectations about how the marine ecosystem is managed
- Growing demand for high quality, ethically harvested seafood
- Advances in information capability and fishing innovations
- Improvement in knowledge about the environment and potential effects of fishing on the environment, and
- Better understanding of science and fisher behaviour.

System-wide changes will improve the way catch limits are set and enable MPI to respond better and more quickly to changes in fish abundance, and give greater certainty to stakeholders.

Your fisheries – your say

In February 2019, a public consultation document (Your fisheries – your say) was released addressing areas requiring regulatory change and discussed in this RIA. The consultation document also referred to policy areas outside the scope of this RIA, due to either being non-regulatory changes or being technical changes or with minor impact.

These changes include:

Non-regulatory

- Better estimating other sources of fishing-related mortality (for example, those fish that are released over the side and subsequently die) and attributing other sources of fishing mortality to the sector that caused it.

Regulatory but technical or with minor impact

- Amendments to ensure continuity between the North and South Island, such as, adding South Island closures to the things that the Minister has to take into account when setting or varying a TACC and allowing for Māori customary, non-commercial fishing interests.
- Complete repeal of the Fisheries Act 1983, which is no longer used.

2.3: Are there any constraints on the scope for decision making?

A number of approaches to addressing the current disincentives for good fishing practices, improving decision-making and providing greater certainty for fishers have not been considered in this RIA, as set out below.

Some stakeholders called for a full review and replacement of the QMS. As noted above, multiple international studies have ranked the New Zealand QMS and its management of particular fish stocks against a range of global indicators. While each study has had a somewhat different framing, New Zealand's rankings in all of these studies has consistently been at the higher end compared to other countries. As such, the basic principles of the QMS (a cap and trade system with rights to harvest a share of the TACC, along with the associated rights and interests) were not part of the consultation and are not considered in this RIA.

Tangata whenua have a central role in the sustainable use of New Zealand's fisheries resources. Māori settlement rights and interests reflected through the 1992 Deed of Settlement and the Settlement Act, beyond commercial interests, are also excluded.

A number of commercial stakeholders considered that "fixing" deemed values would resolve many of the issues raised in the consultation document.[9] There is a range of strong and competing stakeholder views about whether deemed values are incentivising best fishing practice. In response, a joint working group was established to review the operation of the deemed values regime including the Deemed Value Guidelines 2012 and the information basis and applied process for the setting of deemed values, using examples to illustrate issues of concern. This work was completed in 2020 and has resulted in a revised set of deemed value guidelines.[10]

Proposed options around more flexible decision-making link to MPIs more proactive and collaborative management approach to enabling innovation, including:

- Sea Change – Tai Timu Tai Pari, an initiative designed to secure a healthy, productive and sustainable future for the Hauraki Gulf;
- The National Blue Cod Strategy;
- The yellow-eyed penguin/hoiho recovery plan.

[9] Deemed values are the payment commercial fishers must make to the Crown when they do not have annual catch entitlement ACE to cover what they catch and land.

[10] https://www.mpi.govt.nz/dmsdocument/40250-Deemed-value-guidelines.

There are linkages between these proposals and the broader reform agenda. For example, without improvements to monitoring and verification, the risk of illegal discards to the sea could be higher under the options for landings and discards. In the absence of a Cabinet decision on cameras, the impact of change for these proposals have also been considered in isolation, although we acknowledge the linkages above.

2.4: Who are the stakeholders?

Treaty Partners and five stakeholder groups expressed interest in proposals. These stakeholders include: commercial fishers, recreational fishers, environmentalists, the general public and independent experts. The nature of Treaty Partners' and stakeholders' interests are set out below.

1. *Treaty Partner* tangata whenua are represented through Iwi Fisheries Forums and wider Māori are represented through consultation with a range of bodies including Te Ohu Kaimoana, Mandated Iwi Organisations, Asset-Holding Companies, and individuals.
   Te Ohu Kaimoana is an independent Trust, established to provide for the allocation and governance of Fisheries Settlement assets, divested under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, and Fisheries Deed of Settlement. Te Ohu Kaimoana provides fisheries advisory services to iwi, the Māori Fisheries Settlement entities and industry groups. Te Ohu Kaimoana provides advice to, and is guided by, the 58 Mandated Iwi Organisations that represent all Māori in New Zealand. Iwi are also represented separately through these Mandated Iwi Organisations and Asset Holding Companies.
2. *Commercial fishers* include individual fishers; individual companies (small and large operators) that own quota; those individual fishers, individual companies (small and large operators) who fish using ACE from other operators and licensed fish receivers (who may own quota as well); and commercial industry associations.
3. *Recreational fishers* include representative bodies, such as the New Zealand Sports Fishing Council, LegaSea, New Zealand Recreational Fishing Council, fishing clubs and individuals.
4. *Environmentalists* include non-government organisations, such as the World Wildlife Fund for Nature and the Royal Forest and Bird Protection Society of New Zealand Forest and Bird and individuals with environmental interests.
5. *General public* include individuals and organisations with social and community interests in fisheries.
6. *Independent experts* include individuals with expertise in such areas as marine science, ecology, fisheries management or coastal management.

Table 2.1: Treaty Partner and stakeholder interests affected by the proposals

	Group	Nature of interest
Treaty Partners	Treaty Partners	The policy proposals have the biggest influence on iwi commercial fisheries interests in quota, catching fish and as fish retailers. Outside commercial interests, tangata whenua have a broad interest in any changes that affect the long-term sustainability and productivity of fisheries as expressed through their role as kaitiaki (guardians)/managers of their customary fisheries, and any interests they have as individual recreational fishers. Policy proposals on decision-making will have implications for how and when iwi engage on fisheries management decisions and the role that Iwi Fisheries Forums and Māori representative bodies play in that engagement.

Stakeholder groups directly affected by the proposals	Commercial fishers	The policy proposals have the biggest influence on commercial fishers in terms of cost, fishing practices, and the current and future setting of stock limits. The proposals will have clearer rules which may result in greater certainty for fishers when making business decisions.
	Recreational fishers	Recreational fishers have a broad interest in these changes insofar as sustainable fishing practices can improve environmental outcomes for target recreational species.
	Environmentalists	Environmental groups are keenly interested in the long-term sustainability of the marine ecosystem. This includes wanting to ensure that catch limits are consistently and transparently enforced, there is reduced waste and that rules relating to protected species interactions are consistently and transparently enforced. Policy proposals on decision-making will also have implications for how and when environmental groups engage on fisheries management decisions.
	General public	The general public are interested in these proposals as consumers with an interest in improvements to fishing sustainability practices, with regard to improvements of enforcement provisions, and potential costs and benefits of these new practices on their local communities' and New Zealand's economy. Ensuring sustainability of fishing and a profitable fishing sector supports New Zealand's wellbeing and international reputation.
	Independent experts	The policy proposals will lead to changes in our fisheries including the way they are managed; the way science is undertaken and used; the way fishers behave; the gear fishers use; and the way fishing companies operate. Independent experts across will have an interest in the evolution of fisheries as a result of these proposals.

Section 3. The Policy Proposal

3.0: The Policy Proposal

This section lays out the issues that make up the policy problem and the options for addressing it. The analysis sets out proposals that look at the biggest regulatory change first. This is graduated down to proposals that are on the other end of the scale and only require smaller changes or clarifications:

- Section 3.1: Amending the rules for what fish must be landed and what can be returned to the sea;
- Section 3.2: Enabling graduated offences and penalties;
- Section 3.3: Streamlining the decision-making process for setting catch limits;
- Section 3.4: Technical Management Changes to the Act.

These proposals are inter-related and work to confirm New Zealand's marine environment is well managed, fishers are investing in innovation, and local communities are empowered to have greater involvement in the decisions that affect them. They are also in line with the purpose of the Fisheries Act 1996, namely, to provide for the utilisation of fisheries resources while ensuring sustainability.

Objectives

The overarching objective in this policy is to modernise and strengthen the fisheries management system to ensure commercial fishing is sustainable, productive and inclusive.

The proposed legislative changes are focused on changing fishing practices and collectively will:

- improve the accuracy of commercial fishing reporting;
- create incentives for fishers to minimise by-catch and catch fish they value;
- support the implementation of on-board cameras; and
- enable more responsive decisions to changes in the abundance of fish stocks.

The proposed legislative changes are an opportunity to ensure New Zealand can be a world leader in fisheries management and respond to:

- Changing public expectations about how the marine ecosystem is managed
- Growing demand for high quality, ethically harvested seafood
- Advances in information capability and fishing innovations
- Improvement in knowledge about the environment and potential effects of fishing on the environment, and
- Better understanding of science and fisher behaviour

The proposals set a foundation to support the monitoring and verification of fishing activities and also to help MPI to continue to increase the use of ecosystem-based approaches to fisheries management.

This RIA addresses changes to ensure our system is incentivising good fishing practice by commercial fishers. This includes taking a system-wide approach to how our fisheries management rules operate together to induce good fishing practice.[11]

[11] The Government proposes to consult on improved monitoring and verification using onboard cameras. A separate RIA will focus on improvements to our monitoring and verification capability for commercial fisheries. This RIA will discuss the integrity

The options are assessed against five criteria set out below (Table 3.1), for consistency and consideration of the impacts of the proposals at a system level (such as, of the changes to the fisheries management system).

Table 3.1: Assessment criteria

Informational value and efficiency in decision making	***Promoting compliance***	***Cost effectiveness***	***Reputational and economic potential***	***Environmental benefits***
The quality and depth of the current evidence base and the efficiency of decision-making are improved	The new rules are clearer, easier to follow and more easily enforceable	Costs to industry and government in terms of money and time, provision of value over time, and there is greater incentive for investment in innovative technology by commercial fishers	The New Zealand commercial fishing industry's reputation for sustainability and credibility increases (both domestically and internationally) and access to markets, including premium markets, is maintained and/or improved	The potential to reduce fish wastage and mitigate protected species interactions is increased, and sustainable catch limits are set with greater certainty

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

and transparency of the richer information commercial fishers will be providing through these improvements before any final decisions are made about expanding the on-board cameras monitoring and verification programme.

3.1: Amending the rules for what fish must be landed and what can be returned to the sea

3.1.1: What is the policy problem or opportunity?

As incremental changes to New Zealand fisheries management rules have occurred, some of the current rules have become open to greater individual interpretation, are hard to comply with, more difficult to enforce, and have allowed some fish resource wastage over time. This means that in some cases, mortality of fish caused by fishing is not fully reported or accounted for in a fisher's balancing of catch against either ACE or deemed values.

The intention of the QMS is to maximise the value of our commercial fisheries while ensuring sustainability. To ensure the integrity of the QMS, all fish mortality caused by commercial fishing needs to be accounted for to inform robust fisheries management decisions for setting a level of Total Allowable Catch (TAC), and within that a Total Allowable Commercial Catch (TACC) that maximises the sustainable yield from the fishery. The implementation of electronic reporting and improved monitoring and verification capabilities will provide better information to support fisheries management decisions. This includes the level of fishing mortality that is not currently reported, particularly dead QMS fish that should be reported and landed.

Currently, all QMS species that are commercially caught are required to be landed and accounted for with ACE or payment of a deemed value. There are limited exemptions to this overall rule; which includes fish subject to a minimum legal size (MLS) and those listed in Schedule 6 of the Fisheries Act, as long as a fisher complies with certain requirements.[12]

These requirements vary according to the species and include return of fish caught out of season (for example, scallops), return of female rock lobsters carrying eggs, and return of some legal-sized species that are, due to their robustness, likely to survive (for example, various shark and shellfish species).

