

Regulatory Impact Statement

Options for improving management of existing marine aquaculture and marine aquaculture biosecurity risks

Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Ministry for Primary Industries (**MPI**).

It provides an analysis of options to (i) increase process and regulatory certainty and efficiency in relation to replacement consents and species changes for existing marine farms and (ii) achieve a comprehensive and effective framework to manage on-farm biosecurity risks.

MPI, working with Ministry for the Environment (**MfE**) and Department of Conservation (**DOC**), considered 13 regulatory and non-regulatory options and determined that a national environmental standard for marine aquaculture (**NES: Marine Aquaculture**) would be the preferred option. A preliminary cost benefit analysis prepared by New Zealand Institute for Economic Research (**NZIER**) indicates the benefits of an NES outweigh the costs. Guidance material on biosecurity would complement the NES.

The table below sets out key constraints and caveats on the analysis that decision-makers should be aware of:

<i>Key gaps</i>	• A key difficulty is establishing the 'baseline' i.e. what would happen without an NES: Marine Aquaculture. It can be expected that, as coastal plans are reviewed, councils could change some rules to provide more certainty for existing marine aquaculture, so not all the estimated costs and benefits that come from changing the status quo can be attributed to the proposed NES. • At this stage, the costs and benefits of the biosecurity proposals have not been fully quantified.
<i>Assumptions</i>	• The cost benefit analysis assumes that the NES: Marine Aquaculture will provide 'certainty' for existing marine farms through a clear and consistent process for replacement consents, and in relation to farms that are in or near outstanding areas.
<i>Dependencies</i>	• An external document specifying standards for biosecurity management plans must be finalised before the proposed NES is Gazetted. A draft template for a biosecurity management plan is included in the discussion document.
<i>Significant constraints, caveats or uncertainties concerning the analysis</i>	• There is a low level of confidence in the data for the cost benefit analysis. Robustness of the analysis is limited by potential bias in the information and potential magnitude of unquantified costs and benefits.

<i>Further work required before any policy decisions could be implemented</i>	• Consultation with the public and iwi authorities and consideration of the submissions received under section 44 of the Resource Management Act 1991 (RMA). • Preparation and consideration of a report on consultation and the proposed regulations, together with an evaluation report in accordance with section 32 of the RMA. • Drafting of regulations by the Parliamentary Counsel Office. • Final policy decisions to recommend regulations taken by Minister for the Environment and approved by Cabinet.
--	--

Overall, MPI considers that these constraints and limitations do not materially impact the analysis for this Regulatory Impact Statement. Following consultation, further analysis will be carried out as required under section 32 of the RMA. If, following consultation and further analysis, there is a decision to proceed with an NES: Marine Aquaculture, it is intended that it come into effect by mid-2018.

Luke Southorn, Director Economic Development and Partnerships



18/05/2017

Executive summary

1. The Government is committed to environmentally sustainable, primary sector-led strengthening of the economy and its 2012 Aquaculture Strategy supports a well-planned and sustainable aquaculture industry. Marine aquaculture¹ faces unique challenges and conflicts compared to other primary industries because of its use of public space in the coastal marine area. Authorisation to occupy and use coastal space is granted by regional councils under the Resource Management Act 1991 (RMA).
2. Variations and inconsistency in approaches to aquaculture management by different regional councils can impose unnecessary and unjustified extra time and cost on applicants, regional councils and interested parties. The consenting process for existing farms can be complex, uncertain and inefficient. There is a risk that uncertainty and inefficiency in the consenting process could undermine the confidence of investors. This is exacerbated by the fact that up to 64% of marine farming consents are due to expire by the end of 2025.
3. To continue to contribute to New Zealand's economy, the aquaculture industry needs to stabilise its existing production. This would offer investors greater confidence to invest in better use of existing space, value-added production and new technologies. In addition, on-farm biosecurity practices need to be implemented consistently and effectively to safeguard New Zealand's indigenous biodiversity and protect the aquaculture industry and other coastal users from the introduction and spread of marine pests and diseases.
4. Analysis has identified a national environmental standard (**NES**) for marine aquaculture as the preferred option to address these problems. The proposed NES: Marine Aquaculture would:
 - provide for most replacement consents (which may include species changes) to be non-notified, restricted discretionary activities with a confined list of matters of discretion while still allowing management of existing marine farming within environmental limits
 - provide for small scale realignments of existing marine farms, particularly where realignments can reduce adverse effects
 - require all marine farms (existing and new) to prepare, implement and keep up to date biosecurity management plans.
5. A preliminary cost benefit analysis of the proposed NES has been carried out by NZIER, which shows that benefits outweigh costs. The main benefits are (1) increased investor confidence associated with greater regulatory and process certainty, and (2) savings associated with streamlined consenting processes. An unquantified, but potentially significant, benefit is the reduction in biosecurity risk. The main financial costs are associated with (1) changes to regional council processes, and (2) developing, assessing and monitoring biosecurity management plans. There will also be a loss of regional autonomy in setting rules for existing marine farms and, in many regions, a loss of public input on consent applications for existing marine farms.
6. MPI has worked with MfE and DOC on the proposals. Agencies are recommending that the Government release a discussion document to seek submissions from the public and

¹ For the purposes of this document, marine aquaculture is referred to as 'aquaculture'. It means marine farming that has a coastal permit for occupation of the coastal marine area. It does not include land-based aquaculture activities that have coastal permits to take and discharge seawater.

iwi authorities on the proposed subject matter of an NES: Marine Aquaculture under section 46A(4) of the RMA. Following consultation, a report will be prepared for the Minister for the Environment and Minister for Primary Industries on submissions received and final recommendations about whether to proceed with the proposed NES. This will be accompanied by an evaluation report as required under section 32 of the RMA. The Minister of Conservation will continue to be consulted.

7. If the proposal is approved, regional councils will be required to give effect to and enforce the NES under section 44A(8) of the RMA. It is intended that the regulation would come into effect immediately after being publicly notified in the New Zealand *Gazette*. MPI will make relevant guidance information available to assist regional councils and industry with the transition. MPI will also coordinate monitoring, evaluation and review of the NES at different stages of its implementation, in order to assess how the policy objectives are being met.

1. Background

8. The Government is committed to environmentally sustainable, primary sector-led strengthening of the economy, and the Government's 2012 Aquaculture Strategy supports a well-planned and sustainable aquaculture industry.
9. In December 2014, Business Growth Agenda (BGA) Ministers discussed challenges facing aquaculture and directed agencies to prepare an action plan (Document number AM14-260, refers). In March 2015 BGA Ministers agreed (Document number B14-030, refers) that aquaculture should be a priority for development of national direction to improve re-consenting efficiency and provide greater investor confidence in the industry.
10. Following a report-back in May 2016 (Document number B16-0265, refers), BGA Ministers agreed that agencies should work with key stakeholders and other experts to develop a national direction proposal which would provide greater efficiency and certainty for re-consenting marine farms, including those in or adjacent to areas of outstanding natural landscape, features and character. BGA Ministers noted that national direction could also encourage better management of aquaculture through provisions to manage biosecurity risks and provide for on-farm innovation.
11. MPI, MfE and DOC have analysed various regulatory and non-regulatory options, and sought feedback on proposals from an Aquaculture Reference Group comprising members of the aquaculture industry,² regional councils,³ Te Ohu Kaimoana (the Aquaculture Settlement trustee, representing Iwi interests), and the Environmental Defence Society.

2. Status quo

12. Aquaculture makes a significant contribution to the New Zealand economy and communities, but the current regulatory framework presents potential issues for further industry contribution, as well as some biosecurity challenges.

² Sanford, New Zealand King Salmon, Aquaculture New Zealand, Marine Farmers Association

³ Environment Southland, Bay of Plenty Regional Council, Waikato Regional Council, Marlborough District Council

2.1. Contribution of aquaculture to New Zealand

13. Aquaculture contributes to the economic well-being of towns and communities throughout New Zealand, through farming, processing and support industries. In 2015, the industry employed over 3,000 people in production and processing and generated around \$500 million of revenue of which \$338 million was export revenue.⁴ Studies of the social impacts of aquaculture jobs have shown significant benefits to individuals and communities, with each additional job being highly valued in small towns.⁵
14. Production plays an important function in sustaining regional economies by providing an employment based and flow of economic activity through to local economies. This is particularly important in areas such as Northland, Coromandel, Bay of Plenty, Marlborough, Tasman, and Southland. Estimated full time employment in aquaculture by major aquaculture regions is:⁶

Region	FTEs
Northland	100
Auckland	400
Waikato/Coromandel/Bay of Plenty	475
Marlborough	700
Tasman	850
Canterbury	350
Southland	100
Total	2975

15. Iwi participation in aquaculture is significant both in terms of Māori businesses and individual owners, operators and staff. Iwi own aquaculture assets throughout the main aquaculture regions, with iwi ownership being particularly significant in Northland, Auckland and Waikato in the mussel and oyster industries. Te Tau Ihu Iwi (the top of the South Island iwi) have interests in mussel and oyster farms in Tasman and Golden Bays, and throughout the Marlborough Sounds, and Ngāi Tahu holds interests throughout the South Island.
16. Aquaculture is an opportunity for local, regional and national economic growth in New Zealand. Ernst & Young⁷ economic analysis estimated that if the volume, value and productivity of aquaculture increased, the sector could be worth \$1.45 billion by 2025, and the industry aims to increase sales to \$1 billion by 2025. However, the ability to achieve this goal is limited by available space for new farms, making survival of existing farms a high priority for government intervention.

⁴ Aquaculture New Zealand. <http://www.aquaculture.org.nz/industry/overview/>

⁵ Baines and Quigley (2016) *The Social and Community Effects of Salmon Farming and Rearing: A case study of the Top of the South Island*

⁶ Ernst and Young (2014) *New Zealand Aquaculture: Potential financial and economic impacts of 2014 Supreme Court decision*. Report prepared for Aquaculture New Zealand.

