



# Marlborough salmon relocation proposal

Whole of Government presentation- Dan Lees

*Growing and Protecting New Zealand*



[www.mpi.govt.nz](http://www.mpi.govt.nz)



# Introduction – the proposal

**The Minister for Primary Industries has sought comment from the community and iwi authorities on a proposal to amend the Marlborough Sounds Resource Management Plan using the regulation-making powers in sections 360A and 360B of the Resource Management Act 1991 to enable the relocation of up to six existing salmon farms to more suitable, deeper and higher flow sites.**

**The period for receiving written comments closed on 27 March.**

**There are 11 consented salmon farming sites in the Marlborough Sounds.**

**Six sites went into the water over two decades ago in shallow bays with lower flows that are not ideal for modern salmon farming practices. They are also located in close proximity to populated areas.**

**It will be difficult to implement the new best management practice benthic guidelines at these sites developed in 2014 by local government, industry, scientist and community**

# Introduction – the Whole of Government proposal

Relocation to higher flow sites is being considered as a way to:

- **Ensure the environmental outcomes from salmon farming are improved through implementation of new benthic guidelines**
- **Potentially improve the social and cultural outcomes from salmon farming by creating meaningful jobs, and moving salmon farms away from areas of higher competing use**
- **Maintain or increase the economic benefits from salmon farming.**

**This proposal provides for industry growth through the more efficient use of marine farming space, rather than from creating additional surface space. In short, it is about better outcomes from the same surface space. The extent of benefits would depend on the number of farms relocated and the sites they move to.**

# Introduction – the proposal

The power for the Minister responsible for aquaculture to recommend regulations to amend a regional coastal plan in relation to aquaculture was introduced in 2011 as an amendment to the Resource Management Act, as sections 360A and 360B.

This is the first time the Minister is considering the use of the regulation-making power.

Before the Minister can recommend a regulation, he has to do a number of things, including seeking comments from the public and iwi authorities on the proposed regulations.

As part of that process, the Minister has established this independent advisory panel to hold public hearings, consider all comments received, test the available information, and provide a recommendations report to the Minister on the regulations.

Although notification of the proposed regulations was undertaken by the Minister for Primary Industries, it is important to note that the decision to proceed was one taken by Cabinet. These proposed regulations are a Whole of Government initiative.

MPI has led development of this proposal working closely with other Departments.

# Introduction

The decision to progress this proposal was made by Cabinet and is being led by the Minister for Primary Industries.



At this stage, ahead of public hearings, government considers the proposal meets S360 A-B requirements.



The independent Panel has been established to test the case for relocation and to make recommendations

Primary industries are essential to New Zealand's future social, cultural and economic growth



But to grow sustainably industries need to be able to adapt to changing environmental standards



Relocating salmon farms to higher flow sites could improve economic, environmental, and community outcomes

Recent reports have suggested regions like Marlborough will struggle to grow. This increases the importance of these types of initiatives. We need vibrant regional economies.



We need to diversify our regional economies and make use of their inherent assets to make them more resilient to future international shocks and recessions.



Salmon farming has the potential to contribute significantly to this region's socioeconomic development.  
It is one of the most efficient ways to create animal protein

# Introduction

## **THE PROPOSAL IS CONSISTENT WITH GOVERNMENT POLICY FOR AQUACULTURE**

- 1. To recognise the significant existing and potential contribution of aquaculture to the social, economic and cultural well-being of people and communities by:**
  - a) Including in regional policy statements and regional coastal plans provision for aquaculture activities in appropriate places in the coastal environment, recognising that relevant considerations may include:**
    - I. The need for high water quality for aquaculture activities; and**
    - II. The need for land-based facilities associated with marine farming;**
  - b) Taking account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits; and**
  - c) Ensuring that development in the coastal environment does not make water quality unfit for aquaculture activities in areas approved for the purpose;**
- 2. To support well-planned and sustainable aquaculture growth;**
- 3. To improve productivity while reducing environmental impact; and**
- 4. To support aquaculture development regionally.**

# Introduction – other matters

## **THE PROPOSED REGULATIONS**

**The proposed regulations to amend the Marlborough Sounds Resource Management Plan look to address most RMA issues at the plan stage**

