

SEAFOOD

NEW ZEALAND



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showcases
open ocean
opportunities**

**Dolphin plan's
human cost**

**Schoolboy
skipper forges
inshore career**

OUR PROMISE

This is our promise to every New Zealander.

A promise about one of our most valued and treasured resources.

We are the men and women of the New Zealand seafood industry and we want you to be proud of each and every one of us.

We promise to be guardians of our oceans and to continue finding new ways to lead the world with sustainable practices – right now and for decades to come.

We may not always get it right, but we're committed to always exploring ways to do things better.

We have nothing to hide and much to be proud of.

So come with us and share our stories at seafood.co.nz.

OUR PROMISE IN PRACTICE

OUR CODE OF CONDUCT

We do not condone illegal behaviour.

We will always aim to do the right thing. The law surrounding fishing is both technical and complex and, at times, some people may make mistakes. When the law is breached, we will accept the consequences and make changes where needed.

We will work with Government and other interested parties to develop and implement principled and practical policies to ensure the use of fisheries resources is sustainable.

If we don't fish sustainably our industry has no future; it's the cornerstone of our business. We must ensure the economic gains we derive do not come at the cost of long-term sustainability. Working constructively with Government is vital to strike the best balance between current resource use and future opportunities for all New Zealanders. Striking this balance requires application of sound principles to develop evidence-based policy that uses robust information.

We will continue to actively minimise our impacts on the marine environment and encourage others to act similarly.

It is important to us we look after our marine environment. All New Zealanders derive benefits from our natural resources today, but we are also guardians for future generations. This responsibility requires that we take care when we harvest; that we are conscious of our impacts, and that we work hard to reduce them. All food production has an impact on the environment, but we will strive to get ours as close to zero impact as we can.

We will continue to invest in science and innovation to enhance fisheries' resources and add value.

Our fisheries are a treasured resource and, like all other countries, New Zealand uses these natural resources for food, recreation and commerce. We commit to harvest the commercial component of these resources responsibly. We commit to investments that add value to the resources we harvest to deliver optimum value to New Zealand.

We look after our people and treat them fairly.

We value our people. Whether they are working on land or on vessels at sea, we will work hard to keep them safe and to create an environment that fosters their passion for the seafood industry.

We will be accountable for delivering on Our Promise and will support increased transparency.

We will report annually on the progress we are making. We understand that much of what we do is over the horizon and out of sight, and we welcome the public becoming better acquainted with how we operate. Increased transparency is part of building that understanding and trust, but it must be affordable, practical and respect the privacy and dignity of our people.

We give our word

Features

- 6 Skinned and gutted by dolphin TMP
- 12 **Cover story:** Boosting the blue economy
- 24 **Conference special:** A gathering with bounce
- 33 Iwi involvement impresses Australians



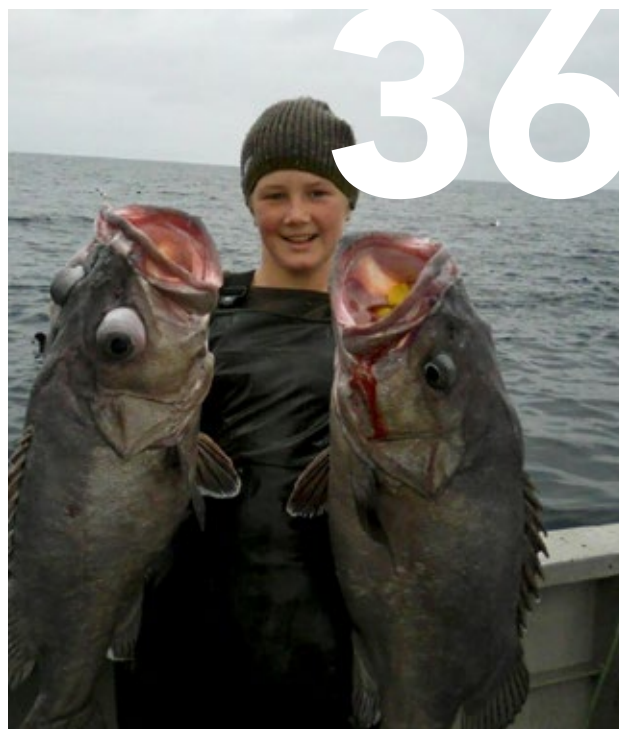
Regulars

- 5 **News:** Croatian fisherman honoured
- 32 **Recipe:** Poached crayfish Thai salad
- 36 **Faces of the Federation:** Schoolboy skipper forges career
- 40 **Seafood Innovations:** Research aids environment
- 46 **Economic review**



Opinion

- 38 Brand put above people - Rocky Bublitz
- 42 **Letters:** Industry 'dropped the ball'



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Subscriptions:

Seafood New Zealand is published for the New Zealand seafood industry. It is also available on subscription in New Zealand and overseas. Subscription rates are available on request. Seafood New Zealand is produced bi-monthly (six issues per annum).

Your Say:

Contributions of a nature relevant to the seafood industry are welcomed and industry participants are encouraged to contribute. Letters to the Editor should be signed and carry the writers' full names and addresses.

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ISSN 1172-4633 (Print)

ISSN 2538-0834 (Online)



In this issue

Can open ocean aquaculture provide a big boost for New Zealand's blue economy? That's the question addressed at a trail-blazing symposium held in Nelson by the Cawthron Institute two months ago. Over three days, 230 delegates from around New Zealand and around the world heard a range of speakers and panels discuss the opportunities and challenges moving aquaculture offshore will bring. They learned about the work already done in farming salmon, mussels and seaweed in deeper, colder and rougher water. The symposium is the subject of this month's cover story. And the answer to that big question? Yes – it can. But as our coverage shows, there's a long way to go before the immense potential of seafood farming far from land can be realised. It's heartening to know that Cawthron's scientists, along with other Kiwi science providers and their collaborators in other countries are leading the way in developing the infrastructure and techniques required to get there. New Zealand is at the forefront of this exciting new direction for aquaculture. As our articles show, it could be transformative.

The other big industry gathering in August was the New Zealand Seafood Industry Conference in Queenstown. Once again we offer a range of stories from this important annual event, which brings together all sectors to review progress and look ahead. The theme was Blue Growth, Charting Seafood's Future. The message was positive – but included frustration at the way our industry is perceived, and the threats it faces from changing government policies.

Nowhere is this more acute than in the inshore fishing grounds affected by the Government's proposal to lock up vast areas around our coast in its misdirected effort to protect Hector's and Maui dolphins. The industry has made its view on this plan clear. In this issue we look at the potential human cost that the dolphin Threat Management Plan will impose on fishing families and their companies. It's a depressing scenario, and one that the politicians need to understand before they act.

There's a lot more in our magazine, including a profile of young Seafood Stars Award winner Matt Howden, who was a qualified skipper while still at school, and who at 25, has already carved out a successful career as a fisherman. Matt loves the industry and doesn't let its critics get him down. He's proud of what he does – and we can all be proud of him.

Tim Pankhurst
Chief Executive

Croatian wins Kiwi honour

A young fisherman from Croatia is the winner of this year's Squax Squires award for the most deserving student on the Mate Fishing Vessel Unlimited course at the New Zealand School of Fisheries in Nelson.

Petar Buovac, 28, received an engraved barometer, having been chosen as the student who best exemplifies the qualities of a good ship's mate. There were nine others on the course.

In 2000 "Squax" Squires, a well-loved and respected fisherman, lost his life on the notorious Greymouth Bar. His fishing boat was washed ashore and his family offered it to the School of Fisheries, which is based at the Nelson Marlborough Institute of Technology.

The boat was sold and the proceeds went to establish a trust fund, held in perpetuity, with the interest to be used for the annual award.

These students have been through the fishing industry from the bottom up, starting as deckhands and gaining experience before coming to NMIT to study on the 28-week intensive course.

Petar Buovac's father, Damar "Bobby" Buovac, has a long history as fishing master on purse-seiners in the Pacific and New Zealand waters.

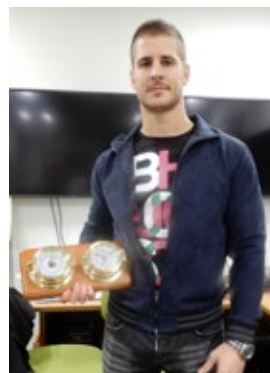
"Since I was a kid I've been listening to stories about the sea, fishing and fishing boats, and I knew I would become a fisherman when I grew up," Petar said.

He began working as a deckhand on Croatian fishing boats in 2007, at first during his summer school holidays, and then fulltime, becoming a deck boss.

In 2013 he joined his father on Sanford's super-seiner *San Nikunau* and in 2015 shifted with him to become a deckhand on the Talley's super-seiner *Eagle*, later joining the Captain M J Souza as second mate.

Course tutor Phil Pinniger said Petar brought together the special traits which defined the frontrunners in a demanding and professional industry.

"He has shown determination, dedication and a passion for the 'Call of the Sea'. It has been a pleasure to guide Petar in his inevitable progression towards leadership," Pinniger said.



Petar Buovac with his Squax Squires award, an engraved barometer.
Photo, Alec Woods

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Skinned and gutted – the fate of New Zealand's inshore fishing industry



Mark Mathers, left, Grant Comer, Gavin MacKenzie and Marcus Culley at Culley's boatshed on the Raglan Harbour.

The ramifications of the Maui and Hector's dolphin Threat Management Plan are sending chills through the inshore fishing industry. In the worst case, the proposed severe sanctions on fishing will send hundreds of fishermen to the wall. Seafood New Zealand communications manager LESLEY HAMILTON went to Maui country to talk to them about the human cost.

Already punch-drunk from previous cuts to their livelihood, this latest government move is the final and fatal straw for what are small fishing operators the length of New Zealand.

Keith Mawson owns New Plymouth-based Egmont Fisheries where he employs 20 locals in his processing factory and retail shop and has four set-net vessels and one trawler fishing for him.

"Most of my staff have been working for me for

more than 10 years. If I only lose two fishermen of the five, it is debatable whether we can continue to operate. We need a certain volume of fish coming through the factory to keep the staff employed and keep the business operating," he said.

"These are all artisanal fishermen. They are out there catching premium quality fish for the domestic market and the people in Taranaki but also for the Auckland and export market, but we

need a certain volume of fish coming through the port here to keep the industry going."

Taranaki fishermen have been dealt blow after blow in the pursuit of Maui dolphin protection since the early 2000s, when the dolphin was still classified as the much more populous Hector's dolphin. It wasn't until 2002 that it was reclassified as a sub-species and named Maui.

"They realised the population of the dolphin off this coast was very small. We had the first set of restrictions imposed in 2003 which pushed our set net fishermen further off the coast to four nautical miles. In 2008 the restrictions were extended to seven nautical miles. So, at that point, and to this day, we have something like 6000 square kilometres of coastline closed to commercial set netting," Mawson said.

In 2012, yet another review of the threat management plan for Maui dolphins saw those restrictions move further south to Hawera and the mandatory use of observers.

"Rob Ansley, who fishes for us, has been carrying an observer full time since 2012 and other vessels have been carrying observers when they fish between four and seven nautical miles.

"We have had a massive amount of observer coverage in the Taranaki region. Since that time there have been no sightings of Maui."

Mawson said the restrictions have had increasingly devastating impacts on his business and talk of transitioning to another method of fishing is simplistic.

"From the beginning, Taranaki has been a set-net fishery.



Egmont Seafoods managing director and owner, Keith Mawson.