⁷ Ernst & Young (2013) *New Zealand Aquaculture: Industry Growth Scenarios, 2013 update*

2.2. Statutory framework for management of aquaculture

17. Marine aquaculture is unique compared to other primary industries in that it uses a fixed area of public space in the coastal marine area that cannot be privately owned. Aquaculture is primarily managed under the RMA, but other legislation is also relevant, including the Fisheries Act 1996, Biosecurity Act 1993, and Marine and Coastal Area (Takutai Moana) Act 2011. Iwi interests in specified areas are recognised through Statutory Acknowledgements which are recorded through Treaty of Waitangi settlements.

2.2.1 Resource Management Act 1991

18. Under the RMA New Zealand's regional councils are responsible for managing the effects of aquaculture within their coastal marine area.
19. Every marine farm requires a coastal permit⁸ to operate. When a coastal permit (or deemed coastal permit⁹) expires a replacement consent must be obtained. A series of planning instruments are considered by regional councils when processing a coastal permit application, including:
- Relevant sections of the RMA, including sections 5-8 (Part 2 Purpose and Principles) and in particular, as matters of national importance, preservation of coastal natural character and protection of outstanding natural landscapes and features (ss 6(a) and (b))
 - *The New Zealand Coastal Policy Statement 2010 (NZCPS 2010)*
 - Relevant existing or proposed regional policy statements
 - Relevant existing or proposed regional coastal plans.
20. The RMA also includes specific requirements for all decision-makers to recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga (subs6(e)), to have particular regard to kaitiakitanga (subs7(a)), and to take into account the principles of the Treaty of Waitangi (s8).
21. This regulatory framework manages aquaculture activities that could have an impact on the social, economic, environmental and cultural values of a community, and could be allowed as long as their adverse effects are avoided, remedied or mitigated.

Regional coastal plans

22. Regional coastal plans generally identify areas where applications for aquaculture can be made and rules, including the activity status, under which consent applications will be assessed. Regional coastal plans are required to go through a statutory consultation process under the RMA which gives consent holders and interested parties participation rights. The process of reviewing plans must commence ten years after they are made operative.

⁸ A coastal permit bundles up resource consent requirements for a marine farm to occupy space in the coastal marine area and other activities such as disturbance of the seabed, take and discharge of seawater, and discharges of feed.

⁹ A deemed coastal permit is a marine farm lease or license, and its associated conditions, issued prior to 2004. The Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 deemed all existing leases and licenses to be coastal permits with a common expiry date 20 years from commencement, leading to the expiry spike in 2024/2025.

Consenting

23. The application process for a coastal permit depends on the activity status in the relevant region and might require consultation with affected iwi authorities, neighbours or interest groups. A coastal permit for aquaculture can be granted for a minimum of 20 years and a maximum of 35 years: it gives the holder a right to occupy the space and undertake farming activities but does not grant or assure occupation rights in perpetuity.
24. An existing coastal permit holder can apply for a replacement consent to undertake the same activity in the same space when the existing consent expires or well in advance of the expiry date. Although a decision maker must have regard to the value of the investment of the existing consent holder there is no statutory presumption that a replacement consent will be granted.
25. Applying for a replacement consent well before the expiry of the current consent is known as 'evergreen consenting'. The consent holder in effect foregoes a period of his or her existing consent but can secure a new consent with new conditions for another 20 to 35 years.¹⁰

New Zealand Coastal Policy Statement 2010

26. The NZCPS 2010 directs integrated coastal management through objectives and policies to achieve the purpose of the RMA in relation to the coastal environment. Councils are required to give effect to these policies in their plans and must have regard to them when considering consent applications. The following policies are particularly relevant to aquaculture:
 - Policy 8 specifically recognises the importance of aquaculture.
 - Policy 2 provides for the principles of the Treaty of Waitangi and kaitiakitanga.
 - Policy 7 provides for strategic planning.
 - Policies 13 and 15 provide for protection of areas of outstanding natural character, features or landscapes ('outstanding areas').
 - Policy 11 provides for protection of indigenous biological diversity.
 - Policy 12 provides for management of biosecurity risks.

2.2.2 Fisheries Act 1996

27. All applications for new marine farming space under the RMA must pass an Undue Adverse Effects test, which is undertaken by the MPI, and register with MPI's Fish Farmer Register.
28. The purpose of the Undue Adverse Effects test is to determine whether a proposed marine farm would unduly affect customary, recreational, or commercial fishing for specific fish stocks. A proposed marine farm cannot proceed if it would have 'undue' adverse effects on customary or recreational fishing, or commercial fishing for non-quota management

¹⁰ For instance a person with a coastal permit that is valid for 20 years may apply for a new coastal permit after 15 years. If granted the new term would be for 20 to 35 years from the date of issue, so the permit holder gives up some of the time period originally granted but obtains security for a further consent period.

system stocks. When commercial fishing for Quota Management System stocks is unduly affected, compensation can be paid to affected quota owners.

2.2.3 Marine and Coastal Area (Takutai Moana) Act 2011

29. The Marine and Coastal Area (Takutai Moana) Act 2011 creates a special status for the common marine and coastal area, meaning neither the Crown nor any other person can own it. This Act also provides for iwi, hapū and whānau to determine customary marine title and have customary activities such as waka launching and gathering natural materials recognised as protected customary rights.¹¹
30. Existing aquaculture activities are permitted to continue in the common marine and coastal area, provided there is no change in location or amount of space occupied.¹² However, a customary marine title group has the right to grant or decline permission for an activity, such as new marine farming, which requires a resource consent. In addition, consent for new space for marine farming cannot be granted if it is likely to have adverse effects that are more than minor on a protected customary right.

2.2.4 Biosecurity Act 1993

31. The Biosecurity Act 1993 provides a legislative framework to manage risks from the introduction and spread of harmful organisms (pests and diseases). Aquaculture biosecurity focusses on preventing introduction of aquatic pests and diseases, and eradicating or managing them if they become established. The intention is to avoid, or minimise and manage the potential risks to people, the environment and the economy.
32. Biosecurity in New Zealand is primarily managed by MPI which is responsible for border control and responding to detections of new, harmful pests and diseases. Regional councils also have an important role to play in risk management through development and enforcement of regional pest management strategies, surveillance and, where appropriate, imposing (and monitoring) consent conditions to avoid release and spread of harmful organisms.

2.2.5 Treaty of Waitangi settlements

33. The Māori Commercial Aquaculture Claims Settlement Act 2004 provides for Iwi to receive settlement assets that are representative of 20% of aquaculture space. Settlements are made under regional agreements and can deliver a mix of settlement assets—comprising marine farming space, cash or a mix. As noted in section 2.1 Iwi have substantial aquaculture interests.
34. In addition, individual Treaty of Waitangi settlements include Statutory Acknowledgements. Statutory Acknowledgements are an acknowledgement by the Crown of mana in relation to specified areas – particularly cultural, spiritual, historical and traditional associations with an area. The presence of a Statutory Acknowledgement in an area requires a council to have regard to it in forming an opinion as to whether an iwi or tangata whenua group specified in a Statutory Acknowledgement may be adversely affected by a consent application.

¹¹ Recognising customary rights under the Marine and Coastal Area (Takutai Moana) Act 2011.
<https://www.justice.govt.nz/assets/Documents/Publications/Blue-Book.pdf>

¹² Aquaculture Legislative Reforms 2011, Guidance Note 4 MPI

2.3. What happens without national direction?

35. To assess what impact national direction would have, it is necessary to know how the status quo might change in the absence of national direction.
36. Under the status quo, regional councils will continue to make decisions on replacement consent applications on the basis of the rules in their operative and proposed coastal plans and will apply notification requirements as set out in their plans or in accordance with the RMA. Existing marine farmers will continue to apply for replacement consents as their current consents expire or well in advance of consent expiry. Innovation through changing species will, in most cases, require marine farmers to apply for a consent variation which must be treated as a discretionary activity.
37. Councils will also continue to undertake 'second generation' planning as they review their regional coastal plans. They will also incur the associated costs of running the planning and consultation processes. Outcomes of these review processes are unknown: some councils may adopt rules that reduce regulatory and process uncertainty and inefficiency for existing marine farms. Others may include marine farms in areas identified as outstanding which may increase uncertainty of the process for replacement consenting for existing marine farmers (discussed in the following section). Plan review processes are lengthy and, in some cases may not be completed before the consent expiry spike in 2024 and 2025, although recent amendments to the RMA provide opportunities for councils to streamline and shorten the process.
38. The status quo is likely to:¹³
 - Be expensive and time consuming for industry, regional councils and other interested parties (due to regional differences in activity status and notification requirements)
 - Result in variable and incomplete approaches to on-farm biosecurity management
 - Result in ongoing uncertainty about the potential impact of planning for outstanding areas on the process of replacement consenting for existing marine farms.
39. At the same time a locally-centric approach does have the benefits of more closely representing local interests, allowing local solutions to match the local situation.
40. In 2015 NZIER prepared a report¹⁴ noting that regulatory uncertainty in the aquaculture sector is expected to lead to:
 - Reduced expected return and asset value of incumbent investments
 - Increased premiums required by investors to undertake new investments
 - Reduced attention from other potential investors
 - Reduced investment and maintenance on existing assets, along with product development and R&D, perhaps to levels required to simply keep production ticking over.

¹³ NZIER 2017

¹⁴ NZIER 2015 *NZIER overview of the impacts of re-consenting uncertainty and delay on aquaculture investment in New Zealand*. Memo to Aquaculture New Zealand.

