

Submission

MPI: Notes in response to the Proposal by Government to extend the duration of existing consents for marine farming

11 March 2024

About the Institute

The McGuinness Institute was founded in 2004 as a non-partisan think tank working towards a sustainable future for Aotearoa New Zealand. *Project 2058* is the Institute's flagship project focusing on Aotearoa New Zealand's long-term future. Because of our observation that foresight drives strategy, strategy requires reporting, and reporting shapes foresight, the Institute developed three interlinking policy projects: *ForesightNZ*, *StrategyNZ* and *ReportingNZ*. Each of these tools must align if we want Aotearoa New Zealand to develop durable, robust and forward-looking public policies. The policy projects frame and feed into our research projects, which address a range of significant issues facing Aotearoa New Zealand. The 11 research projects are: *CivicsNZ*, *ClimateChangeNZ*, *EcologicalCorridorsNZ*, *GlobalConflictNZ*, *OneOceanNZ*, *PandemicNZ*, *PublicScienceNZ*, *ScenariosNZ*, *TacklingPovertyNZ*, *TalentNZ* and *WaterFuturesNZ*.

About the cover

An excerpt from *Discussion Paper 2023/04 – Exploring the role of aquaculture in our marine space*.

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PART ONE: ABOUT THE PROPOSAL

1.1 Context

On 1 March 2024, the Institute formally asked the Ministry for Primary Industries (MPI) if it could become a party to initial stakeholder engagement on the Proposal by Government to extend the duration of existing consents for marine farming (the Proposal). The Institute was informed about the Proposal from other stakeholders who had been invited to participate. We were fortunate to be allowed to participate, although the timeframe was short (three days). Initial feedback was requested by midday 4 March 2024.

The key documents include a one-page Proposal and a seven-page PowerPoint. The Proposal is not dated and contains no author. It is titled ‘Supporting material one pager consents extension’ and was emailed by MPI to targeted stakeholders (see Appendix 1). A second document, a PowerPoint presentation, formed part of the MPI engagement process (see Appendix 2). For the record, both documents are included as an appendix to this paper. At this stage we are unsure what documents are public and what are not. An email was sent on the afternoon of 1 March 2024 to MPI to clarify the extent to which the Proposal and PowerPoint presentation are public documents.

MPI undertook a number of online meetings from Wednesday 28 February to Friday 1 March, with targeted groups including iwi, industry, regional councils and environmental groups.

The Institute was fortunate to attend a Microsoft Teams meeting on Friday 1 March, where MPI staff presented the Proposal to stakeholders and talked through the PowerPoint. This was the last of the targeted meetings.

Our response largely focuses on finfish farming given its significant environmental impacts and the issues of high mortality rates and distress caused to the salmon in the past.

1.2 New Zealand context

The National Party, as part of its oceans policy, recognised the need for an Oceans Commission to advise the Government on strategies for sustainable ocean management and to foster relationships between the Crown, iwi and other stakeholders.¹

The National Party signed a coalition agreement with NZ First on 24 November 2023. Under the heading ‘Rebuilding the Economy and Improving Productivity’, the agreement includes the statement: ‘Deliver longer durations for marine farming permits and remove regulations that impede the productivity and enormous potential of the seafood sector’. This was interpreted by the Institute to refer to new farms, but in retrospect, this may be the part of the coalition agreement that relates to extending the existing farm permits, as suggested under the Proposal. The comment ‘deliver longer durations’ may have been interpreted more narrowly as extending the minimum length of permits from say 20 to 40 years, as set out in the Resource Management Amendment Act 2011.² Importantly, there is no mandate in the coalition agreement for breaching core RMA principles and environmental standards to attain its longer consent duration outcome.

The coalition agreement discusses reforming new infrastructure but this is not relevant here, as the Proposal only refers to existing farms.³

Recently, there has been discussion about how the Government might build a blue economy (defined as ‘marine activities that generate economic value and contribute positively to social, cultural, and ecological well-being’). The National Science Challenges 2023 report *Implementing the Aotearoa New Zealand blue economy principles* sets out six principles for consideration, including Te Mana o te Moana (prioritising the health and wellbeing of the moana/sea, informed by a Tiriti o Waitangi-led approach where the rights and responsibilities of tangata whenua are provided for), regenerative, prosperous, intergenerational, inclusive and accountable.⁴

1.3 International context

United Nations Sustainable Development Goal 14 is about ‘Life below water’ and is one of the 17 Sustainable Development Goals established by the United Nations in 2015. The actual wording is to ‘Conserve and sustainably use the oceans, seas and marine resources for sustainable development’. These goals (and their wider intent) and the Paris Agreement are increasingly being included in New Zealand’s trade agreements. For example, Article 3 of the Free Trade Agreement with the EU, signed on 9 July 2023, states that a party has an obligation to refrain from any action or omission that materially defeats the object and purpose of the Paris Agreement.

The United Nations Biodiversity Conference (COP15) ended in Montreal, Canada, on 19 December 2022 with a landmark agreement to guide global action on nature through to 2030. The agreement includes concrete measures to halt and reverse nature loss, including putting 30% of the planet and 30% of degraded ecosystems under protection by 2030. The Global Biodiversity Framework (GBF) also features 23 targets to achieve by 2030, including effective conservation and management of at least 30% of the world’s lands, inland waters, coastal areas and oceans, with emphasis on areas of particular importance for biodiversity and ecosystem functioning and services. The GBF prioritises ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation, recognising indigenous and traditional territories and practices. Currently 17% and 10% of the world’s terrestrial and marine areas respectively are under protection.⁵

For the New Zealand Government to decide not to assess the environmental impacts of finfish farming on a regular basis goes against good business practice. Regular monitoring is essential to ensure the farms are operating within their consented environmental limits. For instance, four of the New Zealand King Salmon (NZKS) farms have not been fully assessed for their environmental impacts since 1975, 1977, 1978 and 1982 respectively. Adding a further 25 years to these consents means they may not be fully assessed for environmental impacts until 2050 – in some cases a total of 75 years. Even without allowing for climate change, this seems inappropriate, but when you consider climate change, such an approach seems to fly in the face of our international agreements.

We need to evidence our clean, green and sustainable brand and we need public engagement, particularly when we are debating the use of public assets for the next 25 years.

A further key point is that broadly speaking, democratic governments should always seek public consultation and engagement on decisions of such magnitude and longevity. Globally, we are seeing a growing lack of trust and confidence in governments, democracy and those who are given the power to act on behalf of public interests.⁶ Particularly after the occupation of Parliament grounds, Government should be working hard to build trust from the public. Taking away public consultation from the community is not something that should happen without a deeper consideration of the benefits, costs and risks.

1.4 The Proposal

Based on the text in the one-page Proposal, the Institute assumes that the Minister for Oceans and Fisheries, Shane Jones, has been advised that the Proposal will rebuild the economy and improve productivity.

The Proposal states:

- ‘All existing marine farming consents will have the consent expiry date moved 25 years out from the current expiry date. No farms will be excluded.
- This extension will be automatic and will not require an application.
- Only the expiry date of each consent will change, with no changes to or reconsideration of consent conditions.

