

Aquaculture Perspectives on Pathways

**THIS IS MY BACKYARD. I FISH HERE, I SWIM HERE, I WORK HERE.
IT'S MY JOB TO PROTECT IT. MY WATERS ARE BLUE,
MY INDUSTRY GREEN AND MY FUTURE BRIGHT. I HELP FEED THE WORLD
AND THE WORLD CAN'T GET ENOUGH OF MY BEAUTIFUL SEAFOOD.
I'VE EVOLVED OVER GENERATIONS, CREATING
GREEN JOBS AND INVESTING IN MY COMMUNITY.**

**I AM OPPORTUNITY. I AM SUSTAINABILITY. I AM THE FUTURE.
I AM NEW ZEALAND AQUACULTURE.**

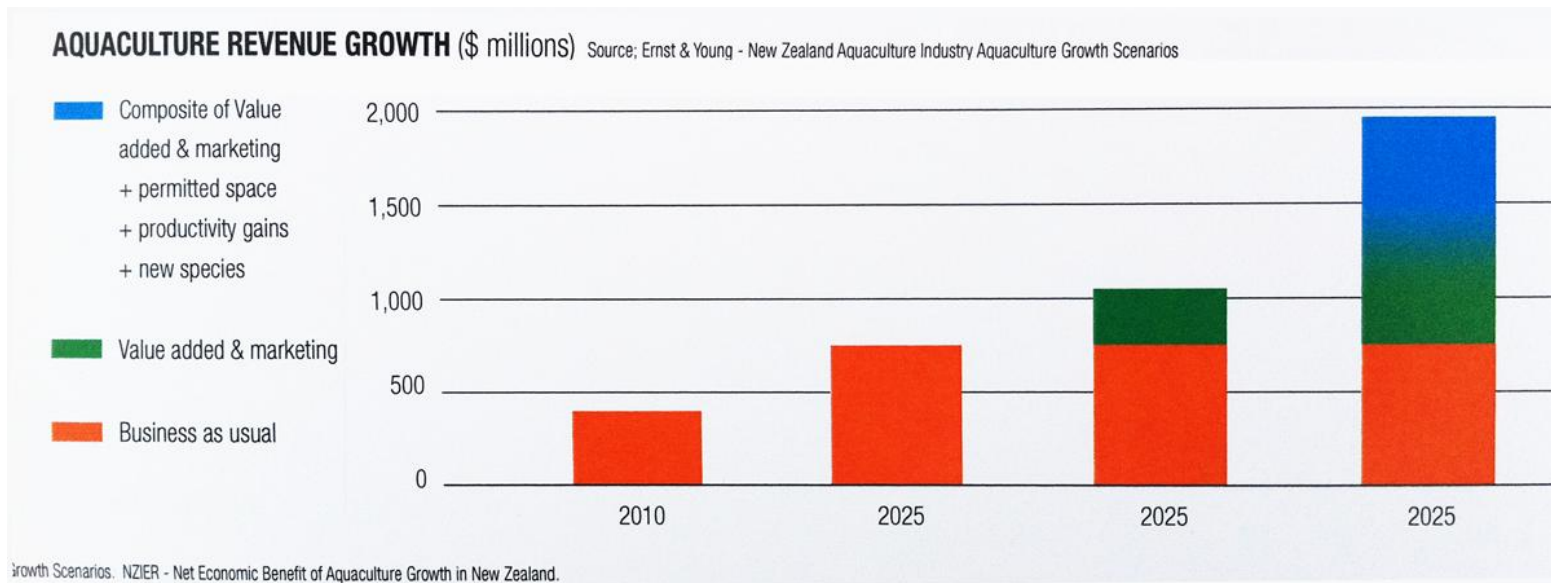
Aquaculture in New Zealand

\$470 million sector

Growth target of \$1 billion by 2025

Scale, productivity and **value growth**

Green jobs, community benefits, export earnings, sustainable, nutritious, delicious products



Farming Goodness

In many ways marine farming is similar to farming on the land – the health and integrity of our farm environment directly impacts the quality and value of our products – and the efficiency and productivity of our farms