"And that is because of the species we target: school shark, rig and blue warehou. All of those species are generally only caught by set net. Egmont fisheries have purchased the quota for those species to support those set-net fishermen. And the fishermen have purchased their own quota of those species to cover all they catch.

"Now I know there are calls to transition away from set-net fishing and move to longlining. In Taranaki if they were longlining the predominant catch is snapper. We hold limited hold quota for snapper, we can't access snapper quota so the fishermen aren't in a position where they can easily transition."



From the trawler to the deep fryer for fish and chips on the Raglan wharf.



Daryl Crimp

"The closest crocodile to the canoe at the moment is the Maui Threat Management Plan." – Marcus Culley

Mawson said the vessels were not ideal for other methods of fishing either.

"We are on the west coast of the North Island. It is a really rough piece of water. There's nowhere for these guys to hide when they go out fishing so they are limited to the number of days they can fish. These set-net guys can get out there, set their gear, retrieve it tomorrow morning, set it again and be back in by 11 in the morning before the sea starts to get rough. With longlining or trawling they could be out there for days – and there are not many days on this coast that will allow that."

The fishermen all run small, family-owned businesses.

"They're intergenerational, they're supporting two crew, their own families and the skipper's family. They're not corporates. Egmont Seafoods is not a corporate. We support the local community, provide sponsorship, supply restaurants and takeaways. If you lose these operators, you will lose them forever."

The stress Mawson and others have been under since 2008 has been immense.

"We have had uncertainty about our futures, we've had our livelihoods and our incomes impacted. We've had our assets impacted. Our

retirement plans, our future investment – the value of that is diminishing all of the time. The pressures on these families is massive. They have mortgages, they've got families to feed and I know that mentally some of these guys are on the edge.

"I don't think anyone can really understand the types of pressures on small businesses by government around something that is emotional, it's about international reputation. You know we've mitigated and reduced the threats to the Maui dolphin from fishing to the point where more restrictions are not going to make any difference to the Maui dolphin. It is well known that toxoplasmosis is a huge threat to these dolphins, but we are not seeing a lot of action to address that. This focus on fishermen will not make any difference to the long-term survival of this dolphin."

The strain on Taranaki fishermen can be seen clearly on the face of Rob Ansley of Ocean Pearl Fisheries.

The closures in 2012 took 95 percent of his fishery off him.

"I had four boats fishing into the factory and three of them stopped because it was too difficult. I had to carry on because I was the one who carried all the debt. I had 18 staff. I had to lay them all off."

There are four options in this latest Threat Management Plan. Option one is the status quo with additional monitoring. And each successive option is more restrictive.

If Option 2 is introduced Ansley says he will be out of business and still owe the bank close to a million dollars.

"It's not good for your mental health. Lots of sleepless nights wondering when I am going to get the next dollar to pay the mortgage. It is an absolute lie that we don't care about the Maui dolphin. Fishermen are the biggest conservationists in New Zealand. We have to conserve our fishery, so we have an income for the next year, and the year after that.

"My parents are both retired so they're living on the super. I owe them a hell of a lot of money. The boat was theirs and I bought it off them and haven't been able to pay them for it yet, so it has affected them. They should have had a better lifestyle than they've had in their retirement. I work seven days a week, eleven months of the year.

"Most people in Wellington making the decisions don't have a clue. I asked them how many people had been on a boat. I think there was only one. They listen to what everyone else says and believe it.

"When you invest money into a business you do a risk assessment. How could you have forecast this as a risk? Decisions are being made that are not based on science. And that has cost me \$3.4 million on two species in the past seven years."

Ansley leans against his truck and gestures around. "My business is now worth nothing. It was my retirement plan. I have no retirement plan now."

Four scenic hours' drive away, the story is depressingly similar in Raglan but, arguably, their case against closures is even stronger.

Raglan and Kawhia are northern harbours in close proximity to Maui coastal habitat but no dolphin has ever been seen in either harbour. The reason for including the harbours in the spatial closures is unclear.

Research out of Otago University* suggests dolphins are not seen in northern harbours because of their aversion to muddy harbour beds. While they like turbid waters, where particles hang suspended in the water column, they like to swim in harbours with a sandy bed. That would rule out the muddy waters of Kawhia and Raglan and explain why no one has ever seen a dolphin there.

Marcus Culley is ex-army and spent 15 years at the United Nations. His home beside the Raglan Harbour, from where he set nets for flounder, is an idyllic contrast to the war zones he left behind.

A small group of fishermen and a fish retailer gather to tell me their stories – they all live on the harbour that provides their livelihoods.

Culley is frustrated with the constant barrage of regulation. "With electronic reporting, cameras, and now this latest threat management plan, I would call this the perfect storm.

"The closest crocodile to the canoe at the moment is the Maui threat management plan.

"A full closure of the harbour will see my livelihood gone. I will need to find work, my partner who works for our small company will need to find work. And why? No one has ever seen a Maui. People who have fished the harbour for years. People who are now dead who fished here, iwi, they've never seen a dolphin inside the harbour."

Grant Comer has fished for flounder in the Raglan Harbour for 34 years. He will be 69 this year and says he will never find another job if the fishing goes. "It will just be the pension for us."

Raglan Seafoods has been operating since 1998 and Raglan Fish has been operating 10 years. Owner Mark Mathers sells gurnard, snapper, trevally and tarakihi.

"With no snapper quota available, the gurnard has the best return for the boats. We work in between the two and four-mile to keep away from the snapper. But if they push us out to four miles you won't see gurnard in the shops again."

Mathers' businesses support the local community with fresh fish and also supply Waikato farmers' markets.

"If this plan goes ahead, we'll be finished. There have been four generations of trawlers here. We have proven we have respect for the environment. It would be a huge mistake to put small businesses and small communities in a situation where we lose all that," Mathers said.

"We've got 20 staff in the summertime catering to the tourists. The first thing tourists want to do when they get here is have a feed of fish and chips on the wharf. They love watching the boats being unloaded



Supplying quality, locally caught fish for Taranaki, Egmont Seafoods.

**If Option 2 is introduced
Ansley says he will be
out of business and still
owe the bank close to a
million dollars.**

and the fish being processed in front of them – and five minutes later it's in the deep fryer."

Almost all the men, including Mathers, have a story about being conservationists.

"At our place we have a small grey-faced petrel colony, a bird that has only recently made a comeback in Raglan due to pest control. It is right under our veranda. They shit on my deck, they keep you awake at night but they're not moving, and I am not moving so we live with each other.

"Same as the dolphins. People think fishermen are only after the money, but we came here for the whole environment. And we work with the dolphins. They are pretty special to us. It's a shared environment, the ocean and we do a good job working with everyone. The mammals, the recreational fishermen – we've proven that."

Gavin MacKenzie also operates a trawler out of Raglan and knows the current restrictions are working.



Rob Ansley, Ocean Pearl Fisheries, Taranaki.

"These little dolphins are poster boys for the conservation movement. They're like the pandas of the ocean world. But no one is really looking at the science. The argument is emotive – and its putting people's livelihoods at risk."

* The ecology and conservation of hotspots for Hector's dolphin
– Tom E Brough – July 2018



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Building the blue ec in the open ocean

New Zealand's first large event to focus exclusively on open oceans aquaculture identified massive opportunities for the blue economy – and big challenges in bringing them to fruition. Seafood New Zealand editor BILL MOORE was there.



onomy



A Norwegian concept design for a revolutionary open ocean salmon farm. Image, Nordlaks/NSK Ship Design.



An experimental exposed site salmon farm off the Norwegian coast.

Imagine a supertanker with giant ocean pens instead of oil tanks, its hull open to the current and teeming with salmon. Or how about an enormous fish farm that's far from land and only marked by a few buoys bobbing on the surface? What about hectares of fast-growing seaweed farmed in the open ocean?

These are just some of the possibilities discussed at the Cawthron Institute's Open Oceans Symposium held at Nelson's Rutherford Hotel in August.

The symposium drew 230 attendees from New Zealand, Australia, Europe, South America and the United States: industry representatives and scientists from many disciplines.

Over three days of presentations and panel discussions they covered a wide-ranging list of topics, all aimed at exploring the new frontier for seafood, extending aquaculture from inshore waters into the open ocean.

It's a development that's still in its infancy both in New Zealand and globally – but it's seen as the best opportunity for this country to develop its blue economy to take advantage of the world's fourth-biggest Exclusive Economic Zone.

Aquaculture production world-wide has matched wild harvest for the first time. There's growing international demand for food protein, while access

to the sheltered inshore waters used until now for aquaculture is increasingly constrained.

Global warming is already affecting those zones, with better conditions in deeper waters remote from land, which also offer the benefits of reduced visual pollution and enhanced biosecurity.

The downsides include higher infrastructure and servicing costs, more downtime in bad weather and greater risk of damage and product loss.

Yet the potential for growth is energising scientists and seafood companies, with work going on in many countries to develop new engineering concepts and marine farming techniques.

In opening the symposium Prof. Charles Eason said it was bringing together investors and regulators, a wealth of scientific, practical and environmental expertise, iwi knowledge and aspirations, and global experience.

"It's unique because we're focused on a primary sector poised to take a leap forward," Eason said.

"Many of us believe that open ocean aquaculture, done right, has huge potential if lessons from the past and overseas are heeded," he said.

"By combining appropriate environmental and site planning with smart farming systems, we can sustainably realise the value of our vast open ocean resources as well as create jobs and a future for many people."

Outlining the framework for growth Cawthron's group manager, aquaculture, Serean Adams, said world population was projected to rise from the current seven billion to 8.5 billion by 2030, requiring

a 23 percent increase in food production.

The global middle class, currently around three billion, was predicted to reach 5.5 billion by 2030, demanding more protein and higher-value products. The ageing population had a preference for seafood. At the same time, there was a shortage of freshwater and a reduction in the land available for growing crops, limiting the ability produce protein on land. Finally, there was an increasing awareness around having healthy oceans.

New Zealand's marine estate was 15 times bigger than the land area less than .005 percent of it being farmed to provide 0.1 percent of world aquaculture production, Adams said.

A 2017 study suggested that nearly seven percent of the EEZ was suitable for aquaculture.

"If we developed just one percent of that, it would result in more than 10 times current production compared to today's industry."



Serean Adams

Having no neighbours was great for biosecurity but created open ocean challenges, she said.

"In almost every direction, the area that wind can blow over to generate waves is essentially unlimited and this is really critical when you're thinking about the open oceans.

"Off the coast of Southland waves as high as 11 metres have been recorded. That's really

important when you go up the south and west coast of New Zealand. On the other coast we're sometimes attacked by cyclones or ex-cyclone conditions. So across New Zealand we really need to take these large waves into consideration when we're designing our open ocean structures."

Mussels, oysters and salmon were already being looked at for open ocean aquaculture, but other high-value species could also be examined, particularly where New Zealand could differentiate itself. For example, there are several hundred 1000 different seaweed species in New Zealand, around 1/3 are endemic.

"To realise the opportunity of open oceans is going to take a lot of collaboration and partnerships – there's a lot of innovation, research and monitoring going on both in New Zealand and world-wide that will contribute, and really we need to all work



Charles Eason

together to make the most of this opportunity," Adams said.

"I can only see that exciting times are ahead."

Cawthron aquaculture scientist Kevin Heasman is working on the development of offshore shellfish and seaweed farming, including the structural design for offshore systems.

Pointing out that open ocean aquaculture didn't need to be a long distance from shore, he said big waves would always be a problem for not only the farm structures but the vessels and offshore workers.