3. Problem definition

41. Aquaculture faces unique challenges and conflicts compared to other primary industries due to its use of public space (the common marine and coastal area). Under the RMA, the right to occupy coastal space for a specified period of time is granted by regional councils. Competition between uses can lead to conflict through the consenting process for existing marine farms seeking to continue operating in the same space. The notification requirements, the range of matters which might be considered, and whether hearings and appeals will be heard, can make consenting processes for existing farms complex, uncertain and inefficient.
42. Biosecurity has been identified as a key risk to both the New Zealand coastal environment and the industry. The industry has taken a voluntary and proactive approach to managing biosecurity risks but there is currently no nationally consistent requirement for biosecurity management plans for marine farms. This creates a high risk situation for the New Zealand environment and the aquaculture industry.
43. While these issues could be addressed by regional councils under the existing planning framework, they may not be addressed before a large number of consents expire by the end of 2025, and with the level of consistency required to give the industry confidence to invest and to implement a nationally consistent biosecurity management system.
44. To continue to contribute to New Zealand's economy, the aquaculture industry needs to stabilise its existing production. This would offer investors greater confidence to invest in better use of existing space, value-added production, and new technologies. To continue to invest the aquaculture industry needs reasonable confidence that existing marine farms are likely to be granted replacement consents without unnecessary costs and prolonged processes, provided the marine farms are appropriately located, have been responsibly operated and will meet modern standards for managing environmental impacts.

3.1. Rules between regions are inconsistent

45. Regional councils develop objectives, policies and rules for aquaculture through a planning process which provides for community participation. Through this process, the activity status and notification requirements for existing marine farms, including applications for replacement consents, can vary between regions. This can impose unnecessary and unjustified extra time and costs on applicants, regional councils and interested parties.
46. The NZCPS 2010 requires regional councils to undertake strategic planning for the coastal environment and recognise the importance of aquaculture, through regional policy statements and regional coastal plans. These directions will be implemented as councils prepare their second generation regional coastal plans. There is an opportunity through the development of second generation regional coastal plans to better plan for areas that are appropriate for aquaculture, to identify areas where aquaculture is considered to be inappropriate, and to better address the cumulative adverse effects of multiple marine farms.
47. Over time, planning should reduce uncertainty about the process for marine farmers seeking replacement consents. However in a number of regions, second generation regional coastal plans are only at an early stage. Development of a proposed plan to public notification can be a lengthy process, as can the process under Schedule 1 of the RMA following public notification of a proposed plan. Of the eight major aquaculture regions, six have first generation regional coastal plans which are being or are due for review prior to

2024.¹⁵ These plans may not be complete in time to provide clear provisions and certainty of process to the significant number (64%) of consents for existing marine farms that will expire between now and the end of 2025. The large number of farms affected mean uncertainty is a problem for the industry as a whole.

3.2. Sources of uncertainty: activity status and notification

48. The activity status and notification requirements for replacement consents set out in a plan can contribute to regulatory uncertainty and inefficiency, by increasing the requirements on applicants and determining whether hearings and appeals will add to the time and cost.
49. Aquaculture activities on existing marine farms have different activity statuses in the main aquaculture regions, ranging from controlled to discretionary. Controlled status means the council can impose conditions, but must grant the consent. It recognises where the effects of aquaculture are well understood, and planning has been undertaken to determine that aquaculture is appropriate. This usually means mapping has taken place, and other uses and values have been considered. Restricted discretionary status provides less certainty that the consent will be granted, but greater certainty can be given by setting clear matters of discretion and clear information requirements.
50. At present:
 - up to 37% of existing marine farms are classified as controlled activities in regional coastal plans¹⁶
 - Marlborough District Council is the only regional council with a restricted discretionary activity rule with confined matters of discretion for existing marine farms, and that rule applies to relatively few farms
 - all other existing marine farms are classified as discretionary or non-complying activities, or restricted discretionary activities with relatively wide matters of discretion.
51. This means up to 63% of existing marine farms have an activity status in regional coastal plans that provides less certainty of process than desirable for stabilising current levels of production and investment confidence. This represents a significant risk to the industry.
52. The RMA encourages public participation in planning and resource consent decisions. While public participation through notification of resource consent applications can enhance the quality of decision-making for new farms or for significant changes to existing farms, the effects on the environment of existing marine farms that are making no or minor changes are known and can be managed through appropriate consent conditions set by regional councils. It is more efficient for the public to provide input on the appropriateness of marine farming at the plan-making stage.
53. In addition, only a few regional coastal plans currently contain comprehensive planning and consenting provisions to enable better and more innovative use of existing space. The aquaculture industry reports that this discourages industry innovation and transition to higher value species. Trials of new species and technologies and integrated multi-trophic aquaculture could increase efficient use of space and productivity in the industry in the

¹⁵ Auckland and Bay of Plenty are a significant way through development of their second generation regional coastal plans.

¹⁶ In Northland, and some areas of Waikato and Marlborough. The number is an estimate because establishing how many existing marine farms in Marlborough are classified as controlled activities is complicated, primarily because of the construction of the rule framework that applies in the Marlborough Sounds Resource Management Plan.

future, as well as potentially reducing ecological effects (for example, farming of sea cucumbers and seaweed).

3.3. Uncertainty in relation to farms in or near outstanding areas

54. An area of uncertainty for replacement consents is the treatment of farms in and near to outstanding areas. The NZCPS 2010 directs that adverse effects of activities on outstanding natural landscapes, outstanding natural features or outstanding natural character ('outstanding areas') are to be avoided. The Supreme Court's judgment in *EDS v The New Zealand King Salmon Company Limited*¹⁷ increased focus on the identification of outstanding areas, and the implications for consent applications in these areas.
55. Eighteen percent of existing marine farms are located within areas mapped as outstanding within operative or proposed regional policy statements or coastal plans. Whether farms within outstanding areas have an adverse effect on the outstanding values often requires expert judgement from landscape architects, and not knowing the outcome of these assessments creates investment uncertainty.
56. There is a risk that replacement consents for some marine farms located in areas defined as outstanding will either not be able to be obtained or will require assessments and expert reports that will increase time and costs associated with gaining the consents.

3.4. Need for national approach to on-farm biosecurity management

57. Marine farms are potential vectors to introduce and spread biosecurity risks.¹⁸ To enable effective responses to biosecurity incursions, appropriate on-farm biosecurity management measures must be implemented throughout New Zealand.
58. A report¹⁹ prepared for MPI in 2016 noted "*there is a large variation in biosecurity practices within the [aquaculture] industry and the high level of industry concern regarding pests and diseases is not always reflected in their biosecurity practices.*" Marine farmers adopting and maintaining effective biosecurity practices, and ongoing improvements to marine farm biosecurity, are critical to safeguarding New Zealand's indigenous biodiversity and wider environmental quality. Pest or disease incursions could also severely affect the industry's production, global reputation, and market access.
59. The aquaculture industry has developed guidance on biosecurity practices for salmon, oysters and mussels through the *A+ Sustainable Aquaculture Programme (A+ Programme)*. Further guidance is provided through MPI's *Aquaculture Biosecurity Handbook (Biosecurity Handbook)*, which includes a biosecurity management plan template for marine farms. These documents provide useful guidance but adoption of the measures remains voluntary, species-limited and currently high level.

¹⁷ [NZSC38 17 April 2014]

¹⁸ Marine farm practices such as the movement of stock, genetic material, farm personnel, equipment and vessels between farms and regions can contribute to the spread of pests and diseases.

¹⁹ Coast & Catchment (2016) *Managing Biosecurity Risk for Business Benefit – Aquaculture Biosecurity Practices Research*

60. Currently, around 80% of existing marine farms have some degree of biosecurity practice in place. These practices and methods are often inconsistent, and their effectiveness can vary substantially between farms.
61. While industry biosecurity programmes have had good uptake, it is essential that all operators have good biosecurity practices – not just those who volunteer. Comprehensive and consistent uptake of effective on-farm biosecurity practices are the most efficient and effective means of safeguarding the environment and improving industry-wide resilience to pest and disease incursions.

3.5. Summary: Value proposition

62. The Government is committed to environmentally sustainable, primary sector-led strengthening of the economy and its *2012 Aquaculture Strategy* supports a well-planned and sustainable aquaculture industry.
63. Regional variation and inconsistency, coupled with ongoing second generation planning in some regions, can impose unnecessary and unjustified extra time and cost on applicants, regional councils and interested parties. The processes involved can be complex, uncertain and inefficient. There is a risk that uncertainty and inefficiency in the consenting process could undermine the confidence of investors in the industry.²⁰ While normal planning processes may address these issues over time, up to 64% of the coastal permits held by the aquaculture industry are due to expire over the next eight years. Planning processes may not have run their course in time to improve confidence before 2024.
64. Uncertain and inefficient processes are also barriers to realising the economic, and social benefits that existing marine farming can provide. Establishing a national direction for marine aquaculture could provide the certainty and efficiency required to maintain investor confidence in marine farming, and can be delivered well before 2024.
65. Having confidence in the continuation of an activity is critical to continued investment and innovation in any industry. While other primary resource industries such as dairy and intensive sheep and beef farming face the same issues of long term security of consenting, aquaculture faces the unique challenge of being located in public space. Continued access to that space is critical for the continuation of each marine farming operation
66. In addition, biosecurity practices on marine farms need to be implemented consistently and effectively to protect the environment, communities and the aquaculture industry from the introduction and spread of marine pests and diseases. A national direction would ensure the level of national consistency required for effective biosecurity management.

4. Policy objective

67. The policy objective is to address the problems identified in Section 3 by:

Developing a more consistent and efficient regional planning framework for the management of existing marine aquaculture activities and on-farm biosecurity management, while supporting sustainable aquaculture within environmental limits.

68. The policy objective aims to retain communities' input to planning for aquaculture activities, but at a regional level at the plan-making stage, rather than at the consenting stage. This

²⁰ NZIER (2015)

recognises that each region has unique environmental characteristics and community views, and allows this to be reflected in planning.

69. The intent is to achieve this policy objective well before the consent expiry ‘spike’ in 2024 and 2025.

5. Options and impact analysis

70. MPI, MfE and DOC have explored a number of regulatory and non-regulatory options to address the problem of variable plan frameworks leading to uncertainty and inefficiency in the processes for replacement consent applications for existing marine farms or change of species, and the need for a consistent approach to on-farm biosecurity management. From this process, 13 potential solutions were identified to address the defined problem.