This Proposal requires a legislative change to the Resource Management Act 1991 (RMA) which will be delivered this year through RMA amendments.’

Other key excerpts are:

- ‘There are approximately 1,200 existing marine farms in New Zealand. Consents for around 300 farms are due to expire and need replacement by the end of 2024.’
- ‘This would be an automatic extension, and consent holders would not need to apply.’

The Proposal states that its impacts are as follows:

- ‘This change will provide certainty of tenure for all consent holders as they will not need to seek a replacement consent for an additional 25 years. Improved certainty of tenure will give consent holders greater confidence to invest in farm productivity and innovation.
- This approach will avoid a **“bottleneck”** from extending all consents to a specific date.
- Having the Proposal in place as early as possible in 2024 will provide **greatest certainty to consent holders**, particularly for those with consents expiring soon.’ [bold added]

To summarise, the key benefits as outlined in the one-pager are that a bottleneck will not arise and the consent holders will gain more certainty. However, this is not a comprehensive cost–benefit analysis of the Proposal. We challenge the above assertions at the end of this paper (see our response to Question 1, in Part 3).

1.5 The role of the Institute

The Institute has been actively researching and trying to minimise the impacts of finfish farming in our oceans as part of our *OneOceanNZ* project. Rather than being repetitive here, we direct MPI staff and other interested parties to our December 2023 *Discussion Paper 2023/04: Exploring the role of aquaculture in our marine space*. The paper is available on our website.⁷ If Cabinet decides to progress this Proposal to the next level, the Institute will prepare a new 2024 discussion paper, analysing the costs, benefits and risks of the Proposal.

PART TWO: ANALYSING THE PROPOSAL

The Proposal prioritises shareholders (some of whom are based overseas) at the expense of wider stakeholders, including local communities. Expectations and processes, including public consultation, have been put in place and supported by previous Governments (including both National and Labour). Transparent and meaningful processes and public engagement are essential to ensure that a social licence to operate exists in practice.

2.1 Not all marine farms are equal

The latest MPI proposal applies a blanket approach to two different types of marine activity (finfish and shellfish), but the effects on the environment are very different.

MPI acknowledges this distinction in earlier reports. For example in 2007 and 2009 MPI asked Cawthron to undertake two different reports; one on the ecological effects of finfish (the 2007 report) and another on all other marine farms excluding fishfish (the 2009 report).⁸ In general terms, they have very different environmental effects; finfish pollute the ocean with feed and faeces, while shellfish tend to clean the ocean (e.g. filter-feeding).

Marlborough District Council's (MDC's) also make the same distinction in their Proposed Marlborough Environment Plan,⁹ Variation 1: Marine Farming and Variation 1A: Finfish Farming. They use the term 'finfish' to refer to any fish with fins, to distinguish them from other kinds of fish that are farmed, especially shellfish.¹⁰

Our first suggestion is that the Proposal is assessed in terms of two different types of farms. Finfish farming is a heavy polluter of the environment in terms of feed discharge, fish faeces, and mortalities, which are transported to landfills. Operationally, finfish farming has a major carbon footprint as all feed is brought from overseas and half the product is exported overseas. In contrast, marine farming excluding finfish, which we will refer to as shellfish farms, is not a polluter, but actually cleans the water; it does not require feeding (and therefore produces no discharge) and requires very little in terms of inputs from overseas – it is likely to be a net zero carbon emitter.¹¹ Our understanding is that the net economic output in terms of persons employed is much lower in the finfish industry than the shellfish industry.

There are also different environments required to optimise both types of marine farming. Finfish require fast-flow cooler water, which means the farms compete for access with fishing boats and ferries. Hence the placement of finfish farms will have different environment, social and cultural impacts, depending on their location.

As an example, it is clear that companies like NZKS like to position finfish farming as different from shellfish farming when it is convenient to do so (as was the case with the MDC decision on Variations 1 and 1A), but group the two together when trying to be excluded from water use charges.

The Proposal's grouping together of 1200 marine farms, with 300 identified as due for expiry, should be more accurately presented as the following table.

As is illustrated in Table 1 below, the heavy burden of managing the pollution and other negative impacts from finfish farming falls heavily on two communities: the Marlborough Sounds community and MDC; and the Stewart Island council and community. The Akaroa farms are small in comparison.

Table 1: Current state of consented marine farms in New Zealand by type of farm

Source: Adapted from Table 4.1: NZKS salmon farms – By the numbers in *Discussion Paper 2023/04: Exploring the role of aquaculture in our marine space* (p. 19).

	Total finfish farms Found in Saltwater: Marlborough Sounds, Akaroa (Christchurch), Stewart Island Found in Freshwater: Aoraki/Mount Cook			Total marine farms (other than finfish) Found in Saltwater: Northland, Coromandel, Nelson, Marlborough Sounds and Akaroa	Total marine farms
	Farms 'about' to expire (in 2024 or 1 Jan 2025) Note: these farms can be reapplied for without public consultation provided application is received 6 months before expiry ¹²	Farms to expire a lot 'later' (in 2036, 2049 and 2057)	Total finfish farms	This includes mussels, oysters, scallops, seaweed farms	
	7 (expiring in 2024 or on 1 Jan 2025, see endnote for more details) ¹³		7		
		2 (NZKS's Sites expiring in 2036 8407/8408)	2		
		2 (NZKS's Sites expiring in 2049 8632/8634)	2		
		1 (NZKS's Blue Endeavour expiring on 10 December 2057) ¹⁴	1		
Total 'about' to expire	7 (0.58%)			293 [being 300 in Proposal -7] ¹⁵	300
Total to expire 'later'		5 (0.42%)		895	900
(i): MPI's total (as per the Proposal)			12 (1%)	1188 (99%)	1200
(ii): NABIS total (as per the NABIS website) ¹⁶			12 (1%)	1505 (99%)	1517

Note to Table 1: We are unsure why there is a difference of 317 farms between the total in the Proposal and the total on the MPI NABIS website. MPI, in response to this question, advised: ‘We estimated the number of farms. We rely on information from regional councils to update NABIS information. For the most up to date data on consents you will need to get in touch with individual councils.’¹⁷

2.2 There is already a lot of flexibility under the existing framework

This means the industry already has a mechanism to have certainty and durability past the expiry date (this is in contrast to what the existing Proposal implies).

2.3 Finfish farms are rarely declined

There is only one finfish farm (that we are aware of) that was declined. Ngāi Tahu Seafood Resources Limited applied for a fast-tracked consent to develop roughly 2500 hectares off the north-eastern coast of Stewart Island. It was declined because the benefits did not outweigh the environmental costs to an area that was home to threatened species and largely unmodified by human activities.¹⁸ Finfish farms applications to expand are often declined because the size and scale of the application in that specific location lead to excessive costs to the environment (exceeding the benefits).