"Eighty to 85 percent of the waves are not an issue, 10-19 percent are a maintenance issue and one percent are particularly unpleasant."

Cawthron had been looking at open ocean aquaculture since 2003 and had established that it was biologically possible after studying effects on a variety of species including oysters and mussels, temperature, environmental conditions and growth rates.

The biggest challenge was farm structures, he said.

For mussel farming, the trend was to take the existing inshore system and modify it to be bigger and more robust, submerging the farm's backbone of mussel lines.

"Essentially you make it very strong and tolerant, or you get it out of harm's way, or you come up with a combination.

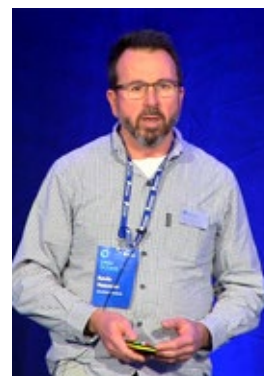
"You have increased costs going out into the offshore, and increased costs means you have to increase production, and for production you make it more robust and a bit bigger, which of course adds to your cost a bit, and eventually you reach a balance to make it economic."

With MBIE funding Cawthron had so far tested more than 30 designs, and completed more than 2000 simulations to see how each would cope with different waves from different directions.

Structurally correct scale models had been tested in a wave basin in Germany, and the development of experimental designs was continuing, Heasman said.

"But you have to consider cost and production ratios, ease of servicing, maintenance, seeding, harvesting and speed of servicing. In the inshore if a weather pattern's coming in, you can still perhaps go out, but in the offshore you've got shorter windows and you've got to get out there, do the business and get back in again. So these things have to be considered, and in that vein, you have to consider the vessel design as well as the size and the complexity of the harvesting systems."

He said Cawthron would continue to innovate, design



Kevin Heasman



A Chilean kelp farm.

and model with its industry partners and technical advisers locally and overseas.

"We'll continue to test prototypes and upgrade where possible. We've got a lot of ideas – we haven't been able to test them all – and we'll continue to pursue automation. We want materials that are procurable, sustainable and recyclable."

Among the visiting speakers was Sintef Ocean research manager Hans Bjelland who briefed attendees on the work the independent Norwegian research centre Exposed is doing in developing ocean aquaculture structures and operations.

Bjelland stressed that open ocean aquaculture development requires knowledge from many sectors and close collaboration between the government, research organisations and industry.

"From industry it requires advanced vessels and advanced knowledge about cage size and the environment – more so than traditional aquaculture."

Typical circular salmon cages in Norway held up to 200,000 salmon, about 1000 tonnes in each cage, he said.

"Compared to the cost of the infrastructure itself, it's tremendous how much value you can put into one cage."

With feeding the fish the costliest part of production, more and more solutions were being developed for remote operations. Similarly, specialised vessels were being developed for ocean aquaculture, both to handle the heavier cages and structures, and to provide treatments



Hans Bjelland

the fish might require.

Visual technology had been created to make identification of individual fish possible, and new cage designs to keep the fish away from other sea life such as lice were under way.

"Developments in aquaculture technology are important when going offshore," Bjelland said. "Having more knowledge and more control of your system, then you are able to deal with the problems that might arise."

He said with so many offshore islands along the Norwegian coast, the current marine farms all had some level of shelter from bad sea conditions.

"I tend not to use open oceans for our ambitions in Norway, because at the moment we are talking more of exposed, and defining what we mean by exposed."

Operating the exposed farms wasn't about the one large wave, Bjelland said, but how to successfully and economically operate the farm.

Already some Norwegian salmon farms had been abandoned "because it's just too hard to carry out operations".

"We believe it's really important to understand the challenges and quantifying them – understanding how many days we are able to carry out certain operations, what really limits it and what kind of technological developments are needed to increase these.

"There is a window of time now where lots of experimentation is happening, and who knows how that will play out? It's not either-or – there is a large opportunity to see how these different systems can play together."

One idea was to grow large, robust smolt on land before placing them into the exposed waters, reducing the open ocean production time.

"Every day that you can't feed is a lost opportunity and will cost money."

Technical innovation for exposed aquaculture

was about having the right vessels and structures, but also systems that worked with less interaction and close physical labour, and improvements in monitoring the fish, enabling problems to be quickly dealt with.

"Without healthy fish we don't have an ethical business, and we certainly don't have a profitable business."

Delegates heard from Chilean seaweed aquaculture specialist Alejandro Buschmann, who said that experimental kelp farming in Chile showed that ocean farms could produce 200 wet tonnes per hectare per year.

"You need production of 100 tonnes per year per hectare – if not you will lose money," he said.

In all there were 20 speakers giving individual presentations and taking part in panels, and the symposium split on day two into lengthy breakout panel sessions, one on shellfish and seaweed and the other on finfish.

Wrapping it all up on the third day, Cawthron group manager, coastal and fresh water, Chris Cornelisen, said only a country of New Zealand's size could fit all the various interest groups in one room as this symposium had done.

"Moving forward we should use this to our



Chris Cornelisen

advantage."

Cornelisen said that aquaculture was "way cooler" than high-profile aerospace manufacturer Rocket Lab.

"I reckon if we bring in the aquaculture and the technology with aquaculture and make it visible, there's a real opportunity there. The ocean is part of all New Zealanders – we've got to bring it right to them and get them excited about it."

He said the symposium had taken Cawthron out of its comfort zone, growing from an initial expectation that it might attract 30 to 40 people to bring together 230.

Open oceans aquaculture wasn't starting from scratch, with more than 40 years of industry experience behind it and a long list of related scientific programmes well established.

Aquaculture needed to foster an industry community and strengthen its leadership, he said.

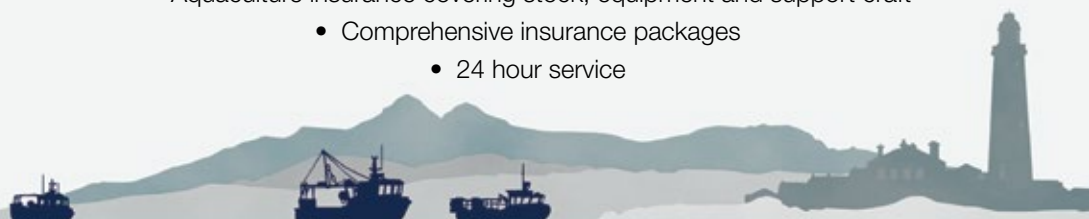
"The opportunity is clear. I think we all see it."



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"catch fish...not cables"

There are a number of international submarine cables which come ashore in the Auckland area. These cables supply international communications for both New Zealand and Australia to the rest of the world.

New Zealand is a very isolated nation and as such is extremely reliant upon global communication via submarine cables. Here in New Zealand over 98% of all international communication is carried via submarine fibre optic cables. These cables are a key component of New Zealand's infrastructure and play a significant role in our everyday lives, the general economy and future growth of New Zealand.

These cables are laid in three submarine cable corridors in the greater Auckland area where anchoring and fishing is prohibited under the Submarine Cables & Pipelines Protection Act.

These areas are:

- **Muriwai Beach** out to the 12 mile territorial limit where both anchoring and fishing is prohibited.
- **Scott Point to Island Bay** in the upper Waitemata Harbour where anchoring is prohibited.
- **Takapuna Beach** this runs from Takapuna Beach in the south to just north of the Hen & Chicken Island (opposite Taiharuru Head) where anchoring and fishing is prohibited.

Note: These protected areas are monitored by sea and air patrols.



**Spark
New Zealand**



Symbols Relating To Submarine Cables

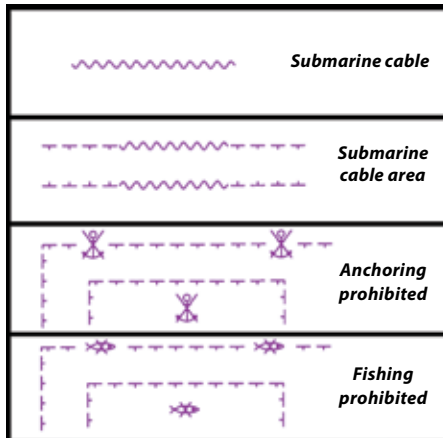


Figure 1.

These are some of the penalties

- A maximum fine of \$20,000 for a non-commercial vessel.
- A maximum fine of \$100,000 for a commercial vessel.
- A maximum fine of \$250,000 for damaging a submarine cable.

Additional to the fine for damage, the cable owners would inevitably pursue the recovery of costs associated with repairs, this could be up to \$100,000 plus a day; a typical repair can take up to two weeks.

Be Aware

These International submarine cables carry up to 10,000 volts to power the system repeaters along the cable.

What should you do?

- If you are going into any of these areas, be sure to check your marine charts and/or GPS plotter so you know the exact locations of the prohibited zones. The relevant charts are NZ53, NZ5322, NZ532, NZ522, NZ52, NZ42 and NZ43. The symbols used to mark the zones are detailed in Figure 1.
- If you suspect you have snagged your anchor or fishing gear on a submarine cable in one of these areas, don't try to free it. Note your position, abandon your gear, then call 0800 782 627.

What happens outside the prohibited areas?

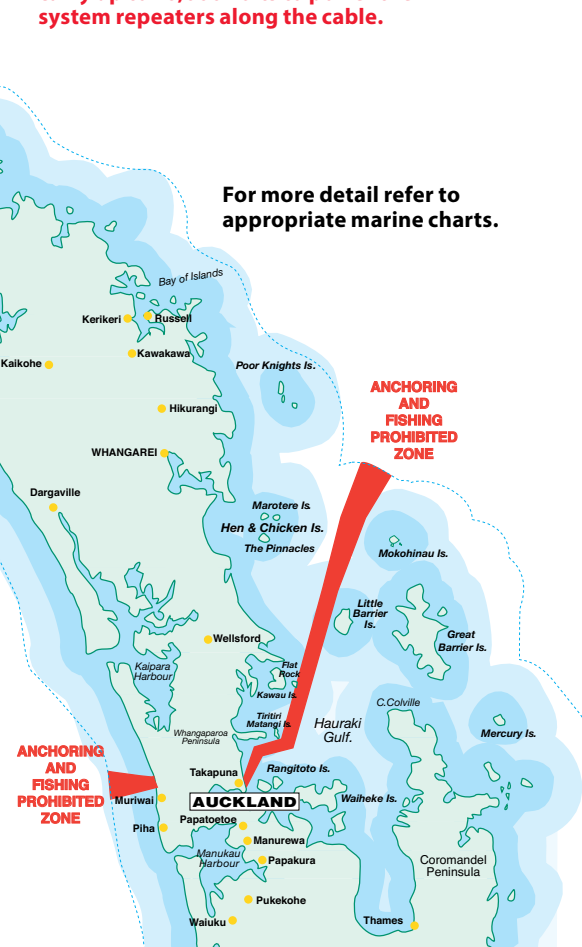
These cables are covered by the Submarine Cables and Pipelines Protection Act regardless of whether they are inside or outside a prohibited area. Beyond the confines of the "anchoring and fishing prohibited" areas, the cables are clearly marked on the appropriate marine charts.

Considering possible positioning inaccuracies and repaired cable section deviations, fishermen are advised to keep a minimum distance of one nautical mile from either side of charted cables.

Note this number:

For any queries regarding submarine cables call: **0800 782 627**

For more detail refer to appropriate marine charts.