5.1. Options analysis assessment criteria

71. To assess the options “first order” assessment criteria were developed to assess how well the option would address the policy objective, and “second order” criteria were developed to assess whether the option could be implemented effectively and efficiently.
72. All of the options considered can meet the policy objective of ‘supporting aquaculture within environmental limits’.

First order assessment criteria

1. *Delivers consistency*

Does the option address unnecessary variation between councils in relation to controls on aquaculture?

2. *Increases certainty about consenting processes and requirements*

Does the option increase certainty of processes and requirements (for example requirements for information to be supplied with consent applications and the matters that will be considered by decision-makers) for existing consent holders, while maintaining the underlying purpose of the RMA?

3. *Improves management of on-farm biosecurity risks*

Does the option enable consistent and effective on-farm biosecurity management plans/procedures?

4. *Recognises future strategic planning for aquaculture*

Does the option recognise and provide for future strategic planning by councils that identifies areas that are appropriate or inappropriate for aquaculture?

Second order assessment criteria

5. *Effectiveness (timeliness/difficulty of implementation)*

Are there any significant barriers or complexities to implementation? Does the option deliver a solution that can be implemented in a timely and effective manner prior to 2024? Is it possible to monitor compliance with the option, and can it be enforced?

6. *Efficiency*

To what extent are the benefits of the option expected to exceed costs?

5.2. Assessment of possible options

73. The status quo (that is, the option of doing nothing) and the 13 possible solutions were assessed against the criteria. This showed that:

- Four viable options met or partially met the first order criteria
- The remaining options are not considered viable because they did not meet or only partially met the first order criteria or have significant difficulty meeting the second order criteria.

74. The status quo and four viable options to address the defined problem are:

Status quo No central government intervention. Existing marine farms would continue to apply for replacement consents under the rules of the relevant regional coastal plan. Consent holders could apply for replacement consents well-before expiry of consent ('evergreen consenting') to manage risks associated with upcoming plan reviews. Adoption of on-farm biosecurity measures would continue to be either voluntary or when required by regional councils under consent conditions. Inconsistency across regions would result in ongoing risk to the environment and industry should an incursion occur. Existing marine farms would face ongoing regulatory and process uncertainty and inefficiency giving rise to reduced investment confidence.
National Environmental Standard: Marine Aquaculture An NES is a regulation providing a nationally consistent set of rules that, in most cases, replace rules in regional coastal plans for a particular activity. An NES may specify when the new rules come into effect and documents can be incorporated by reference. Councils would need to change their plans to ensure they include reference to, and do not conflict with, the NES. No further consultation is required. An NES would provide one set of rules and standards for replacement consents and changes of species, and could provide consistent direction on measures to address biosecurity risks at a farm-specific level. It can also be developed and implemented in a reasonably short time frame, and well ahead of the expiry of the majority of the current coastal permits for existing farms. Inclusion of specific rules relating to change of species would provide a pathway for marine farmers to change species, through a replacement consent application, immediately that the NES was Gazetted. The NES: Marine Aquaculture would lead to a loss of locally-set rules and local input into consent applications for existing marine farms. It would however support future strategic planning by councils on areas that are appropriate or inappropriate for aquaculture. This focuses Iwi and community input to the plan-making stage rather than the consent stage.
NZCPS and NES for Marine Aquaculture A combined approach involving both an NZCPS: Marine Aquaculture and an NES: Marine Aquaculture could be taken. This would provide a consistent set of rules, and provide more detailed and specific aquaculture objectives and policies than those currently in the NZCPS 2010. This option has the advantages and disadvantages of the NES: Marine Aquaculture discussed above, in combination with more detailed and specific aquaculture policy, which might be of assistance to decision-makers administering an NES: Marine Aquaculture.

While more specific objectives and policies relating to replacement consents, change of species and biosecurity risk management could be included in an NZCPS: Marine Aquaculture, the existing NZCPS 2010 already includes policies on aquaculture, biosecurity and strategic planning. These policies and others in the NZCPS 2010 already provide an integrated framework for coastal management and the management of aquaculture in the coastal marine area. The provision of more specific objectives and policies through an NZCPS: Marine Aquaculture might increase consistency and process certainty by providing greater direction to the development of regional coastal plans, but interpretation and implementation of those objectives and policies by regional councils is still likely to vary across the country, reducing the effectiveness and efficiency of an NZCPS: Marine Aquaculture as an option. Implementation of objectives and policies in an NZCPS: Marine Aquaculture through plan changes to regional coastal plans could also be a lengthy process and may not be fully completed by 2024/25.

In the context of the existing objectives and policies of the NZCPS 2010, work programmes underway, the degree of process certainty sought, and implementation timeframes, the benefits of adding an NZCPS: Marine Aquaculture to the NES: Marine Aquaculture are marginal and the costs are high.

This combined option is not considered efficient or effective since developing policy direction involves additional time and costs, with little benefit over the standalone NES.

Minister for the Environment directed plan changes (s25A)

The Minister for the Environment can direct regional councils to prepare a plan change that addresses a resource management issue relating to their functions under s30 RMA. The Minister could therefore direct selected regional councils to prepare changes to regional coastal plans to include new provisions for replacement consents for existing marine farms, change of species and management of biosecurity risks. Once prepared, the plan change would be subject to the normal Schedule 1 process under the RMA.

This option could address consistency issues and provide more certainty of process, but achievement of these aims is contingent on comprehensive direction being given to councils. Differing drafting and interpretation between councils is still likely to result in inconsistency, and the RMA Schedule 1 process might result in plan provisions that differ significantly from the original ministerial direction. A separate direction would have to be made to each regional council in order to implement this option, and the likely timeframes for each council to develop a plan change and complete the RMA Schedule 1 process mean that this option cannot be implemented in a short time frame. Ministerially-directed plan changes are generally better suited to the purpose of making small corrections to individual plans rather than addressing a wide ranging issue in multiple plans.

Aquaculture regulations (s360A)

The Minister of Aquaculture may recommend regulations to amend provisions in a regional coastal plan that relate to management of aquaculture in the coastal marine area. Specific rules and/or methods for replacement consents for existing marine farms, change of species and management of biosecurity risks could be added to regional coastal plans by regulation. To achieve certainty the Minister would need to make regulations to amend all relevant regional coastal plans. Regulations would need to be customised to individual regional plans and can only be used to amend

operative regional coastal plans, so cannot efficiently recognise future planning processes.

While less time-consuming than the RMA Schedule 1 process, the number of regional coastal plans that would need to be amended could result in complex and time consuming processes to establish new provisions. The need to make changes across multiple regional coastal plans also means that this option would not be cost-effective to implement.

75. **Table 5.1** (below) compares the status quo and the four viable options using the first and second order criteria.

Table 5.1 Comparison of status quo and viable options using assessment criteria

Option	Description	Assessment Criteria					
		First order				Second order	
		Delivers consistency	Increases certainty around consenting processes and requirements	Improves management of on-farm biosecurity risks	Recognises future strategic planning for aquaculture	Effectiveness Timeliness/ Implementation	Efficiency: Extent to which benefits exceed costs
Status quo	No policy intervention.	No difference	No difference	No difference	No difference	No difference	No difference
		Activity status and rules for existing marine farms vary between regions, resulting in inconsistency and uncertainty in some regions as to how applications will be processed. In the absence of flexible consents or specific plan provisions, applications to change species can be time-consuming and costly, resulting in a constraint on innovation. Existing consent holders can apply for replacement consents for existing marine farms well-before expiry to manage risks posed by uncertainty of process. Section 127 RMA provides for applications to be made to change consent conditions relating to the species being farmed. There is no nationally consistent framework for biosecurity management under the RMA.			Future strategic planning would continue, consistent with the policy direction of the NZCPS 2010.	No barriers to implementation, as the status quo is what is happening now. Whether a solution to the problems identified can be delivered in a timely and effective manner is reliant on timely implementation of second generation plans to deliver higher degree of process certainty. No extra costs to Council as plan review work is being undertaken, however high cost to industry and others needing to engage on individual applications for replacement consents under current provisions.	
Viable options							
NES: Marine Aquaculture	Regulations that: replace rules in regional plans relating to replacement consents for existing marine farms and change of species	Better	Better	Better	Better	Better	Better
		Would ensure consistency through introduction of one set of rules and standards for replacement consents for existing marine farms and consents for change of species, and provide certainty about activity status and matters that will be considered in making decisions on consent applications. A national framework for on-farm biosecurity management under the RMA would be achieved for new and existing farms. Councils would be able to prescribe controlled activity status where appropriate planning has occurred. This would reduce consistency			Would support future strategic planning by regional councils to identify areas that are appropriate or inappropriate for aquaculture	Requires Minister-established consultation process, but likely to be faster than the same process for an NZCPS. Councils need to change coastal	Estimated benefits expected to significantly exceed costs (NZIER preliminary analysis).