In contrast, the New Zealand King Salmon application (Blue Endeavour) was approved, with environmental conditions, even though the site is home to threatened species and largely unmodified by human activities. From the Institute’s perspective, we consider there are significant environmental risks if Blue Endeavour progresses, but equally we have been heard and the Commissioners disagreed. Although we cannot and will not agree in principle, we have been heard and accept the Commissioners acted independently and made the decision based on the information before them.

2.4 A social licence has brand value

Social licence is important brand collateral for New Zealand’s aquaculture products locally and overseas. Our aquaculture industry can position itself as a premium product.

Increasing the length of consents will not improve the aquaculture industry’s reputation. Instead, we want to make New Zealand aquaculture more efficient and sustainable by producing better quality products. We are seeing this issue play out in the building industry where wood is not being purchased or used as it no longer meets the sustainable standards set by global standard-setting organisations.

2.5 Economic value is not just about quantity, but quality

Quality is important both in terms of the quality of the fish and the marketing of the quality of the environment the fish lives in. In August 2023, Fisheries New Zealand released its *Report on the Year Three Review of the National Environmental Standards for Marine Aquaculture*. It notes:

At the time the NES-MA [National Environmental Standards for Marine Aquaculture] came into force consents for approximately 460 farms were due to expire by 2024/25. Updated analysis factoring in the above data indicates a significant number of these farms are still yet to apply for a replacement consent so can be expected to do so in the coming year. In Marlborough it is estimated that over 130 farms will still require a replacement consent, with over 40 farms in each

of Northland, Auckland, and Southland also requiring replacement consents. Other regions such as Waikato, Bay of Plenty, and Canterbury also have existing farms that will require replacement consents during this period.¹⁹

The Institute considers that the assumption that all farms that are expiring soon should be extended for 25 years is overstated. The Proposal assumes, without justification, that all expiring farms are economically viable and meet current environmental standards. Additionally, there are particular marine farms that have been abandoned/fallowed by the companies themselves, due to lack of productivity. The re-application for extending consents allows the economic viability of companies' farms to be assessed. This is in line with policy 8(b) of the New Zealand Coastal Policy Statement 2010, which directs decision-makers to: '[take] account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits'.

Where farms are economically viable, companies are reaping the rewards. For example, the New Zealand King Salmon Interim Consolidated Financial Statements for the six months ended 31 July 2023 shows they are highly profitable under their current business model, with a total profit after tax of \$10,630,000.^{20, 21} This again questions the validity of such a Proposal, when companies are clearly thriving under the current regime.

Additionally, in practice there is a lot of evidence that quality is an increasingly important factor for determining revenue.

For example, the Global Salmon Initiative (GSI) is responsible for 40% of the world's farmed salmon production and is now promoting an Environmental, Social, and Governance (ESG) tool to assess a company's impact and conduct in three critical areas: environmental stewardship, social responsibility, and governance practices. GSI acknowledges that 'ESG is increasingly important in today's business landscape, as it helps stakeholders understand a company's long-term viability and ethical impact, aligning with growing global emphasis on responsible and sustainable business practices. Strong ESG credentials can lead to reduced legal risks, improved customer loyalty, and better overall competitiveness for a company.' Concerns over the global impact on oceans from aquaculture are of growing interest. See for example the Task Force on Nature-related Financial Disclosures (TNFD) invitation to comment, due 29 March 2024.²²

If the Proposal goes ahead, we expect consumers (both local and international), on learning about the lack of environmental assessment, will reduce or stop purchasing salmon. We question how New Zealand companies will compete when the global emphasis is on responsible and sustainable business practices. New Zealand may increasingly become known globally for its dirty industries.

Recent issues with public trust, including high levels of mortalities in NZKS farms²³ and high levels of antibiotics found in wild fish in Tasmania,^{24,25} show how public opinion responds to environmental and ethical issues caused by salmon farms.

Any form of farming that creates pollution requires a strong focus on quality, both of the product and the environment. There are a number of risks with salmon farming as indicated by issues faced by Chile,²⁶ Scotland²⁷ and Norway.²⁸

The industry, and in particular specific companies that leverage off our clean, green brand, need to consider all angles as this Proposal may damage the industry's reputation and attract other, less green, companies to the industry. Having a low bar in terms of environmental outcomes will not attract high-end investment from overseas or high-end consumers. In contrast, the Proposal invites investor to think short-term and rely on our low business and environmental standards to

pollute at minimal costs. For example, the Proposal does not consider what would happen if the remaining 50% of NZKS shares are sold to overseas. If the New Zealand Government is happy to provide the use of public water at no cost to consent holders and to enable salmon to be farmed on the ocean in unique areas with low-environmental standards, we are making ourselves and our brand very vulnerable – in our view unnecessarily.

In order to ensure long-term, durable outcomes, we must think beyond just expanding consent timing. This should include consideration of investing in other alternatives, such as using land-based aquaculture or other methods to farm healthy and sustainably viable fish.

2.6 Occupational usage costs must be considered

All marine farms use public space (the ocean) for their exclusive private use and do so without paying any costs for occupying the public space. In the long term, and looking forward 25 years, private companies should be required to pay a fee when using public space for their own private profit. We need to ensure the Proposal does not limit this possibility.

2.7 Public engagement is critical

Public engagement is an important aspect of democracy and a critical part of the aquaculture industry's licence to operate (for free) in the public space.

Public engagement is relevant for every industry but is particularly heightened in aquaculture due to the interconnected nature of the ocean's ecosystems, meaning impacts cannot be controlled within a certain area. For instance, waste caused by aquaculture, such as fish faeces and excess feed, flows into local ecosystems, damaging other species' habitats. Many aquaculture locations are also near to human recreation areas and have impacts, such as waste flowing into areas where people swim, fish and boat.

Community engagement develops trust and communication between communities and institutions of government, helping lead to more sustainable, equitable public decisions. The timeframe for public consultation on the Proposal undermines the ethical and just practice of allowing the public sufficient time to engage with and respond to policies that have the potential for widespread, long-lasting impacts. Without adequate public consultation, decision-makers are operating on incomplete information and are likely to make decisions that do not reflect the needs of the communities impacted.

2.8 Support for corresponding submissions

The Institute has reviewed Submissions and Feedback to the Proposal made by:

1. Kenepuru and Central Sounds Residents Association Inc, Clova Bay Residents Association Inc and Guardians of the Sounds Inc [combined submission];
2. Environmental Defence Society
3. World Wide Fund for Nature – New Zealand; and
4. Environmental Law Initiative.

In addition to what the Institute's submission has raised, we agree with and support the issues raised by these groups.

PART THREE: OUR RESPONSE TO THE FEEDBACK QUESTIONS

Question 1: Do you support this Proposal to extend consents? Why? Why not?

No; the Institute does not support the Proposal.

The reasons why we do not support this Proposal are summarised below:

A: No analysis of risks, costs and benefits

1. No comprehensive and independent assessment has been undertaken of the risks, costs and benefits. It is a major concern that this Proposal is based on economic benefits, but neither the one-pager nor the PowerPoint provide or refer to any economic analysis or evidence.
2. No comprehensive and independent assessment on the risks, costs and benefits have been made public. Nor has a process for public engagement been forthcoming.
3. The dataset is not accurate.