Biosecurity is core to our success



**Proudly grown
in your backyard**

Marine farmers are mindful that they operate in public water space and **work hard to be good neighbours.** Careful site selection and a co-operative

Applications for new farms are assessed by local Councils, or if considered a matter of national significance the application may be heard by the Environmental Protection Authority (EPA). The approach is robust and provides

Pristine waters =
premium seafood

What Lies Beneath

There are a number of marine pests that have been identified as being particularly significant. These include *Styela Clava* (already here) and the Northern Pacific Seastar



However the real risks probably come from pests and diseases that are as yet unknown or that seem innocuous internationally or even locally, but may react, spread and impact quite significantly in New Zealand's unique **marine environment**

For this reason comprehensive **pathway management** is even more important

International Pathways

Aquaculture in New Zealand does not have any of its own international pathways

But risks to our industry are significant from pests hitch-hiking on vessels from overseas waters – *Styela clava* is a good example



So we actively support initiatives to manage risks from international vessels through hull fouling and ballast exchange

Regional Pathways

Management of regional pathways can significantly reduce the risk of spread of pests that have already arrived in New Zealand waters

Most of these pathways are non-aquaculture related – the most common being recreational and commercial vessels, as well as natural vectors

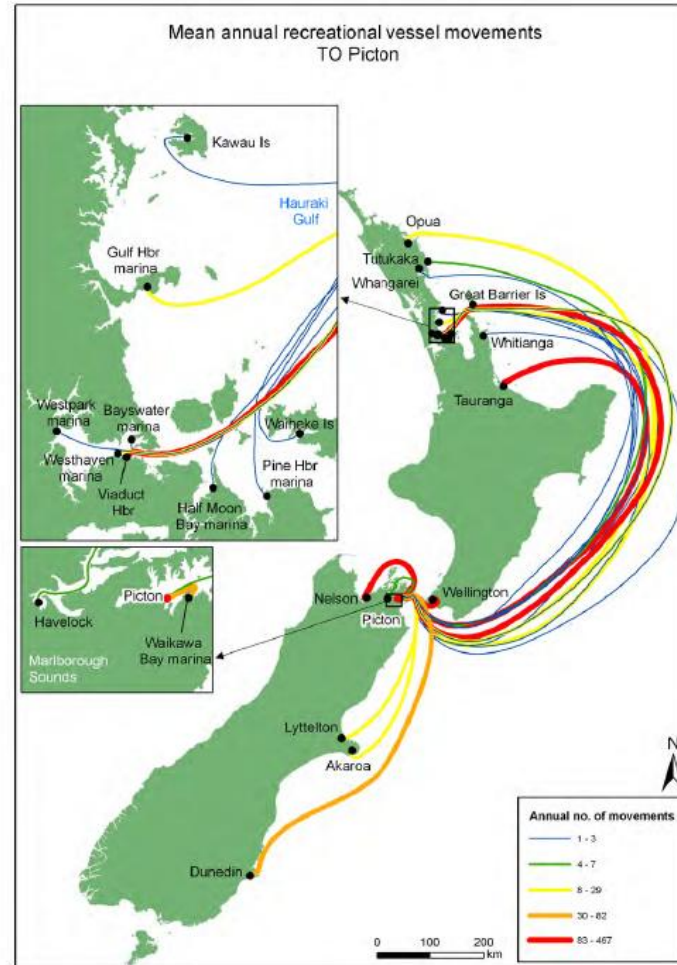


Figure 84: Modelled mean annual recreational vessel movements to Picton. Model parameterised with 2002-2003 movement data.

