New Zealand Aquaculture
& Biological risk management
• Aquaculture New Zealand is the aquaculture sector’s peak body

• We represent over 250 growers throughout New Zealand

• We were formed in 2007 to provide a single voice for aquaculture

• Currently representing three commercial species
  — New Zealand Greenshell™ Mussels
  — New Zealand (Chinook/King) Salmon
  — New Zealand Pacific Oysters

• We are funded by a compulsory production based levy on harvested product

• And with the support of government for market development, R&D and sustainability projects
We must turn to the sea with new understanding and new technology. We need to farm it as we farm the land...“

- Jacques Cousteau, 1973
Major demand side trends

Steady growth in consumer demand combined with limited wild capture supply will drive up prices over the long-term. Demand for aquaculture products will also increase.
The average growth rate over the above period is 10.5%; China overtakes Japan as the second largest economy in the world in 2010

Source: World Bank, World Development Indicators
There are 3 key drivers behind a significant expansion in the size & nature of the Health & Wellness market – with significant potential for marine-derived products.
Premium vs. commodity

NZ's UNIQUE PROPOSITION
Export growth

Aquaculture exports over time

Export values (NZ$million Fob)
- Oysters
- Salmon
- Mussels

1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011
Aquaculture In New Zealand

- Currently a $400 million sector
- With a sector growth target of $1 billion

- An independent expert assessment of the sector growth potential confirms revenues closer to $2 billion are attainable, if synergies between new space, new species and productivity gains are considered.
Pristine waters = premium seafood

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 approach help farms remain in balance with fellow water users. As well as regular industry initiated beach clean-ups, local sponsorship programmes and providing access to premium seafood for people who don’t have boats, marine farming also provides some of the country’s best fishing grounds and a safe place for boats to tie up in distress.

“Ask any fisherman where the best snapper fishing is, they’ll tell you it’s around the farms,” says Marine Farming Association chief executive Graeme Coates.

“If a boat breaks down, they can tie up to the farms.”

“A lot of recreational fishermen have come to realise it’s to their benefit.

“We’re always open to suggestions from fellow water users about how we can improve things further or any worries they have.”

“At no point is any water space privatised – ownership remains with the Crown on behalf of the New Zealand public.”

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 a powerful check and balance, by examining environmental sustainability, economic benefits, navigation, recreational water users, and existing businesses.

Public and community consultation is an integral part of either process. Every farm application must satisfy the process and will be judged on its own merits regardless of what has come before it.

If an application is successful, a consent is granted giving the right to farm for a defined term, in accordance with a set of conditions requiring strict environmental management. The approval of an application does not create precedents and one approval does not make it easier for subsequent applications.

Marine farmers are subject to considerable costs in utilising water space, through a variety of consent charges, application fees, research costs, monitoring charges and bonds.
Aquaculture biosecurity

- Farm level
- Region level
- Sector level – ECoP
- Specific issues – G. catenatum CoP
**Biosecurity**

**Objective:** Comprehensive Biosecurity Management, by Industry.

| R | Farmers must uphold Aquaculture NZ’s *Styela clava* Code of Practice and its Biosecurity Code of Practice. |
| R | Farmers must notify Biosecurity NZ of the finding of any Notifiable organism or organism not normally seen or detected in NZ. Phone the Biosecurity Hotline 0800 80 99 66. |
| R | **Emergency Biosecurity:** If the farmer is advised in writing of the requirement by Aquaculture New Zealand the farmer shall comply with a Biosecurity monitoring (and/or management) plan or protocol re transfers/pests/diseases or other Biosecurity considerations to the satisfaction of Aquaculture New Zealand. |
| G | Farmers should note that Aquaculture New Zealand may implement new Biosecurity requirements at short notice for immediate implementation as part of this Code of Practice. |
| G | **Emergency Biosecurity:** Supervisors should be familiar with the list and with the reporting procedures for new organism incidents as required by Biosecurity NZ (www.biosecurity.govt.nz). |
| N | While oyster farming may be a potential vector re Biosecurity threats this should be seen in context, including other vectors, for example: equipment, vessels, boats, currents, also that the key NZ Biosecurity measures against undesirable aquatic organisms are to keep them out of NZ and for early detection (most probably at ports). |
G. catenatum cysts