**The proposed regulations provide for non-notified and restricted discretionary consents.**

**This is the opportunity for the community and iwi authorities to input into the process and whether relocation is appropriate under the RMA.**

## **The Fisheries Act Undue Adverse Effects (UAE) test**

**If the plan is amended, the council in assessing any consent applications will need to request the Ministry for Primary Industries conduct the UAE test on fishing.**

**If the decision maker cannot be satisfied there would not be an undue adverse effect on customary or recreational fishing, then the application cannot proceed.**

**If there is an undue adverse effect on commercial fishing, the Fisheries Act provides for an arbitration process to compensate commercial fishers for catch lost.**

## **Coastal Occupation Charges**

**During consultation people have raised why the aquaculture industry does not pay a charge for the use of coastal space**

**The government and industry strongly support the proposed introduction of coastal occupation charges in the Marlborough Environment Plan.**

# Marlborough could benefit from relocating some existing salmon farms to more suitable locations

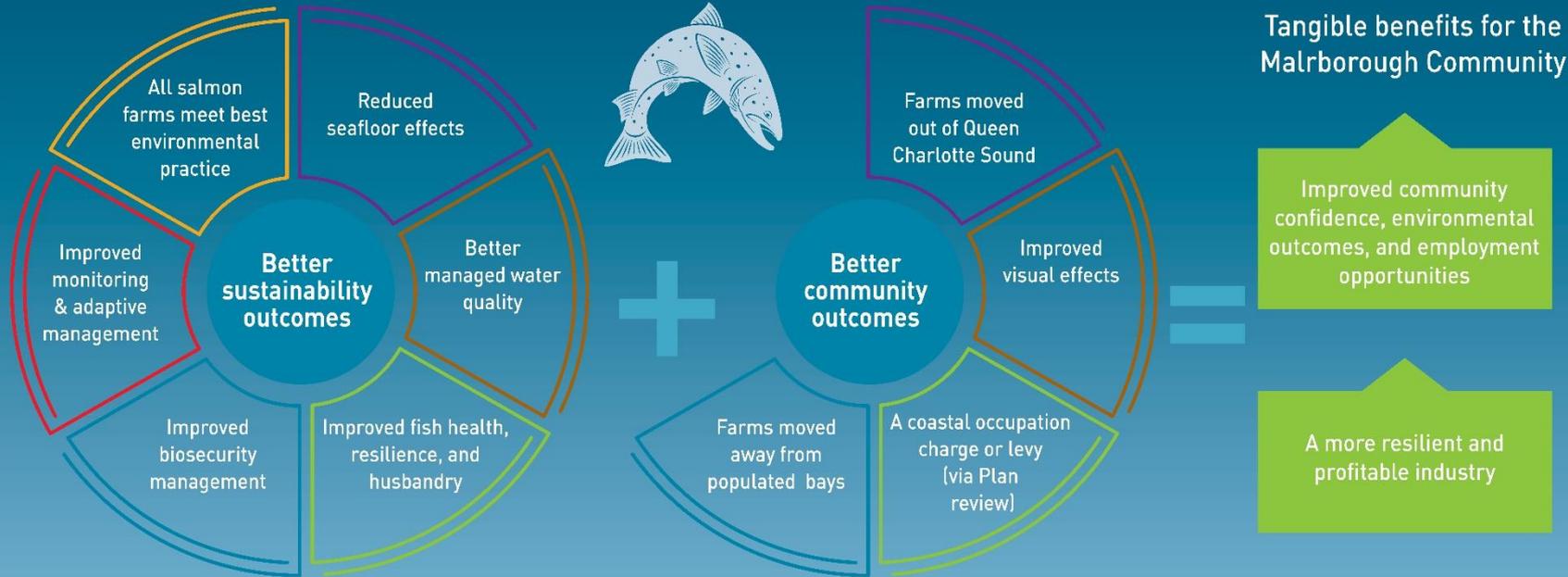
We know more about salmon farming than we did even 5 years ago. We already manage salmon farming to a high standard, but should always try to improve.

