A **sustainable** growth story

New Zealand Aquaculture

In 1969 a group of fishermen towed the first mussel barge into the Marlborough Sounds and anchored it in the Kenepuru.

In the 43 years since, the New Zealand aquaculture industry (farming of Greenshell™ Mussels, King Salmon and Pacific Oysters) has evolved from a group of innovative pioneers to **a professional, specialised and premium food production sector** focused on environmental sustainability, food safety and value added marketing.

In 2011 the industry employed over 3000 Kiwis and generated over $400 million of revenue.

The industry goal is to reach $1billion in annual revenue by 2025.

Moving forward, the sector offers **tremendous sustainable growth potential for New Zealand,** to create more regional jobs, support associated industries and inject much needed export earnings into local communities and the economy.

"I think you could go quite a bit further than that $1billion"

Former Fonterra CEO, Andrew Ferrier.
2011 New Zealand Aquaculture Conference

Blue sea thinking

Aquaculture is already the world's fastest growing primary industry and demand for aquaculture products is expected to strengthen significantly as the world's population grows and wild-catch levels remain relatively static. United Nations Food and Agricultural Organisation figures show aquaculture produces about 47% of seafood consumed globally by humans with production levels growing at a rate of approximately 6.3% annually for the past decade. Estimates suggest aquaculture will soon produce more seafood than wild fisheries.

It is one of the world's most efficient forms of food production and is considered a sustainable solution to feeding the world. The New Zealand aquaculture industry has positioned itself at the high-end of the market, exporting premium seafood products around the world.

New Zealand aquaculture products are exported to 79 countries and considered among the world's best seafood. Their taste, health properties, quality and versatility see them served at parties in New York, white table-cloth restaurants in London and at backyard barbecues down under.

The high quality of New Zealand coastal waters and the abundance of plankton, along with the prevalence of sheltered harbours and inlets create ideal conditions for aquaculture. Couple this with our **pristine waters, world class environmental management practices and reputation for quality and food safety, and we are well-placed to capitalise on this food growing revolution** with high value premium seafood products.

Of the $400 million industry revenue, $298 million was generated in exports. Sustainable growth in the sector will inject much needed export earnings into communities and the economy, generate more regional jobs and support a host of associated industries.

THE STRATEGY

In 2006 the industry launched the New Zealand Aquaculture Strategy, developed to steer the industry toward its $1 billion sales goal. The industry representative organisation Aquaculture New Zealand was established in 2007 to implement the strategy and unlock the potential through strengthening partnerships, iwi participation, improving public understanding, market development, innovation, sustainability, investment and education.

Artisan**pride**

The heart of the industry and our flagship aquaculture products are Greenshell™ Mussels, Pacific Oysters and King Salmon.

Naturally perfect and nurtured to perfection - farming these premium species is a craft honed over forty years.

New Zealand is the only country where Greenshell™ Mussels naturally occur. They are farmed in six main growing regions using a long-line rope system and take 12-18 months to grow to market size.

Pacific Oysters are predominantly farmed in the warmer waters off the North Island on intertidal racks or in a basket system and take 12-18 months to grow to market size.

New Zealand farmed King Salmon are grown in the colder waters off the South Island with the majority in sea pens in Marlborough, Canterbury and Southland regions. The farms are located in areas selected for their isolation, water quality and flow. After being placed within a sea water farm, a salmon generally takes 19 - 31 months to grow to an optimum market size of around 3.5 – 4 kg. There are also fresh water farms operating in the McKenzie Country hydro-canals.

Proudly**grown** in**your**back**yard**

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 if in distress.

"You 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.

"Also, 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 are 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 benefit, navigation, recreational water users, iwi and existing businesses. Public and community consultation is an integral part of either process. Every farm application must satisfy this 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.

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

Pristine

waters=premium**seafood**

Consumers can eat New Zealand aquaculture produce with a clean conscience.

Core to the industry is a commitment to sustainable practices. No one has a greater interest in protecting the marine environment than the farmers who depend on it for their livelihoods.

Our farmers follow Environmental Codes of Practice, independently recognised as world leading, that direct best industry practices throughout growing and harvesting, to minimise potential effects on the environment. Independent authorities also monitor the industry's environmental performance through the resource consent process, requiring independent scientific studies be conducted on all potential farm sites and on-going environmental monitoring during the life of the farm.

Aquaculture is considered **one of the world's most efficient forms of food production.**

King Salmon farmed in New Zealand are net marine protein and oil producers (meaning the industry produces more fish protein and fish oil than it consumes) – the small amount of fish protein and oil in their diet is sourced from recognised sustainable fisheries.

Greenshell™ Mussels and Pacific Oysters filter nutrients from the water column and are universally recognised as a supremely environmentally friendly food source.

BLUE OCEAN INSTITUTE

Inspiration, Information, Action

The International Conservation Organisation Blue Ocean Institute, ranks New Zealand Greenshell™ Mussels as one of the top 'eco-friendly seafoods' in the world.

Kaitiakitanga

Māori are key participants in the sector and their role will grow in coming years through the Māori Aquaculture Settlement, in which the Crown will provide iwi the equivalent of 20% of all new space allocated for aquaculture.

The scale of potential iwi involvement in the future of the industry is such that the sector as a whole will not reach its full potential unless iwi prosper.