Many of the current rules do not have a clear reason for why certain fish can be returned to the sea and others must be landed (for example, snapper have a minimum legal size and gurnard do not – both are highly desirable and often caught together). Other rules are open to interpretation (for example, likelihood to survive is a subjective assessment made by individual fishers at the time of capture). These rules reduce the incentive for fishers to maximise the value of their catch by improving fishing practices, such as using more selective fishing gear, and adjusting how, where and the way they fish or to find value from the less desirable fish they do catch. Non-regulatory approaches (such as voluntary agreements with the fishing industry) would be unlikely to provide strong enough incentives for all fishers to change behaviour.

[12] There are exemptions to the requirement to land QMS species including:

- Undersize fish that have a MLS must be returned, whether they are alive or dead. An MLS is intended to protect juvenile fish, and support fish populations to grow as fish can mature and reproduce before they are caught. Currently, 17 species have an MLS.
- Some fish can be returned if they are alive, or likely to survive. These species, and their conditions for release, are listed on Schedule 6 of the Fisheries Act.

Changes to the current landings and discards rules are needed to create stronger incentives for fishers to reduce unwanted catch by improving fishing practices, and seek new ways to gain value from unwanted fish. These changes will lead to less waste of unwanted or economically low-value fish caught, as well as greater use of fish that would otherwise have been caught and killed at a size that does not optimise yield per fish.[13]

While the current domestic market opportunities for economically low-value fish may be limited (although this may change over time), there is an economic opportunity to develop export markets for low-value fish species. There are also additional opportunities to develop markets for value-added products from low-value fish or fish by-products.

Minimum legal size limits are one tool for managing selectivity, so as to limit the mortality of small fish. However, a significant issue arises where fishing gear is used that is not very selective with respect to size – such as bottom trawling – and where most small fish caught are dead or are unlikely to survive release. Where returning of small dead fish is allowed if they are below the minimum legal size, there is a reduced incentive for fishers to operate (for example, in areas and seasons fished and types of gear used) in a way that minimises the mortality of undersized fish.

Also, it is difficult to monitor the return of catch of individual fishers when they are operating in a fishery with a mixed catch of species, some of which have minimum legal sizes, and some do not. Determining the size of a fish, the life state and likelihood of survival, and sometimes species, can be challenging for an observer and very difficult for a camera.

To increase the incentives to minimise the catch and wastage of small fish and improve the quality of catch information, particularly within inshore fisheries, it is proposed that the minimum legal sizes for the 11 commercial finfish are removed.

3.1.2: What do stakeholders think?

In general, stakeholders have agreed that inaccurate catch reporting, due to unclear rules on what fish must be landed and what can be returned to the sea and the government's ability to monitor for compliance, and the waste or loss of fish are key problems, but they hold differing views on how it can be resolved.

Commercial fishers, quota owners and Te Ohu Kaimoana suggest there are already economic incentives that support sustainable fisheries and that the problem motivating this policy change needs to be better defined but have not provided suggestions for a better definition.

Te Ohu Kaimoana and some commercial fishers emphasise that the TACC setting and deemed value processes need to be considered as having an incentive and disincentive effect for reporting catch accurately depending on how they are used. Te Ohu Kaimoana has cited the kingfish KIN7 fishery as an example, where there is a low TACC but a high deemed value rate for a fish that is caught as a bycatch in some trawl fisheries.

[13] High grading is the practice of selectively harvesting fish so that only the best quality fish are brought ashore. Some fish returned to the sea under this practice do not survive and therefore high-grading can be detrimental to improving sustainability outcomes.

Commercial fishers and tangata whenua representative bodies generally have been in favour of more flexible rules tailored to a diverse industry in terms of location, species, operator size, and ability to innovate. Commercial fishers and tangata whenua representative bodies have been concerned the “landing all fish approach” would create higher costs and increase wastage of fish if new markets were not successful. These stakeholders have said that if this approach was implemented a transitional period would be necessary to ensure fishers have time to innovate and/or develop new markets.

Tangata whenua representative bodies have been particularly concerned that rule changes on what fish must be landed could devalue their quota. They have stated that if a land all approach is implemented then the additional catch balanced against ACE would need to be reflected in TACC adjustments.

Independent experts, environmentalists, recreational fishers and tangata whenua have stated that inaccurate catch reporting and waste is due to ineffective incentives to motivate commercial fishers to reduce unintended catch.

In general, environmentalists, independent experts, individual tangata whenua and general public stakeholder groups have supported tightening the rules through a land all fish approach. These stakeholders have stated that tightening the rules would incentivise fishers to innovate and reduce unwanted bycatch while also providing more reliable data for better decision making. Environmentalists particularly have supported this on the condition that there was no compensatory increase in TACC.

Many of these stakeholders, including recreational fishers, have stated that the proposals did not go far enough and failed to address the fundamental problems of the QMS as they see it (e.g. cumulative impacts of fishing on the environment). A number of these stakeholders argued that the QMS should be re-evaluated in its entirety. These stakeholders hold that the QMS enables high-grading and illegal returns to sea. Recreational fishers suggest a Royal Commission of Inquiry should be established to reassess the QMS.

Many stakeholders agree that there should still be opportunity for fish likely to survive to be returned to the sea.

3.1.3: What options are available to address the problem?

Option 1 – Status quo: Retain the current rules for what is landed and what is returned to sea

This option would not make any changes to the current rules, but still requires fishers to report all fish caught, as well as those legally returned to sea.

The Act prohibits commercial fishers from returning to sea, any fish that are managed under the QMS. The only exceptions to this rule are the 19 species where a MLS has been set and the 36 species listed in Schedule 6 of the Act, which specifies the requirements for legal returns to sea, or where a fishery officer or observer authorises a return. There is little incentive for fishers to innovate or alter fishing practices under this option.

The introduction of electronic catch and position reporting is already providing better information on total catch of sub-MLS and Schedule 6 species, which need to be recorded (although with limited exceptions not counted against ACE).

Under this option, it is anticipated that there would be no impact on fishers' current behavior, unless there is significantly improved monitoring and verification of fishers catch, for example, the expanded use of on-board cameras.

Option 2 – Increase the flexibility around fish allowed to be returned to the sea

This would mean increasing the range of fish that would be allowed to be returned to sea but would still require commercial fishers to report all catch and balance fish mortality against ACE, except sub-MLS fish.

Option 2 is intended to maximise the value of the total commercial catch through increased flexibility for fish returns to the sea. That is, fishers would have greater discretion on which fish to retain, as long as all fish mortality (including permitted returns to the sea) are reported and, in some cases, accounted for with ACE. Under this option, the use of MLS would be retained for existing finfish and potentially extended for additional QMS finfish species where appropriate. In determining the optimal MLS for each species, consideration would need to be given to both the biological and economic value of the fish caught.

This approach will require a regular assessment and adjustment to ensure optimal MLS were determined to maximise the economic value of those fish caught and retained.

The major settings changes are:

- MLS is reviewed and extended to additional QMS finfish species. The review will be evidence-based, where the size of the fish released is based on the market value and/or biological evidence (for example, overall level of the fish stock).
- Use of Schedule 6 is reviewed and likely extended to those fish that have lower economic value relative to the other fish caught (this would mainly impact on inshore shared fisheries).

Option 2 could attract negative public perceptions as fish that has been permitted to be lawfully returned to the sea (if unlikely to survive) will be considered as wastage, or a foregone opportunity for use.

This option allows fishers more discretion in which fish they choose to land and profit from. In other words, it would allow fishers the ability to high-grade their catch by enabling return of small and unwanted low-value fish.

It provides weak incentives to innovate or invest in more selective fishing practices that minimises capture of low value or smaller fish. The legal ability for commercial fishers to return dead fish to the sea weakens the integrity of the reporting system. The ability to verify catch using current technology is weakened and fishers self-reporting may be less accurate as a result. The greater the number of exemptions or discretion around returning fish to the sea, the greater the risk that the benefits associated with cameras, verification, improved decision making and incentives for fishers will be undermined.

Option 2 will require a greater level of fisheries monitoring capability than the other options so as to accurately determine if a fisher is legitimately permitted to return certain fish to the sea under provisions for MLS or Schedule 6 and that it may prove challenging to enforce these provisions to allow for the return to sea of certain fish and fish sizes.

Option 3 – Tighten the rules for returning fish to the sea

This would mean limiting the range of fish that would be allowed to, or must be, returned to sea. This may provide a more refined level of accounting of fish mortality than the other options, for example, fisher-reported fish mortality would be supplemented with information from licensed fish receiver returns. This is because fishers would have to land a wider range of fish than previously.

Option 3 is designed to simplify the rules for returning fish, limiting the opportunities where the rules for returning fish to sea are open to interpretation by fishers. Under this option it is proposed to remove the existing MLS for 11 commercial finfish species. This option would strongly incentivise commercial fishers to improve fishing practices and innovate towards more selective fishing methods and technologies. This is to both avoid unwanted or low value fish which would be required to be landed at the expense of higher value fish, as well as maximising the overall value of their catch.

Option 3 would remove the inconsistencies between the rules that allow for returning to sea certain QMS fish species and sizes of fish. This option shifts the settings to require commercial fishers to return more of their catch to shore (maximising the use of all fish caught – fewer dead fish are allowed to be returned to the sea) and allowing live healthy fish to be returned to the sea where the evidence supports the high likelihood of survival.

The major settings changes are:

- Remove the commercial MLSs for finfish.
- Review Schedule 6 and:
  - limit fish that can be returned dead to the sea to only those fish that have negative value (i.e. the retention of that species would damage other fish caught by the commercial fisher) and all dead catch is covered by ACE. Criteria would need to be clearly set to determine what is meant by “negative value”;
  - include limited exemptions to the no return rule, e.g. as currently for spiny dogfish, which can be returned alive but is counted against ACE. The review for these species would be evidenced based (current scientific evidence which could include consideration of capture method and depth) and seek to identify when fish are highly likely to survive and could be released; and
  - live release conditions would be specified by Gazette notice and would include a specific species/method/event details/on-board handling combination that would result in an acceptable likelihood of survival. Approval of these specified combinations would be made by the Minister for Oceans and Fisheries following advice from MPI and after appropriate consultation and review by the Fisheries Stock Assessment Working Group.

These proposed changes to what fish must be landed and what can be returned to the sea follow international trends to tighten obligations around landings and returns to sea.[14]

A consideration for this option (and Option 2) is how to transition from existing settings to any new rules.

- In many inshore fish stocks this may require new or additional stock assessment to ensure the TAC is set appropriately.
- The parameters for a revised Schedule 6 or its replacement would have to be consulted on and worked through with stakeholders.
- Under Option 3, more small fish would be returned to shore. If this option is implemented, MPI would need to assess how best to monitor industry performance in this area. In particular, MPI would need to monitor interactions between fishers and licensed fish receivers[15], and the fish that licensed fish receivers choose to receive according to the changing profile of what fishers' land under this option, as well as the market opportunities.

This option sets clearer rules about what fish can be landed and what can or must be returned to the sea. This option also aims to reduce the cost of fisheries compliance by simplifying the rules for enforcing instances of illegal discards to sea.

The preferred option to tighten the rules (Option 3) for what fish must be landed or can returned to the sea will increase the economic costs for commercial fishers to operate in the short to medium term, in comparison to the status quo, but also provide incentives for commercial fishers to adopt more economically efficient fishing practices that avoid unwanted fish. These include transitioning towards fishing practices that minimize unwanted catch, ongoing innovation in more selective fishing gear and methods, as well as seeking opportunities to maximise the value from those fish landed, such as the further development of markets for unwanted or economically low-value fish and fish products.