Image from Cawthron Institute:
### Biosecurity Action Plan — decreasing the risk profile of the Industry

<table>
<thead>
<tr>
<th>Action Area</th>
<th>Goals</th>
<th>Key Objectives</th>
<th>Critical Components</th>
<th>Measures</th>
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<tbody>
<tr>
<td>Intelligence &amp; intervention on the risk pathway</td>
<td>Trade standards protect and serve industry</td>
<td>AONZ engages in NZ border risk management process (risk assessment, import health standards development)</td>
<td>AONZ inputs into risk analysis and import standards development where appropriate</td>
<td>AONZ signed up as stakeholder with MPI imports group</td>
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<td>AONZ coordinates industry input into international trade standards</td>
<td>AONZ ensures proposed trade standards are received from MPI and responded to where necessary</td>
<td>AONZ coordinates submissions on relevant risk analyses and import standards</td>
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<td>Biological risks are identified and communicated</td>
<td>AONZ gathers and collates information from national and international forums</td>
<td>AONZ monitors national and international forums and identifies trends and risks</td>
<td>AONZ monitors OIE (and similar) proposed trade rules and coordinates industry response</td>
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<td>Information is communicated to stakeholders</td>
<td>Critical information is transmitted to industry via representative biosecurity groups in a timely manner</td>
<td>AONZ is aware of and signed up to alert and information forums, participates in webinars and gathers information from relevant meetings and conferences</td>
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<td>Guaranteed representation of industry on Response Strategic Leadership (RSL) Group</td>
<td>MPI agrees for appropriate representative of industry to sit on RSL for responses in a species related to current industry</td>
<td>Industry representative appointed to relevant RSL teams, every time</td>
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<td>Clear &amp; agreed trading partner notification rules</td>
<td>MPI agrees that trading partner notification will not occur until clear diagnostic criteria have been reached, and industry has been consulted</td>
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<td>Industry is consulted (not just informed) prior to any trading partner notification, with agreement on timing and content of notification reached.</td>
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<td>Use of international diagnostic laboratories managed to protect reputation of NZ industry</td>
<td>MPI agrees that diagnostic samples will not be sent to overseas laboratories without industry consultation and Director General (DG) approval</td>
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<td>No diagnostic samples of relevant to industry goes overseas without industry knowledge, good reason and appropriate safeguards.</td>
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<td>Surveillance activities do not pose a threat to industry</td>
<td>New Zealand standards for good surveillance practice are agreed upon and adhered to by government, industry, research providers, NGOs</td>
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<td>Government, industry, research providers, universities etc. adhere to surveillance standards, limiting risk to export trade</td>
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<td>Government clearly elucidates roles and responsibilities during an investigation or response</td>
<td>Generic event investigation &amp; response agreement between MPI and industry</td>
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<td>Industry and Government understand roles and adhere to agreed standards in investigations and responses.</td>
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<td>Industry event response structure</td>
<td>Improved readiness for, and communication during, response events</td>
<td>AQNZ sets up representative biosecurity groups for salmon, mussels &amp; oysters</td>
<td>Biosecurity groups set up for salmon, mussels and oysters</td>
<td>Groups established and Terms of Reference agreed</td>
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<td>AQNZ acts as central coordination point for Ministry for Primary Industries communications regarding industry/sector-wide events</td>
<td>Biosecurity groups agreed Terms of Reference</td>
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<td>Relationships</td>
<td>Industry is consulted proactively and informed promptly, on significant biosecurity issues.</td>
<td>Networks built, and maintained, with government, non-government organisations and biosecurity practitioners</td>
<td>Central government – MPI, MBIE, DoC, etc. and Regional Authorities</td>
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<td>Non-Government Organisations (e.g. Fish &amp; Game, other representative bodies) and Biosecurity Practitioners (Research providers, consultants, diagnostic service providers)</td>
<td>Industry is aware of events or potential events before public and media</td>
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<td>Practical Biosecurity Planning</td>
<td>Biosecurity measures are fit-for-purpose, reducing risk to the industry without constraining activity</td>
<td>Farm-level measures are effective in protecting individual establishments</td>
<td>Review of current procedures, extension of biosecurity theory and assistance with planning for the industry as required</td>
<td>Establishments operate to at least minimal agreed level of biosecurity pertinent to their risks and procedures</td>
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<td>Regional biosecurity plans (where developed) provide protection to industry, without unnecessary constraint, and take future growth potential into account</td>
<td>AQNZ works with MPI Aquaculture Unit in ensuring that biosecurity plans referred to in the Government Aquaculture Strategy and 5-year action plan are fit-for-purpose.</td>
<td>Government biosecurity plans are beneficial for industry</td>
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<td>AQNZ monitors and is involved where necessary in other biosecurity initiatives</td>
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<td>Understanding the risk profile of the industry, improving tools and capability for identifying, mitigating and responding to critical factors</td>
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<td>Other initiatives (e.g. Top of the South, Domestic Pathway Management) are cognisant of industry needs</td>
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<td>Understanding animal health &amp; performance with respect to emerging and exotic risks</td>
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<td>Building knowledge and capability</td>
<td>Building a generic response capability within the industry and its service providers</td>
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<td>Encouraging research to fill critical knowledge gaps</td>
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<td></td>
<td>Identifying need and opportunity for research and funding not otherwise covered above but of significant utility to industry</td>
<td>Research funding sourced and research carried out as needed. Findings useful to industry</td>
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Editorial