Table 1 shows that MPI does not know the number of marine farms. The difference between the total in the Proposal (1200 marine farms) and the total on the MPI NABIS website (1517 marine farms) is 317. It is out by 26%. In our view MPI needs to obtain more accurate information in order to be able to advise Cabinet on the scale, timing, types and locations of marine farms.

4. The magnitude of the marine area is not fully described or understood.

According to MPI, the total area of current marine farms is 33,909 ha.²⁹ This area may initially seem insignificantly small, accounting for only 0.008% of New Zealand's total marine area, which covers more than 400 million hectares.³⁰ However, coastal ocean, where almost all New Zealand's salmon farms are (as opposed to open ocean) is a highly productive marine ecosystem.³¹ The coasts hold more marine biodiversity, hence the potential disruption of salmon farms to biodiversity and ecosystems is greatly exacerbated. The Proposal does not make recognition of the fact that the environmental impact is determined by the location.

5. In terms of benefits, the three major salmon farms in Tasmania are overseas-owned, raising the question of why, if this trend was to continue in New Zealand, we would allow companies to pollute our waterways without charging at least the costs of the pollution in occupancy costs. If it is based on the benefits of employment, that needs to be considered in terms of increased technology and therefore lower staff numbers.
6. Arguably there is no rush as the RMA reforms are in progress and are the natural place for such strategic decisions on the future of ocean management and the aquaculture industry.

B: No national or international alignment

7. There is no Oceans Commission (as proposed by National Party policy), nor is there any oceans strategy. We literally remain rudderless, without any guidance on how to make decisions on how to use, price or protect our ocean resources. The fact that this Proposal can even be suggested by a Minister of the Crown illustrates the existing void in ocean policy.
8. This Proposal lacks any analysis on how the costs of protection and repair of environmental damage can be funded. The use of water space requires costs to be recovered. Without any costs being recovered, the industry will not be policed. In our opinion, this explains why the industry has fought occupancy charges.
9. The Proposal shows no respect for or attempt to work alongside our international commitments (see Section 1.2). Effective conservation and management of at least 30% of our inland waters and coastal areas, with emphasis on areas of particular importance for biodiversity and ecosystem functioning and services, is not considered in this Proposal.

C: No bottlenecks?

10. A bottleneck does not exist for finfish farms, and may not exist for other marine farms:
 - There are only seven finfish farms, of which three are fallowed. The so-called bottleneck noted by MPI relates to only four active finfish farms. It is hard to argue that this is a bottleneck. See Table 1.
 - The bottleneck for other marine farms is estimated to be about 300. Many of these may also be fallowed, in which case the numbers being used in this Proposal may be unintentionally over-inflated. The fact a resource consent has not been reappplied for indicates it is no longer active. One would expect if it was of value, they would have used the opportunity to reapply.

D: Greater certainty to consent holders?

11. There is currently sufficient flexibility in the existing system to provide certainty for the finfish industry and investors without compromising the necessary safeguards. Further and most importantly, MPI itself noted in July 2023 that “The only finfish farms that are able to rely on the 2004 Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 (ARA) reforms to operate are:
 - (i) NZKS six farms in the Marlborough Sounds (which expire on 31 December 2024); and
 - (ii) Sanford’s Big Glory Bay farm in Stewart Island (which expires on 1 January 2025).

If no Council plans exist to the contrary, both companies can reapply for their existing farms without public consultation under the NES-MA.³²

12. Those consent holders that have reapplied before the expiry are disadvantaged under this Proposal and now face considerable uncertainty. Marine farmers that have applied the law in good faith have been disadvantaged, while those that have held back (and may have instead focused their effort into lobbying for a repeat of the 2004 reforms) have a significant competitive advantage.
13. This Proposal creates expectations for consent holders that this sort of response by Government can occur and will occur in aquaculture again (e.g. it did in 2004, in 2024 and maybe in 2050 etc.). It illustrates that complex problems can be solved by legislating.
14. It also creates uncertainty for other similar industries, for example, water and mining rights.
15. Given the controversial nature of this proposal and the changes it necessitates to long-standing legislation, and the unique composition of the current Government, it is likely that the next Government will rescind this policy. If opposition parties announce before the Proposal becomes law that they will rescind any Act when next in power, it will create a great deal of uncertainty for consent holders. In this case, we understand the consent holders would not be able to make any claims for costs due to changes in public policy (as they would know in advance). The reality is that it is in all our interests to develop durable and trusted law.
16. There has been a long time of certainty (20 years) for industry to pivot and apply for extensions under the 2004 Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 (ARA). Any other industry would have simply applied and used the existing processes. Those consent holders that advocated for or actively support this Proposal are not wanting durable *public* policy, they are wanting durable *private* policy – the freedom to use and pollute public assets at no cost for a long period of time – without ongoing reviews and environmental assessments.

Question 2: What impact will this Proposal have?

The Institute is primarily concerned about the long-term impacts of the Proposal on the environment, on our legacy to future generations (such as a polluted ocean that has made many flora and fauna extinct) and on New Zealand's brand internationally.

The Institute understands that the driver behind the Proposal is for greater certainty for consents and positive economic outputs. However, the environmental risks the Proposal poses undermines these drivers. The changing climate has evidenced that certainty in the long term is implausible. The uncertainty around marine farming is deeply intertwined with the uncertainty of a changing environment, where waters are warming and causing unprecedented fish mortalities in the aquaculture industry. Making decisions in the name of economic prosperity today, with a substantial risk of creating an economic burden in the recovery later on, is irresponsible. Further, it undermines New Zealand's investment and commitment to climate mitigation and adaptation strategies. Together, we consider this Proposal will have a negative economic and social impact on current and future generations.

Question 3: Is there anything you would change in the Proposal? What?

The Institute suggests that:

A: Finfish should be excluded from the Proposal.

The reasons are:

1. Finfish farming represents 1% of the approximately 1200 marine farms.

Note, there exist only 12 finfish farms consented in New Zealand, see Table 1.

We recommend that finfish farming should be left out of the Proposal because of its significant environmental impacts; changes to the industry and consumer preferences; and the rate and intensity the environment is changing due to climate change. These farms and their impacts therefore require regular assessment of conditions. Secondly, the finfish industry is not affected in the short term, given that existing legislation creates a lot of flexibility in terms of extending permits and providing companies with certainty, in most cases without public consultation or scrutiny.

2. Finfish farming is the dirty underbelly of marine farming.

One of the major concerns the Institute has is that the Proposal is an incentive for farmers to continue to farm in the marine space, creating an obstacle to progressing land-based aquaculture. We believe this is to everyone's disadvantage, in that we will continue with 1960s technology rather than seek out new and improved ways of doing things and creating a brand that is competitive with overseas suppliers (who may export to New Zealand consumers seeking more environmentally sound salmon). If the Government wishes to support the aquaculture industry to create a durable and sustainable future, it should work much harder to embrace land-based aquaculture (even if that means pumping ocean water through land-based infrastructure and then filtering it before returning it to the sea).