What other options have been ruled out of scope, or not considered, and why
A basic premise of the QMS is that all fish caught should be landed and accounted for by the fisher through ACE. There are currently limited exemptions to this general rule through the use of MLS and Schedule 6.

A range of options for change were considered on the ongoing use of MLS and Schedule 6. The questions asked included: What fish should a commercial fisher have to land and be accountable for? What fish can or is allowed to be returned to the sea and for what reasons? How does a fisher determine whether a fish meets the criteria what can or is allowed to be returned to sea by the fisher?

The variations ranged from either no MLS, restricted MLS, or a wide application of MLS based on biological and/or economic grounds. For Schedule 6 it ranged from tightly limiting its application to making it more flexible in the criteria needed for a species to be added.

[14] For example, the reform of the European Union's Common Fisheries Policy 2013 seeks to eliminate discarding through the introduction of a landing obligation requiring all catches of regulated commercial species on-board to be landed and counted against quota. See: https://ec.europa.eu/fisheries/cfp/fishing_rules/discards_en.

[15] Only licensed fish receivers are allowed to receive fish for sale. Commercial fishers must sell their catch to a licensed fish receiver (although they can sell small amounts – less than 10kg per day – on wharves). This restricts fishers' options for landing their catch and means that fish can be tracked. See Fisheries Act 1996 section 191.

The two options for change that were consulted upon were determined to best reflect the two different approaches of either tightening the rules based on scientific evidence or making the rules more flexible based on biological and economic grounds. The incentive structure around these options is different and reflected contrasting approaches of either creating stronger incentives to improve fishing practice to maximise value of catch or weakening the incentives for better, more selective fishing by allowing fishers the flexibility to maximise value by returning unwanted low value fish.

An alternative approach of using input controls such as closed areas and seasons, and gear restrictions was also considered as a way to reduce the catch of small and juvenile fish. This approach was also raised by a number of stakeholders who saw it as a clear and definite way to tackle juvenile mortality and the wastage of small and low value fish that are caught and returned to sea when fishers are pursuing large and more valuable fish.

There are already a number of such controls on our fisheries. It is time to consider an approach that incentivises the fisher to innovate and find ways to improve their fishing practice, particularly in fisheries where bulk harvesting methods are being used in ways that result in limited selectivity of catch. Imposing more closed areas and restrictions will likely increase the complexity and confusion about what rules apply where.

The opportunity to introduce additional input controls remains available to the Minister for Oceans and Fisheries on a case-by-case basis, but that additional measures are not proposed at this time.

3.1.4: Options analysis

The above options are assessed against the criteria set out in Table 3.1.

Table 3.2: Assessment of options for the rules that set out what fish must be bought back to port (landed) and what fish can be returned to the sea against the criteria

	No action	**Increase flexibility**	**Constrain rules**
Informational value and efficiency	**0** Complex rules mean reporting can be difficult.	**+** Increasing flexibility for returns to sea increases complexity of reporting.	**++** The retention of almost all fish caught will simplify reporting requirements and improve information quality for setting catch limits.
Promoting compliance	**0** Inconsistency of rules regarding landings and returns between species remains. Industry familiar with rules.	**0** Rules are more complex, but there is greater incentive to comply.	**+** Rules are clearer around landings and returns to sea which may incentivise voluntary compliance for some fishers, but there is less incentive to comply for some fishers.
Cost effectiveness	**0** Low cost to industry and low incentives for innovation.	**+** Low initial cost to industry. Increased cost to government to ensure compliance. Increased value from ACE through greater opportunity to legally high-grade catch.	**+** Initial cost to fishers adjusting to the new rules to either minimise unintended catch, innovate, or maximise the value from previously unwanted/low value fish.

			Significant cost if fishers are unable or unwilling to change practices. Long-term potential for investment in innovation to result in greater use.
Reputational and economic potential	**0** Many unwanted fish returned to the sea. Potential to fall out of step with international best practice/trends and to not meet public/consumer expectations.	**-** The opportunity for high-grading is higher so that there are more valuable fish in the market. More dead fish in the sea and less opportunity for positive international reputation on improved sustainability practices. Low incentive to innovate.	**+** Increased potential for access to new markets. Better potential for positive international reputation on improved fishing practices and sustainability of fisheries.
Environmental benefits	**0** Many unwanted fish returned to the sea.	**-** More dead fish in the sea than currently and potentially more fishing effort due to the greater opportunity to high-grade which may have greater impacts on the environment such as protected species interactions.	**+** Greatly reduced fish wastage. Less fishing effort due to reduced opportunity to high-grade and therefore there may be less environmental impact, such as protected species interactions.
Overall assessment	**0** Complexity and inconsistency in rules. Missed opportunity to improve sustainability practices.	**-** The ability to legally high grade means more valuable fish in the market, but the rules are more complex and there is less opportunity for improved reputation on sustainability practices.	**+** Improvements in all areas from the status quo.

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

3.2: Ensuring fair and effective penalties

3.2.1: What is the policy problem or opportunity?

Introduction of new offences, including infringement offences

Currently, the offences and penalties regime is based on a low probability of being caught and high consequences for offending when illegal behaviour is detected, regardless of the level of offending. These proposals seek to introduce a more comprehensive range of offences and penalties to better reflect the wider roll-out of on-board cameras and proposed changes to the rules that set out what fish must be brought back to port (landed), and what fish can be returned to the sea.

Proposal objective

Change is required to ensure penalties for the new rules relating to landings and discards of fish to the sea are applied so they are proportionate to offending and enforcement measures can be applied more often, with more certainty and greater effect. For example, the introduction of infringement offences for low-level breaches of fisheries rules aim to encourage compliance, correct any offending in a proportionate way, and deter any future offences.

Removing defence for returning fish to sea by fisheries officer or observer authorisation

The defences available for commercial fishers relating to what they can return to sea and in what circumstances include:

- return of fish parts where legally caught fish have been processed on-board;
- return was necessary to ensure safety of vessel, or people;
- return has been authorised by a fisheries officer or observer. This must be recorded and counted as part of a fisher's catch.

The third defence listed above, approval from a fisheries officer or observer to return fish, could be viewed as potentially legitimising the illegal return to sea of fish in circumstances which would otherwise be unlawful.

Proposal objective

Provide incentives for fishers to maximise the value and reduce wastage of all fish caught by tightening the requirements for observer authorised return to sea.

New defence to lawfully return fish to the sea to save marine mammals

Returning fish to the sea can be unavoidable or desirable to avoid capturing marine mammals. In this circumstance fishers should not be penalised for returning fish to the sea.

Proposal objective

To mitigate the mortality of marine mammals when caught by commercial fishers.

3.2.2: What do stakeholders think?

Most stakeholder groups agree, in principle, that the current offences and penalties relating to landings and discards to sea are disproportionate and have a low chance of detection and prosecution. Most stakeholder groups agree a graduated offences and penalties regime would ensure a fairer system that efficiently delivers enforcement measures.

Many commercial fishers and Te Ohu Kaimoana stated the proposals were still unclear and could not be considered until landings and discards proposals were decided.

Most stakeholders approved the use of infringement offences for lesser offences but were unsure on how they would be applied. Recreational fishers, environmentalists and independent experts said it was important to retain maximum penalties for more serious offences.

Most stakeholders agree with the defence for returning fish to avoid the capture of marine mammals. Some individuals from various stakeholder groups noted this defence could be complex to administer and may be used as an opportunity to illegally return unwanted fish.

Most commercial fishers and Te Ohu Kaimoana were against removing the defence for returning fish if a fisheries officer or observer approves it. Their reasoning was that observers play a crucial third-party role for approving returns.

Environmentalists, independent experts, recreational fishers, the general public, and individual tangata whenua supported the removal of fisheries office/observer approved defence for returning fish to sea. These stakeholders suggested the success of both changes to the defences would be reliant on on-board digital monitoring.

A wide range of stakeholders recommended a variety of ways to apply a graduated offence and penalty system. Based on the implementation of infringement offences, suggestions include classifying offences by number of fish or by applying it to weight, species, scale of operator, or number of offences. The various stakeholder groups that suggested classifying offences by species support the notion that all fish are not of equal value and abundance size. As well, smaller operators advocate classifying offences by scale of operator to support proportionate penalties based on ability to pay.

3.2.3: What options are available to address the problem?

Introduction of new offences, including infringement offences

Option 1: Status quo – retain current legal settings in relation to these rules

Option 2: Introduce a tiered infringement regime to reflect the new rules for commercial fishers that set out what fish must be bought back to port (landed) and what fish can be returned to the sea

It is proposed to introduce a new offences structure for illegally returning fish to the sea (Option 2). Currently, this offence is punishable by a fine of up to $250,000 and automatic forfeiture of catch, gear, and vessel. This is based on a low likelihood of detection, high penalty model.

Introducing a graduated offences and penalty regime for illegal fish returns to the sea should allow for a stronger focus on the level of offending and a more proportionate response. This would allow the range of penalties to be tailored to the level of harm the offending has on the marine environment and integrity of our fisheries management system. This graduated approach would also be consistent with the graduated offences and penalties set out in the Fisheries (Reporting) Regulations 2017.

In addition to a graduated offence structure, the introduction of infringement notice and demerit points regimes are proposed to address lower-scale repeat offending. These would provide another enforcement mechanism, to reinforce to all commercial fishers that any breach of the rules is unacceptable, while providing a fair and proportionate approach to correcting illegal behaviour.

Currently, the Act allows for infringement offences for specified offences, which can be penalised with fines up to $3,000. However, the Act does not allow for the use of infringement offences for illegal behaviour that involves taking or possessing fish, which could include breaking the landings and discards rules. Introducing more infringement offences is likely to mean that over time, under the VADE approach to compliance, there is potential for more directive warnings in relation to an activity and, potentially, a reduced amount of enforcement action, or potential for prosecutions. The Act should be amended to enable the introduction of these small-scale offences in the future.

The proposed introduction of cameras would increase the likelihood of being caught disobeying the rules and provide more detail about the type and scale of offending. However, the assessment is that successful implementation of the changes proposed in this RIA are not dependent on widespread use of cameras.

With the introduction of any enhanced monitoring and verification system, compliance will be able to be more appropriately monitored regardless of changes to landings and discards rules, and thus will provide an improved information base for monitoring and verifying any of the new offences. Introducing a tiered infringement regime will bring the offences and penalties in line with any new rules for commercial fishers that set out what fish must be bought back to port (landed) and what fish can be returned to the sea.

Removing defence for return to sea by fisheries officer or observer authorisation
Option 1: Status quo – retain defence for return to sea by fisheries office or observer authorisation

Option 2: Remove defence for illegal returns to sea by fisheries officer or observer authorisation

There are currently a range of defences that can be employed when returning fish to the sea. This includes where a return of fish is authorised by a fisheries officer or observer who was present when the fish, aquatic life or seaweed was taken and supervised the return or abandonment. The amount of fish or aquatic life must be recorded as part of monthly returns, and counted against ACE, or covered by deemed values.
It is recognised that there needs to be a balance struck between holding individuals accountable for illegal behaviour and providing defences for unavoidable returns to the sea.

Retaining the rules for the defence of returning to sea by fisheries officer or observer authorisation will potentially legitimise the illegal return to sea of unwanted fish and miss an opportunity for fishers to move towards more sustainable fishing practices.

Removing the defence of returning to sea by fisheries officer of observer authorisation has the potential to reduce fish wastage and to increase fisher accountability for the fish they catch, rather than relying on observer/or officer authorisations as a means to maximise value from what fish is taken to port.