Government industry agreements for biosecurity

It’s not hard to sell the concept of working together to achieve good outcomes, especially regarding biosecurity. What is more challenging is creating a shared view of what the partnership will look like – and then making it work for everyone.

The new Government Industry Agreement on Biosecurity Readiness and Response (GIA) establishes an integrated approach to preparing for and effectively responding to biosecurity risks, through a partnership between government and primary industries.

Key elements of the GIA are:
- partnerships to deliver a better biosecurity system;
- reducing the harm of pests and diseases to the environment, economy and community;
- shared decision-making and cost-sharing between government and industry to support an efficient and effective biosecurity system;
- identifying and addressing priority risks to minimise harm; and
- establishing an independent Secretariat and interim governance body to facilitate the partnership and GIA outcomes and drive the development and delivery of the GIA.

The GIA uses a formal Deed of Agreement for a robust, collaborative approach to reducing harm caused by the entry and emergence of pests and diseases that would have a significant adverse effect on the New Zealand environment, economy or communities. A draft of this Deed, prepared by a joint working group of industry and government representatives, was released for feedback last December. It will commit signatories to a partnership across every part of the biosecurity system – from pre-border risk assessment and management, through border risk management, to post-border biosecurity, while also accommodating the government’s legal, national and international obligations. Onshore activities that will be and government on 1 July 2013. These issues will be negotiated through meetings of government and industry representatives during March and April.

The release of the draft Deed signals a major step forward for the GIA. It represents and embodies a spirit of partnership first mooted in GIA discussions as far back as 2009. This spirit is evident today not only through the joint working group overseeing the development of the Deed, but through a wider group of industry and MPI representatives who met throughout 2012 to test the Deed provisions and ensure it embodied the principles and value of partnership.

Developing the Deed is just the tip of the iceberg, with so much more work required make it work – from revising the Biosecurity Act to accommodate the GIA, to developing case studies helping industry groups to assess the value of joining the GIA.

Value

To secure mandate from their members, a number of industries are developing a business case to demonstrate the value of signing the Deed. A Memorandum of Understanding has been signed by representatives of 20 industries. This MOU provides for joint work by MPI and industry to jointly develop information on the value of the agreement to help other industry representatives decide whether to sign the Deed.

Several projects are underway to explore elements of the Deed to demonstrate their value as part of the business case that industry organisations will put to their members. These industries include eggs and poultry, horticulture, dairy, equine and citrus.

A generic business case template is being developed through the GIA Secretariat to help industry analyse the value that GIA may offer them and to help them prepare for seeking mandate from their members. MPI is also
New Zealand estimated farmgate return per hectare

Salmon returns 2,000 times as much per hectare as beef and sheep meat

Investment opportunities in the New Zealand Salmon industry
Aquaculture is good for communities
for the economy
for New Zealand