Ocean modelling to boost NZ's blue economy

Bill Moore

The ocean between New Zealand and Australia is warming at four times the global average, bringing many challenges to the “blue economy” and an urgent need for more scientific data.

This was the message MetService head of research partnerships Moninya Roughan brought to the Cawthron Institute’s Open Oceans Symposium in Nelson.

Roughan, who heads the MBIE-funded Moana Project to deliver a national ocean modelling system for New Zealand, called on the seafood industry to get more involved in data collection to help overcome the paucity of open ocean access data.

With 20,000 “fishing events” each season there was a massive opportunity for seafood sector boats and marine farms to collect ocean data for open access, she said.

“We sit in a hotspot for global warming. We also know that marine heatwaves are becoming more frequent and more intense – 10 years ago no one had heard of a marine heatwave and now we all know about them.”

The seafood sector was being affected by habitat destruction, loss of kelp, the arrival of tropical species, problems in salmon farming, and anecdotal evidence that mussels at the top of the

water column died in the most recent heat wave, Roughan said.

Impacts reached far below the surface because the heat was “mixed down”, with observations showing the temperature increased down to 1200 metres.

“There are massive problems and we’re getting changes in species distribution and abundance as well. The deepwater hoki industry took a big cut because of what we think was the impact of warming. So there are huge financial consequences.”

“You wouldn’t farm kiwifruit without an accurate weather forecast, so why do we work in the oceans without accurate ocean forecasts?”
– Moninya Roughan

She said with a poor understanding of ocean dynamics, temperature transferability and climate change scenarios, marine industries were essentially farming in the dark.

“You wouldn’t farm kiwifruit without an accurate weather forecast, so why do we work in the oceans without accurate ocean forecasts?”

The Moana Project’s goal was to revolutionise ocean observing and modelling because it was really important to the blue economy.

“It’s really hard to get tomorrow right – look at the weather forecast on the telly every night, how often do they get it wrong? How are we going to get it right in 100 years’ time?”

The collaborative project was developing a step change in access to historic data, increasing data gathering in the coastal ocean, providing open access ocean modelling with timescales that were actually useful for marine operation, Roughan said.

“We’re improving our coastal ocean forecasts and we’re supporting iwi aspirations, and we’ve got loads of smart tools for data access. So hopefully this will facilitate new dynamic insight into oceanographic processes, how complicated ocean circulation is around New Zealand, and we can also use that to address gaps in the data.”



Moninya Roughan

Nelson scientists conceive mobile fish farms

Bill Moore

Roving fish farms that keep moving to provide the best conditions for their stock could be the answer for open ocean aquaculture in New Zealand's EEZ, Plant & Food Research believes.

Senior scientist, seafood technologies, Suzy Black, told the Cawthron Institute's Open Oceans Aquaculture Symposium that such farms might offer many advantages.

The idea came when scientists were thinking about how to successfully transfer juvenile fish from hatcheries to open ocean farms.

"We started thinking, why not grow them during the transit period? So, why not a mobile production system?

"We could follow the optimal environmental conditions for the fish year-round – we wouldn't be limited by one position where we have to endure the yearly environment, we could move and optimise the conditions for growth, health and welfare."

Black said static systems were heavily engineered to withstand the harsh open ocean environment.

"We're trying to design something that works with the environment, rather than try to fortify against it."

A mobile production system would potentially alleviate biological welfare, operational and social licence concerns facing existing aquaculture, she said.

"It may allow us to explore the open ocean on an economically feasible scale.

There's a heap of science challenges and a lot of knowledge gaps before we can actually create this but we're up for the challenge."

Black said the Plant & Food seafood production group, which conceived and developed Precision Seafood Harvesting, had fish physiology at its heart, always looking to fit the process to the animal, not the other way round.

"We really want to know what the fish need to be at their best out in the open ocean."

This meant many engineering and design challenges to produce different approaches around structures, design hydrodynamics, mobility dynamics and

**"There's a heap of science challenges and a lot of knowledge gaps before we can actually create this but we're up for the challenge."
– Suzy Black**

integrating humane handling and harvesting into the production system.

A mobile system could allow the tailoring of year-round growing conditions – temperature, water quality and swimming velocity.

"We know from other studies, if you can optimise those conditions, you'll get improved growth and welfare, and we're all about producing healthy, resilient and robust fish."

There would be minimal environmental footprint on the seabed, and minimal impact on the landscape.

"Potentially we can make these so they're barely visible, plus being out in the open ocean they're away from that busy inshore coastal space."

The idea was still in the design and prototype stage, Black said.

"There are many many benefits to New Zealand if we can make this happen – not only through substantial increases in production capacity but also resilience to climatic change.

"We very much see the designs we're looking at as a Pacific way of going into open ocean aquaculture, specifically for New Zealand conditions.

"We're quite different from the rest of the world, what can we design and develop for New Zealand?"



Suzy Black

King Salmon aims to begin Cook Strait farms

Bill Moore

Warming inshore waters have impelled New Zealand King Salmon to seek resource consent to develop New Zealand's first open ocean finfish farms.

It announced the move during the Cawthron Institute's Open Oceans Aquaculture Symposium.

The Nelson-based company has lodged a 35-year consent application for 1972 hectares north of Cape Lambert in the Cook Strait area, aiming to introduce its first stocks at the end of next year or early in 2021, with the first harvest 12-18 months later.

NZKS currently produces about 8000 tonnes of king salmon annually from its nine farms in the Marlborough Sounds.

It believes the initial farm, costing \$25-30 million, will potentially grow 4000 tonnes, and is planning a second farm of similar size, with overall capacity of 8000 tonnes per 18-month cycle.

Chief operating officer Alan Cook said moving to the open ocean would be an ideal environment for the king salmon in the long term.

"Climate change is very real and we have felt its impact in the Marlborough Sounds over the past couple of summers. This decision is crucial to our long-term sustainability efforts," he said.

"It will undoubtedly be a major challenge to farm in the open ocean because of more extreme conditions than in the Sounds, but we've chosen the best site possible."

The company has named the project Blue Endeavour. Chief executive Grant



Grant Rosewarne

Rosewarne said this signified a future-focused strategy to sustainably harvest the ocean's potential.

"The pens on these farms will be so spacious that we're calling them sea ranges."

He said aquaculture was a force for good in addressing the global challenges of climate change and the need for low-carbon, high-nutrition food. "We are investing in what we think will be the future of sustainable food production."

NZKS consulted iwi fishing companies, DOC, Forest and Bird, the Environmental Defence Society and community groups ahead of the application.

It was encouraged to continue research into

offshore farming by the Marlborough Salmon Working Group, made up of stakeholders including the Ministry for Primary Industries, iwi, DOC and environmental groups.

Rosewarne said he anticipated a favourable reaction to the application from the community.

**"Climate change is very real and we have felt its impact in the Marlborough Sounds over the past couple of summers."
– Alan Cook**

"Open ocean farming allows the development of positive economic activity, away from communities and recreational activities," he said. "We hope that successful commercialisation of our open ocean farming vision may decrease our reliance on the in-shore farming model, as part of our ongoing efforts to farm in the most suitable conditions available."

NZKS is also proposing to research other locations off the South Island's east coast for open ocean farming suitability.



New Zealand King Salmon's Blue Endeavour site on the edge of Cook Strait.

Whakatohea emphasises innovation, teamwork

Bill Moore

Combining science with strong community involvement has seen a large open ocean mussel farm established 12 kilometres from shore in the Bay of Plenty – with much more growth planned.

From 10 lines five years ago Whakatohea Mussels has reached 174, and plans to increase that to around 320 lines between 2020 and 2022. By 2025 it aims to reach 570 lines.

At that point it will be producing about 10,000 tonnes of mussels a year, with 30 percent of the farm given over to spat catching and spat holding.

Whakatohea Mussels chief executive Peter Vitasovich told the Cawthron Institute's Open Oceans Aquaculture Symposium in Nelson that the Opotiki company had faced a number of challenges and had "quite a few blood noses" but had come out the other side.

Its major shareholder is the Whakatohea Maori Trust Board but it has 16 shareholders in total, including other trusts and mum-and-dad investors. All the shareholders are from Opotiki or with links to the town, and Vitasovich said that was what made the company strong.

"We are a commercial operation with commercial outcomes and a very strong social aspect to our business," he said. "We only have one site – we live and breathe it. Every day we can, the boats are on the water. Every day they're not on the water, we're thinking about how we can do it better."

Cawthron and the Whakatohea Maori Trust Board, and later Whakatohea Mussels, have collaborated for over a decade assessing the feasibility of open ocean aquaculture off Opotiki, examining options for mussels, scallops and oysters.



Peter Vitasovich speaking at the symposium.

The outcome of this research, with early trials going back to 2005, is now bearing fruit with commercial production of mussels beginning to ramp up. Whakatohea Mussels is innovative and an early adopter of new technology, being an active participant in a globally connected MBIE programme led by Cawthron.

"We only have one site – we live and breathe it. Every day we can, the boats are on the water. Every day they're not on the water, we're thinking about how we can do it better."

– Peter Vitasovich

The programme has fostered relationships with world-leading marine scientists in conjunction with New Zealand experts to improve engineering designs with resilience and ease of production front of mind.

Whakatohea's two vessels are based at Whakatane, an hour's steaming time from the farm site.

Vitasovich said the company's experience had shown that open ocean aquaculture presented special challenges. Vessels needed to be tailored for offshore conditions, with the 8-metre beam on both Whakatohea's boats important for the stability it offers.

The farms had to be set up to withstand cyclone conditions, and the onshore infrastructure needed to be in place, with adequate wharves and suitable water and power supplies to processing factories.

"When you want to develop offshore sites, where does the money come from? We've been very fortunate in our company that we've had a lot of shareholders that want to see Opotiki thrive. They want to see a new business come in to support the horticulture and dairy industries in the region. That is fully supported by Whakatohea and that's where we are."

Investment would be the key for offshore aquaculture – Whakatohea had \$8-9 million

invested in its boats alone – and spat supply would be a major issue when new sites were developed.

He said work done by Cawthron and spatNZ in producing hatchery spat was “absolutely fantastic, a game-breaker for our industry”.

“But we need more. We can’t just rely on sites like ours where we catch our own spat, there’s a challenge there for MPI and industry to work together to put together a retention site where we can try to retain some of the spat we catch, or even hatcheries in the future.”

People were also important, with offshore sites requiring different skills to inshore marine farms.

Whakatohea had trained 14 young people over the past four years, all from Opotiki.

“Now they’re good competent offshore marine farming staff. They’re going to be leaders in the future.”

The challenges Whakatohea faced applied to the industry as a whole, Vitasovich said, and it should never be thought that offshore farms would replace the existing industry.

“There’s a whole big range of things that challenge us – they’re not insurmountable. If we all work together as an industry, collaborating with our research providers, we’ll have a very good, strong, robust offshore aquaculture industry in the future.”



There’s little to see on the surface at Whakatohea’s farm off Opotiki.



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Ecology must trump ideology, Finlayson tells delegates

Bill Moore

Plastic pollution is the overwhelming problem facing our oceans and dealing with it should come ahead of creating marine sanctuaries, argues former Treaty Negotiations Minister Chris Finlayson.

In a warmly-received speech to the 280 attendees at the New Zealand Seafood Industry Conference in Queenstown, Finlayson – also Attorney-General for nine years in John Key's National-led government – said a solution to the contentious issues around a vast Kermadec Islands ocean sanctuary had to be based on ecology, not ideology.