There was considerable support for retaining this defence, acknowledging that greater clarity could be provided around authorising returns. Observer authorised returns to sea are accounted for in both observer reports, fisher reports, and are required to be counted against ACE.

The preferred approach is to maintain the status quo (Option 1) and develop further stronger criteria for use by observers in determining whether to authorise discards.

Interactions with other proposals
If the option to tightly constrain the rules for landings and discards to sea is implemented then this, together with criteria to support decisions around fisheries officer or observer authorisations, will ensure that the defence is only used for unavoidable returns to the sea.

New defence to lawfully return fish to the sea to save marine mammals
Option 1: Status quo – do not introduce a new defence to lawfully return fish to the sea to save marine mammals

Option 2: Introduce a new defence to lawfully return fish to the sea to save marine mammals in defined circumstances

There are circumstances where returning fish to the sea is unavoidable or desirable, when fishers should not be penalised for returning fish to the sea. For example, there is no specific defence for returning fish to the sea to avoid capturing marine mammals. Consistent with the current sections of the Act[16], in defence of any proceedings for a contravention of the Act (such as, an offence of returning fish to the sea) to save marine mammals the defendant must prove that they took reasonable precautions and exercised due diligence to avoid the contravention. For example, in addition to specific requirements for fishing operations such as to avoid initial capture of marine mammals (such as, area and fishing method based restrictions and the use of capture mitigation devices), there are codes of practises for fishers to abide by to minimise any capture of marine mammals if required to return fish to sea to save them.

The new defence provision proposal would allow fishers to lawfully return fish to the sea to save marine mammals; and, requires those fish to be included in the fisher's Catch Effort Landing Return and not be counted against ACE. This will give marine mammals a better chance of being released alive, while ensuring that those fish returned to the sea are still estimated and counted as part of the overall catch. It is noted that the implementation of this new rule may lead to misreporting of marine mammal interactions in order to return

[16] Fisheries Act 1996, section 240 and 241.

low-value fish to the sea. Monitoring of this issue to mitigate this potential risk will need to be considered.

Introducing a defence to lawfully return fish to the sea to save marine mammals will improve the chances for marine mammals to be released alive. At the same time, the new rule will ensure that those fish returned to the sea are still estimated and reported as part of a fisher's overall catch, but not counted as part of their annual catch entitlement.

The implementation of this new rule has the potential to improve management decisions in response to marine mammal interactions, due to improved reporting, and to improve industry reputation in this area. The requirements under the Act for a defendant to take reasonable precautions exercise due diligence to avoid a contravention of the Act (such as, returning fish to the sea where otherwise prohibited to) would still apply. The preferred approach is to implement Option 2.

Interactions with other proposals
Implementation of a new defence to lawfully return fish to the sea to save marine mammals, alongside recently implemented reporting requirements, and the proposed introduction of improved monitoring and verification capabilities will collectively provide a more detailed information base from which to improve the management of marine mammal interactions in commercial fisheries. In addition, the introduction of this defence, will contribute to a fairer and clearer offences and penalties regime.

What other options have been ruled out of scope, or not considered, and why
No other options were considered.

3.2.4: Options analysis

The above options are assessed against the criteria set out in Table 3.1.

Table 3.3: Assessment of options for introduction of new offences and penalties

	No action	**Amend offences and penalties regime**
Informational value and efficiency	**0** No impact likely.	**0** No impact likely.
Promoting compliance	**0** Regime offers little flexibility and is disproportionate to level of offence.	**++** Regime is more proportional to level of offence. Over time, more directed compliance may be used, and there may be a decrease in the need for an enforced compliance approach (potential for prosecution).
Cost effectiveness	**0** Offending fishers committing different levels of offence can be penalised with the same maximum penalty.	**+** Potential short-term increases be in costs to offenders (and to government to process increased compliance breaches) should offset long term as offending levels reduce.
Reputational and economic potential	**0** No impact likely.	**0** No impact likely.

Environmental benefits	**0** Little incentive for improving sustainable fishing behaviours over time.	**+** Improved compliance over time may positively impact sustainable fishing behaviours.
Overall assessment	**0** Regime is disproportionate, inflexible and provide little incentive to improve sustainable fishing practices.	**+** Compliance levels should improve over time and incentivise sustainable fishing practices/good fisher behaviour.

Key:

++ much better than doing nothing/the status quo

+ better than doing nothing/the status quo

0 about the same as doing nothing/the status quo

- worse than doing nothing/the status quo

- - much worse than doing nothing/the status quo

Table 3.4: Assessment of option for removing defence for return to sea by fisheries officer or observer authorisation

	No action	**Remove defence**
Informational value and efficiency	**0** No impact likely.	**0** No impact likely.
Promoting compliance	**0** Rules are more complex, and this authorisation is without clear and specific reason. Returns to sea already covered by other defences.	**+** Rules are less complex and fisher accountability for returns to sea increases.
Cost effectiveness	**0** No impact likely.	**-** Short-term cost to fishers (especially deep-water) who can no longer discard low-value fish.
Reputational and economic potential	0 No impact likely.	0 No impact likely.
Environmental benefits	**0** Potential to legitimise return to sea of unwanted fish.	**+** Greater potential to reduce fish wastage.
Overall assessment	**0** Rules are more complex than they need to be and have potential to legitimise return to sea of unwanted fish.	**+** Rules clearer and fisher accountability for returns to sea increases.

Key:

++ much better than doing nothing/the status quo

+ better than doing nothing/the status quo

0 about the same as doing nothing/the status quo

- worse than doing nothing/the status quo

- - much worse than doing nothing/the status quo

Table 3.5: Assessment of option for a new defence to lawfully return fish to the sea to save marine mammals

	No action	Remove discarding defence
Informational value and efficiency	**0** No regulatory incentive to save marine mammals. Cases of release may not be reported so overall catch is not impacted.	**+** Fish returned to the sea will be estimated and counted as part of a fisher's overall catch. Greater incentive for improved reporting on marine mammal interactions and better information can improve related management decisions.
Promoting compliance	**0** Uncertainty for fishers as to whether releasing fish to save marine mammals could contravene fisheries compliance.	**+** Greater incentive to save marine mammals as will be lawful and won't count against catch allowance. **-** Potential for perverse incentive to misreport marine mammal interaction in order to return low-value fish to the sea. Depends on how fishers choose to act and MPI's ability to monitor this behaviour.
Cost effectiveness	**0** No impact likely.	**-** Potential for increased costs of monitoring for MPI. No additional costs to fishers.
Reputational and economic potential	**0** Likely ongoing negative public perceptions that fishers had not taken all reasonable steps to save marine mammals	**+** Potential for positive domestic and international reputation on marine mammal interactions.
Environmental benefits	**0** Capture and mortality of marine mammals may further impact on risks to population declines.	**+** Greater potential for marine mammals to be saved. Better information on where mitigations are occurring to inform management decisions.
Overall assessment	**0** No significant operational impacts to commercial fishers but likely highly undesirable to the public, such as fishers not adequately incentivised to report and mitigate capture and mortality of marine mammals	**+** Incentives to save marine mammals increase and better reporting information can improve management decisions. Potential for marine mammals to be saved and for reputation on marine mammals to improve.

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

3.3: Streamlining the decision-making process for setting catch limits

3.3.1: What is the policy problem or opportunity?

Setting limits on the total harvest from a stock is fundamental to the operation of the QMS. By constraining the total amount of fish caught, we can ensure that only a sustainable amount of fish is taken from the stock. Consequently, adjusting catch limits is one of the most important decisions made to ensure the sustainability of New Zealand's fisheries and to provide for use.

The TAC is set and enforced annually for each fish stock. Once a catch limit is set, decisions are then made on management controls that work to constrain catch within the TAC. These include the TACC for commercial fishers (i.e. the allocation of commercial catch shares to commercial fishers), and bag limits and other tools used to constrain recreational or customary catch.

Streamlining the decision-making process for setting catch limits

To be effective, a TAC needs to reflect the size and characteristics of the stock and its current status (sometimes called "health"). Some stocks can fluctuate quickly in size, due to their biology or in response to environmental changes and fishing pressure. Deriving the best value from each fish stock, and managing risks to sustainability, requires that TACs can be changed in response to changes in the stock. Making changes that deliver on the objectives for management requires up to date research and other information.

Since the QMS was introduced, adjustments to the TACs for a number of stocks have been very infrequent and many TACs have not been changed at all. Of the 642 fish stocks currently in the QMS, 388 are actively monitored and managed as appropriate, while the remainder are considered to be nominal stocks.[17] Of the 388 material stocks, MPI has good information on 165, and has the capacity to adjust catch limits for 10 to 30 stocks annually. This means that some of our adjustments are not as timely as they could be and may lag behind changes in the abundance of some stocks. This is a lost utilisation opportunity if the stock increases well above a sustainable level of harvest and a sustainability risk if the stock decreases and the TAC is not adjusted.

For many stocks, our ability to adjust TACs appropriately is constrained by a lack of up to date information on their biology or status. A project to derive information on such low-information stocks is currently underway and may support future management to increase utilisation benefits or reduce sustainability risks. However, a key reason we are able to adjust catch limits for only 10 to 30 stocks annually is that there is insufficient capacity within fisheries management teams to develop and deliver advice for more stocks, given the current statutory decision-making processes. Each adjustment to a TAC requires detailed work to understand the science advice, formal engagement with iwi, informal engagement with potentially affected stakeholders, and full public consultation that includes the development of detailed consultation documents, summaries of submissions,

[17] Nominal stocks are fish stocks that do not have a demonstrated significant commercial or non-commercial potential. As an example, the SBW 1 "stock" is considered nominal because it includes only northern waters where southern blue whiting rarely occurs; the species is almost entirely restricted to sub-Antarctic waters.

and final advice papers to the decision-maker. This lengthy process means that it can take up to a year after science advice becomes available for the Minister to make a decision on a TAC. This delay can lead to lost opportunities or sustainability risk, and sometimes means adjustments need to be greater and more disruptive than would have been required had action had been taken sooner.

The infrequency of changes to TAC, gives rise to stakeholder uncertainty about when and by how much a TAC will change, and its corresponding impact on their sector's allocation. One solution to this is implementing pre-set decision rules such as harvest control rules (HCRs). These are pre-agreed set of responses to a change in the health of a stock and work by translating science into a recommended catch limit.

Ensuring co-ordinated and responsive implementation of management controls

Once a TAC has been set, a decision on a TACC is implemented relatively quickly, by a notice in the Gazette. However, decisions on recreational controls (such as bag limits or minimum legal sizes) can take a further year to implement, as it requires a change to regulations. This has created a significant lag between TAC adjustments and any consequential change to constraints on recreational catch.

This was recently emphasised in the response to the Kaikoura earthquake where a sustainability risk was identified for some fish stocks. The response was to reduce the TAC and corresponding allowances. The TACC change was given effect much more quickly, while changes to the recreational daily bag limits took more than two years after the TAC change to be implemented.

This misalignment in implementation of controls can present a 'chilling effect' on making changes to recreational constraints in response to changes in the abundance of our stocks, as the change to a recreational control could come too late to contribute to the rebuild of a fishery.

The TACC, its corresponding mechanism of constraining catch (ACE balancing and deemed values), and constraints on recreational catch work to achieve the same objective, which is to constrain catch within the sector's allowance. It is appropriate that decisions on these measures (TACCs and recreational measures) are considered together to ensure equity for users.

Proposal objective: To provide a more responsive decision framework for setting catch limits.