New Best Management Practice Guidelines developed by MDC, MPI, community, experts

Forecasted warming sea temperatures

New Hydrodynamic Water-Quality Models developed by NIWA

The benefits of higher flow sites



CONSISTENT CONSENT CONDITIONS

CONSISTENT MONITORING

CONSISTENT MANAGEMENT

Continual environmental improvement

Monitoring technology

Feed efficiency

Waste capture

Future offshore aquaculture

# Relocation could deliver benefits

## Better sustainability outcomes

- All 11 consented salmon farms in Marlborough would meet best environmental practice
- Reduced seafloor effects through implementation of the benthic standards
- Better managed water quality
- Improved fish health, husbandry, and greater resilience to disease and increasing sea temperatures
- Opportunities to improve management of biosecurity risk
- Improved environmental monitoring, staged development, and adaptive management.

## Potential better community outcomes

- Farms moved out of areas with high recreational use and amenity
- Improved visual effects from more low profile structures and recessive colours
- Farms moved away from populated bays, reducing noise, lighting, and odour effects
- Meaningful jobs and employment opportunities

## Improved economic outcomes the relocated farms could produce

- Up to \$49 million annually to regional GDP
- Up to 511 Full Time Equivalent jobs.

Economic gains would occur over 10 to 15 years as the sites are relocated and then developed in stages. These values are based on all six farms relocating.

# **There will be costs and missed opportunities if relocation does not proceed.**

**If relocation does not proceed, NZ King Salmon is still committed to improving environmental management by implementing the benthic guidelines across all its farms**

**This would require initial fallowing of the four operative lower-flow farms for two to five years to allow the seabed to recover before recommencing production at reduced stock levels. Two of the lower flow sites, at Crail Bay, have not been farmed since 2011.**

**Over the fallowing period it is estimated \$10m GDP per annum and 105 Full Time Equivalent employees (FTEs) would be lost.**

**After the fallowing period, there is scientific uncertainty about the exact stocking level required for farms to meet the benthic guidelines. Therefore, GDP and FTE implications under both minimum and maximum stocking levels are based on estimates.**

**Under modelled minimum potential feed levels, all four of the currently operative lower-flow sites (Note the two existing Crail Bay sites have not been farmed since 2011) would become commercially unviable (Ruakaka, Waihinau, Forsyth, and Otanerau), resulting in a sustained loss of \$10 m GDP and 105 FTE.**

**Under the modelled maximum potential feed levels, three of the four sites (Waihinau, Forsyth and Otanerau) would remain commercially viable at reduced production levels. Reduced production at these three sites is estimated to result in an ongoing loss, after the fallowing period, of \$3.6 m GDP and 38 FTEs.**

# Consideration of other alternative options

## OFFSHORE FARMING

**NZ is located in the roaring forties – waves over 10 m pose significant farming and engineering challenges.**

**Offshore technology is being investigated worldwide, because it could enable expansion of salmon farming away from competing uses and values, but the economic viability of offshore farming is not yet proven.**

**In NZ one project to develop offshore net farming technology is underway. There is also a proposal in development to the Primary Growth Partnership fund led by the NZ Heavy Engineering Institute, a consortium of engineering companies and salmon aquaculture companies to develop offshore cages powered by wave energy.**

**The hope is that offshore farming will be viable in maybe 10 to 15 years.**

## LAND-BASED FARMING

**MPI has also considered the potential of land-based aquaculture using recirculating systems.**

**The costs of building and running such a facility are exceedingly high and the economics questionable.**

**Recirculating systems are however used for small scale research purposes.**

**Salmon are farmed in the hydro canals in the central South Island, but they are at capacity due to water restrictions and nitrogen limits.**

**Many of our natural river also have nitrogen limits and are prone to floods and high sedimentation.**

# Consideration of other alternative options

## WASTE CAPTURE AND REMOVAL

There is ongoing international research on developing technology to capture wastes before they fall to the seabed and/or to remove waste from the seabed. There is the potential to use this waste for secondary purposes such as fertilisers.

MPI commissioned a report with MDC from Prof Kenneth Black from Stirling University on waste capture. The report provided information on the current technology under investigation internationally. But as yet it is unproven.