In terms of evidencing the dirty underbelly, a recent study found that 865 million farmed salmon died between 2012 and 2022 worldwide, and that:

“The increase in distribution, frequency, and scope of the magnitude of mass mortality events (MMEs) adds to the growing concerns about global aquaculture's ability to feed the future. Globally, salmon aquaculture has grown in some regions more than others, with United Nations Food and Agriculture Organization (FAO) data showing that the most growth in production between 2016 and 2020 occurred in Norway and Chile, and more modest to stagnant growth in the UK, Australia, New Zealand, and Canada. There is also concern that future growth in aquaculture is optimistic, with recent research suggesting that global aquaculture has peaked and may be on the verge of decline. While it is too early to suggest that MMEs may offset global production, it may add to the list of factors pointing away from aquaculture production growth.³³

3. Finfish farms are already well catered for under the existing legislation.

It is a waste of time and money to add 25 years to existing finfish farms when the legislation and the 2004 reforms solve the problem that the Proposal aims to address for finfish farming – why solve a problem that is already solved? See discussion in Q1: D.

4. Finfish farmers are heavily impacted and will continue to be heavily impacted by climate change – hence where finfish farms exist really matters as they co-exist with other flora and fauna in an increasingly stressed environment.

Given the threat that climate change poses to flora and fauna (as evidenced by the salmon mortality resulting from an increase in water temperature), the Government's intention to add another 25 years onto each of these timespans lacks understanding of the changing marine environment. The evidence that king salmon are being so impacted by rising temperatures implies that other species (such as marine mammals, sharks, fish and seabirds) might be equally or even more impacted by rising temperatures. We do not consider, as implied in this thinking underlying this Proposal, that king salmon are the only fish being affected and secondly, that the next 25 years will remain static.

The IPCC's Assessment Reports make it clear that:

- temperatures over land, where people live, have increased much more than temperatures over ocean,
- the ocean has absorbed about 25% of humanity's CO₂ emissions to date,
- the ocean has absorbed about 90% of the excess heat caused by humans, and
- many changes are baked in for thousands of years. Changes to global sea level, the ocean and ice sheets are 'irreversible' on timescales relevant to human beings.

Intentionally adding more stress into a stressed ecosystem without due consideration of those impacts, particularly on the people, flora and fauna, for a period of 20 years, makes no sense. This needs to be considered in terms of the relevance of the next 20 years, when 2040 becomes a significant point in our ecological history.³⁴

5. Finfish farmers are experienced and have invested heavily in legal expertise.

It is important to appreciate that two of New Zealand's finfish farming companies are very large, experienced, and well-resourced with expert legal teams that have actively lobbied to gain the current regulatory environment they are working in. It is not our experience that finfish farming companies such as NZKS require support. NZKS, in particular, is fully aware of and capable of applying for applications and managing public consultation. Large companies such as NZKS are currently enjoying the benefits of a system encouraging aquaculture, as evidenced by the recent approval of Blue Endeavour. It has only been as a result of public consultation that a number of conditions have been added to at least benchmark and monitor the environment. These additional conditions are not expensive, and have real long-term value for future New Zealanders as they navigate the management practices of heavily polluting industries such as finfish farming, which operate in special waters such as sounds and fiords.

B: All consents getting a renewal should be updated with conditions from farms more recently approved

NZKS's Blue Endeavour farms were recently approved, and through an appeal and mediation, a condition was added to the consent. This condition should be added to all farms covered under the Proposal. This condition compels the consent holder (NZKS):

- To address any effects of the salmon farms that are different or more significant due to the effects of climate change, including due to a change in the importance of the location for indigenous biodiversity;

- During the years of the anniversary of the granting of this consent and every 5th year thereafter.³⁵

This clause should be included for all farms because it is the very latest significant decision on a marine farm, and the environmental effects were thoroughly assessed based on the most recent data and research. Additionally, the reasoning behind the need for the open ocean farm Blue Endeavour was warming waters due to climate change. Therefore, it is very appropriate that this clause is applied to all farms.

C: Recently approved NZKS farm Blue Endeavour should be excluded from the Proposal

Blue Endeavour should be excluded as it has just been considered and approved. It should not receive an additional 25 years. It has the stability NZKS requested; for the Government to provide additional time seems an extravagance, an unnecessary risk and a contradiction to the consent process that approved particular farms and their conditions on the basis of their prescribed timeframe. Additionally, Blue Endeavour differs in its nature and scale from the other marine farms in New Zealand in that it is an ‘open ocean’ farm – rather than the in-shore farms that make up the rest of marine farming in New Zealand.

D: A range of other options exist

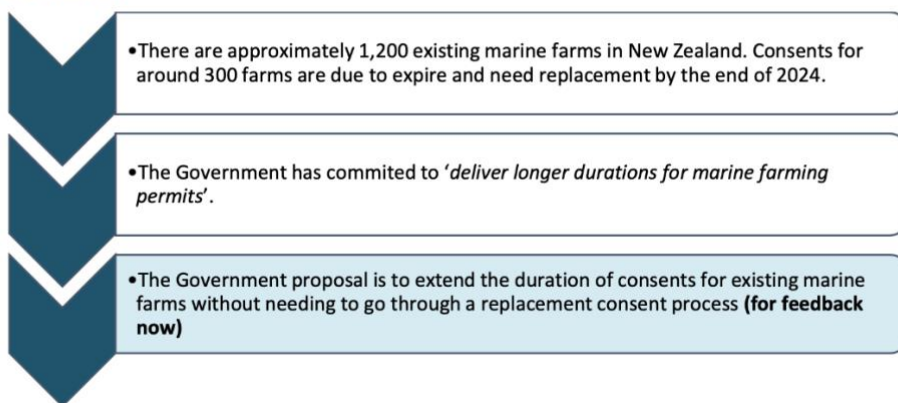
Although we strongly advocate the option A (i.e. that the Proposal should not apply to finfish farming), there are a range of other options for the Government to consider. Below are a few examples.

1. Create a small window of five years to allow industry, stakeholders and MPI to work with a newly established Oceans Commission (which is mentioned by the National Party as emerging policy).
2. Require fish farms that have not been environmentally assessed for 20 years to reapply (in other words, those farms do not have an automatic extension).
3. Those that take up the extension should provide funds to Councils to manage the additional farms that would have expired under the old regime.
4. Councils should be able to assess, review and set new environmental conditions.
5. In areas that Councils have identified as ecologically significant, they should be able to remove farms, provided they give them five years to reapply elsewhere.
6. Farms that have been fallowed over the last five years should be exempt from the extension as the company is not using them and therefore it is not necessary to provide certainty over their use going forward.
7. If a farm is sold to another company, it should trigger an environmental reassessment of conditions with full public consultation. This is in lieu of the company not having to reapply in 2024/25 and would go some way towards respecting the rights of the community and the environment. No transfer of marine farm resource consents should be progressed for marine farms extended under this proposal, and a transfer would trigger a new resource consent application.
8. The Proposal should not in any way prevent any occupational charges, national conditions or reporting requirements being set and applied to existing farms in the future.
9. We remain concerned that decisions like these should be based on up-to-date research and evidence. Given the legal flexibility that currently exists, there is no need to rush through policy that is not based on accurate and timely information.