Improvements to the process for setting catch limits are required to improve decision-making principles in terms of being responsive, providing certainty and transparency to stakeholders, while maintaining the integrity of the science that underpins the decision. Further, change is required to align the decision-making process with MPIs shift to a more responsive management approach, based on near real time reporting by commercial fishers.

3.3.2: What do stakeholders think?

All stakeholder groups agree that some catch limits are inaccurately set because the current decision-making process for setting them is too slow and unresponsive.

One option for making the process more responsive that has been discussed with stakeholders is the use of HCRs, which would include a pre-agreed set of responses to any given change in the status of a stock. Commercial fishers, environmentalists, general public, independent experts, and tangata whenua generally support the use of HCRs, but consider there needs to be extensive process testing and research before they are fully implemented. They also suggested several ways for prioritising stocks for catch limit adjustments including by risk level, commercial importance, or availability of reliable data.

Commercial fishers and tangata whenua representative bodies support a strategic collaborative approach with industry and Treaty Partners during the development phases of Harvest Control Rules (HCRs). Te Ohu Kaimoana noted the recent increase in the TAC for CRA 4 (rock lobster in Wellington/Hawke's Bay area) using a HCR as an example of where more consultation during the development of harvest control rules stage should also have considered other relevant matters for the fishery. They also noted that, in contrast with the observations of key iwi, the HCR recommended an increase. They consider that, if there is no consultation that is relevant to the specific circumstances of the fishery at that time, this denies iwi the opportunity to act in accordance with their Treaty expectations.

Most stakeholders supported faster adjustments being made to reflect stock abundance levels through HCRs, although they noted the importance of consultation and processes for engagement were critical.

Environmentalist and independent experts were concerned streamlining decision-making would favour utilisation over sustainability outcomes. Recreational fishers, environmentalists, and independent experts raised concerns with HCRs, noting current issues with inshore fisheries HCRs, specifically in rock lobster, red cod, and flatfish fisheries.

Many stakeholders raised concern with the use of catch per unit effort (CPUE) data as a true indicator of stock abundance, especially if rules governing landings and returns are changed. Environmentalists, recreational fishers, and independent experts were concerned that current indicators, including CPUE, are often based on industry reported data, not independent scientific research.

Commercial fishers, environmentalists, general public, independent experts, and tangata whenua note recreational fishers have a direct effect on fish stocks and suggest their catch should be considered when setting harvest control rules.

Most stakeholders supported the need to explore wider and more flexible changes to how other management controls are implemented, including the use of Gazette notices.

Commercial fishers and tangata whenua representative bodies thought HCRs should be industry-led and that they be used alongside broader fishery plans and other management procedures like ACE shelving. Te Ohu Kaimoana proposed that records of deemed value payments could supplement other information on stock levels and potentially exhibit

information about the nature of some fisheries where catch limits may not be set appropriately. Independent experts and environmentalists suggest independent research to test and monitor future models, indicators and targets before HCRs are implemented. Recreational fishers note the need to validate self-reported data through on-board monitoring.

3.3.3: What options are available to address the problem?

Streamlining the decision-making process for setting catch limits

Option 1: Retain the current rules (status quo). This option would mean that we retain the current processes for adjusting catch limits.

This option would not make any changes to the existing statutory decision-making process.

This would mean that for most stocks, changes would not be made until 7 to 12 months after science and research results become available to inform a decision. The process would remain as follows:

- review and interpretation of science results by government officials and scientists;
- development of options for change, and translation of these options and science inputs into a discussion document;
- full public consultation on options; and
- analysis of submissions, and preparation of advice for the Minister for the TAC change and corresponding allowances.

This would mean some of our adjustments to catch limits would not be as responsive to changes in abundance as they could be, and the number of stocks that have their TAC adjusted per year would stay largely the same. MPI resource would continue to be focused on facilitating the statutory decision process, rather than giving attention to more local fisheries issues.

Option 2: Streamline the process for adjusting catch limits by allowing for multi-year HCRs to specify a catch limit for a stock.

HCRs would ensure a pre-agreed set of responses to changes in the status of a stock based on pre-agreed information sources and analyses. A HCR specifies the relationship between the inferred abundance of the stock and a management response, such as a catch limit. In this context, stock abundance is inferred by monitoring agreed fishery indicators using specified analyses that have been rigorously tested for their ability to accurately reflect the abundance of the stock, or by modelling the abundance of the stock (a “stock assessment”) using agreed inputs and assumptions.

The main difference between this approach and the status quo is that, once the HCR is agreed, the process for changing the TAC or other management settings can be streamlined and depends primarily on changes to the agreed fishery indicators.

Because it provides the basis for TAC and other changes for several years, a HCR should be rigorously tested, generally using computer simulations, to ensure it has a high

probability of delivering the use and sustainability outcomes for a particular stock, as well as meeting the objectives of fishers and stakeholders. Reaching agreement on all aspects of a HCR, therefore, requires significant resource from researchers, government officials and scientists, and stakeholders. Experience with our existing HCRs suggests that many will take some years to develop.

Internationally, HCRs are applied in regional fisheries management organisations[18] and are highly regarded in terms of increasing the efficiency and transparency of management.[19] For example, a HCR has been successfully applied to rebuild fisheries on the high seas that are fished by different nations, such as the South Pacific Jack Mackerel fishery. The international experience of HCRs has also pointed to their ability to specify catch limits that are inherently resilient to the impacts of uncertainties such as climate change. By adopting HCRs, there can be a quicker response to changes in stock size – as a result of climate change or otherwise.[20] HCRs can be used to specify not only catch limits, but other measures that work to constrain harvest (for example, bag limits or area/seasonal closures).

HCRs are already in place for a number of New Zealand's fisheries, including some rock lobster, red cod, flatfish and orange roughy stocks, to guide decision making on catch limits. Features of a HCR include:

- drawing on existing reference points and standards[21] that guide the management of the fishery, consultation with stakeholders will be undertaken to determine fishery objectives;
- extensive testing and evaluation to ensure the HCR delivers on these objectives and meets statutory obligations;
- determining the length of time that an HCR can remain in place;
- determining the steps to be taken if the HCR is not meeting objectives.

Although HCRs are currently used to guide decision making and provide a range of benefits including greater certainty and transparency, their effectiveness is reduced because of the need to adhere to the existing statutory decision process. This has probably limited the uptake of HCRs in some fisheries.

By changing the existing decision-making process, the effectiveness of HCRs can be increased, and a greater range of benefits can be realised. These changes include allowing the Minister to approve a HCR for a stock, and once approved:

- undertaking public consultation during the development of the HCR rather than for each adjustment;

18 For example, see the following paper on the use of harvest control rules in the West-Central Pacific Ocean tuna management in the Western and Central Pacific Fisheries Commission: https://www.wcpfc.int/system/files/MOW1-IP-06-Intoduction-HCRs-WCPO-Fisheries-%28MI-WP-03%29.pdf.

19 For information see the following report by the Pew Charitable Trusts: http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/07/harvest-control-rules and the OECD https://www.oecd.org/greengrowth/fisheries/45497984.pdf.

20 See, Kritzer, J. P. et al. (2019) Responsive harvest control rules provide inherent resilience to adverse effects of climate change and scientific uncertainty. ICES Journal of Marine Science. https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsz038/5425355

21 The setting of reference points, including management targets and limits, is guided by the Harvest Strategy Standard for New Zealand Fisheries, and must be consistent with the requirement in the Fisheries Act 1996 to maintain the stock at or above the level that will produce the maximum sustainable yield (BMSY). The Harvest Strategy Standard recommends a default soft limit of ½ BMSY or 20% BO (virgin biomass), whichever is higher, and a default hard limit of 1/4 BMSY or 10% BO, whichever is higher.

- allowing for the Minister to decide whether the decision could be delegated to the Deputy Director General of Fisheries New Zealand, provided the change specified by the HCR is within a pre-set range.

Under this proposed framework, HCRs would initially be used to specify TACs in fisheries that are primarily commercial. This is because there are usually greater amounts of information available from these fisheries (from sources such as fisher catch reporting, observer sampling, and surveys). Starting with those fisheries where there are fewer competing demands from different sectors will enable MPI to learn as it goes when it comes to bringing diverse and at times contradictory strategic goals together.

Developing HCRs requires an extensive and transparent engagement and consultation process at the beginning of the process. This would require an upfront resource investment by Government, affected Treaty Partners and stakeholders. Tangata whenua would require input and participation in the development of HCRs – meaning that they would be involved in identifying the issues along with designing the solutions. However, if this option were to be implemented, the process for operating the HCR (such as, using it to adjust catch limits) once developed, could be streamlined. Much less time would be needed to develop, analyse, and consult on potential management options.

The outcomes from applying the HCR would be transparent and understood by stakeholders because management objectives and responses relative to the abundance of the stock have been considered during the development of the HCR. This means that once a HCR has been approved, engagement on changes to the management response could be reduced or eliminated.

However, if the health of a fish stock shifts enough for the catch limit specified by the rule to be outside a pre-agreed range and may impact or disadvantage a stakeholder group or present an increased level of risk to another species, for example, seabirds, the consultation process would revert to full consultation as specified under the Act. This could also trigger Ministerial intervention.

Feedback from consultation has led to some changes to the proposal that was consulted on. These include:

- renaming the proposal to “pre-set decision rules”. This better describes the mechanism, provides greater flexibility, and aligns it with existing terminology;
- the change to pre-set decision rules is also required to provide greater flexibility for the type of intervention the rule controls, including other sustainability measures. This would mean the decision rule could specify the full range of sustainability measures that contribute to the sustainability of the stock. For example, bag limits and seasonal closures.

In general, if Option 2 is implemented, these process changes would require significant upfront investment for developing more pre-set decision rules than under the status quo, but long-term changes will pay off in terms of being able to adjust catch limits more efficiently and providing greater certainty to fishers on the sustainability of stocks.

Option 2 is the preferred option and will mean that the decision-making process for setting catch limits is more responsive and provides greater certainty in terms of sustainability of New Zealand’s fish stocks. Although significant upfront investment in the development of

pre-set decision rules will be required, this will pay off over the long term with greater certainty and more responsive decision making when TACs are adjusted.

Linkages with the broader reform agenda
This proposal links to the implementation of electronic catch and positioning reporting and the improved information base for decision-making that has been realised. Further, when proposals for improving and monitoring and verification capabilities for commercial fisheries are implemented through the use of cameras, this will enhance the quality and efficiency of information on different stocks, and consequently the ability to set accurate and responsive catch limits.

Ensuring co-ordinated and responsive implementation of management controls

It was proposed in Your fisheries – your say that final decisions by the Minister on a broader range of management controls, including constraints on recreational catch, could be implemented using Gazette notices rather than regulation changes. This was explored at a high level in the consultation document and feedback signalled significant support for making this change, particularly allowing for bag limits and MLS that work to limit the fish taken by recreational fishers to be set by Gazette notice rather than regulation change. Many stakeholders considered a Gazette notice to set bag limits for recreational fishers would be a more responsive and flexible management control.

Recreational fishers agree there is a need for more effective communication to ensure compliance of bag limits and support Gazette notices in principle. A few recreational fishers suggested more effective communication of changes made using Gazette notices was needed, for example through social media ads and revamped notice boards at boat launch sites.

Making this change will better align how decisions on measures to constrain catch are implemented. It will also address the recent issue of the misaligned implementation of measures taken to ensure the sustainability of fish stocks impacted by the Kaikoura earthquake.

What other options have been ruled out of scope, or not considered, and why?