A research programme is about to start in NZ on waste removal as a potential future ongoing mitigation measure and to remediate vacated sites.

## IMPROVED FEED EFFICIENCY

Much research has been undertaken on the feed efficiency of Atlantic salmon, which is nearing a 1:1 feed conversation ratio.

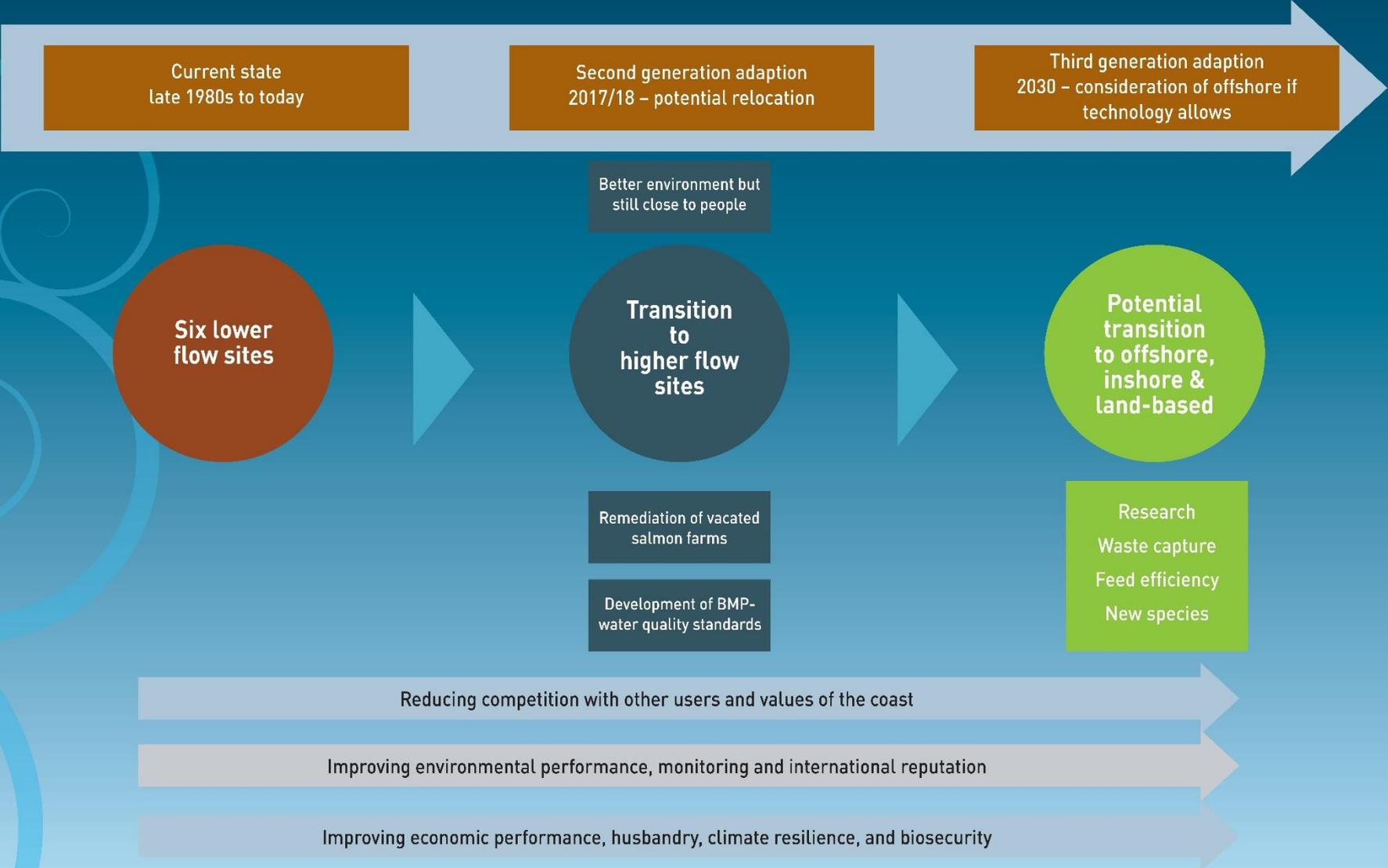
In NZ, we grow Chinook Salmon, which is an oilier fish and will never convert feed as efficiently as Atlantic salmon.