Option	Description	Assessment Criteria					
		First order				Second order	
		<i>Delivers consistency</i>	<i>Increases certainty around consenting processes and requirements</i>	<i>Improves management of on-farm biosecurity risks</i>	<i>Recognises future strategic planning for aquaculture</i>	<i>Effectiveness Timeliness/ Implementation</i>	<i>Efficiency: Extent to which benefits exceed costs</i>
	set requirements for on-farm biosecurity management plans	but increase certainty of process. As regional plans are reviewed, the NES would continue to apply, maintaining a consistent approach.				plans, but no further consultation process required. Can be implemented well in advance of 2025.	
NZCPS: Marine Aquaculture and NES: Marine Aquaculture	Prepare both an NZCPS: Marine Aquaculture to set objectives and policies, and an NES: Marine Aquaculture to set rules.	Partially better	Better	Better	Better	Worse	Worse
		In addition to relevant NZCPS 2010 policies, an NZCPS: Marine Aquaculture would provide more specific and targeted policy to guide replacement consents for existing marine farms, change of species and on-farm biosecurity NES provisions. Differences in regional council interpretation of objectives and policies in an NZCPS: Marine Aquaculture may be translated into decision making on consent applications, reducing clarity for all parties. Would ensure consistency through introduction of one set of rules and standards for marine farming replacement consents and change of species, and provide certainty about activity status and matters that will be considered in making decisions on consent applications. A national framework for on-farm biosecurity management under the RMA would be achieved. Councils would be able to prescribe controlled activity status where appropriate planning has occurred. This would reduce consistency but increase certainty of process. As regional plans are reviewed, the NZCPS and NES would continue to apply, maintaining a consistent approach albeit with some potential reduction in clarity of decision making as discussed above.				NZCPS: Marine Aquaculture would reinforce need to undertake strategic planning and NES provisions would support any future planning that identifies areas that are appropriate or inappropriate for aquaculture.	Compared to NES standalone option, this option would take longer to implement because associated regional plan changes could be a lengthy process. Benefits of the NES expected to exceed its costs, but additional costs of developing and implementing an NZCPS are expected to be greater than its marginal benefits. Overall, costs of this option are expected to exceed benefits.

Option	Description	Assessment Criteria					
		First order				Second order	
		<i>Delivers consistency</i>	<i>Increases certainty around consenting processes and requirements</i>	<i>Improves management of on-farm biosecurity risks</i>	<i>Recognises future strategic planning for aquaculture</i>	<i>Effectiveness Timeliness/ Implementation</i>	<i>Efficiency: Extent to which benefits exceed costs</i>
Minister for the Environment directed plan changes (s.25A)	Minister to direct regional councils to prepare a plan change to provide for replacement consents for existing marine farms and biosecurity management.	Partially better, at least initially			No difference	Worse	Worse
		Could achieve a fairly high level of consistency, but differing council drafting, interpretation and the outcome of RMA Schedule 1 consultation processes might lead to variation. Has the potential to improve certainty, depending on how the final outcome of directed plan changes following RMA Schedule 1 process and on how plan changes are implemented. Consistency would be likely to decrease over time as plans are reviewed.			Plan changes can only apply to the current plan.	Plan changes go through normal RMA process (Schedule 1) which must be done for all relevant regions, and could be onerous.	Development of plan changes by each region is not likely to be an efficient option and would be costly for councils, industry and submitters.
Minister for Aquaculture regulations (s360A)	Amends provisions in regional coastal plans that relate to aquaculture.	Partially better, at least initially			No difference	Worse	Worse
		Would achieve a high level of consistency and certainty initially through introduction of prescriptive planning and consenting rules for existing marine farms and on-farm biosecurity management in each regional coastal plan. Consistency would be likely to decrease over time as plans are reviewed.			Regulations can only amend current plans.	Requires Minister-established consultation process. Implementation is expected to be complex as regulations must be customised to each regional plan, and protracted compared to some other options.	Inefficient due to high implementation costs and outcomes that are not future proof.

76. The following options were also assessed, but are not considered viable:

<i>NZCPS: Marine Aquaculture</i> An NZCPS with specific objectives and policies for marine aquaculture has the potential to provide a more nationally consistent policy approach to how aquaculture activities are addressed by councils in regional policy statements and coastal plans. As noted above, local interpretation and implementation could still lead to different approaches across regional councils reducing its effectiveness and efficiency. In this regard, a standalone NZCPS: Marine Aquaculture would only partially achieve regulatory and process certainty for the aquaculture industry and partially improve on-farm biosecurity management. It could reinforce the need to undertake strategic planning for aquaculture, but this is already directed under the NZCPS 2010. Extended timeframes associated with implementing the national objectives and policies through changes to regional coastal plans make it less likely that rule changes will be completed prior to 2024. It is considered unlikely that benefits would exceed costs given the potential variable outcomes resulting from regional planning and extended timeframes before changes are in effect.
<i>Amend NZCPS 2010</i> The NZCPS 2010 could be amended to more explicitly provide for recognising existing aquaculture, and greater direction of how farms in outstanding areas should be treated. Amendments to the NZCPS 2010 must go through the same process as a new NZCPS, followed by regional council processes. As a standalone option this would not meet the criteria because it could not deliver greater certainty of process: there would continue to be variability in regional council implementation of the amended policies. Amending the NZCPS 2010 is likely to be complex and costly, and implementation through changes to regional coastal plans is unlikely to be able to be completed within the timeframes required. This option is not considered effective or efficient, particularly given the ongoing effectiveness review of the NZCPS 2010 as a whole. It is expected to have significant costs and minor benefits.
<i>Minister amendment of plans prior to approval</i> Clause 19, Schedule 1 of the RMA allows the Minister of Conservation to amend regional coastal plans prior to approval. Clause 19 may be used to make amendments to plans, but while the Minister has the option, it has not been used to make substantive changes to plans. This option could achieve a high level of certainty through prescriptive amendments, but can only be used at the end of a plan review process. Until those plan reviews are initiated there would be ongoing uncertainty about the process for considering application for replacement consents for existing marine farms and changes of species, and incomplete management of biosecurity risks. Implementation would also be complex and time consuming as issues would need to be considered on a region by region basis. It is very unlikely that rules for all relevant regional plans could be in place before 2024.

National planning standards

The Resource Legislation Amendment Act provides for national planning standards. These standards are designed to set nationally consistent parameters (structure, format or content) for regional policy statements and plans to support implementation of national environmental standards, national policy statements, New Zealand coastal policy statements or regulations made under the RMA. National planning standards may specify objectives, policies and rules to be included in plans. The first set of national planning standards are to be minimum requirements for the structure and form of policy statements and plans, definitions and electronic functionality and accessibility of policy statements. Planning standards need to be translated into plans before they have effect however, and any national planning standards for aquaculture would not be able to be prepared until the first set of standards has been prepared. This option would therefore not offer a timely response to the problems identified.

Legislative reform

The government could propose amendments to the RMA and Fisheries Act or develop new aquaculture-specific legislation to stabilise existing aquaculture production. While this would provide a high level of consistency and certainty through prescriptive statutory provisions, it might not allow for regional planning (particularly the strategic planning for the coastal environment envisaged by Policy 7 of the NZCPS 2010) and it would separate consideration of aquaculture from other activities and uses of the coastal environment.

Development of new legislation or changes to legislation is likely to be complex, costly and unable to be completed within the timeframes required. Costs are expected to exceed benefits.

Guidance material

Central government could prepare national guidance material setting out matters that should be considered for replacement consents or change of species and the approach to notification. Initial guidance has already been developed in relation to biosecurity management plans through MPI's *Biosecurity Handbook* and the aquaculture industry's A+ programme.

Preparation of guidance material can partially meet all the first order criteria, but is not considered to be effective or efficient as a standalone option. Regional variation in interpretation and implementation is still likely, unless guidance is very directive. The non-statutory and voluntary nature of guidance ultimately limits its ability on its own to ensure a consistent and effective approach to the problems discussed in section 3.

Guidance would be a useful complementary measure to support statutory or regulatory approaches. It can be developed in a relatively short time frame and generally at low cost, with significant benefits in terms of supporting implementation.

Enhanced central government participation in regional processes

The government could increase its involvement in regional planning and continue to make submissions to regional councils on second generation plans and on consent applications where necessary, in an attempt to have greater influence over the outcome. Any submissions would still be subject to council decisions however, and therefore may not increase certainty about consenting processes or requirements.

This option has medium costs, but benefits would be uncertain due to variable outcomes.
<i>Use Aquaculture Planning Fund to assist with upfront planning</i>
Strategic planning for aquaculture could be encouraged, and funding provided, through MPI's Aquaculture Planning Fund. Work is already underway to identify projects that might be suitable to support, but this is unlikely to be a viable standalone option. Strategic planning would still be completed by each regional council, and may continue to result in differing consenting processes and requirements. This option will not deal with improving on-farm biosecurity.
<i>Industry standards</i>
The <i>A+ Sustainable Aquaculture Framework</i> is a voluntary standard that promotes best practice, including biosecurity measures. It provides high level guidance for salmon, oyster and mussel farming. As a standalone measure it cannot contribute to increasing process certainty for replacement consents for existing marine farms, and because of its voluntary nature it cannot ensure comprehensive uptake of biosecurity management measures.

77. Appendix 1 summarises the assessment of all possible solutions.

5.3. Preferred option: national environmental standard with complementary measures

78. Based on this assessment, an NES: Marine Aquaculture is identified as the preferred option to address the problem and achieve the policy objective. Complementary measures, including guidance material on NES implementation and on-farm biosecurity and use of the Aquaculture Planning Fund, would support implementation and enhance outcomes. A list of guidance topics is being developed, however, feedback on the type of guidance and training would be sought during consultation.
79. An NES meets all of the assessment criteria and is preferred over all other options for its ability to:
- provide prescriptive national direction in a way that can provide consistency, efficiency, and certainty of process while ensuring aquaculture is managed within environmental limits, especially in relation to replacement consents, and
 - be implemented in a timely manner.
80. A significant advantage of an NES is that it can be implemented in a timely and effective manner. Following consultation and the completion of an RMA s32 evaluation report for the proposed regulations, if a decision is made to proceed with an NES it can be prepared and Gazetted within relatively short timeframes when compared to the RMA Schedule 1 process for regional coastal plans or development of an NZCPS: Marine Aquaculture and its implementation through changes to regional coastal plans. A consistent approach to replacement consents for existing marine farms can therefore be established well before the majority of current consents expire, and address uncertainty of process and improve investment confidence in the aquaculture industry.
81. An NES could provide greater clarity of the interpretation of the NZCPS 2010 in relation to outstanding areas by separating specific criteria for farms within an outstanding area.

This would make the consenting path for the 82% of farms outside outstanding areas under current operative plans more certain.