The harvesting of seafood and purity of water is a fundamental part of Māori culture.

This is vital to Māori participants in the industry in ensuring that the management of aquaculture is consistent with traditional management concepts such as kaitiakitanga (the exercise of guardianship by tangata whenua in accordance with their ethic of stewardship towards natural and physical resources).

The world's best seafood

Pure, unique, desirable - our meticulously farmed seafoods are **the taste of New Zealand.**

NZ Greenshell™ Mussels are sought after by seafood lovers the wold over. They combine a stunning iridescent green shell with a plump, full-flavoured mussel packed with a wealth of nutritional benefits. Their culinary versatility makes them a perfect menu option that is healthy, satisfying and easy to prepare.

New Zealand Pacific Oysters are the height of decadence. They offer a generous serving of succulent plump meat nestled within a deeply cupped shell, providing a taste unique to New Zealand and the individual growing areas in which they are cultivated.

King Salmon is considered the 'wagyu' of salmon. Raised within the pristine waters of New Zealand, this isolated and pure environment is perfect for producing the premium King Salmon variety, prized for its characteristic rich flavour, delicate soft texture and high omega-3 content.

FOOD SAFETY

New Zealand marine farmers and processors adhere to one of the world's strictest seafood quality assurance programmes that meet the specifications and standards set by the U.S Food and Drug Administration, European Union and New Zealand Ministry for Primary Industries.

Smart **seafood**

It's food that helps you think, from an industry that is always thinking. Our people are constantly working to improve husbandry, farming technologies, productivity and added value. By refining processes and improving efficiencies

we produce more, with less resources increasing yield and value while minimising environmental impact.

The sector works closely with respected research institutions, Cawthron, NIWA, Plant and Food, and several universities on various research and development projects including selective breeding, new species formats, sensory science and biosecurity work.

The future of the sector also requires investment in training and education and the ability to attract and retain a skilled workforce. A key component of the sector strategy lies in working closely with education providers and individual companies to enhance the capabilities of staff. Besides scholarships and work experience opportunities offered by individual companies, there are eight tertiary institutions providing specific higher education courses in aquaculture.

New**Zealand's**own **superfoods**

New Zealand farmed seafood is nutritious, as well as delicious, making them foods that love you back.

Greenshell™ Mussels are high in protein, low in fat and provide a source of omega 3s. They are also a rich source of selenium, iron, Vitamin B12 and iodine and a good source of magnesium and calcium. Nutraceutical products derived from Greenshell™ Mussels are commonly associated with supporting joint mobility. Recent studies suggest they could also be used beneficially in the management of asthma and ADHD.

King Salmon has one of the highest natural oil contents of all salmon varieties making it a quality source of omega 3s. Work is on-going to derive an omega 3 dietary supplement for human consumption from New Zealand farmed King Salmon. Indications are that a sustainable, New Zealand fish oil sourced from fresh product would have a high demand in the $16billion international fish oil market.

Pacific Oysters are rich in zinc, iron and Vitamin B12. They are also high in protein and an excellent source of copper, iodine, magnesium, selenium and Vitamin C and a good source of Vitamin D.

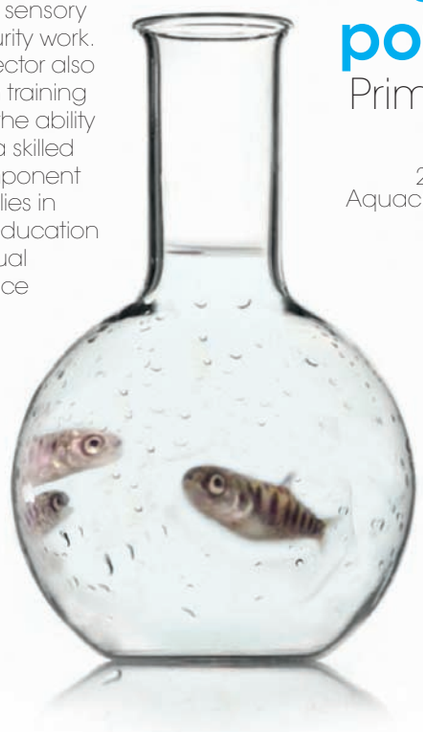
Government **support**

Successive governments have recognised the valuable opportunity aquaculture offers the country and taken major steps to unlock the potential and enable industry-led, sustainable growth.

The sector works closely with the government and its agencies on matters of sustainability, biosecurity, market development, food safety and research and innovation.

"If you want to lift economic growth... you pick some industries that you know have got massive upside potential"

Prime Minister John Key.
2010 New Zealand Aquaculture Conference



New Zealand marine farmers have a proud history. A reputation earned over 40 years of strong environmental management with processes independently recognised as world leading. Aquaculture produces world-class, nutritious and delicious seafood, employs 3000 Kiwis and injects hundreds of millions of dollars in export earnings into the economy each year.

Aquaculture offers New Zealand a unique opportunity to utilise our coastal resources, to generate more jobs and grow the economy by farming carefully chosen sites under planned and controlled conditions. It is not a choice between economic growth or environmental sustainability. It is a means of achieving both and people can feel proud for supporting sustainable economic development in their community.

Aquaculture is good for communities for the economy for New Zealand

Aquaculture New Zealand

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