Appendix 1: One-page Proposal emailed by MPI on Friday 1 March 2024³⁶

Extending the duration of existing consents for marine farming

Context:



Preliminary Proposal:

The Government is proposing to extend existing marine farm consent durations by an additional 25 years (added to existing consent terms).

The proposal:

- All existing marine farming consents will have the consent expiry date moved 25 years out from the current expiry date. No farms will be excluded.
- This extension will be automatic and will not require an application.
- Only the expiry date of each consent will change, with no changes to or reconsideration of consent conditions.

This proposal requires a legislative change to the Resource Management Act 1991 (RMA) which will be delivered this year through RMA amendments.

Impacts of the proposal:

- This change will provide certainty of tenure for all consent holders as they will not need to seek a replacement consent for an additional 25 years. Improved certainty of tenure will give consent holders greater confidence to invest in farm productivity and innovation.
- This approach will avoid a 'bottleneck' from extending all consents to a specific date.
- Having the proposal in place as early as possible in 2024 will provide greatest certainty to consent holders, particularly for those with consents expiring soon.

We welcome your feedback

The Government is seeking feedback from Partners and stakeholders before final decisions are taken.

The Ministry for Primary Industries is hosting a series of online meetings to gather feedback on the proposal (see letter for details). Please provide any written feedback by 4 March 2024 by email to AquaculturePolicy@mpi.govt.nz.

Appendix 2: PowerPoint slides provided by MPI as part of the online feedback meetings on Friday 1 March 2024³⁷

Aquaculture Policy Team

-  Who are we?
-  our team is part of the policy group at MPI
-  we work with our colleagues in MPI's Fisheries New Zealand group and other agencies to develop aquaculture policy and legislation

How this session will run

- We will be taking written notes
- Email further written feedback by [12:00 pm Monday 4 March](#)
- Our email address is AquaculturePolicy@mpi.govt.nz
- Your feedback will be reflected to the Minister for Oceans and Fisheries
- We will provide you with a summary of feedback from this engagement
- *Teams meeting etiquette*
- Please use the 'raise hand' button to kōrero
- Please use the chat function to ask questions and make comments
- Please 'mute' yourself when not speaking

What are we engaging on?

- The Government has committed to **delivering longer durations for marine farming consents**, in order to provide greater certainty for the aquaculture sector.
- This will require a legislative change to the Resource Management Act 1991, through a **Resource Management Act Amendment Bill** in 2024.
- We are seeking your feedback on the proposal.



Context

- Marine farms (aquaculture) must be authorised by resource consent (also known as a 'coastal permit') issued by the local council or authority
- There are approximately 1,200 existing marine farms in New Zealand.
- Most are in:
 - Marlborough
 - Waikato
 - Northland
 - Auckland
 - Tasman
 - Canterbury
 - Southland
 - Bay of Plenty regions.
- Consents for around 300 farms are due to expire and need replacement by the end of 2024.
- Aquaculture has significant potential to contribute to economic growth and boost regional prosperity.

Map showing major aquaculture regions around New Zealand (% production 2023) (source: AQNZ).



What is proposed?

The Government is proposing to extend all existing marine farm consents, for a period of 25 years as an addition to their current consent term.

If a consent holder holds an existing marine farm consent, the consent expiry date would be moved 25 years out from the current expiry date.

This would be an automatic extension, and consent holders would not need to apply.

What will this proposal deliver?

- This proposal aims to reduce the regulatory burden on consent holders
- A 25-year time frame will give greater business certainty to industry
- If passed by the end of 2024 as anticipated, this proposal gives certainty to around 300 marine farms with consents expiring at the end of the year
- This proposal is an efficient means of achieving certainty of tenure for the marine farming industry



Feedback questions

Do you support
this proposal to
extend consents?
Why? Why not?

What impact will
this proposal
have?

Is there anything
you would change
in the proposal?
What?

Appendix 3: McGuinness Institute *OneOceanNZ* publications, 2020–2023

Dec 2023	<i>Discussion Paper 2023/04 – Exploring the role of aquaculture in our marine space</i>
Mar 2023	<i>Discussion Paper 2022/02 – New Zealand King Salmon Case Study: A financial reporting perspective</i>
May 2022	<i>Working Paper 2022/10 – New Zealand King Salmon key documents 2012–2022</i>
Nov 2021	<i>Working Paper 2021/15 – Looking for a taxonomy for Aotearoa New Zealand’s oceans</i>
Nov 2021	<i>Working Paper 2021/14 – The Role of Ocean Water Temperature in Climate Change Policy – A New Zealand King Salmon Case Study</i>
Feb 2021	<i>Marlborough District Council – Variation 1: Marine Farming and Variation 1A: Finfish Farming</i>
Mar 2020	<i>Marlborough District Council U160675: The New Zealand King Salmon Co Limited (NZKS) and Te Atiawa o Te Waka-a-Maui Limited</i>

Appendix 4: Cost and timing of renewing marine consents in the Marlborough District Council

Charge for Marlborough District Council notified resource consents³⁸

Notified resource consents		Charge
All applications (including subdivisions)	Base*	\$6,894.00

Once a consent has been granted by the relevant regional council or unitary authority, the council or unitary authority requests an “aquaculture decision” from the Director-General of MPI. For the aquaculture decision, MPI will assess whether the proposed aquaculture activity will have an undue adverse effect on recreational, customary or commercial fishing because it restricts access to or displaces fishing. The process for assessing those effects is known as the undue adverse effects on fishing test (UAE test).³⁹

MPI charges for marine-based farms

Marine-based farm charges		
Charges for aquaculture decisions, aquaculture agreements, or compensation declarations are invoiced after processing. FishServe, on our behalf, manages payments and invoicing for aquaculture agreements and compensation declarations.		
Application and levy details	Charge (excl GST)	Charge (incl GST)
Processing application for an aquaculture decision (the average time to process is about 15 hours)	\$116.42 per hour	\$133.88 per hour
Administration and processing of a compensation declaration registration*	\$240, then \$21 for each additional stock	\$276 for one stock, then \$24.15 for each additional stock
Administration and processing of a compensation declaration registration*	\$240, then \$21 for each additional stock	\$276 for one stock, then \$24.15 for each additional stock
Annual levy (administration fee to maintain fish farmer register)*	\$84.23	\$96.86
* Administered by FishServe on behalf of MPI.		