He also strongly endorsed the Quota Management System, calling it the best in the world.

He said the establishment of massive marine reserves had become the “issue du jour” of the Pacific. Such reserves had been created around Easter Island, Pitcairn Island, and in the northern Pacific, each with some fishing permitted, and in the Coral Sea, with different levels of protection.

“And then we have the Kermadecs, which has caused so much concern, and we know the response of Maori and the fishing industry that it is a step too far, that it is wrong.”

Property rights and the rule of law had to be respected, and it was not good enough to treat consultation as a box-ticking exercise.

Everyone could quickly agree that plastics represented the greatest ocean problem. A recently



Chris Finlayson gave his address at the 2019 New Zealand Seafood Industry Conference.

released Royal Society report on the use and disposal of plastics and their environmental effects was “hugely frightening”, Finlayson said, highlighted by the “great Pacific garbage patch”.

“Most people are aware of the shocking state of Henderson Island, one of the most remote places on Earth, part of the Pitcairn group.

“Henderson Island should be a jewel of nature, it's thousands of miles from anywhere, but as we know from the increasing publicity about it, it's covered in plastic. It's

Blue Growth

The 2019 New Zealand Seafood Industry Conference in Queenstown was themed “Blue Growth – charting seafood's future”. Some excerpts:

“When US products cannot enter China, it's both opportunity and a threat for you. What happens when their exchange rate goes even lower, or their economy goes down due to tariff impact? Suddenly you might find you have a very volatile customer.”

– Rabobank senior industry analyst Gorjan Nikolic

“The seafood industry is no longer a cherished part of the establishment. It is a threatened minority interest, left with the same three things to defend itself with that Maori have had for 180 years: the Treaty, our native intelligence, and guts.”

– Toroa Strategy consultant Tom McClurg

"The new religion is environmentalism and the high priests and priestesses of extreme environmentalism employ the same tactics that the Spanish bishops used in the Spanish Inquisition. That's why ecology is so very important in all these debates, not ideology." – Chris Finlayson

the best example of the need to protect our oceans and the marine environment before it's too late."

Most people were also aware of the need to protect valuable fisheries and at-risk species like whales.

"Conservation of precious resources and protection of our oceans are imperative and we can agree on those fundamental principles without too much debate."

He said that in today's world there was an increasing danger of facts being less important than ideology, a very dangerous phenomenon that needed to be challenged, whatever the issue.

"With the decline of Judeo-Christianity, people need a new religion. The new religion is environmentalism and the high priests and priestesses of extreme environmentalism employ the same tactics that the Spanish bishops used in the Spanish Inquisition. That's why ecology is so very important in all these debates, not ideology."

The Kermadec reserve and the others would not address the scourge of plastic in the ocean, which could only be dealt with by an international clean-up fund with contributions from all nations bordering the Pacific,

Finlayson said.

Citing the European convention on trans-boundary air pollution, signed in 1979 and bringing a reduction in acid rain, he said international cooperation worked, and New Zealand could take the lead in the Pacific.

"We live in the scientific world, not in the dark ages. What is needed in this debate [is] a robust scientific study about what's needed to restore our oceans to health. Let's start with the Kermadecs discussion, without anger or recrimination, let's maintain the basic principles of the Treaty relationship and the Treaty-based agreements we've made, and this time let's really work together to get it right."

Finlayson said the important point about the QMS was that it worked, because it was based on evidence-based sustainability.

"It's under threat at the moment because of the extreme views of some groups."

He urged delegates to master the arguments of their opponents and engage in the debate with equal determination and ferocity.

"I think the fishing industry hasn't spoken out enough about this wonderful system that we have. We need to say it year in and year out, repeat until you're blue in the face, the QMS is the best form of sustainable fisheries management in the world."

Finlayson said that if the Kermadec sanctuary proposal did go ahead, fishing according to the QMS had to be permitted. This wasn't an absurd proposition because local fishing was allowed in the Easter Island reserve.

Above all, he said, the 1992 Maori Fisheries Settlement was full and final, and the integrity of that settlement had to be safeguarded "at all costs".

New Zealand had done great bipartisan work over 30 years to address historic Maori grievances.

"We can be very proud of that. It's clearly understood that these settlements have to be full and final, not subject to change every generation or so. That means they have to be honoured by all parties, year in and year out."

The conference was preceded by the NIWA technical day attended by 170 people, up 50 on the 2018 total.

"While the Treaty has been a strong defence for Maori fisheries rights, every dolphin, every sealion, every seabird caught on a fishing trip challenges its moral authority, especially amongst our own people. So the battle is actually over the hearts and minds of the domestic voting public. The challenge for us as an industry is to recast our narrative within this increasingly hostile and disruptive environment, and to demonstrate how we add value to people's lives."

– Te Ohu Kaimoana chief executive Dion Tuuta

"The more I travel and film Ocean Bounty, the more I meet great people. The industry's full of them. This thing Ocean Bounty I think will go on for a very long time. The key thing is to convey great messages, positive messages, and to actually come out fighting, because that's what we should bloody well be doing."

– Frontier Television head Graeme Sinclair

Industry's performance lifts in a difficult year

Bill Moore

Holding its ground is not good enough for the beleaguered fishing industry, Seafood New Zealand executive chairman Craig Ellison said when delivering his annual report card.

"It's been a mixed bag of sorts – some good, and some not so good. But the good intent remains strong," he said.

"Again, we have much to be proud of, and our stable rating in terms of trust and reputation is very good, even if we are still the target of misinformation and skewed perceptions from the eco-zealots chasing membership income."

Since the industry first produced a code of conduct in 2017, the document has been used to assess the sector's performance, with Ellison going through his third report card at the 2019 New Zealand Seafood Industry Conference in Queenstown.

He concluded the sector still had work to do in some areas but was winning on sustainability.

The first point on the code is that the industry does not condone illegal behaviour. Ellison said the industry continued to improve in this area. A significant sentencing of an offending fishing company was completed, inspection and compliance rates were in line with previous years and prosecutions were slightly up.

"A constant theme was the desire to see the rogues eliminated. However, we were as an industry hesitant to message that openly."

There was good news around transparency with a large number of vessels transitioning to electronic reporting. This was scored C plus – up from a C in 2018.

On point two of the code, ensuring fisheries resources are sustainable, Ellison said this had been a strong focus for the industry with 95 percent of all landed fish verified as sustainable, which moved the score from a B plus to an A minus. "Sustainability was identified very clearly as the key factor that New Zealanders look to and expect of this industry."

Point three of the code is around minimising the industry's footprint on the marine environment and this was another area of concern with too many protected species captures, including five Hector's dolphins in one trawl. Ellison said while huge work was being done

in this space and the positives were numerous, zero interactions had to be the industry's target. For that reason, the score moved downward slightly from a B in 2018 to a B minus in 2019.

"We're not improving as we must, even though we're doing an incredible amount of work. Holding ground is not good enough."

Investment in science and innovation improved from a B to a B plus with significant investments through Seafood Innovations Limited and the rollout of the revolutionary trawl technology Precision Seafood Harvesting (PSH).

Looking after our people, which is point five on the code, also slipped down the rankings. Ellison said zero harm to the industry's people had to be the target. Despite some great initiatives including instigation of the Living Wage in some workplaces, the "Safe Crews Fish More" campaign and a win against shark cage diving to make paua

divers safer, the industry slipped from a C plus to a D.

The last point of the code is living up to the promise the industry made and supporting increased transparency. The port roadshow visited 16 locations and was well supported, Ellison said. While observer rates on vessels remained high and an increasing number of vessels had moved to cameras, the industry failed to get its voice heard sufficiently.

He stuck with last year's B grading.

"In the age of sound bites, we struggle, we are in a complex industry doing very challenging things, and it does not simply translate to click-bait."

Ellison said the Code of Conduct needed to be reviewed and updated where necessary, not be left as "something that gathers dust in a forgotten cupboard", and should be used as "something to aspire to, to be proud of, and to use as a connection for everyone who wants to see our industry and our people thrive".



Craig Ellison

Minister calls for unity, action

Bill Moore



Shane Jones uses his conference speech to urge unity against industry critics.

Regional Economic Development Minister Shane Jones is urging the seafood sector to unite and act against what he calls “a largely metropolitan power culture” seeking to damage it.

Jones told delegates at the New Zealand Seafood Industry Conference that “millennial attitudes” were changing New Zealand industry, with farming and forestry also facing a wave of new regulations.

Maori in particular, with legacy interests in the fishing industry via the Treaty, needed to “gird our loins and protect ourselves” against efforts to undermine it.

The minister said it was essential for fishing leaders to work with “those of us who are pro-industry politicians” to get alongside the Crown and officials and avoid a return to the litigation of the 1990s.

“Fisheries as an industry is but one occupant in a lotto of discontent. If you are not vigilant, if you are not adroit, a crisis is coming your way,” Jones said.

“Please do not think that we can easily go back to those litigious chapters of the 1990s where the men and women at that part of the historical trajectory as an industry were able to keep the Crown at bay ... by constantly turning up and getting interim injunctions in the High Court.

“I was a major player in that game myself, but I

seriously doubt whether that represents a sustainable strategy today.”

He said innovation provided an opportunity to collaborate with the Government, but it needed a high quality of unified, far-sighted and courageous leadership.

A “doubting Thomas” mentality was driving global trends against historical extractive industries.

“I think that is just a new level of tripe, but we have to deal with the fact that as industry leaders, me as a politician, you as investors, that there is a higher level now of expectation.”

Leaders should regularly engage with other industry leadership groups to fashion a strategy to counter these new expectations, which would loom large in the coming election year.

“They’re not issues that will conquer us, but they will undermine our profitability if we do not meet with a higher level of innovation, and quite frankly, action. Delivery beats strategy every hour of the day.

“We’ve got to muster a higher level of organisation, messaging and ability to deliver.”

The New Zealand fishing industry was a profitable and internationally reputable force.

“Let no one take that away from us,” Jones said.

Stars of the seafood industry recognised



Sam Hayes, Young Achiever Award.

Outstanding performers in New Zealand's seafood sector were recognised at the 2019 New Zealand Seafood Industry Conference in Queenstown.

Four Young Achiever Awards were presented, which augurs well for the future of the industry.

Sam Hayes of Whangarei and Matt Howden of Gisborne both joined the industry out of school and quickly showed leadership skills that saw them gain skipper's certificates, purchase their own vessels and employ crew at an early age.

Josh Pearce of Melbourne completed the Australian National Seafood Industry Leadership Programme and has a passion for New Zealand seafood. Pearce and his business partner Renee run the Fish Shoppe in the South Melbourne Market and proudly sell and tell the story of sustainable New Zealand seafood.

Another Young Achiever Award went to Sam Pearson of New Zealand King Salmon who has been earmarked as a future leader.

New Zealand King Salmon also picked up two Future Development Innovation Awards. One was for Denver McGregor for his research into listeria monocytogenes, a bacteria which can contaminate product, and the other to Simon Thomas for his work to maximise the use of salmon by-products.

The Longstanding Service Award went to two recipients.

Bryan Skepper has worked at the Sydney Fish Market (SFM) since 1973 and currently holds the role of general manager. He established OceanWatch and the industry-based levy to support its environmental operations, introduced the Dutch-auction trading system and the electronic trading system now used at SFM, established the Sydney Seafood School and oversaw the evolution of SFM from a purely wholesale fish market into an international tourism destination. More than 10 percent of the fish sold at SFM is from New Zealand.