Two options, ACE shelving and Authorised Management were ruled out prior to consultation. These are both optional mechanisms, relying on collective industry agreement to constrain catch. Further, the incentives that exist in the QMS and “free rider” issues further limit their effectiveness. Where a sustainability concern is evident, the setting (or varying) of an appropriate TAC is the primary tool to ensure sustainability and to rebuild the stock at a way that the Minister considers appropriate.

3.3.4: Options analysis

The above options are assessed against the criteria set out in Table 3.1:

Table 3.6: Assessment of option for Streamline the process for adjusting catch limits

	No action	Streamline process
Informational value and efficiency	**0** Adjustments to catch limits can be infrequent and could lag behind the true rate of abundance in stock.	**+** The use of HCRs improves the speed and efficiency for the setting of catch limits.
Promoting compliance	**0** No impact.	**0** No impact.
Cost effectiveness	**0** Current process is lengthy and resource intensive.	**+** Upfront investment by Government and stakeholders required to develop HCRs. Once operating, the decision-making process will require less resource (including with streamlined consultation). Greater business certainty for fishers' long term. Potential for fishers to take advantage where there is short-term increases in abundance in stock.
Reputational and economic potential	**0** No noteworthy impact.	**0** Increased use of HCRs follows best practice and may improve sustainability but not expected to impact beyond status quo for reputation and market access.
Environmental benefits	**0** Lengthy current process could put sustainability of fisheries at greater risk.	**+** Less risk to sustainability with quicker responses to stock increases and decreases in abundance. Potential to focus on key fisheries where sustainability could be at risk.
Overall assessment	**0** Current process could be improved to provide greater certainty to fishers to be more efficient, and to improve the responsiveness of decision-making.	**+** Upfront investment in developing more HCRs offset long term by more responsive decision-making for catch limits and less resource required for consultation. Potential for greater certainty to fishers. Fisheries managers could better manage increases and decreases in abundance to improve sustainability outcomes.

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

3.4: Technical Management Changes to the Act

3.4.1: What is the policy problem or opportunity?

A number of technical changes are proposed to improve the functionality of the Fisheries Act and ensure it is fit for purpose in light of the other proposed changes. These included proposals to amend the Act to provide for consistency of treatment of customary fishing considerations between the North and South Islands. Following feedback from consultation this proposal is deferred subject to further engagement with tangata whenua and customary fishing interest groups.

Other proposals included would have little or no regulatory impact. These include the proposal that other sources of fishing related mortality (OSFM) is attributed to the sectors responsible for causing the mortality. Decisions on how this is attributed to each sector would be made at the same time as when TACs are reviewed and will be notified using Gazette notices. This is considered an operational matter and no legislative changes are required. Officials would develop guidelines on setting OSFM as part of the transitional arrangements.

Proposals to repeal the remaining provisions of the Fisheries Act 1983 would have little or no regulatory impact as these provisions are now redundant and dealt with under the Fisheries Act 1996 and the Resource Management Act 1991.

Proposal

To amend powers relating to the installation and maintenance of equipment to observe fishing. This proposal would require amending sections of the Fisheries Act.

Amendment to powers to regulate equipment to observe fishing

The ability to use on-board cameras (electronic monitoring) for monitoring and verification of commercial fishing activity is provided for in the Fisheries (Electronic Monitoring on Vessels) Regulations 2017. As currently drafted, the section of the Act relating to the observation of fishing or transportation is considered too narrow to cover the policy intention of electronic monitoring, which is to observe fishing-related activities, such as processing of fish, returning fish to the sea and interactions with protected species.

The policy intention is to be able to monitor and verify a wide range of activities carried out by commercial fishers, including, for example, those activities relating to: the rules for commercial fishers that set out what fish must be brought back to port (landed) and what fish can be returned to the sea and/ or the new defence to lawfully return fish to the sea to save marine mammals.

Proposal Objective

The proposal to broaden the power relating to the installation and maintenance to observe wider fishing related activities are intended to improve the fisheries monitoring and verification capabilities to better account for all fish caught (including fish returned to the sea), as well as the processing of fish and interactions with protected species.

3.4.2: What do stakeholders think?

Few submissions commented specifically on this proposal. Non-commercial fishing interests supported the proposals, noting that the proposals to expand the definition of fishing would help support further implementation of electronic monitoring. Of the commercial fishing interests that submitted, there was limited support for the proposals to expand the definition of fishing. Most do not support this proposal and consider this is more significant than a "technical change". They propose that MPI delay consultation on this and alternatively consider it when consulting on the installation and coverage of cameras.

3.4.3: What options are available to address the problem?

Option 1: status quo – retain current legal settings

Option 2: Change the powers to regulate equipment to observe fishing such that on-board cameras are able to observe the wider activities related to fishing

The ability to use electronic monitoring by using on-board cameras came into effect via the Fisheries (Electronic Monitoring on Vessels) Regulations 2017. On-board cameras can be used to improve MPIs monitoring and verification capability for commercial fisheries. Doing so will ensure the integrity and transparency of the richer information commercial fishers are providing on which fish are caught and where.

The Fisheries Act allows for prescribing requirements or matters relating to the installation and maintenance of equipment (including electronic equipment) to observe fishing or transportation. Fishing is defined as the activities related to catching, taking or harvesting of fish.

The current definition is too narrow for what on-board cameras may need to observe. For example, enabling regulation for the electronic monitoring of a wider range of fishing activities via the placement of on-board cameras would enable better accountability and the verification capabilities of fish caught, processed and/or returned to the sea. It is noted that changes to the rules for landing and returning fish to the sea will still apply in the absence of a vessel carrying an on-board camera.

It is proposed that on-board cameras should be able to observe the wider activities related to fishing, such as returning fish to the sea, processing fish and interactions with protected species.

Observing this wider activity will help ensure that these provisions will be workable, that catch reporting can be verified, and that on-board cameras can help deliver wider benefits for the fisheries management system and commercial fishers.

Broadening the definition of the activity that on-board cameras observe would also support a greater level of consistency with the wide variety of activities that fisheries observers currently monitor and verify, insofar as observers and on-board cameras are both mechanisms by which the policy objective of monitoring and verifying commercial fishing activity can be achieved.

Option 1, maintaining the status quo would mean that if electronic monitoring is implemented as proposed the definition is too narrow for the range of activities that are intended to be observable via electronic monitoring. Option 2, amending the definition of fishing, will mean that the provisions will be workable and fit with policy intent when electronic monitoring is implemented.

The preferred option is Option 2, amend the definition of fishing to broaden the power relating to the installation and maintenance of equipment (including electronic equipment, such as on-board cameras) to observe wider fishing-related activities (such as fish processing, returns to sea, and protected species interactions).

Specifically, this would require amending sections 113K(1)(n), 227A, and 297(1)(ca) of the Act. Any regulations relating to the use of cameras to observe fishing activities will be developed subsequently.

What other options have been ruled out of scope, or not considered, and why
The definition of the 'processing of fish' could include land-based activities related to fishing, such as the filleting of fish in fish factories and markets. Monitoring of these activities with electronic equipment is out of the scope of the options considered. Options were considered whether this power would include specific land-based fishing activities however, at this point in time extending this power to land-based activities is not being considered.

Interactions with other proposals:
Amending the powers to regulate equipment to observe fishing means that when on-board cameras are implemented, authorities are able to monitor and verify compliance with any new rules implemented. For example, widening the definition will enable monitoring and verification of: amended rules for commercial fishers that set out what fish must be brought back to port (landed) and what fish can be returned to the sea; and/ or the new defence to lawfully return fish to the sea to save marine mammals.

Amending both the regulation making powers (s297) and high seas permits (s113) sections of the Fisheries Act to reflect this widened definition will ensure that it can be applied in both domestic and high seas fisheries.

3.4.4: Options analysis

The above options are assessed against the criteria set out in Table 3.1

Table 3.7: Assessment of option for amending powers to regulate equipment to observe fishing[22]

	No action – retain the narrow observation definition	**Widen observation definition**
Informational value and efficiency	**0** The amount of additional information gathered will be limited.	**+** A deeper information base improves decision-making.
Promoting compliance	**0** Verification of some of the new rules is not possible.	**++** Verification is possible for new rules including what fish must be bought back to port (landed) and what fish can be returned to the sea, and protected species defence.
Cost effectiveness	**0** No impact.	**-** A greater number of cameras may be required than the status quo to observe a wider range of activities.
Reputational and economic potential	**0** Potential to demonstrate transparency of sustainable fishing methods.	**++** Increased potential to demonstrate transparency of wider range of sustainable fishing methods.
Environmental benefits	**0** Limited possibility to verify new rules which increase sustainability and mitigate protected species interactions.	**++** Increased possibility to verify new rules which increase sustainability and mitigate protected species interactions.
Overall assessment	**0** Verification and accountability for some of the new rules is limited and there is limited increase in new information from on-board camera implementation.	**++** Verification and accountability potential for some of the new rules is increased and there is more new information from on-board camera implementation to support better fisheries management decision making.

Key:

++	much better than doing nothing/the status quo
+	better than doing nothing/the status quo
0	about the same as doing nothing/the status quo
-	worse than doing nothing/the status quo
- -	much worse than doing nothing/the status quo

[22] Note this table analyses the impacts of this amendment in terms of what this change enables once on-board cameras are implemented.

Section 4: Conclusions

4.1: What option, or combination of options, is likely best to address the problem, meet the policy objectives and deliver the highest net benefits?

Preferred option and analysis

New Zealand's fisheries management system has to balance the private benefit that fishers gain from our fisheries with the public expectations that they are managed sustainably.

At present the regulatory settings in the Fisheries Act 1996 and the primary mechanism for managing commercial fishing, the QMS, is not operating as effectively as it could be. Disincentives for good fishing practice to reduce catch of unwanted fish exist within the system, and these contribute to wastage, illegal activity and potential losses of social, economic, and cultural well-being. At the same time, there have been significant changes in the expectations consumers and the wider public have in how our marine systems are managed for present and future generations. Additionally, a number of regulatory changes have been enacted, including electronic reporting of catch and position, regulation enabling the placement of cameras on fishing vessels to monitor fishing activity and enabling innovative trawl technologies. These changes will result in new information about who is fishing, where, and how, and provide new opportunities for fisher to demonstrate sustainable practices and support traceability initiatives.

In response to areas of under performance in the fisheries management system, increased public expectations and the opportunities new technologies provide, the government has a broad reform agenda to strengthen and modernise New Zealand's fisheries system. The reform package will ensure commercial fishing is sustainable, productive and inclusive. The legislative changes will contribute to strengthening the management system, provide assurance that New Zealand's marine environment is well managed, fishers are investing in innovation, and local communities and stakeholders are empowered to have greater involvement in the decisions that affect them.

Our preferred proposals reflect the vision for a commercial fishing sector that is innovation and technology driven, with highly selective fishing practices and minimal environmental impacts, underpinned by data, and agile and responsive regulation. The proposals are designed to amend the regulatory system such that every fish caught is not only accounted for but also valued by all commercial fishers. Clear and easily understood rules incentivise fishers to work out how to selectively target only the fish they want. More accurate reporting informs decisions for the sustainability of our fisheries and records the impacts on the marine environment.

These proposals will help provide assurances about the improved long-term sustainability of our fisheries to New Zealanders, consumers and overseas markets. The proposals are also in keeping with international moves toward incentivising good fishing practice and use of modern technology to monitor and verify fishing activity and catch. They also move our industry in the direction of being able to meet the expectations of discerning, high value consumers around the provenance of fish available in the market.