There is a \$2008.20 fee charged for an aquaculture decision. The fee covers 15 hours of MPI’s work associated with the coastal permit application. If the work takes more than 15 hours, the additional work is charged at the hourly rate of \$133.88. If the work takes less than 15 hours, MPI discounts the fee or time covered by the fee but not used.⁴⁰

Endnotes

- ¹ For example, the *Blueprint for a Better Environment* states National will: 1. Advance marine protection initiatives and 2. Harmonise oceans management and regulation. ‘Over the medium term, National will also consider establishing an Oceans Commission to advise the Government on strategies for sustainable ocean management and to foster relationships between the Crown, iwi and other stakeholders.’ (The National Party (n.d.). *Blueprint for a Better Environment*, p. 9. Retrieved 4 March 2024 from www.national.org.nz/betterenvironment)
- ² The Resource Management Amendment Act (No 2) 2011 states: ‘The period specified under subsection (1) must be not less than 20 years from the date of commencement of the consent under section 116A unless–
(a) the applicant has requested a shorter period; or
(b) a shorter period is required to ensure that adverse effects on the environment are adequately managed.’ (Resource Management Amendment Act (No 2) 2011, s 31).
- ³ ‘Amend the Resource Management Act 1991 to: (i) Make it easier to consent new infrastructure including renewable energy, allow farmers to farm, get more houses built, and enhance primary sector including fish and aquaculture, forestry, pastoral, horticulture and mining. (ii) Streamline the plan preparation process in Schedule I of the RMA. (iii) Simplify the planning system and related statutes including the Public Works Act and the Reserves Act. (iv) The Parties commit to establish a fast-track one-stop-shop consenting and permitting process for regional and national projects of significance. The process will include a referral by Ministers for suitable projects. A Bill to introduce this process and make other essential statutory amendments will have its first reading as part of the government's 100 day plan.’ (New Zealand National Party & New Zealand First (2023, 24 November). *Coalition Agreement*. Retrieved 4 March 2024 from www.nzfirst.nz/coalition-agreement).
- ⁴ See Sustainable Seas National Science Challenge (July 2023). *Blue Economy Principles for Aotearoa New Zealand*. Retrieved 10 March 2024 from www.sustainableseaschallenge.co.nz/assets/dms/Summaries/Blue-economy-principles/Blue-economy-principles-Summary.pdf
- ⁵ See United Nations environment programme (20 December 2022). COP15 ends with landmark biodiversity agreement. Retrieved 10 March 2024 from www.unep.org/news-and-stories/story/cop15-ends-landmark-biodiversity-agreement

See also Convention on Biological Diversity (19 December 2022). Cop15: Nations adopt four goals, 23 targets for 2030 in landmark UN biodiversity agreement. Retrieved 10 March 2024 from www.cbd.int/article/cop15-cbd-press-release-final-19dec2022
- ⁶ See Tharwat, I. (14 January 2024). Why trust and ethics are the most important currencies in our economy. World Economic Forum (WEF). Retrieved 4 March 2024 from www.weforum.org/agenda/2024/01/trust-ethics-economics-governance
- ⁷ See McGuinness Institute (December 2023). *Discussion Paper 2023/04: Exploring the role of aquaculture in our marine space*. Retrieved 4 March 2024 from www.mcguinnessinstitute.org/publications/discussion-papers
- ⁸ See MPI website: (i) Cawthron Report No. 1285: Review of the Ecological Effects of Marine Finfish Aquaculture: Final Report. Retrieved 4 March 2024 from www.mpi.govt.nz/dmsdocument/15865-Review-of-the-Ecological-Effects-of-Marine-Finfish-Aquaculture-Final-Report and (ii) Cawthron Report No. 1476: Review of the Ecological Effects of Farming Shellfish and Other Non-fish Species in New Zealand (2009). Retrieved 4 March 2024 from https://fs.fish.govt.nz/Doc/22056/CAW1476_FINAL_FORMATTED_31Aug09_REDUCED.pdf.ashx
- ⁹ See Marlborough District Council (23 May 2023). Variations to marine and finfish farming notified [media statement]. Retrieved 4 March 2024 from www.marlborough.govt.nz/your-council/latest-news-notice-and-media-releases/all-news-notice-and-media-releases?item=id:2m6x4qhv01cxbyonbiwb
- ¹⁰ See Perception Planning Limited (November 2020). *Section 32 Evaluation – Proposed Variation 1A: Finfish Marine Farming Provisions for the proposed Marlborough Environmental Plan (PMEP)*, p. 4. Retrieved 4 March 2024 from www.marlborough.govt.nz/repository/libraries/id:2fzri1o01cxbymxkvwz/hierarchy/documents/your-council/environmental-policy-and-plans/mep-variations/section-32-reports-list/V1A_S32.pdf
- ¹¹ For example, see Feng, J. C. et al. (January 2023). Carbon sequestration via shellfish farming: A potential negative emissions technology. *Renewable and Sustainable Energy Reviews*, 171. Retrieved 4 March 2024 from doi.org/10.1016/j.rser.2022.113018
- ¹² ‘The only finfish farms that are able to rely on the 2004 Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 (ARA) reforms to operate are (i) NZKS six farms in the Marlborough Sounds (which expire on 31 December 2024; sites) and (ii) Sanford's Big Glory Bay farm in Stewart Island (which expires on 1 January 2025). If no Council plans exist to the contrary, both companies can reapply for their existing farms without public consultation under the NES-MA.’ (See personal communication with MPI, 26 September 2023).

Under s 165ZH of the RMA, farms with ‘deemed coastal permits’ granted under ss 10, 20, 20A, 21 of the ARA can continue to operate pending the determination of new applications if they have (i) applied for a new application at least six months before the expiry (i.e. 30 June 2024) or, if MDC agrees (ii) applied in the three-to-six-month period before the expiry (i.e. 30 June–30 September 2024). In practice this means NZKS can continue to operate their six farms that are due to expire on 31 December 2023 for however long the process of generating new applications will take, including resolving any potentially lengthy appeals (Resource Management Act 1991, s 165ZH).