82. Guidance is being developed by MfE to standardise the approach to landscape assessments. Reviewing the NZCPS 2010 in respect of aquaculture while a wider effectiveness review of the whole NZCPS 2010 is underway would be inefficient, and would not allow for a coordinated approach between any potential changes to policies.
83. Future strategic planning, including community participation, for aquaculture can be supported through the NES provisions. An NES can therefore support the existing policies of the NZCPS 2010 and assist its implementation with regard to strategic planning for aquaculture.
84. The NES: Marine Aquaculture has a cost in terms of reduced public input on consent applications for existing farms. Where councils have undertaken strategic planning and identified areas where aquaculture is inappropriate, public input is not precluded on applications for replacement consents in these areas.
85. Further details on the benefits and costs of the proposed NES are set out in section 7.

6. Proposed NES: Marine Aquaculture

86. The proposed NES: Marine Aquaculture would address replacement consents for existing farms (including some limited opportunities for realignment), species changes for existing farms, and the preparation and implementation of on-farm biosecurity management plans for all marine farms.
87. The proposed NES does not address industry growth outside of existing space, or creation of new space for aquaculture. These are government priorities, but will be addressed separately.

Replacement consents (re-consenting)

88. An application for a replacement consent for an existing marine farm in the same location, occupying the same area (or less), with structures and anchoring systems that are materially the same, and farming the same species, would be a restricted discretionary activity without public notification. Councils would be able to set controlled activity status for existing farms through their regional planning processes.
89. Although replacement consents would be non-notified, tangata whenua with Statutory Acknowledgements in the relevant area would be notified if regional councils determined that they were affected parties to a replacement consent application.
90. The matters of discretion would be limited and focused on adverse effects on seabed features, marine mammals and seabirds; timing of occupation in relation to seasonal activities; public access and navigation; biosecurity; and management of rubbish, noise and debris. For farms within²¹ outstanding areas there would be an additional matter of discretion relating to effects of the activity on the values and characteristics that make the area outstanding.
91. For marine farms that use supplementary feeding there would be additional matters of discretion, including conditions to manage water quality and benthic effects; effects on

²¹ 'Within' is defined as a marine farm that has more than 1% of its consented area within an identified and mapped outstanding area.

the seabed away from the farm; use of additives, antibiotics, therapeutants and antifouling; underwater lighting and discharges of odour.

92. The discussion document seeks feedback on whether there should be special provision for replacement consents for particular sites of strategic importance to aquaculture. For instance, the Wainui Bay spat catching farms in Golden Bay are of national importance to the mussel farming industry²² and are located in an area where outstanding values are contested.
93. Areas specifically zoned for aquaculture in Tasman and Waikato would be exempted from the replacement consent rules. These areas are specifically zoned for aquaculture and have an overall planning and consenting structure that aims to manage cumulative effects, so it is not seen as appropriate or necessary to alter the rules through the NES: Marine Aquaculture.

Recognising future planning by regional councils

94. The NES: Marine Aquaculture would support future planning for aquaculture by regional councils to determine where aquaculture is appropriate and where it is inappropriate. Communities will therefore continue to have a central role in determining the overall areas that are available for marine farming.
95. If a council-led regional coastal planning process identifies an area where aquaculture is inappropriate, the proposed NES would recognise and support this. It is proposed that a discretionary activity rule be included in the proposed NES for existing marine farms that may, in the future, be determined to be in inappropriate locations.
96. The NES would, in effect, encourage community input to the plan-making stage and require strategic decisions about the appropriateness of particular locations for aquaculture to be made upfront.
97. Farms identified in either operative or proposed plans as being in outstanding areas would be considered under the outstanding area matter of discretion in the NES. This would recognise instances where more up-to-date assessments have identified different outstanding areas.

Realignment

98. To provide flexibility for situations where shifts in the boundaries of a marine farm would result in better environmental outcomes, the NES: Marine Aquaculture would provide for realignment of up to one third of a farm. This is limited to marine farms that are less than 10 hectares and excludes marine farms for fed aquaculture. To prevent farms incrementally entirely relocating from their original site, the realignment provision can only be exercised once every 5 years.
99. Applications for realignment would also be restricted discretionary activities, and allow additional discretion in relation to effects on historic heritage, seabirds, marine mammals and benthic values. Councils would determine whether or not to notify these applications. In addition, realignment would shift farms over space that has not previously been farmed so applications would be subject to the Undue Adverse Effects test evaluating impacts on customary, recreational and commercial fishing in respect of the new space.

²² These farms provide about half of the spat used for mussel farming in Marlborough and Tasman: mussels grown from Wainui Bay spat account for an estimated \$126 million in annual revenue.

Changes in species (on-farm innovation)

100. With innovation in technology there is potential for marine farmers to add value by changing the species farmed. A farmer may wish to add species or completely change the species farmed.
101. The proposed NES: Marine Aquaculture provides a framework for applications for replacement consents for existing farms to include changes in species (and associated changes in structures) on existing marine farms based on four categories²³ of change. These applications would also be restricted discretionary activities. The matters of discretion would be equivalent to those that would apply to applications for replacement consents for existing marine farms, and include additional matters to account for the effects of changing species on a marine farm.
102. This framework will provide some increased certainty and efficiency of process for marine farmers, while ensuring that environmental and social effects are still taken into account as necessary. It will also allow flexibility for farmers to diversify their farming operations at the time of applying for replacement consents and may enable more efficient use of consented space.
103. As with replacement consents for existing farms, it is proposed that councils can set controlled activity status through their regional planning processes.

On-farm biosecurity

104. The NES: Marine Aquaculture would implement a nationwide approach to managing on-farm biosecurity risks, benefitting both the industry and New Zealand's marine environment. It would ensure consistent and effective biosecurity management practices at each marine farm site.
105. All marine farms would be required to prepare, implement and regularly update an approved biosecurity management plan. Biosecurity management plans would be tailored to address the specific biosecurity risks of each farm (e.g. type of species farmed, the location and operational requirements). It would be possible for 'global' biosecurity management plans could be prepared for multiple sites where there are commonalities between farms (e.g. for mussel farms in Beatrix Bay, Marlborough Sounds). Once the NES is Gazetted, any new marine farms would be required to have an approved biosecurity management plan before a coastal permit is granted. All existing marine farms must have biosecurity management plans by 31 January 2025 at

²³ The four categories are:

- Category 1: Species changes that do not require changes to existing structures (for example adding clams to an existing Pacific oyster farm).
- Category 2: Species changes that require changes to sub-surface structures (for example converting some mussel lines to scallop baskets).
- Category 3: Species changes that require changes to any of the structures (for example installing geoduck tubes underneath an existing mussel farm).
- Category 4: Species changes to finfish farms (for example adding mussel lines around the edge of salmon pens, or farming sea cucumbers underneath a salmon farm).

the latest. The council must initiate a consent review process for any existing farms that have not applied for a replacement consent before 2025.

106. Criteria for the preparation and assessment of biosecurity management plans will be set out in a separate document and incorporated into the NES by reference using the processes in Schedule 1AA of the RMA. MPI will work closely with biosecurity experts to develop the externally referenced document well in advance of the NES being Gazetted. It will be informed by current best practice, the *Aquaculture Biosecurity Handbook*²⁴ and associated technical reports.²⁵ Referencing an external document means that updates to biosecurity requirements can be made by *Gazette* rather than needing to change the NES.

7. Cost benefit analysis

107. A preliminary qualitative and quantitative assessment of the proposed NES: Marine Aquaculture has been undertaken. NZIER was commissioned to carry out a preliminary economic analysis²⁶ of a proposed national direction for aquaculture encompassing replacement consents, species changes, and on-farm biosecurity.²⁷ This is now developed as the proposed NES: Marine Aquaculture.
108. NZIER concluded that the estimated benefits outweigh the estimated costs. The results are sensitive to assumptions about the impact of the proposed NES on certainty around council processes, so low and high scenarios were developed and sensitivity analyses were carried out.
109. NZIER indicated that most of the costs associated with the proposed NES can be estimated with a reasonable degree of certainty. However, because of the lack of New Zealand data it is difficult to determine and quantify the benefits with great confidence. Hence NZIER's figures should be regarded as an order of magnitude calculations rather than a definitive measure. Details of the costs and benefits are discussed below.
110. NZIER's analysis was based on some key assumptions and constraints:
- The analysis assumes that the NES will bring clarity to the role of the NZCPS 2010, especially in relation to replacement consents for farms in or near outstanding areas.²⁸
 - There are limitations in the quantified analysis due to the limited information available. The robustness of the analysis is influenced by the potential bias in the information provided and the potential magnitude of unquantified costs and benefits, such as uncertainty about the environmental impacts of the new national direction.
 - Because of the complexity of the biological systems, it is impossible to calculate the impact of considering innovation and biosecurity initiatives with great accuracy.

²⁴ *Aquaculture Biosecurity Handbook*. July 2016. <https://www.mpi.govt.nz/document-vault/13293>

²⁵ *Options to Strengthen On-farm Biosecurity Management for Commercial and Non-Commercial Aquaculture*. July 2016. Technical Paper No: 2016/47. <https://www.mpi.govt.nz/document-vault/13287>

²⁶ NZIER 2017

²⁷ Costs and benefits of providing for realignment have not been included in the analysis, but are not expected to alter the overall conclusion that benefits exceed costs due to the very large benefit associated with reducing regulatory uncertainty around replacement consents.

²⁸ As a proxy of benefits foregone, NZIER use a range of 1% to 2% of future production between 2017 and 2025.

111. More detailed evaluation of alternatives, benefits and costs will be undertaken on the final NES proposal following consultation.

7.1 Estimated costs and benefits

112. NZIER estimated costs and benefits of national direction under 'low' and 'high' scenarios to illustrate the potential range under different assumptions.²⁹ The analysis takes into account that the benefits from national direction would occur over a number of years, and considers the effects over 20 years.