Tightening the options around landings and discards to sea would simplify the rules, and strongly incentivise fishers to minimise by-catch and catch fish they value. Pre-set decision rules and streamlining the decision-making process for setting catch limits will enable MPI

to leverage off near real time reporting of catch and effort and better knowledge of the status of low-information stocks, reduce the time required to respond to stock signals, and enable stakeholders' strategic goals to be better reflected in decision-making. A strengthened fisheries management system across the board would enable more consistent decision-making and mean greater transparency and certainty for all our stakeholders.

Lastly, these changes to the system lay a foundation for moving towards the increased use of ecosystem-based management approaches to fisheries, by improving the long-term sustainability of fisheries and deriving better value. Additional steps towards increasing the use of ecosystem-based management approaches to fisheries include: developing holistic approaches that consider factors beyond fishing practices in the maintenance of healthy ecosystems; enabling appropriate governance structures; and increasing the incorporation of local community and stakeholder views and objectives into decision-making.

The recommendations are those considered the best fit with the purpose and principles of the Act and the balance required to achieve ongoing sustainable utilisation of fisheries. They are also options that best address the specific policy problems highlighted in each section.

The preferred options are

- tighten the rules relating to what fish is landed and what fish can, or must, be returned to sea,
- introduce a graduated offences and penalties regime to reflect the new rules for commercial fishers that set out what fish must be brought back to port (landed) and what fish can be returned to the sea,
- tighten the defence for return to sea of fish through a fisheries officer or observer authorisation,
- introduce a new defence to enable fishers to lawfully return fish to the sea to save marine mammals in defined circumstances,
- streamline the process for adjusting catch limits to be more efficient, transparent and responsive to changes in the marine environment and focus on long-term fisheries objectives through the use of multi-year pre-set decision rules,
- change the powers to regulate equipment to observe fishing such that on-board cameras are able to observe the wider activities related to fishing.

Table 4.1 indicates that the preferred options, when assessed against decision-making criteria, are rated as improvements on the current rules. These changes are likely to motivate good fishing practice and to contribute to the system objective of strengthening and modernising New Zealand fisheries management system.

Policy areas already implemented under the programme to strengthen the fisheries management programme

Following public consultation in 2016, the following policy initiatives were implemented:

- electronic catch reporting via an e-logbook,
- electronic position reporting, and
- a regime that enables the use of innovative trawl technologies.

The preferred options in this RIA complement and enhance these existing initiatives. For example, improved information from catch reporting and electronic position reporting will be able to be utilised as part of the improved process for setting TACs. Another example: tightly constraining the rules around landings and discards may incentivise greater use of innovative trawl technologies.

Table 4.1: Overview preferred options and overall analysis against impact assessment criteria

Proposal area	Proposal	Preferred option	Overall analysis against decision-making criteria
Improvements to rules for landings and discards	Amending the rules for commercial fishers that set out what fish must be brought back to port (landed) and what fish can, or must, be returned to the sea.	Constrain what can be returned to the sea / increase the incentives for good fishing practices.	+ Improvements in all areas from the status quo.
More efficient adjustments to catch limits	Streamline the process for adjusting catch limits.	Streamline the process for adjusting catch limits.	+ Upfront investment in developing more HCRs offset long term by more responsive decision-making for catch limits and less resource required for consultation. Potential for greater certainty to fishers. Fisheries managers could better manage increases and decreases in abundance to improve sustainability and utilisation outcomes.
Establishing a graduated offences and penalties regime (including changes to defences)	Introduce a graduated offences and penalties regime.	Introduce new criminal offences / tiered infringement regime.	+ Compliance levels should improve over time and incentivise sustainable fishing practices/good fisher behaviour.
	Remove defence for discarding by fisheries officer or observer authorisation.	Retain defence and tighten criteria for discarding by fisheries officer or observer authorisation.	+ Rules clearer and fisher accountability for discarding increases. Potential for environmental and reputational and economic benefits to increase.
	Introduce defence to lawfully return fish to the sea to save marine mammals.	Introduce defence to lawfully return fish to the sea to save marine mammals.	+ Incentives to save marine mammals increase and better reporting information can improve management decisions. Potential for marine mammals to be saved and for reputation on marine mammals to improve.
Management change to the Act (for electronic monitoring)	Amendment to powers to regulate equipment to observe fishing.	Widen observation definition.	+ Verification and accountability potential for some of the new rules is increased and there is more new information from on-board camera implementation to support better fisheries management decision-making.

Next steps in the programme to strengthen the fisheries management system

The chosen options all provide a foundation for an ongoing reform agenda to strengthen the fisheries management system, including enhanced independent verification of catch (including potential use of on-board cameras) and ecosystem-based approaches to fisheries management.

Table 4.2: Policy settings preferred options and links with next steps in reform agenda to strengthen the New Zealand fisheries management system

	Policy settings: current proposal areas			
	Improvements to rules for landings and discards	**More efficient adjustments to catch limits**	**Ensuring fair and effective offences and penalties (including changes to defences)**	**Management change to the Act (for electronic monitoring)**
Next step: Enhanced independent verification	Verification of compliance with new landings and discards rules. Traceability of sustainable fish practices.	Verification of catch reporting builds a deeper and more accurate information base for decisions on catch limits.	Verification encourages compliance with rules. Monitoring improved to support management decisions involving stocks and protected species.	Widened definition of what an on-board camera can observe means verification of a wide range of commercial fishing activities.
Next step: Towards ecosystem-based approaches	Innovative technology helps catch target stocks with greater precision, more efficiency and less waste. Accountability for each fish caught and improved information base has potential to improve sustainability, a fundamental aspect of ecosystem-based approaches.	Potential for more certainty in stock management: ecosystem-based approaches can focus on single and multiple species.	Good fisher behaviour is encouraged, and non-compliance is penalised in a fair and proportionate way. Therefore, individual human activities are accounted for as part of an overall functioning marine ecosystem.	Decisions about the management of ecosystems for future generations are informed by an improved information base.

4.2: Summary table of costs and benefits of the preferred approach

The main expected benefits of the preferred option are to commercial fishers and broader society. These benefits include:

- improved clarity in the rules about what fish can be landed and returned to the sea;
- the incentive to reduce the catch of small fish will result in improved utilization through use of fishing gear that selects for larger fish, leading to increased yield from some fisheries;
- improved certainty in the long-term sustainability of our fisheries. In addition, the introduction of on-board cameras would provide commercial fishers with the potential benefits from consumers and international markets resulting from an improved industry reputation.

The level of income a fisher receives is a function of both price per kilogram and quantity, which is determined by the Licenced Fish Receiver, and the perception of demand for fish in the market. The income a fisher derives will change based on the price of fish, which is often determined by the quality and size of fish in the market (such as generally, high-quality larger fish will attract higher prices than low quality smaller fish).

Under the preferred option, where the rules are tightened for returning fish to sea, a larger proportion of the catch obtained must be landed at port instead of being returned back to sea will result, initially at least, in a higher proportion of smaller fish landed, in comparison to the status quo.

MPI commissioned a desktop review of the options for the management of commercial landings and discards. [23] This review was limited by access to data on the actual operational and administrative costs for fishers to catch and process fish.

This initial analysis identified three potential market responses and therefore three consequences (scenarios) on a fisher's income of landing a higher number of smaller fish. For each of the scenarios described below, the proportional relationship between the larger and smaller fish cannot be calculated with accuracy, therefore directional movements indicate the economic impacts of each scenario.

a) Scenario A – The price of fish is permanently lower through the landing of smaller fish, and no secondary market for this is established. Therefore, the fisher has a choice to further process the small fish of the catch or have fish dumped at the landfill, both of which will incur additional costs as well as a reduction in price received.
b) Scenario B – A secondary market for smaller fish is found which results in the value of smaller fish being landed breaking even.
c) Scenario C – A profitable second market for landing smaller fish evolves which results in smaller fish becoming highly profitable. The smaller fish value drives up the new ACE profile value and provides an income increase, when compared to the status quo.

Based on the scenarios, under the preferred option the level of income for the fisher will either decrease, stay the relatively the same or increase, depending on the development of a secondary market for smaller fish.

Some commercial fishers are currently not meeting the true cost of fishing (for example, by externalising the cost of unwanted fish by illegal high grading practices onto other fishers and the environment). These new rules set the basis for improved fisher behaviour.

The primary costs from these changes in terms of New Zealand commercial fishers will result from the new landing and return to seas rules. There are no significant costs expected to industry as a result of the other proposals.

As markets change, as a result of implementing the new landing and return to sea rules, licensed fish receivers, quota holders and ACE fishers are likely to incur costs. In the short term, the segment of this group expected to bear the majority of the costs is individual ACE fishers fishing for mixed finfish species in the inshore, using set net, long line or trawl fishing methods. This is because they use gear that is relatively non-selective and thus will have to cover the full cost of their fishing activity and will no longer be able to legally return unwanted small fish of key species such as snapper and tarakihi to the sea. The new rules which make these fishers accountable for each fish caught should incentivise investment in new technology to better target the kind of the fish they want to catch. Other

[23] Deloitte report to MPI: *Discards rules on fishing quota and catch entitlements*. April 2019.

methods to mitigate catching (and being compelled to land) unwanted fish, include changing where and when they fish.

Operating costs
Under the preferred option, with tighter rules for returning fish, for both scenario A and B there will be an increase in operating costs as it is assumed that fishing vessels will need to fish for longer using a larger mesh size or travel further to minimise small/undesirable fish caught. Fishers will also need to undertake further research and invest in better, systems, processes and equipment in order to ensure they maximise the value of their catch.

Under Scenario A, as there is no profitable market for the smaller fish there will also be a cost of landing the smaller catch (for example, through additional fuel use) and either disposing of it at a landfill or processing it at a loss. Under Scenario C it is unlikely there will be any material increase in operating expenses as there is little incentive for the fisher to change their fishing practices as catching smaller fish will be profitable.

Administration costs
Under the preferred option (for all three scenarios) the level of administration costs will increase, as there will be an increased requirement to account for the fish caught and returned, as the criteria for which live fish can be returned to the sea increases from the *status quo.* Despite this, given fishers have already invested in reporting systems, it is not anticipated that there will be a significant increase in administration costs.

Capital costs
Under the preferred option, for scenario A and B, the level of capital costs will increase as the fisher invests in new systems and processes to reduce their likelihood of catching smaller/less desirable fish. The scale of investment will relate to the ability to reduce the larger proportion of small fish catch and reducing the subsequent operational costs included. However, under scenario C, the fisher has little incentives to make any further capital investments than they currently do and therefore there will be no change in capital costs, because it is assumed there is an economic return for smaller fish.

Overall, under the preferred option, for scenario A and B it is anticipated that there will be an increase in operating, administration and capital cost, while under scenario C there will only be a minor increase in administration costs as there are little incentives for the fisher to change their current behaviour and invest in further processes and systems or make any additional capital investments.

There are no significant costs expected to arise from the preferred option for recreational or customary fishers. Both groups may benefit over the longer term from the actions of commercial fishers in terms of the productivity and sustainability of shared stocks.