- ¹³ More information on the seven finfish farms is listed below:
- one is Sanford’s Big Glory Bay farm in Stewart Island;
 - two NZKS farms are active (Sites 8396 and 8274);
 - three of the NZKS farms (Sites 8085, 8515 and 8110) are currently fallowed for environmental reasons; and
 - one of the marine farms is Akaroa Salmon New Zealand Limited. Although the permit was not found on the Christchurch City council website, MPI notes it expires 1 Jan 2025, but we are unsure when it was established and therefore do not know its status under the Aquaculture Reform (Repeals and Transitional Provisions) Act 2004 (ARA).
- ¹⁴ See Marlborough District Council (10 November 2022). *Decision of Marlborough District Council*. Retrieved 4 March 2024 from <https://eservices.marlborough.govt.nz/programmes/ListProgrammeEvents?id=3516198>
- ¹⁵ This includes 1 NZKS marine farm which is currently a seaweed trial, site 8513.
- ¹⁶ See Ministry for Primary Industries (MPI) (n.d.). National Aquatic Biodiversity System (NABIS). Retrieved 4 March 2024 from maps.mpi.govt.nz/templates/MPIViewer/?appid=96f54e1918554ebbf17f965f0d961e1
- ¹⁷ See personal communication with MPI, 4 March 2024.
- ¹⁸ See Radio New Zealand (RNZ) (2 August 2023). Open ocean salmon farm bid declined, despite economic benefits. Retrieved 4 March 2024 from <https://www.rnz.co.nz/news/business/495000/open-ocean-salmon-farm-bid-declined-despite-economic-benefits>
- ¹⁹ See Ministry for Primary Industries (MPI) (August 2023). *Report on the Year Three Review of the National Environmental Standards for Marine Aquaculture*. Retrieved 4 March 2024 from www.mpi.govt.nz/fishing-aquaculture/aquaculture-fish-and-shellfish-farming/national-environmental-standards-for-marine-aquaculture
- ²⁰ See New Zealand King Salmon (NZKS) (21 September 2023). 1H24 Interim Results – Financial Statements. Retrieved 4 March 2024 from www.kingsalmon.co.nz/reports-and-results
- ²¹ See New Zealand King Salmon (NZKS) (21 September 2023). 1H24 Interim Results – Media release. Retrieved 4 March 2024 from www.kingsalmon.co.nz/reports-and-results
- ²² See SalmonBusiness (2024, 10 March). What is ESG and why have the Global Salmon Initiative launched a tool to measure it? Retrieved 4 March 2024 from www.salmonbusiness.com/what-is-esg-and-why-have-the-global-salmon-initiative-launched-a-tool-to-measure-it
- See also Taskforce on Nature-related Financial Disclosures (TNFD). (December 2023). Draft sector guidance: Aquaculture. Retrieved 22 March 2024 from tnfd.global/publication/draft-sector-guidance-aquaculture
- ²³ For example, a ‘25% mortality rate for NZKS farms is considered standard for the company, and NZKS is forecasting a 38.8% mortality rate. The Scottish salmon farming industry, which itself has a bad reputation for fish welfare, has a 10–20% mortality rate on average.’ (SAFE (29 September 2022). NZ King Salmon Mortality Rates Are Ethically And Legally Contentious [press release]. Scoop. Retrieved 4 March 2024 from www.scoop.co.nz/stories/PO2209/S00204/nz-king-salmon-mortality-rates-are-ethically-and-legally-contentious.htm)
- ²⁴ For example, Burton, B. (26 February 2024). Antibiotics found in wild fish near Tasmanian salmon farms at nearly five times allowed limit, report shows. *Guardian*. Retrieved 4 March 2024 from www.theguardian.com/australia-news/2024/feb/26/antibiotics-found-in-wild-fish-near-tasmanian-salmon-farms-at-nearly-five-times-allowed-limit-reports-show
- ²⁵ For example, Tasmania’s three salmon producers are all foreign-owned, with the last remaining company, Tassal, bought by Canadian seafood giant Cooke in 2022. Tasmania’s primary industries minister says the fish farming industry is desperate to regain the support of the community. (Breen, F. (2 May 2023). Tasmanian salmon industry future plan released — but fish-farming opponents say it fails on several fronts. ABC News. Retrieved 4 March 2024 from www.abc.net.au/news/2023-05-02/tasmanian-salmon-industry-future-plan-released/102288752 and Environmental Defenders Office (EDO) (n.d.). Why salmon farming needs new rules. Retrieved 4 March 2024 from www.edo.org.au/why-salmon-farming-needs-new-rules)

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- ²⁶ For example, see Fishfarming expert (10 January 2024). Harmful bloom kills 5,000 tonnes of salmon in Chile. Retrieved 4 March 2024 from www.fishfarmingexpert.com/aquachile-blumar-harmful-algal-bloom/harmful-bloom-kills-5000-tonnes-of-salmon-in-chile/1611325
- ²⁷ For example, ‘Despite booming demand, mass fish die offs have made the business almost impossible to scale sustainably.’ (Afanasieva, D. & Treloar, S. (20 January 2024). Scotland’s Salmon Farms Navigate Troubled Waters for Global Industry. Bloomberg. Retrieved 4 March 2024 from www.bloomberg.com/news/features/2024-01-20/scotland-s-salmon-farms-navigate-troubled-waters-for-global-industry)
- ²⁸ For example, ‘[i]n Norway, nature has been exploited for financial gain with catastrophic and irreversible effects. The situation has become so serious that the government has banned all new licenses for open net pen farms and is only awarding licenses to companies that are developing eco friendlier production methods, like closed containment. It is not a coincidence that Norwegian salmon farming companies are now seeking to invest in Iceland.’ (North Atlantic Salmon Fund (NASF) (n.d.). Disaster in Norway. Retrieved 4 March 2024 from nasf.is/en/norway)
- ²⁹ See Ministry for Primary Industries (MPI) (n.d.). National Aquatic Biodiversity System (NABIS) – Aquaculture: Current Marine Farms. Retrieved 12 March 2024 from maps.mpi.govt.nz/templates/MPIViewer/?appid=96f54e1918554ebbf17f965f0d961e1
- ³⁰ See Ministry for the Environment (MfE) (December 2008). *Environmental Report Card – Marine areas with legal protection*, p. 1. Retrieved 12 March 2024 from environment.govt.nz/publications/environmental-report-card-marine-areas-with-legal-protection
- ³¹ See Wildermuth, R. (n.d.). Marvelling at the Marine Biome. Arizona State University – Ask a Biologist. Retrieved 12 March 2024 from askbiologist.asu.edu/explore/marine
- ³² See personal communication with MPI, 5 July 2023
- ³³ See Singh, G.G., Sajid, Z. & Mather, C. (7 March 2024). Quantitative analysis of mass mortality events in salmon aquaculture shows increasing scale of fish loss events around the world. *Sci Rep* 14, 3763 . Retrieved 10 March 2024 from www.nature.com/articles/s41598-024-54033-9
- ³⁴ See Lang, J. (n.d.). IPCC Explainer: Climate change synthesis report. Energy & Climate Intelligence Unit. Retrieved 22 March 2024 from eciu.net/analysis/infographics/ipcc-explainer-infographic-synthesis-report-climate-2023
- ³⁵ See *Director-General of Conservation v Marlborough District Council* [2023] NZEnvC 203 (19 September 2023). Retrieved 2 November 2023 from [www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2023/203.html?query=title\(%222023%20NZEnvC%20203%22\)](http://www.nzlii.org/cgi-bin/sinodisp/nz/cases/NZEnvC/2023/203.html?query=title(%222023%20NZEnvC%20203%22))
- ³⁶ See personal communication with MPI, 1 March 2024.
- ³⁷ See personal communication with MPI, 4 March 2024.
- ³⁸ See Marlborough District Council (MDC) (n.d.). Fees - Resource Consents. Retrieved 12 March 2024 from www.marlborough.govt.nz/services/resource-consents/fees-resource-consents
- ³⁹ See Ministry for Primary Industries (MPI) (February 2013). Guide to Establish and Operating a Marine Farm in New Zealand. Retrieved 12 March 2024 from www.mpi.govt.nz/fishing-aquaculture/aquaculture-fish-and-shellfish-farming/setting-up-a-marine-farm
- ⁴⁰ See Ministry for Primary Industries (MPI) (February 2013). Guide to Establish and Operating a Marine Farm in New Zealand. Retrieved 12 March 2024 from www.mpi.govt.nz/fishing-aquaculture/aquaculture-fish-and-shellfish-farming/setting-up-a-marine-farm