Also receiving a Longstanding Service Award was Wayne Lowther who has been part of the industry since he was the manager of the observer programme of MAF(Fish) in the early 1990s. He continued in management roles in the Ministry of Fisheries when it was established in 1995 until he moved into his current role as general manager, client services for FishServe in 1999. The award pays tribute to his huge knowledge of, and contribution to the smooth running of the Quota Management System.

Seafood Stars Awards are presented at the Seafood New Zealand conference annually.



Josh Pearce, left, receiving his Young Achiever's award from Seafood Innovations Ltd chairman Dave Sharp.



Matt Howden, Young Achiever Award.



Sam Pearson, Young Achiever Award.



Denver McGregor, Future Development Innovation Award.



Wayne Lowther, Longstanding Service Award.



Simon Thomas, Future Development Innovation Award.



Bryan Skepper, Longstanding Service Award.

Seafood function serves up thrills in Queenstown

Emily Pope



Delegates catching up at the ANZ cocktail function, held at the AJ Hackett Bungy Centre, where a number of them took the plunge.

Adrenaline and locally sourced seafood proved to be the winning combination to round off this year's seafood industry conference in Queenstown.

The atmosphere was abuzz as 260 industry delegates filed into the AJ Hackett Bungy Centre for a taste of South Island seafood and outdoor entertainment.

Attendees gathered outside to witness their mates bungy off the nearby bridge as part of Moana's "Nominate to drop your mate". The caveat: the nominator had to jump too.

Te Ohu Kaimoana chief executive Dion Tuuta was the first of 25 to take the leap of faith, dangling by his feet for quite some time before being retrieved by the bungy crew in the raft below.

Laws Lawson was keen for a dip in Queenstown's Shotover River and was not disappointed, plunging 43 metres from the Kawarau bridge, emerging drenched from his shoulders up.

Seafood Stars award winner Wayne Lowther joined in the fun as the night set in and didn't look back, waving at onlookers as he stepped off the bridge.

Inside, the night kicked off with bloody Mary Bluff oyster shots and a blue cod ceviche. Greg Menzies from Emerson's brewery was also on hand, supplying seafood inspired beer – "Orange Roughy" pale ale, "Bluffie" stout and "Shark Bell" Kolsch.

Business development and catering manager for In2Food Andy Thompson and his team delivered a delicious spread of seafood this year – an opportunity he says, they were excited to be given.

"The inspiration behind this menu was to showcase the diversity and quality of New Zealand seafood," Thompson said.

"We really wanted to explore local, southern seafood, some of which is overlooked in the current culinary scene. We worked closely with suppliers to bring quality seasonal produce that would accompany the flavour of our seas."

Stall one featured battered blue cod with hand cut chips, toothfish tacos and lemon sole and mash – one of the crowd favourites. Stall two proved popular with shellfish enthusiasts, offering oyster bao buns, steamed mussels and queen scallops with a herb butter – all locally sourced.

Manuka smoked salmon with a beet and cress salad and scampi on an orange fennel salad were some of the lighter dishes offered by stall three.

Each dish was a modern taken on classic, time-tested dishes, with ingredients that highlighted the natural flavours of Southland's kaimoana.

"We were thrilled to be able to showcase our menu using the highest quality, sustainable seafood," Thompson said. "We have tried and tested food from all backgrounds, so deciding what direction to take these dishes was difficult."

"It was rewarding to see that our recipes were so well received."



Vaughan Wilkinson, left, with Baz Henare, Regional Economic Development Minister Shane Jones, Dot Pumipi, Susan Petricevic and Tim Law.



Scampi formed part of the night's seafood spread.



Ziplining also formed part of the night's activities. Seafood Industry Australia chief executive Jane Lovell was first up.



Wayne Lowther preparing to make the 43-metre jump.



Seafood New Zealand chief executive Tim Pankhurst, left, with US ambassador Scott Brown.



Aussies Patrick Hone, left, with Christopher Izzo, Peter Jones and Alex Ogg devouring our NZ seafood.

Thai crayfish salad

Serves two



Photo, Torin Barnes.

Ingredients:

2 fresh crayfish tails
½ cucumber
½ punnet cherry tomatoes
Small bunch coriander
Small bunch Vietnamese mint leaves
2 red chillies
100g mung beans
2 kaffir lime leaves

For the dressing:

3 tbsp Thai fish sauce
3 tbsp lime juice (1–2 limes)
3 tbsp crushed palm sugar
1 tbsp sesame oil

Bring a large pot of water to the boil and add a good pinch of salt. Cook the crayfish in the boiling water for 8 minutes, remove and place in iced water until cold.

Once cooled, remove meat from the shell and set aside.

Halve the cucumber, remove seeds with a spoon and slice. Cut the cherry tomatoes in half, wash and prepare the coriander and mint and finely slice the red chilli and kaffir lime leaves. Combine ingredients and set aside.

Prepare the ingredients for the dressing, mix together and set aside.

Cut the crayfish into chunks and combine with the salad ingredients. Toss with the dressing and place in a bowl to serve.

Recipe courtesy of executive chef Shane Avent, QT Queenstown.

Lessons from across the seas



Australian delegate Mick Gilby on a tour of the Port Nicholson Fisheries rock lobster processing plant.

Photo, Chris Calogeras

Cultural pride, leadership and collaboration were highlights of an Australian delegation's trip to learn more about Maori involvement in New Zealand fisheries. Annabel Boyer's article gives an Australian take on Maori fisheries and is reprinted here with the permission of FISH, the industry magazine for Australia's Fisheries Research and Development Corporation.

Learning how to harness both economic benefits and cultural wellbeing for Indigenous Australians through involvement in seafood provided the drive for a recent trip to New Zealand by members of the FRDC's Indigenous Reference Group (IRG) and the Indigenous Land and Sea Corporation (ILSC).

The Australians were guests at the 2019 Maori Fisheries Conference, where they presented and were later honoured to be the first ever non-members to attend the annual general meeting – a collective of Maori fishing groups.

The purpose of the trip was to develop stronger

relationships between New Zealand and Australian First Nations peoples, in order to share knowledge and experience related to operating in fisheries and aquaculture. The Australian delegation returned home buoyed by the experience and confident about the promise for Indigenous Australians in Australia's seafood industry.

"It was empowering to see how strong a voice the Maori people have in the New Zealand fishing industry, being involved at all levels, from fishers and workers right up to CEOs and board members or chairs," said Ashley Perez from Northern Territories Fisheries.

Other delegates included IRG members Bryan Denny, Chels Marshall, Frank Parriman, Matt Osborne, Michael Gilby, Shane Holland and Traceylee Forester, as well as executive officer for the IRG Chris Calogeras, and the FRDC's senior portfolio manager, Josh Fielding. The FRDC also provided bursaries for Delahay Miller from the Department of Primary Industries and Regions South Australia (PIRSA), and Lizzy Murrah Keys and Ashley Perez to attend.

Calogeras said the trip provided insight into the strategies and policies that had either hindered or assisted the economic and cultural development of First Nations peoples in New Zealand, and how these learnings could assist in Australia.

United community

Now in its eighth consecutive year, the Maori Fisheries Conference was this year held in Auckland in March, with more than 300 people attending. The theme of the 2019 conference was “Te ha o Tangaroa kia ora ai taua” – “The breath of Tangaroa sustains us”. Tangaroa means “God of the Sea”, and the theme spoke to the interconnectedness of humanity with the environment, underpinning the purpose of the Maori Fisheries Trust, Te Ohu Kaimoana, and the work it undertakes to protect Maori fishing rights.

The conference explored topics surrounding humanity's relationship with Tangaroa – from eco-colonialism and Indigenous resilience, to Maori food gathering and traditional practices – and examined how businesses can preserve culture in commercial practices.

Though unable to understand the language, the Australians were impressed by the power of a presentation by Danny Poihipi, speaking in Maori, on Maori food gathering and traditional practices. Educated in the art of gathering food since he was a child, Poihipi is skilled in the arts of net making

and seafood processing. He works presenting this knowledge to children in local schools.

The theme of a presentation by Chellie Spiller, of Wayfinding Leadership, was approaching leadership in a culturally grounded way, with an example of leadership development undertaken through a journey on a traditional waka (sailing canoe).

Delahay Miller says he has come back from the trip inspired.

“I’m an Aboriginal man, and going to the conference – the most powerful people in the room were First Nations people. It was great to see,” he says. “It empowered me to want to develop as a leader.”

Members of the IRG delivered a presentation on Indigenous fisheries in Australia, with Matt Osborne presenting on the IRG’s Indigenous fisheries research advisory role for the FRDC. Shane Holland gave an overview of native title and access to aquatic resources for Indigenous Australians and Chels Marshall spoke about some of the key research projects that have been funded, such as the identification of values placed on fishing by Indigenous Australians.



Members of the IRG present a gift from the Australian group to fisheries peak body Te Ohu Kaimoana, at the Maori Fisheries Conference. Left to right: Matt Osborne, Te Ohu Kaimoana chair Jamie Tuuta, Chels Marshall, Shane Holland. Photo, TWA

Two worlds combined

Conference presentations also demonstrated the increasing level of concern about the impact of climate change on aquatic resources in New Zealand, and for the Maori community. In a presentation regarding eco-colonialism and Indigenous resilience, Tina Ngata advocated for the protection of Indigenous rights, but also spoke about science working towards effective environmental stewardship along with traditional peoples.

“This really resonated with me and with my work at the

Australian Institute of Marine Sciences (AIMS),” Traceylee Forester said. “I work with AIMS scientists and traditional owners of sea country to build partnerships that connect Western science and traditional knowledge. So both Tina and I are working to bridge the divide.”

Another presentation of note was from Rachel Taulelei, named the 2018 Maori Business Leader, who is CEO of family-owned Maori food and beverage producer Kono.

Forester said Taulelei talked about combining Maori lore and law, trying to make a commercial enterprise

work with traditional lore as a fundamental basis for the business. "It was about preserving Maori culture in a modern society and thinking that this isn't a choice but a must. Again this really affected me, as my own people are thinking along this line."

Forester hopes that this will be the first of many opportunities for the First Nations peoples of Australia and New Zealand to learn from one another.

"In terms of moving forward into the future, both the Maori peoples, the Aboriginal peoples and the Torres Strait Islanders have a lot of experience and knowledge that can be shared between the three groups – there should be more opportunities for us to 'talk' with one another," she said.

"The conference really emphasised the strength of working together and that, although it can be slow, it is far more substantive than moving forward in isolation."

Working together

Following the conference, the Australian delegation attended the annual general meeting of Te Ohu Kaimoana. This organisation, which hosted the Maori Fisheries Conference, operates as a Maori fisheries peak body to the New Zealand Government, negotiating policy to advance Maori interests in the marine environment, including fishing rights. It was the first time non-iwi (Maori clan) representatives have ever been allowed to attend this meeting, and the FRDC's Josh Fielding said the experience was incredibly valuable for the group. "It gave great insights into the organisation and management of fishing rights that the Maori have in order to realise the benefits."

The following day, on a processing tour of the Port Nicholson Fisheries lobster plant in Auckland, the group also had the opportunity to spend time with Maru Samuels, general manager of the Iwi Collective Partnership, an entity that organises and manages commercial fishing quota on behalf of 14 iwi.

Samuels emphasised how the partnership approach – working together as a collective – had been the hardest component of the journey for Maori people in gaining and accessing their fishing rights. While they were making gains, he said this component remained the hardest part on an ongoing basis.