Table 4.3: Additional costs of proposed approach, compared to taking no action

	Affected parties	**Comment**: nature of cost or benefit	**Impact** ($m present value, for monetised impacts; high, medium or low for non-monetised impacts)	**Evidence certainty** (High, medium or low)
	Additional costs of proposed approach, compared to taking no action			
Commercial fishing industry	Licenced fish receivers	Short-term costs adjusting to market change: • investment in finding new markets for previously unwanted fish • may make less profit for on-selling smaller fish • may need to dispose of any new fish that they can't sell In the long term there may be benefits from new markets for previously unwanted fish.	Medium	Medium
	Quota holders	Short-term increased returns from ACE as fishers compete for ACE. Long-term ACE prices may drop to reflect 'true' value of ACE. Long-term quota value may rise as reflection of sustainability of fisheries and increased yield.	Low	Medium
	ACE fishers In inshore, fishing for mixed finfish species, using set net and long line and trawl fishing methods.	Short-term costs may increase as fishers have to cover more fish caught (as limited opportunities to return fish) with the same ACE or pay deemed values. Inshore fishers cost increase in the short run in terms of investing in technology to more selectively target the fish they want. Long-term benefits of simplified reporting. Improved consumer confidence reflected in market prices. (Costs will vary between individual fishers, depending on the method used and species targeted. Our information indicates that fishers may have to account for up to an extra 5% of their catch, possibly more in some circumstances.)	High	Medium
Customary and recreational fishers	Customary fishers	-	Low	High
	Recreational fishers	-	Low	High
Government	Fisheries Compliance (MPI)	Resource requirements may increase as the tiered penalty regime increases the need to implement directed compliance approaches.	Non-monetised Low	Medium
	Fisheries Management (MPI)	Short-term costs in resource required for developing HCRs.	Non-monetised Medium	Medium
	Fisheries Science (MPI)	Short-term costs in resource required for developing HCRs.	Non-monetised Medium	Medium
	Total Monetised Cost			
	Non-monetised costs			

4.3: What other impacts is this approach likely to have?

Environmental benefits

The preferred option for changing the landing and discard to sea rules, may result in reducing fishing effort by certain methods in some fisheries (for example, bottom trawl in mixed species fisheries) as fishers adopt methods that are more selective. This would reduce the number of bottom impacting events and protected species interactions. This would influence the commercial fishing industry and the New Zealand market insofar as environmental benefits in terms of better potential for a positive domestic and international reputation on improved fishing practices and sustainability of fisheries. Future implementation of improved monitoring and verification methods will provide greater assurance that fishers follow the new rules and provide consumer confidence that rules are being followed.

International reputation

As noted in Section 2, the New Zealand QMS and its management of fish stocks is often assessed as at the higher end compared to other countries. However, other countries have progressively raised the expectations they have around what fish is landed and what may be returned to the sea. Most notably European Union member countries are in the process of implementing a zero return to sea policy – termed the “landing obligation”. Additionally, European Union countries and others have progressively enhanced and improved their ability to monitor and verify commercial catch either through improved observer coverage or by adopting electronic monitoring of catch.

Clarifying and simplifying the rules relating to landings and discards to sea, along with the other proposed changes that strengthen the management system will provide an opportunity to enhance this international reputation by being able to demonstrate improvements to the system. The proposed changes set a foundation for future improvements to the regulatory system, which include supporting the monitoring and verification of fishing activities that improve fisher accountability and helping MPI to continue to increase the use of ecosystem-based approaches to fisheries management.

Improved reputation with consumers

Proposals which incentivise good fishing practice and require commercial fishers to be more accountable for what they catch speak directly to consumer expectations for sustainable seafood. New Zealanders’ perceptions of the fishing industry and of how MPI ensures that the industry operates in a sustainable way would benefit from these proposals. The goal of reduction of wastage, transparent clear rules and strong incentivises for fishers aligns with public expectations around the management of our fisheries. The future implementation of improved monitoring and verification methods will provide an opportunity to enhance this international reputation by being able to demonstrate fisher accountability and improvements to the system.

4.4: Is the preferred option compatible with the Government's 'Expectations for the design of regulatory systems'?
The proposals in this RIA comply with the Government's Principles of Good Regulatory Management. The options are linked to clear objectives derived from the governing legislation (the Fisheries Act 1996) and are designed in order to modernise and strengthen the New Zealand Fisheries Management System to improve the sustainability of fisheries for New Zealand's future. The preferred combination of options is aligned with guidance provided in Government Expectations for Good Regulatory Practice (April 2017).

Section 5: Implementation and operation

5.1: How will the new arrangements work in practice?

Legislative vehicles

A legislative amendment is required to the Fisheries Act 1996 to make these changes so as to strengthen the New Zealand fisheries management system. It is expected that a bill will be introduced and progressed through the Parliamentary process in 2021, with enactment expected in early 2022.

If, under the new landings and discards rules, commercial MLS for finfish are either removed or added to, then this would most likely be achieved via amendment of the Fisheries (Commercial) Regulations 2001, 31 (5) and (6).

Transitional arrangements will be required to provide the commercial sector with sufficient time to adjust their operations and to develop ways of avoiding unwanted fish or value for that fish. This transitional period will also be required to provide for MPI to carry out any required research and make adjustments to affected fish stocks should the Minister deem that some form of adjustment is required.

It is considered that four full fishing years are needed to support the successful implementation of the proposed changes. Four years will enable fishers to adopt new practices. This will also provide four years of electronic catch and position data which will inform the required research necessary for any adjustments to TACs.

Throughout this four year transition MPI would continue to monitor and assess the fisheries likely to be most affected by changes to what can be landed and what can be returned to sea. Which stocks are assessed and when will be informed by catch data and supporting analysis of the economic impacts of measures as we go.

Involvement of stakeholders in implementation and/or operation

Regular meetings with Treaty Partners and key stakeholders will continue as the changes to the regulatory system are implemented.

5.2: What are the implementation risks?

Issues regarding implementation raised through consultation:

There are several key implementation risk with the proposed changes outlined in this RIA.

Commercial fishers noted if rule changes were not flexible enough to meet a diverse industry, in terms of species, operator size, regions and innovation, many operators could be put out of business. Commercial fishers highlighted that changes to the management settings would require them to, in some cases, significantly change their practices and that this may require significant investment on their part.

Supporting transition to a new operating model:

Commercial fishers will need sufficient time to respond to these changes, to adjust their operations and to develop ways of avoiding, or creating value from, unwanted fish. In many cases they cannot just simply avoid catching unwanted fish – especially with some current methods. This will require innovation and new ways of fishing – whether that be new

technologies, new methods or new approaches to how current methods are used. Allowing for transition will also allow fishers to find markets for previously unwanted fish and mitigate the loss of quota value.

This risk would be mitigated through adopting a four-year transition with changes rolled out progressively across fisheries. The transition would involve a review of the existing exemptions including MLS over the four years, to align with existing periodic reviews of fisheries management settings (such as reviews of the total allowable catch).

Some of the current exemptions would meet the new evidence-based exemption criteria, while others may not. For those fish species where the exemption is removed, the impact may be significant. To expedite the transition, while acknowledging the need for evidence-based decisions, the review of exemptions would be staged to start with the most significant species, either in terms of catch volumes or in terms of a proportion of total landings.

Where an exemption is revoked, fishers would be required to account for and land the fish. In some circumstances, the requirement to land the fish could be delayed for a period of time so long as the fish is accounted for.

During this four year transition MPI would:

- consider adjustments to management settings based on changes to MLS requirements for each commercial finfish stock in the fishery;
- review Schedule 6 stocks for each stock in the fishery, including the rationale and evidence base;
- ensure any proposed TAC changes appropriately balance the need to create incentives for better fishing practices against the effects of finfish MLS removals and changes to Schedule 6;
- consider the deemed value settings for relevant stocks.

There are a range of funding mechanisms that provide support for fishers to innovate (for example, the Sustainable Food and Fibre Futures (SFFF) funding enables large scale investment in long-term innovation). Fishers also have access to Seafood Innovations Limited[24] funding to increase the value of existing harvests, reduce catching and processing costs and/or enhance consumer-driven product attributes.

Recognising that inshore small-scale fishers (who may be most affected by these proposals) may not be able to access these schemes because of the level of co-funding required, the Ministry for Primary Industries replaced the Sustainable Farming Fund, which explicitly excluded fisheries projects and replaced it with the Sustainable Food and Fibre Futures fund to include fisheries.

Many stakeholders raised concerns about the removal of the MLS. Recreational fishers and environmental groups were concerned that removal would see the growth of markets for small fish and that commercial fishers would deliberately target these fish, which would have potential negative sustainability outcomes. The concerns are acknowledged although

[24] Seafood Innovations Ltd is a research partnership owned by Seafood New Zealand Limited and The New Zealand Institute for Plant and Food Research Limited. Its purpose is to promote the carrying out of research relating to the seafood industry in New Zealand. The Ministry of Business, Innovation & Employment is a cornerstone funder of the company's research on behalf of the New Zealand Government.

the likelihood of such markets arising is considered to be low because the value of small fish is generally less than large fish and the industry is sensitive to public perceptions around the capture of small fish. Should such a market emerge, a range of non-regulatory and regulatory measures including differential deemed values, nursery area closures to limit such markets will be explored.

There is a risk that graduated offences and associated penalties will be construed as softening the compliance framework. It is expected that the proposed changes will result in increased ability to respond to minor infractions through the strict liability approach and that this will lead to better on the water behaviour. The criminal offences will still remain in place. As part of the transition process, MPI plans to work closely with relevant stakeholders and key agencies to ensure penalties and offences are aligned fairly.

A risk to the successful implementation of pre-set decision rules is the challenge to ensure that the scope of the pre-set decision rule and its upfront design is sufficient enough to ensure the rules work and that Treaty Partners and stakeholders are included in that process. Many stakeholders noted the importance of public consultation but agreed decision-making needs to be faster and more responsive. Thus, if implemented without building space for stakeholder participation there could be issues with stakeholders feeling left out and believing decision-making is industry motivated.

In the short term, there are likely to be costs falling on the commercial industry (and predominately ACE fishers who operate in mixed-inshore fisheries using bulk harvest methods) as the profile of fish landings changes (due to reduced ability to return small fish), the markets respond to the new profiles, and fisher behaviour changes and innovative technologies and methods are used.

There will also be some initial costs to government to adjust systems to administer the new rules. MPI will monitor the implementation of these proposals in the medium and long term to determine whether they are meeting the desired objectives. Long term, it is anticipated that the preferred options will provide benefits to all affected parties.

Section 6: Monitoring, evaluation and review

6.1: How will the impact of the new arrangements be monitored?
MPI is best placed to collect information and monitor the impact of the proposed changes to the fisheries management system. MPI will monitor the progress of proposals using existing means of data collection; during and post the transitionary phase of their introduction. This information includes ACE prices and ACE markets for key inshore species and stocks, changes in catch levels and quantity of small fish in markets (domestic and international). This will include data from the electronic reporting of catch and position along with feedback from fishers through stakeholder forums. Potential use of enhanced monitoring and verification through on-board cameras will also inform the evaluation of the proposals. Data will be analysed, discussed, and, where necessary, decisions made in collaboration with Treaty Partners and stakeholder representatives.

6.2: When and how will the new arrangements be reviewed?
MPI has the ability to track the progress of the changes to the fisheries management system, and to consider how they are working in practice through the data discussed above. It is not proposed that there will be any formal review of the proposals. However, a review will likely be triggered if monitoring data (such as from electronic monitoring, ACE price data, and stock sustainability assessments) shows that the arrangements are having unintended, unforeseen consequences, or having the reverse effect from that intended. MPI will continue its programme of engagement and communication with stakeholders, including those affected by the proposals, and will include consideration of targeted engagement to meet requirements as needed during the implementation of changes to the fisheries system. Regular engagement with stakeholders will provide an opportunity for them to raise any concerns with the new arrangements – both through the relationship between the regulator and regulated parties, and the regular relationships between government departments and consumer advocacy groups.