113. Sensitivity analyses were also carried out, focussing on changes to the benefits since these are large compared to the costs. In all cases, benefits exceed the costs by a substantial margin. NZIER analysed readily quantifiable and valued effects, and qualitatively described those effects which are not readily quantified or valued.

114. NZIER concludes that the main benefits of national direction are:

- A small to medium benefit associated with streamlined consenting processes, and
- A large benefit associated with reducing regulatory uncertainty.

115. The main estimated costs of national direction are the cost of plan changes to give effect to the new rules.

116. The costs and benefits are summarised in **Table 7.1 and 7.2**.

Table 7.1. Costs and benefits of national direction, present value dollars

	Low scenario	High scenario	Comment
Costs	\$2.6 m	\$3.9 m	Administrative costs, plan changes and associated costs to industry and central government
Benefits	\$40.6 m	\$80.1 m	Impact of reducing investment uncertainty and streamlining consent procedures for existing aquaculture
Net benefit	\$38.0 m	\$76.3 m	
Benefit/cost ratio	15.9	20.8	

Table 7.2. Sensitivity analyses, present value dollars

	Reduce benefits by 25%		Halve certainty benefit	
	Low scenario	High scenario	Low scenario	High scenario
Costs	\$2.6 m	\$3.9 m	\$2.6m	\$3.9m
Benefits	\$30.5m	\$60.1m	\$23.2m	\$45.3m
Net benefit	\$27.9m	\$56.3m	\$20.6m	\$41.4m
Benefit/cost ratio	12.0	15.6	9.1	11.7

²⁹ The assumptions made for these scenarios are set out in a 'Commercial in confidence' annex to the NZIER (2017) report

7.2.1 Costs

117. In developing cost estimates, NZIER made the following assumptions:

- i. The main driver of cost would be the changes associated with replacement consent processes and adjustments which would be made by councils, industry, communities, environmental groups and Iwi. Plan change costs would be incurred over a 7 year period commencing in 2019.
- ii. Costs would also be incurred when the NES is put in place – there will be on-going costs associated with implementation, both nationally and locally. There may also be additional potential costs associated with any judicial review.
- iii. A discount rate of 8% was used in line with standard Treasury guidance (varying the discount rate had little impact on the analysis).
- iv. A 20-year planning horizon was used to reflect the long term approach required for aquaculture management.

118. NZIER estimated the total cost of plan changes to be between \$1.0m and \$2.5m (2017 dollars). Where farms are situated in outstanding areas further assessments will be required³⁰ and these costs are estimated to be nearly \$720,000. Other costs include council staff training, biosecurity monitoring and central government costs. Overall the estimated cost of introducing national direction ranges between \$2.6m and \$3.9m, in 2017 dollars.

7.2.2 Benefits

119. In developing benefit estimates, NZIER made the following assumptions:

- i. The main driver of benefits is reduction in uncertainty within the aquaculture industry. As uncertainty increases the price an investor is willing to pay for an asset such as a marine farm falls. To illustrate the benefit foregone, NZIER have used figures of 1% and 2% of future production between 2017 and 2025 to show the size of the economic benefit that could be lost because of regulatory uncertainty. This is expected to be at the lower end of the benefits foregone.
- ii. National direction will improve consistency of process and reduce ambiguity thereby reducing costs associated with hearings and appeals to the Environment Court.

120. Overall the estimated benefits of national direction range from \$40m to \$80m (2017 dollars), comprising:

- i. Estimated benefits associated with increased certainty, ranging from \$35m to \$79m. The reduction in uncertainty is likely to have an immediate effect on investment decisions in the form of an ‘announcement effect’.
- ii. Estimated benefits associated with streamlining processes for replacement consents, ranging from \$5.7m to \$10.4m. These are estimated savings compared to the status quo³¹ and are assumed to occur over the period 2020 to 2025.

³⁰ These are in fact costs associated with the NZCPS 2010. The savings in costs to farms that are adjacent to outstanding areas and not required to undertake landscape assessments are a benefit of the proposed NES.

³¹ Aquaculture Direct (2016) Costs of Renewing Marine Farm Resource Consents. Report prepared for Aquaculture New Zealand, February 2016. The paper originally put the cost at \$42 million, but a peer review (Britton R (2016) suggested improvements to the estimate which increased the costs to \$50.3 million.

7. 3 Summary of impacts on environment and stakeholders

7.3.1 Environment

Benefits

- 121. Environmental benefits would arise from the proposed NES ensuring the key effects of aquaculture are appropriately managed through relevant matters of discretion. This should lead to improved environmental outcomes over time, particularly as marine farms operating under deemed coastal permits apply for replacement consents. For these farms, the replacement consent application will be the first time they have undertaken an assessment of environmental effects under the RMA.
- 122. There would also be environmental benefits through the proposed NES enabling the realignment of existing farms (e.g. if an existing marine farm was partially located over a reef it would be able to realign to a more suitable position).
- 123. Improved and more consistent biosecurity management is a key environmental benefit as it is intended to reduce threats from biosecurity incursions.

Costs

- 124. There is a risk that local environmental issues could be under-valued at the consenting stage, but only if regional councils hold different views to the community or where there is local concern about the impact of marine farms just beyond the boundaries of outstanding areas. However, local concerns can be expressed at the plan-making stage by assessing the appropriateness of aquaculture.

7.3.2 Regional councils

Benefits

- 125. Greater certainty provided by the proposed NES would lead to more straightforward consent processing for existing marine farms which should reduce costs and delays to regional councils. The simplified process would be particularly beneficial and provide efficiencies to regional councils during times when consent expiries spike (e.g. 2024/25 in some regions).
- 126. The proposed NES would enable plans to be more lenient so where regional councils and communities have appropriately planned for aquaculture a controlled activity status can be used.
- 127. The realignment provisions would better and more efficiently enable councils and marine farmers to address site specific concerns regarding the placement of certain farms.
- 128. Regional councils would benefit from a nationally consistent biosecurity management regime, particularly through the implementation guidance to ensure biosecurity management plans are effectively developed, assessed and audited.

Costs

- 129. Councils would need to become familiar with the NES and implement it (such as staff training). These are transitional costs and are likely to be negligible (with the exception of biosecurity, which is discussed further below).

130. Some regional councils may choose to initiate specific plan changes to ensure their plan rules are fully consistent with the NES to avoid confusion. It is important to note that many regional councils are scheduled to undertake coastal plan reviews in the next few years so it is likely these councils would incorporate any changes in response to the NES into the wider coastal plan review. This review would include strategic planning for where aquaculture should be located, as required by NZCPS 2010. NZIER estimates the total cost to all councils for implementation is likely to be between \$1m and \$2.5m over a seven year period. The Aquaculture Planning Fund will be used to offset some of these costs.
131. Costs associated with implementation of the biosecurity component of the NES: Marine Aquaculture are largely around the assessment of biosecurity management plans (i.e. increasing capability and capacity within council where necessary, or contracting this out to relevant experts). Most of these costs are recoverable under the RMA. However, there would be non-recoverable costs to some councils (and ultimately ratepayers) in 2025 where the council has to initiate a review of consent conditions to ensure all marine farms have an effective biosecurity management plan in place.
132. In addition, NZIER estimates that councils would face additional learning costs on how to approach and manage biosecurity issues, estimated to be \$209,000 nationally spread over two years.

7.3.3 Aquaculture industry

Benefits

133. The biggest benefit of the NES: Marine Aquaculture for the aquaculture industry³² would arise from the greater certainty and efficiency about the process for replacement consents for existing marine farms through nationally consistent activity status, matters of discretion and notification requirements, and clear direction on marine farms in and adjacent to outstanding areas. This would also lead to a reduction in some of the predicted costs associated with the consenting process (in some cases completely), and a reduction in costs associated with Environment Court appeals.
134. The proposed NES would enable plans to be more lenient so where regional councils and communities have appropriately planned for aquaculture, a controlled activity status can be used – this would provide even greater certainty for marine farmers.
135. Increased certainty would have an immediate stabilising effect and would give industry the opportunity to turn attention to investment in new opportunities for growth such as better use of existing space, value-added production, marketing and new technologies and species. NZIER estimates the benefit of the proposed NES with regard to replacement consents for existing marine farms would be between \$40m and \$80m.
136. For larger industry corporations a benefit would accrue from the consistent approach to replacement consents for existing marine farms across regions. This is important as the aquaculture industry is becoming increasingly rationalised around a small number of large players whose operations extend over multiple regions.
137. Enabling simpler transition into new (and potentially higher value) species on existing farms would allow for innovative responses to changes in markets and would improve

³² Including tangata whenua interests, individual marine farmers, larger corporations and industry representatives (e.g. Aquaculture NZ)

industry flexibility (e.g. farming of different species subject to environmental constraints).

138. Industry would benefit from a consistent approach to biosecurity management across regions. Managing biosecurity risks is fundamental to the ongoing sustainability of aquaculture in New Zealand. The long term benefits of biosecurity are difficult to predict, but are potentially significant if they prevent, or enable early detection and containment of, significant disease incursions.

Costs

139. The industry would potentially face increased costs when engaging in planning processes, particularly around where aquaculture is appropriate and the extent of outstanding areas. However, this increase is likely to be negligible as it would be offset by not having to submit on the matters prescribed by the proposed NES (i.e. a narrower range of matters would be up for debate).
140. The impact on existing marine farms of the values and characteristics of outstanding areas will remain unknown until replacement consents are applied for and future specific landscape studies have been undertaken on the interaction of marine farms and specific outstanding areas (for example, as has occurred through the Auckland Unitary Plan). This is occurring to varying degrees in second generation planning and replacement consenting currently underway across the country.
141. The industry would bear a small cost to prepare and implement biosecurity management plans, however this would be negligible to most marine farmers, especially those covered by the 'global' biosecurity management plans which would be developed by Aquaculture New Zealand. There would be an ongoing cost to industry associated with the monitoring and auditing of biosecurity management plans, however these costs should reduce over time as knowledge increases and processes are standardised.