Shane Holland, traditional fisheries manager at PIRSA and an IRG member, said the trip had really impressed upon him the need for unity. "I can see a future where Australia will get to where New Zealand is, but we have a way to go," he said.

"The conference really emphasised the strength of working together and that, although it can be slow, it is far more substantive than moving forward in isolation."



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A skipper while still a schoolboy

Bill Moore

The annals of the fishing industry are sprinkled with stories of youngsters going to sea but not many can claim to hold a commercial skipper's ticket while still at high school. Matt Howden did exactly that.

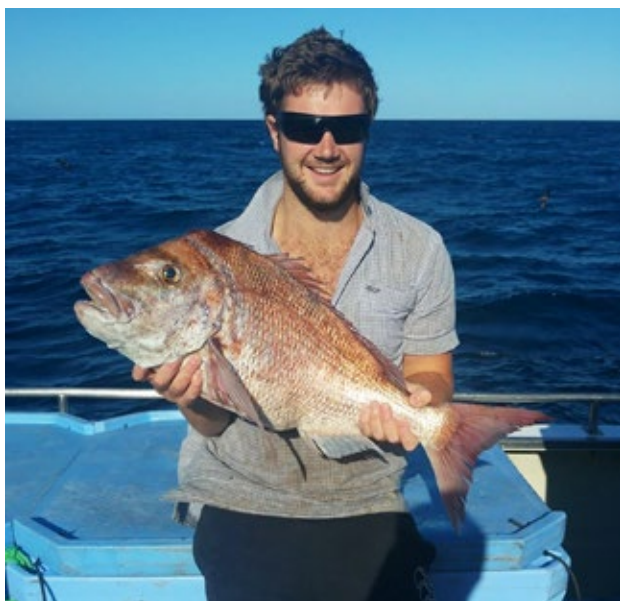
Today 25-year-old Howden, one of the young achievers honoured in the 2019 Seafood Stars Awards, owns his own 16.3m trawler which he fishes out of Gisborne.

Eight years ago he was skippering a Kaikoura charter boat, taking out up to 20 people at a time on recreational day trips. That was on weekends. During the week he was at boarding school in Christchurch.

To hear him tell it, this arrangement was the most natural thing in the world. His family moved from Picton to Kaikoura when he was 13 and once he went to boarding school, he would come and help on Peter Cleall's boat *Seafarer II*. Initially he did it for nothing, then as a paid deckhand.

"Almost every weekend I'd drive home from school and within quite a short amount of time I went and did my first skipper's ticket at 17."

A few months later Cleall's charter skipper had a heart attack, forcing him to stay ashore for some time.



Matt Howden in his favourite place – aboard *Hakuwai*.

The teenager was given the helm. "I've been running boats since then," Howden said.

His only other work experience was washing dishes in a Kaikoura café.

"I couldn't stand the routine of it," he said.

Before long Howden was mixing the charter work with some longlining out of Kaikoura.

"Then the boss man put a longline reel on the boat and said to go and catch fish out of Wellington when we weren't chartering."

So, "somewhat naively", he headed up the coastline to fish in Cook Strait, with two deckhands.

"We'd go up there Monday to Friday and come back in the weekends for charters on Saturday and Sunday. We lost a bit of gear and what-not but it was a huge learning curve and I eventually sorted it out."

Seafarer II had been replaced by *Hotspur* when the young skipper broke his leg in a farmbike accident and decided while recovering that he wanted "a bit of change". Five years ago he moved to Gisborne, working for Richard Kibblewhite as a skipper and a deckhand, crayfishing, longlining and gill-netting.

"The boat that we used to tie up next to was a trawler called the *Hakuwai*. I got talking to the owner – he was 67. I assumed he was going to retire at some time and asked if I could buy the boat, then I asked Gisborne Fisheries if I could carry on catching the quota package that went with it, and here we are now."

Howden, who had never trawled before, was in for another steep learning curve in the months he worked on the *Hakuwai* before taking it over from the owner. On his first trip they did three tows before the weather forced them in.

"He said, 'You'll be right to take the boat out tomorrow won't you?' And that was it. He never came out with me again."

That was two and a half years ago.. Today Howden sets off with a deckhand of his own on the 50-year-old kauri-hulled trawler, targeting tarakihi, gurnard, snapper, john dory, moki and trevally.

"In the winter trips can be one day and overall, we



Hakuwai heading for the fishing grounds.

never do any more than three days, which works in well with Gisborne Fisheries' quality requirements. We range up to 100 miles from home, but in winter we're just out the front doorstep – we're pretty lucky."

As with other fishing ports, the once large inshore fleet has shrunk. *Hakuwai* is now one of only four Gisborne-based trawlers.

However, Howden doesn't fear for inshore fish stocks, which he said were holding up at stable levels, even when the population base is small according to original stock size scientific data.

Tarakihi remains his staple catch and he said it was fishing sustainably.

"Population levelled off and has been consistent for at least a decade."

He trusts the Quota Management System to safeguard stocks.

"If we didn't have it we'd be in a world of hurt."

A greater concern, he said, was the dearth of young people wanting to take up fishing as a career, especially those aiming to become skippers. He views himself as an anomaly, and struggles to see why sheep and beef farming still attracts many, while fishing does not.

The farming recruits had little hope of buying their own farm one day, he pointed out.

"A young fisherman has every chance of owning their own boat and business."

Factors holding youngsters back could include pressure to get a university education, an unwillingness to do hard physical work, and "expecting to get a million dollars from day one".

But Howden, who has settled in Gisborne with his own home but still travels to Kaikoura sometimes to catch up with family and mow his parents' lawn, has no doubt that he's in fishing for the long haul, enjoying the independence and variety of the job, as well as the good income.

"I love the uncertainty of it – you don't know where you're going to be, what you're going to be doing, what could go wrong. I've got to be constantly thinking.

"We all have bad days – you can have shit weather and bad fishing, a few breakdowns, you can get frustrated like at any job – but then you swing your legs out of bed at three o'clock in the morning and

carry on again. Just having a nice day, good weather and being out of the bustle of town is nice."

Like most fishermen, he's frustrated by the industry's negative public image and supportive of the Federation's efforts to work as a representative body and counter misinformation.

Fishermen were respected in countries with long fishing histories like Iceland and Denmark, he said.

"We're classed as criminals here to be honest."

He said he used to back down when the negativity started but now stood up for himself, knowing the efforts fishermen put in to fish responsibly, obey the rules and adopt innovations to improve their performance.

"I don't rant, I don't get in arguments, but I'm proud of what I do.

"I don't waste my breath a lot of the time because what I'm saying just falls on deaf ears. You can give them all the facts in the world but they only hear what they want to hear."

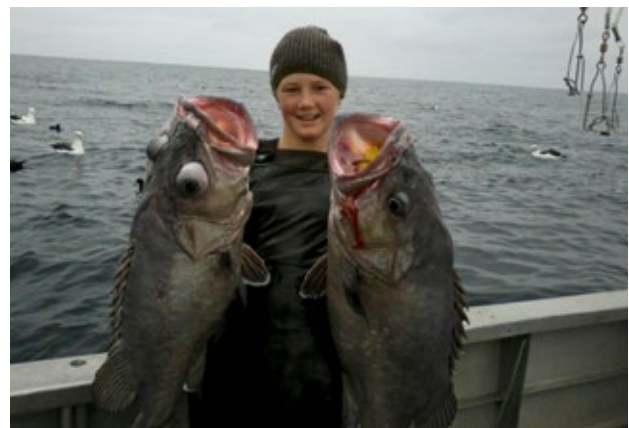
That's one reason why he enjoys the Federation conference each year, which not only sees issues being addressed with representatives of industry sectors such as MPI and Maritime New Zealand, but is also "a hell of a good time with lots of like-minded people".

Howden said the best and worst thing about his career was being the person who makes all the decisions, with the responsibility for other lives on the boat.

"You go to sea when you want, no one's telling you what to do, where to be or when to be there. You go out and do three hard days – you certainly sleep well after that, not just because you're knackered, but you know you've given it your all."

He said the fishermen's voice was seldom heard in the public domain, and given the chance he would ask the industry's critics to open their eyes, look and listen, and stay clear of nasty personal attacks and threats on social media.

"People are going to think what they're going to think, at least just try to come at it with a level head. Try to see the other side, put your feet in our shoes."



Thirteen-year-old Matt with the makings of a good fishing story.

Brand reputation put above people

Jacqueline "Rocky" Bublitz

We are not always who you think we are. Some of us get seasick, don't like the taste of fishy fish, and can't tell our hake from our hoki.

We might only ever see snapper served on a plate, and possess a rudimentary knowledge of the tides. But we are connected to your community, whether through family, emotional or intellectual ties, and we see the passion you bring to your industry. We know your stories, and role you play in bringing kaimoana to our tables. We are the people standing in the background, supporting you, and shaking our heads when the media try to tell a different story about the work you do.

And sometimes, when the seas get rough, we are compelled to stand up and speak with you.

I am a Taranaki woman, and I moved back to my beloved west coast nine months ago to help look after my ailing father. Somewhere between the hospital stays and sleepless nights, the latest Maui and Hector's Dolphin Threat Management Plan was released, and with it came the predictable headlines and social media posts framing commercial fishers as the biggest threat to New Zealand's dolphins.

As I learned more about the science behind the plan, it became apparent that statistically higher risks, such as toxoplasmosis, were deemed less translatable to the general public—and, dare I say, less palatable to any eNGO trying to drum up support. As the TMP gained momentum in the media, I witnessed politicians skirt around the financial impacts to communities reliant on inshore fishing, shifting the narrative away from our people to the promotion of that political, ubiquitous, concept: "Brand New Zealand".

I'm a writer, I've worked in media, and I suppose it should not have surprised me when that machine so quickly went into spin drive, with prominent party members, environmental groups and hyperbolic celebrities reducing the nuance of the proposed plan to soundbites. That's the world we live in these days, one where we'd sooner feel something than understand it, react rather than learn. Who amongst us wouldn't want to save our dolphins, after-all! You'd be crazy not to capitalise on public sentiment to get what you want, even if it means the more



"Rocky" Bublitz with her father John Bublitz, who died a few days before this article was written.

complicated aspects of the story remain untold.

Perhaps you have less tolerance for distortion when a beloved family member is dying. Perhaps it is simply that your world narrows down to a fine point, and your senses heighten. Over the past few months I've watched my brother-in-law, owner of New Plymouth's Egmont Seafoods, fight to exhaustion for the company he has run since he was 24 years old.

I've seen elderly, salt-crusted fishers cry over the way their craft has been misrepresented. I've listened to young Maori protest the chipping away of their Treaty rights, and I've heard scientists and policy-makers lament the lack of traction when it comes to getting the public to understand the genuine and immediate threat of toxoplasmosis.

A better state of mind #6



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Research boosting environment

Anna Yallop

Unless you've been asleep at the wheel, you can't have failed to notice the rapid escalation of worldwide interest in alleviating the strain humans have put on the environment over the last 200 or so years.

From climate change to sea level rise, extreme weather to plastics in the ocean or extinction of wildlife, there has been a move to focus more on how we can undo the damage we've caused and ensure that we and future generations retain this planet we call home.

I've spent the last month or so looking over the range of projects that Seafood Innovations Ltd (SIL) has co-funded since its inception in 2004. As a reminder, SIL (funded by the Ministry of Business, Innovation and Employment) co-funds research projects with industry to help add value to the seafood sector. These projects focus on technically challenging science, or the development of novel technologies that create benefits for industry. Examples include working out how to domesticate species, developing genetic markers, utilising robotics, improving harvesting techniques, or creating high-value functional foods.