But, there is now a \$ multi-million research project underway with the Cawthron Institute to improve feed efficiency in Chinook Salmon.

Reducing the amount of feed you need to grow a fish will reduce feed waste and nitrogen inputs. In five years the project hopes for a 5 to 10% improvement.

Both these projects are about continued environmental improvements. We want the consent conditions of any relocated farms to require adoption of evolving best management practices.

# Conceptual framework for developing a vision for salmon farming in Marlborough



# How the six relocation sites were chosen

Extensive investigations of over 100 potential sites have been undertaken. This list was refined to just 9 sites after considering a wide range of RMA constraints including ecological, biophysical, landscape/natural character, and social and cultural factors.

The Marlborough Salmon Working Group considered these 9 sites along with other options to implement the benthic guidelines. The group concluded that:

- 3 potential relocation sites should be rejected from further consideration
- 3 potential relocation sites were suitable to proceed to consultation (Horseshoe Bay, Richmond South and Tio Point).
- The group had split views whether Blowhole Point South, Blowhole Point North, and Waitata Mid-channel sites should proceed.

The Minister accepted rejection of 3 sites and decided to seek comments on the remaining 6 potential sites.

Advances in cage technology and the use of circular pens allowed consideration of more exposed sites than were proposed to the Board of Inquiry in 2013. These are the Blowhole Point North, Blowhole Point South and the Waitata Mid-channel sites in the outer Pelorus Sound.

Our work shows opportunities for growth beyond these six sites are limited and that any future growth in Marlborough is likely to occur offshore.

# Key issues – What will happen to the existing sites

If farms are relocated, the consents for the vacated sites will be relinquished and they will be prohibited to aquaculture (mention difference with Crail bay and that they are largely recovered).

Research conducted internationally and by the Cawthron Institute in the Sounds, shows that the seafloor beneath the vacated sites will recover to a functional state in 5 years and fully recover in 10 yrs.

The Cawthron Institute reports from research and monitoring of fallowed sites in the Sounds show that after one year fish species return to feed on the abundant polychaete worms living in the enriched sediment.

Research trials will occur whether waste removal through suctioning will speed up recovery times and not cause environmental harm.

NZKS will be required to remediate the seafloor if appropriate, in line with its current consent conditions when surrendering a site.

# Key issues – achieving the benthic standards

<b>All six relocation sites can be farmed to meet the benthic standards (ES5) based on NIWA deposition modelling</b>	<b>The farms will be monitored and managed adaptively in accordance with the standards</b>	<b>Farms will not relocate for at least two years enabling time to establish baseline monitoring including of adjacent reefs/habitats</b>
Because of the stronger currents and greater depths, the size of the deposition footprints are larger than the existing sites, but the effects are more diffuse.	Deposition footprints are predominately located over common sand/mud sediments and communities.	A number of reefs are present in the outer edges of the footprints at maximum discharges, but deposition is low. Monitoring of existing high flow sites shows little impact on reefs.
Farming at the higher flow and deeper sites would enable increases in salmon production within the benthic guidelines.	The government considers increased production should be enabled providing it can be sustainably managed.	Increased production will also affect water quality and staged adaptive management is needed.

# Key issues – water quality

The NIWA deposition models suggest discharges and production could increase at the higher flow relocation sites while still operating within the benthic standards.

The current feed levels from the existing six sites is about 3,600 tonnes. This could theoretically increase to 24,600 tonnes if all six sites are relocated.

These additional nutrient streams need to be considered on top of the discharges from the other salmon farms (both fully developed and in development) and natural sources of nutrient inputs from rivers and the upwellings from the Cook Strait.

New improved water quality models were developed by NIWA in 2015 jointly funded by MDC and MPI. These models were not available at the time of the EPA Board of Inquiry in 2013.

The models have been extensively reviewed by modelling experts.

Using the new models NIWA has looked at a range of scenarios, including the maximum discharges from all the salmon farms in Pelorus Sound and Queen Charlotte Sound/Tory Channel.