7.3.4 Costs and benefits to government

Benefits

142. The government benefits through an NES that supports its aquaculture policies and biosecurity objectives, and that supports the purpose of the RMA. The government also benefits from the efficiency of addressing this issue through an NES rather than through a series of repeated regional plan changes.

Costs

143. The government would face implementation costs, including liaising with councils, producing guidance material, monitoring implementation and effectiveness of the proposed NES. It is estimated that this would cost \$300,000, spread over four years.
144. The government would also face ongoing engagement in regional coastal plans (particularly by DOC and MPI). Any increase in cost would be negligible as it already occurs and would continue given the role of agencies in supporting planning for aquaculture under NZCPS 2010.

7.4 Other impacts and risks

Trade-off between local decision-making and national consistency

145. Loss of local decision making and knowledge of local conditions may be a concern for some communities and councils. The proposed NES: Marine Aquaculture allows communities and councils to continue to identify and plan areas where aquaculture is appropriate and where it is inappropriate, but does restrict a council's discretion over whether to grant a replacement consent to an existing farm to a limited set of criteria. This aims to focus community input to the plan reviewing stage. The proposal will give effect to Statutory Acknowledgements to recognise Iwi interests on a consent by consent basis.

Outstanding areas

146. National direction seeks to implement a pragmatic approach to marine farms in and adjacent to outstanding areas. When a farm has structures within an outstanding area, the effects of the farm on the values which make the area outstanding will be a matter of discretion for replacement consents. This is not a matter of discretion for replacement consents for farms adjacent to or clearly outside outstanding areas.

Ability to set controlled activity status

147. Under the proposed NES, where councils have undertaken adequate upfront planning as part of the development or review of regional coastal plans to determine appropriate controls on aquaculture they may set a controlled activity status. This is less stringent than the restricted discretionary status proposed under the NES, and provides the industry with greater certainty. For example, in Northland replacement consents have controlled activity status.³³

Ability to accommodate future planning

148. Where councils undertake future planning to identify areas which are inappropriate for aquaculture, the NES would provide that any existing farms in these areas have discretionary activity status. This means that when applying for replacement consents, the matters of discretion will not be restricted and regional councils may have grounds under the provisions of their coastal plan to refuse to grant new consents.

Cost and benefits for Iwi

149. Iwi aquaculture interests would benefit through increased regulatory and process certainty. Where Iwi have taken authorisations for aquaculture space (rather than cash) under the Maori Aquaculture Settlement, the proposed NES will enhance the value of their settlement through reduced uncertainty relating to replacement consents and clearer provisions for species changes at the time of applying for replacement consents. Iwi will bear costs associated with developing and implementing biosecurity management plans, however they are also the beneficiaries of a comprehensive management framework that enables effective response to incursions.
150. Tangata whenua values are also likely to be relevant when considering applications for replacement consents for existing marine farms. The extent of effects on tangata

³³ The ability for an NES to allow councils to set a more lenient activity status was introduced in the recent amendments to the Resource Management Act.

whenua may vary with location and type of aquaculture, and input will be sought through targeted hui with iwi authorities at the same time as the more general public consultation process on the proposed NES as to what these matters should be.

Ability to recognise sites of particular importance

151. There may be concern that making special provision to recognise sites of particular importance could be used for a large number of sites that the industry identifies as of 'particular importance', possibly leading to erosion of other significant values in those areas. In relation to Wainui Bay, it could also be seen as pre-empting a decision that is currently before the Environment Court.

8. Consultation

152. To assist with development of the proposals, MPI working with the Ministry for the Environment and Department of Conservation, convened an Expert Reference Group comprising members of the aquaculture industry,³⁴ regional councils,³⁵ Te Ohu Kaimoana (the Aquaculture Settlement trustee, representing Iwi interests), and the Environmental Defence Society.
153. The Reference Group met nine times between August 2015 and April 2017. Various proposals were tested on an iterative basis with the Reference Group before arriving at the proposed NES: Marine Aquaculture. The Reference Group was supportive of the proposals, although the aquaculture industry also wanted to have an accompanying New Zealand Coastal Policy Statement to guide future development of the industry. The Reference Group did not have an opportunity to comment on whether there should be special provision for replacement consents for sites of particular importance to aquaculture.
154. MPI also undertook early engagement on the proposals with regional councils and Iwi in the major aquaculture regions in September 2016.

9. Conclusions and recommendations

155. MPI recommend proceeding to consultation with the public and iwi authorities on a proposed NES under section 46A(4) of the RMA.
156. If Cabinet decides to consult the public and iwi authorities, MPI would carry out formal consultation over 8 weeks. This would involve release of a public discussion document, public meetings and hui with iwi authorities. Following consultation, a report would be prepared for Ministers on submissions received and final recommendations. This report would be accompanied by an updated regulatory impact statement and an evaluation report as required under Section 32 of the RMA.

³⁴ Sanford, New Zealand King Salmon, Aquaculture New Zealand, Marine Farmers Association

³⁵ Environment Southland, Bay of Plenty Regional Council, Waikato Regional Council, Marlborough District Council

10. Implementation plan

157. If an NES: Marine Aquaculture is approved, regional authorities (and unitary authorities) will be required to give effect to and enforce it under s44A(8) of the RMA.
158. Regional councils, central government and industry will be responsible for implementing the NES in relation to biosecurity management plans for marine farms. The proposed NES requires a co-ordinated approach between all three in order to be most effective and ensure that it integrates with the requirements of the Biosecurity Act.
159. It is intended that the regulation would come into force immediately after being publicly notified in the *New Zealand Gazette*. Subject to the outcome of consultation and final Cabinet approval, MPI anticipates that the regulations would be Gazetted and come into effect by mid-2018.
160. MPI would undertake ongoing monitoring to assess the effectiveness of the proposed NES at addressing the problems that have been identified. MPI would also continue to develop and implement guidance material to assist regional councils, the community and the aquaculture industry to implement the NES.

11. Monitoring, evaluation and review

161. MPI will lead the monitoring, evaluation and review of the NES. At this stage the framework for this (set out below) is indicative. It is designed to evaluate how the NES meets the objectives at different stages of its implementation.

Implementation

162. The process of implementation will be evaluated to highlight areas of concern or where additional resources are required. The implementation phase has been designed to provide information and guidance to regional councils and the aquaculture industry. Monitoring will focus on the effectiveness of the support. Evaluation of this phase will begin as soon as implementation activities commence.

Impact evaluation

163. Within 1 to 2 years of implementation an evaluation of impacts will be undertaken to determine the extent to which key objectives are being achieved. In particular, monitoring and evaluation will focus on:
 - i. Costs of replacement consents
 - ii. Uptake and costs of provisions allowing for species changes
 - iii. Uptake and costs of provisions allowing for boundary realignment

164. It will also be necessary to continually monitor, and assist with, implementation of the proposed biosecurity measures.

Outcome Evaluation

165. By mid-2025, an evaluation of the longer term goals will be undertaken looking at the effect of regulatory and process certainty on investment in the aquaculture industry.

References

Aquaculture Direct (2016) *Costs of Renewing Marine Farm Resource Consents*. Report prepared for Aquaculture New Zealand, February 2016.

Baines and Quigley (2016) *The Social and Community Effects of Salmon Farming and Rearing: A case study of the Top of the South Island*

Britton R (2016) *Peer review of: Costs of Renewing Marine Farm Resource Consents*. Report prepared for Ministry for Primary Industries, July 2016.

Ernst & Young (2013) *New Zealand Aquaculture: Industry Growth Scenarios, 2013 update*. Report prepared for Aquaculture New Zealand.

Ernst and Young (2014) *New Zealand Aquaculture: Potential financial and economic impacts of 2014 Supreme Court decision*. Report prepared for Aquaculture New Zealand.

MPI (2012) *Aquaculture Legislative Reforms 2011 Guidance Note 4 Re-Consenting Aquaculture*, October 2012

MWH (2016) *National Direction for Aquaculture Biosecurity – A Think Piece*. Preliminary report prepared for Ministry for Primary Industries, September 2016.

NZIER (2015) *NZIER overview of the impacts of re-consenting uncertainty and delay on aquaculture investment in New Zealand*. Memo to Aquaculture New Zealand.

NZIER (2017) *Proposed new national direction in aquaculture: a preliminary economic analysis*. Report prepared for Ministry for Primary Industries, March 2017.

Appendix 1. Summary of assessment of status quo and all identified possible solutions

Option	First order criteria			Second order criteria		
	<i>Delivers consistency</i>	<i>Increases certainty</i>	<i>Improves on-farm biosecurity management</i>	<i>Recognises future planning</i>	<i>Effectiveness</i>	<i>Efficiency</i>
Status quo	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>
Viabile options						
NES: Marine Aquaculture	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Better</i>
NZCPS and NES: Marine Aquaculture	<i>Partially better</i>	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Worse</i>	<i>Worse</i>
Minister for Environment directed plan changes	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>Worse</i>	<i>Worse</i>
Minister for Aquaculture regulations	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>Worse</i>	<i>Worse</i>
Non-viable options						
NZCPS: Marine Aquaculture	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>No difference</i>	<i>Worse</i>	<i>Worse</i>
Amend NZCPS 2010	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>Worse</i>	<i>Worse</i>
Minister of Conservation amendment of plans	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>Worse</i>	<i>Worse</i>
Legislative reform	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Worse</i>	<i>Worse</i>	<i>Worse</i>
National planning standard	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Better</i>	<i>Worse</i>	<i>Worse</i>
Guidance material	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>
Enhanced Government participation	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>Partially better</i>	<i>No difference</i>	<i>Worse</i>
Aquaculture Planning Fund	<i>No difference</i>	<i>Partially better</i>	<i>No difference</i>	<i>Better</i>	<i>No difference</i>	<i>No difference</i>
Industry standards	<i>Partially better</i>	<i>No difference</i>	<i>Partially better</i>	<i>No difference</i>	<i>No difference</i>	<i>No difference</i>