Marine biosecurity relies on the effective management of these vectors

Regional Pathways - Aquaculture

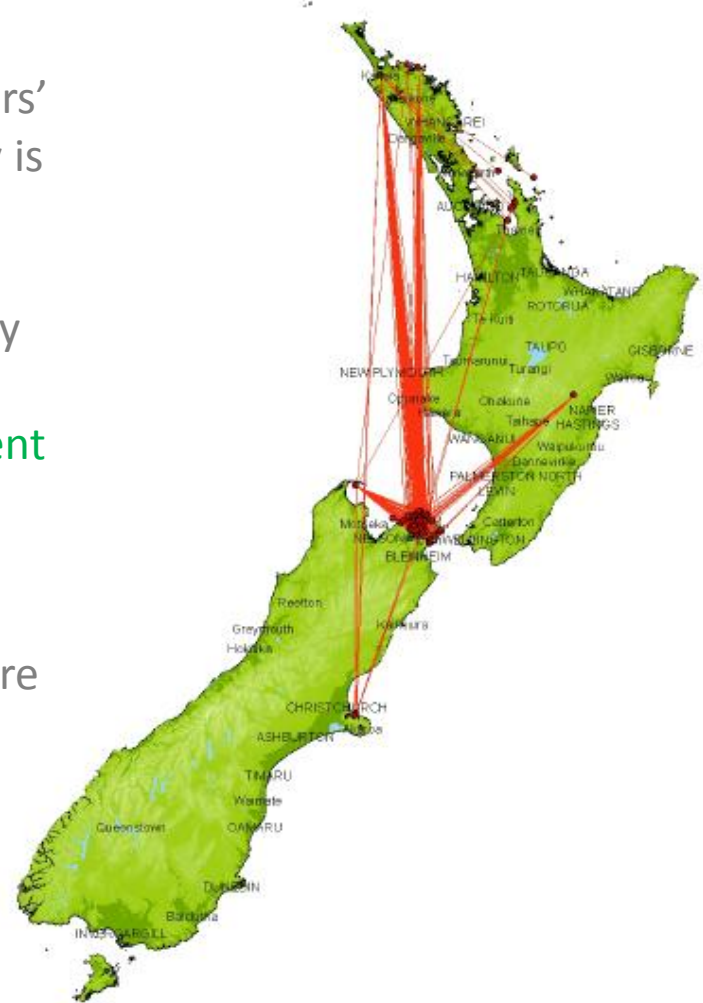
Just as we look to a range of marine ‘exacerbators’ to manage their risks – the aquaculture industry is mindful of the need to manage its own

Biosecurity initiatives in the aquaculture industry include:

- Prevention – including pathway management
- Readiness
- Response

Particular pathways of interest within aquaculture are:

- Vessel movements
- Gear movements
- Stock movements



Current Initiatives

New Sustainable Management Framework – to be launched at the Aquaculture Conference in September

This will include guidance around

- Antifouling
- Vessel maintenance
- Good farm maintenance to reduce fouling reservoirs
- Surveillance and awareness of what's in the water and on the farm
- MPI Hotline awareness
- Stock and gear movement protocols such as washing and declumping of mussel seed prior to transfer
- Education, training and communication



Working with the Top of the South Partnership on biosecurity elements

Future Initiatives

MPI and AQNZ have been collaborating on a project entitled '*Identification of On-Farm Aquaculture Biosecurity Management Options*'



Recommendations include

- On-farm biosecurity management solutions need to be effective and practical
- Biosecurity needs to be managed on the basis of geographic zones that align with water bodies
- Availability of water space to operate fish farms as single year classes and to fallow
- Research on practical methods to reduce pest and disease transmission through stock transfers – don't throw the baby out with the bathwater
- Appropriate surveillance and testing
- More user friendly pest identification and collection tools
- Better collaboration and education

Also GIA

Important Points

- Aquaculture relies on biosecurity to maintain clean, healthy water – to maintain a good reputation and premium products
- Biosecurity in the New Zealand marine context is a real challenge because there is so much we still don't know about how particular pests and diseases will interact in our unique environment
- The full suite of prevention, readiness and response is important
- Pathways management is a crucial element of prevention
- Significant non-aquaculture pathways include commercial and recreational vessel movements and natural vectors
- Aquaculture pathways include movements of stock, vessels and gear
- The industry already has initiatives in place to ensure we are responsible users of the coastal water space – including the development of the New Zealand Aquaculture Sustainable Management Framework
- However more work and research is underway to develop practical, risk based tools and methods to manage aquaculture pathways
- Education and collaboration are also very important