The results have been extensively reviewed by experts.

At maximum discharges, modelling for both Sounds found that absolute and relative concentration increases of plankton are small:

- relative to present day standing stocks.
- relative to historical seasonal and inter-annual fluctuations.

Ammonia remains well below toxic levels even close to farm boundaries.

Modelling suggests it is unlikely that farm relocation and expansion will meaningfully change the frequency or magnitude of algal blooms.

Concerns have been raised about Tory Channel where blooms occur naturally in some side bays – Onapua Bay, and for Grove Arm in Queen Charlotte.

Regular fortnightly monitoring of blooms already occurs as part of the food safety requirements for marine farms. There is an existing baseline to help check if bloom occurrences increase.

# Key issues – water quality

NIWA considers, based on the worst case scenarios of feed input

## IN SOUNDS IN WINTER

Phytoplankton growth is light limited. Thus, little of the nutrient from the fish-farms is quickly incorporated into living matter.

Instead, it spreads through the Sound and out into Cook Strait as inorganic nutrient.

Standing stocks of phytoplankton, zooplankton and organic detritus change by <1% relative to the present situation.

## IN PELORUS IN SUMMER

Growth is no longer light limited. The nutrient from the fish-farms is quickly consumed by phytoplankton (algae).

Standing stocks of phytoplankton, zooplankton and organic detritus increase throughout the Sound (esp. inner parts of the Sound).

Standing stocks of phytoplankton predicted to increase by only up to 2%. Standing stocks of zooplankton predicted to increase by up to about 6%

## IN QUEEN CHARLOTTE IN SUMMER

The largest changes in phytoplankton abundance tend to arise in Onapua Bay and Grove Arm

Phytoplankton concentrations in Grove Arm/Onapua Bay may increase 1-6% relative to baseline.

Harmful algal blooms occur naturally in Onapua Bay at times – monitoring is in place

# Key issues – water quality

All models are predictive, based on assumptions and should be used as a guide to decision-making.

It is also a complex system:  
Sounds water quality is influenced greatly by climate (Cook Strait, rivers) and catchment events.

Expert reviewers agree monitoring and staged adaptive management is required and prudent.

Nitrogen is open to adaptive management because the effects are reversible.

Staged development for the six relocation farms would start at discharges closer to what the environment has previously experienced (~1/2 x maximum potential feed input).

## INITIAL ANNUAL FEED DISCHARGE

Blowhole Point North	2250 T
Blowhole Point South	2500 T
Waitata Mid-channel	3500 T
Richmond Bay South	2500 T
Horseshoe Bay	1000 T
Tio Point	1000 T
	<b><u>12,750 T</u></b>

Feed increases can only occur every 3 years, and only if both water quality standards and benthic standards are met (based on monitoring).

Likely 10 to 15 years to develop fully.

NZKS will be required to provide advanced real time monitoring buoys. These alongside current water sampling methods would be used to monitor near farm and far field effects and the occurrences of any plankton blooms.

The final monitoring programme will be determined through experts workshops

Buoys will also support an improved network of state-of-environment monitoring.

The government also agrees that best practice management water quality standards need to be developed for Marlborough.

The farms would start at the initial annual feed discharges. But, further development would not occur until the water quality standards were finalised.

NIWA and the Cawthron Institute are both available to present to the Panel.

# Key issues – Biosecurity- Pests and Disease

**The Cawthron Institute AEE on pests concludes that relocating farms is unlikely to influence the long-term distribution and impact of marine pest species.**

**DigsFish AEE on diseases concludes that moving farms to deeper, higher flow sites, combined with effective on-farm biosecurity management would:**

- **Decrease the likelihood of biological risks impacting farm operations and adverse effects on the aquatic environment from pests and diseases,**
- **Improve salmon health and resilience to warming sea temperatures from climate change.**

In 2015 higher than usual numbers of fish deaths occurred on some Marlborough farms. It is likely the increased death rates are due to a range of factors.

These may include environmental factors like water temperature, farm management practices, and exposure of salmon to bacterial infection.

In 2016 despite equally high water temperatures, normal survival rates were achieved as production switched to a site with higher flows of oxygenated water.

# Key issues – Biosecurity disease

Two bacteria have been detected in samples from Marlborough salmon farms: a Rickettsia-like organism (an unwanted organism) and *Tenacibaculum maritimum*.

Rickettsia-like organisms are intracellular bacteria. They can be harmless, but some cause disease and death. *Tenacibaculum maritimum* bacteria cause skin lesions.

No causal relationship has been established between bacterial infection and mortality, and neither bacteria pose a risk to human health. Rickettsia-like organisms are the only salmon pathogen in NZ requiring risk mitigation measures.

A resource consent condition for each farm would require a Biosecurity Management Plan to be implemented.

Biosecurity Management Plans would be independently audited on an annual basis.

Aquaculture New Zealand is developing a salmon industry standard to provide effective and coordinated biosecurity management across New Zealand.

# Key issues – King shags

**NIWA's AEE concludes the relocation proposal would have a negligible effect on seabirds.**

**However special consideration must be given to the nationally endangered King shag in Pelorus Sound.**

**The existing sites are located within the preferred feeding depth of king shags being 20-40m**

**The relocation sites are located in deeper water 18-80m, with the majority of pens sited over water greater than 50m deep.**

**Removal of salmon farms from existing sites therefore will return more suitable foraging areas for King shags.**

**The structures at the relocation sites also occupy 1 hectare less space than the existing sites.**

Only one third of the potential consented area at the relocation sites is in preferred depths for King shag foraging, whereas all of the consented area at existing sites are.

But, there is a risk if the existing site has not recovered before the new site is developed that foraging areas could be reduced.

Cawthron Institute seabed recovery studies found that the main prey species of King shags (such as witch flounder, opal fish, triple fins, jock stewart, and lemon sole) are likely to return to vacated farm sites within one year.

Therefore the lower flow sites will be fallowed for at least one year prior to relocation. This allows the prey species of King shags to return and avoids two foraging sites being impacted simultaneously.

# Key issues – King Shags

Existing farms are 3.5-8km from the Duffers Reef colony, the relocation sites range from 3-12km away, so the change in distance if all sites were relocated is considered to be neutral.

In terms of noise and activity disturbance, the AEE considers this to be negligible.

AEE concludes that overall the relocation proposal would have a negligible effect on King shags. However, any development would be carefully planned, staged, and monitored to avoid adverse effects.

A King shag Management Plan developed by experts is already in place for the existing farms approved by the Board of Inquiry to monitor the king shag population every two years

Continual revision and improvement is proposed, including monitoring population annually and in addition also monitoring the numbers of breeding birds

# Key issues – landscape and natural character

**The government is conscious of the requirements of the NZCPS to avoid adverse effects on outstanding landscapes, natural character and features**

**Relocation needs to be sensitive to the values and cumulative effects particularly in Waitata Reach**

**A view has been expressed that the Board of Inquiry set a threshold and no more farms can go in the Waitata Reach. The government disagrees. Our legal advice is on the MPI website.**

Sites were chosen to avoid adverse effects on outstanding areas.

We have tried to place farms in areas of existing marine farm development. The farms declined by the Board of Inquiry were more in undeveloped parts of the coast

The exception is the Waitata mid channel site, which will use low profile circular cages and barge.

The two farms at Blowhole Point North and South will also use low profile circular cages.

Sites would use modern recessive colours and will look very different to the existing old farms and will be less visually intrusive.

The sites are away from residences. In Queen Charlotte Sound/Tory Channel the number of residential dwellings within 1 km of a salmon farm would reduce from 21 to 3

In Pelorus Sound, there would be no residential dwellings with a direct line of sight within 1 km of a salmon farm.

Hudson Associates has provided a report that effect of relocation would be no more than minor on the outstanding areas and cumulative effects acceptable. This report has been reviewed by Drakeford Williams Ltd.

Others will have differing views

Hudson also found that the relocation would in his view improve the overall landscape values in the Sounds.

# Key issues – navigation

Navigation assessments have been conducted for all sites by Navigatus and consultation has occurred with the MDC harbour master and Ferry operators

The harbour master is concerned by the mid-channel site. This has also been raised in public comments.

Kiwi Rail has also highlighted the need for a navigational safety plan for the Tio Point Site to ensure safe passage and secure moorings.

- Navigatus and the harbour master agree navigational risk for the Waitata mid channel site can be managed through appropriate navigation warning devices and signs
- The regulations provide that navigation is a matter of discretion at the consent stage to enable appropriate navigation warning devices and signs. A navigation safety plan is appropriate for Tio Point given the high use of the Tory Channel.
- All sites would be appropriately marked for navigational safety

# Key issues – socioeconomic benefits

PwC have assessed the economic impacts of relocating the six farms. The proposal protects 105 existing FTE and \$10 million GDP and would increase jobs up to 511 FTE and GDP to \$49 million per annum

Previous government research shows that a job is often more than a person with a wage.

Meaningful employment has important social benefits to both families and communities.

Quigley and Watts found the salmon industry provides meaningful jobs:

It generally pays higher than the average median income.

Compared with pastoral farming, forestry and tourism, it provides consistent, year-round work and wages.

The key to achieving success in each region is to build on the region's unique mix of economic opportunities and competitive advantages to attract new investment and people, and grow jobs and incomes.

In Marlborough we are fortunate to have the ability to farm high value salmon, which can provide a range of jobs across the top of the South Island

Quigley and Watts found salmon farming activities have retained people, income and skills in the Marlborough Sounds community at a time when employment opportunities generally have been declining.

At present jobs are predominately in Nelson with around 87 staff located in Marlborough working on-farm, in engineering, performance planning, and support.

NZKS has a goal to move more jobs into Marlborough in the future in primary processing and associated businesses.

# Key issues – Tourism and Recreation

The AEE concludes that none of the proposed sites have activities that are not substitutable nearby, and as a result the impact from potential farm relocations on tourism and recreation is negligible for all sites except one, Waitata mid-channel.

Removing the Ruakaka site in Queen Charlotte Sound has some minor positive benefits for recreation and tourism. This removal would create the potential need to use an alternative salmon farm site for tour operators currently visiting.

Waitata mid-channel has the potential to cause perceived visual impacts for the land-based eco-tourism operators in the vicinity.

The AEE also found evidence that the impact on recreation and tourism of additional salmon farms installed in both Queen Charlotte Sound (2015) and Pelorus Sound (2016) appears to be less than minor.

# Key issues – Residential amenity

Taylor Baines & Associates assessment focused on the potential social consequences in the immediate vicinity of each farm site.

The relocation proposal would change the situation where dwellings are close enough to salmon farms to make adverse residential amenity effects highly likely, to a situation where they are unlikely.

Quigley and Watts Ltd also found residents living near salmon farms are likely to experience a localised loss of environmental amenity values (visual, noise, odour, wildlife, water quality).

The proposal significantly reduces the number of residents living in close proximity to a salmon farm

In Queen Charlotte Sound/Tory Channel the number of residential dwellings within one kilometre of a salmon farm would reduce from 21 to 3

In Pelorus Sound, there would be no residential dwellings with a direct line of sight within one kilometre of a salmon farm.

# Key issues – Cultural

**The Crown has an ongoing settlement obligation with Maori equivalent to 20% of any new aquaculture space created.**

**Iwi also have range of views and concerns on the relocation proposal. All iwi have said they wish to be heard by the Panel.**

**It is important to note that Te Atiawa has a commercial joint venture arrangement with NZ King Salmon for the proposed Tio Point relocation site.**

**We encourage the Panel to investigate iwi concerns as specifically required under the RMA and potential mitigation options.**

# Conclusion

**Today I have presented a summary of the Whole of Government proposal. The full proposal, however, is contained in the consultation document, draft AEE, the proposed regulations that take the form of a plan change, and in the numerous research reports the comprise the full Assessment of Environmental Effects.**

**Written comments and the public hearings are essential to understanding the full effects both positive and negative on people's current uses and values.**

**Our Experts and the AEE research providers are available to present their findings.**

**An exact swap proposal has not been determined. This can only be established once comments from the public and iwi authorities have been assessed.**