During my investigation, what struck me is how many projects have recently been initiated that respond to specific environmental challenges and ones in fact, that don't create direct economic benefits via the development of products or services that seafood companies can then sell. These projects do, however create highly important research outcomes that we would all agree are certainly worth having if we want both the seafood industry and the environment to thrive.

SIL's initial goal in 2004 was mainly to generate economic benefits for the seafood sector and whilst its goals are largely still the same, albeit with a slight tweak to also look for ways to improve productivity and increase volumes of exports, increasingly, we're funding projects that are about understanding the science around ocean habitats, learning more about rare marine species, developing technologies to alleviate any impacts of fishing and the like.

Examples of some of the projects we're involved with include: a study monitoring the at-risk king shag population, finfish seabed recovery; whale

migration path tracking; bycatch alleviation; polystyrene replacements (e.g. Zealafoam, Woolcool) and optimising fish diets to reduce the impact on the environment.

All of these projects have been initiated and co-funded by industry to the tune of millions of dollars – a very significant contribution towards research that will benefit not singular companies, not even a singular sector, but will benefit regions, animal populations, tourism, scientific knowledge, the health of our oceans and New Zealand's prized reputation as an "unspoiled" nation.



Photo, Tamzin Henderson.

Increasingly, these types of projects involve multiple parties both within the seafood sector and across external groups such as councils, the Department of Conservation and iwi, demonstrating a willingness to work collectively that is bound to have payoffs for the wellbeing of our oceans, our wildlife and our future.

Other examples of environmentally-focused projects I'm aware of include ones to reduce and/or reuse waste, developing tools to monitor fish farms' footprints, reducing carbon emissions through smart fishing, plastic-use auditing and net technologies that safely release undersized fish. The range of projects that companies are looking at is widespread and reflects a growing interest in ways the seafood sector can put value back into the habitat from which it generates its income.

Of course the companies involved in such projects generate some economic payoff from being involved in these projects including an enhanced reputation with consumers, reduced costs and possibly even new products generated but what has been a pleasant surprise for me is the engagement, motivation and investment I've seen across the industry to do its part in ensuring the environment

comes out better off as a result of this research.

At the end of the day, we all need to put the effort in to making sure we behave in ways that enhance our environment and leave as little impact on the world as possible. It is just a start but it's nice to play even a small part in initiatives that have the potential to improve our environment even just a little. If you're interested in such initiatives, feel free to contact me to talk further.



Anna Yallop

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Anna Yallop is general manager of Seafood Innovations Ltd.

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Industry 'dropped the ball'

Before the implementation of the dolphin sanctuary around Banks Peninsula there was a small thriving fleet of small fast boats using minimal yardage of nets launching from various boat ramps around the peninsula in the summer season targeting rig, elephant fish and school shark. This was a day fishing method and fishermen could be home with their families at night and at the end of the season their boats were stored high and dry and safe until next year.

The sanctuary took away 191 miles of close, safe and lucrative fishing area and as the next comparable fishing area was out of reach economically for these boats.

To stay in the fishery, affected fishermen had to make a huge financial commitment and upgrade to a larger displacement vessel capable of staying overnight on far away fishing grounds and carry much more net to cover the added costs of year-long berthage and maintenance required for these vessels. There was the cost of running two households, one at sea and one at home, and the extra stress on the family unit.

Added to that was now this vessel had to diversify to find a winter fishery with the extra expense of purchasing different fishing gear, all to maintain the ongoing cost of running a high-maintenance vessel, more cost as no longer could he have his boat safely high and dry and supplement his income with a job over winter.

Countless meetings were held leading up to the establishment of the sanctuary usually chaired by Laurel Tierney and the ever present Liz Slooten and Steve Dawson with Ray Voller and Mike Donaghue for MAF. To be fair the fishing industry dropped the ball. Instead of showing a united front they turned their

backs and didn't want to get involved. It should have died right there but they let these two segment the industry and get a foothold. Little did they know that Slooten's and Dawson's tentacles would encompass all fishermen and methods.

Many many promises were made. One was that fair and adequate compensation would be given to those affected. Despite many requests not one red cent has ever been paid. No wonder relationships between the Government and industry are strained – 28n rights are another glaring example of broken promises and outright deceit from the Government.

The problem is that when a new minister is elected he comes in with the new broom syndrome and hope is high that he will make needed changes but what he knows about fishing would not fill a fisherman's butt crack and he is guided by the same old advisers with the same old prejudices and soon he becomes just another puppet minister.

Fishing cannot be taught from a book, catching a snapper on a line does not make you a fisherman. Only by trial and error, equipment loss and many many failures does a fisherman learn to efficiently fish an area. This knowledge is hard-earned and valuable and is jealously guarded, and rightly so.

Fish stocks have recovered substantially and I think it is high time the Government reinstated these stocks and reimbursed those that have made it possible. The fishing industry is a huge part of the country's economy. Treat it with respect or lose it.

Doug Saunders-Loder said it's time to push back (Seafood New Zealand, Volume 27 No 4) and I hope he takes these issues on board.

Bob Beggs
Lyttelton

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Doug Paulin

Paulin to be Sealord chief executive

Doug Paulin is to become chief executive of Sealord at the end of the 2020 financial year – and is spending a year as chief operating officer first.

Formerly Sealord's general manager, group operations, Paulin became COO at the beginning of the month and will be the first internal appointment Sealord has made to the top job. He will take over from Steve Yung, who became chief executive in 2014.

Paulin, whose whakapapa links him to Ngati Porou and Ngati Raukawa, has a BCom/LLB from the University of Otago, an MBA from Henley Management College in England and is a graduate of the Advanced Management Programme at

Harvard University in Boston.

He was chief executive at Hubbard Foods for five years before joining Sealord in 2011.

Sealord board chairman Whaimutu Dewes said Yung had done a superb job evolving Sealord into the organisation it is today with a strong performance culture, clear strategic focus in deep sea fishing and aquaculture, and consistent financial results.

"Steve remains focused on the continued success of Sealord, and will work closely with Doug to ensure a successful transition whilst continuing business as usual."

Healthy stocks recognised

Research has again shown that New Zealand's fish stocks are in great shape, thanks to a world-leading management system.

Presenting the latest data at the Seafood New Zealand conference in Queenstown, Dr Rich Ford, the manager of fisheries science at MPI division Fisheries New Zealand detailed the regular assessments of New Zealand's fisheries.

The annual Fish Stock Status Report confirms that 95 percent of all fish landed in New Zealand is from stocks that are sustainable and healthy.

Fisheries New Zealand has verified the status of 169 fish stocks and found 142 stocks with no sustainability issues and 27 stocks that need to be rebuilt.

The report says this means 95 percent of fish landed in New Zealand is from sustainable stocks and "a near record of tonnage of landings of scientifically evaluated stocks has no sustainability issues".

The 27 stocks that are not performing as well as expected are under management to enable rebuilding.

Highlights from recent assessments indicate strong performance for both stocks of hoki, most stocks of crayfish and red gurnard, four stocks each of orange roughy, rig, stargazer, John dory and North Island longfin eels, three stocks each of scampi and barracouta, two stocks each of blue cod and blue moki, and snapper in Golden and Tasman Bays.

New expertise joins Fisheries Inshore

International expertise has been added to Fisheries Inshore New Zealand's team with the arrival of fishery manager Brianna King.

King joins FINZ from Alaska, where she worked as a fisheries observer on longliners, trawlers and pot cod vessels. She recently completed a Masters of Science, with her specialty lying in conservation engineering.

As part of her thesis, she worked in collaboration with a Bering Sea pollock vessel using a pelagic trawl net to measure the amount of contact commercial fishing gear made with the seafloor.

"From this small sample size, we found that that the amount of footrope contact observed was less than expected by the skipper based on net mensuration electronics, and less than what would be modelled for a footprint of pollock gear in the North Pacific," she said. Her findings are expected to be published in a peer-reviewed journal in the near future.

King hopes to continue similar research in her new role, tackling further issues such as particularly bycatch mitigation.

"I'm looking forward to working in New Zealand fisheries. I've had the chance to get out on a crayfish boat already, the *Steve Mayree*. It was a great opportunity to meet some of the fleet face-to-face, get acquainted with their work environment, see the similarities and differences between New Zealand and Alaskan fishing operations, and to hear what their concerns are.

"I'm hoping to have more face-to-face discussions with different industry players - eNGOs, managers, government, fishing companies, and fishermen.



Fisheries Inshore's new fishery manager Brianna King, standing in front of a pollock vessel, the *Pacific Explorer*, in the Dutch Harbour, Alaska.

There's certainly a lot to talk about."

Wellington-based Fisheries Inshore New Zealand is a non-profit organisation that was established by quota owners, ACE holders and fishers to work together to advance their interests in inshore finfish, pelagic and tuna fisheries.

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Fishy tales about tarakihi



Tarakihi

Wellington chef, sustainability champion and national sales manager of Yellow Brick Road, Martin Bosley, says anyone forecasting the demise of tarakihi needs to have a look at the science around the Quota Management System.

"What we are seeing now, in the debate over the sustainability of tarakihi is the Quota Management System in action," Bosley said.

"If you see a stock reduce you cut how much you catch. It's that simple."

He said the commercial fishing industry took a 20 percent cut in the quota last year and the stock was rebuilding, with the industry working on further proposals to help.

"I'm still supplying my customers tarakihi because

I know how the Quota Management System works. And I believe in the science."

Bosley said Yellow Brick Road supplied around 300 restaurants and its reputation relied on the sustainability of the fish it supplied to its customers.

"The word 'sustainable' is misunderstood. Put simply, a sustainable fishery is one whose practices can be maintained indefinitely without adversely impacting on other species within the ecosystem."

Kiwis should always eat sustainable species, Bosley said.

"I would also encourage people to be a bit more adventurous in their fish choices. We tend to only eat five or six different species when there are dozens of great eating fish in your fish shop."



FOR SALE

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Economic review

of the seafood industry to June 2019

Welcome to the latest update on the economic performance of New Zealand seafood. This edition provides provisional data for the year-to-date to June 2019.

KEY RESULTS FOR THE PERIOD:

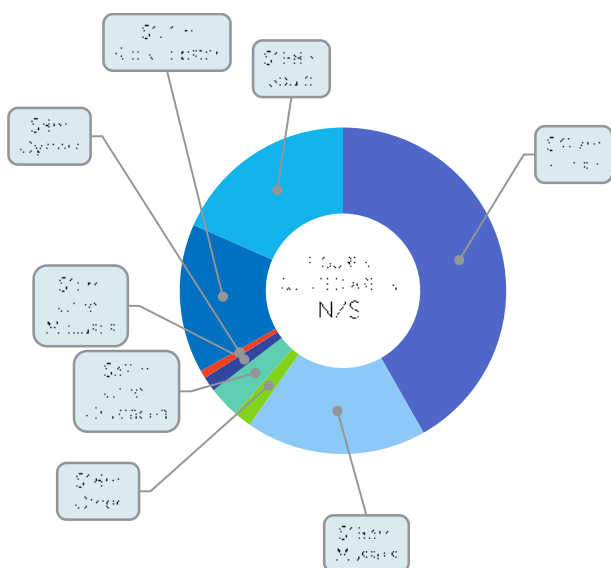
- Seafood exports ytd for 2019 reached NZ\$1.022b, compared with NZ\$867m for the same period in 2018. The volume has also increased from 130,163 to 141,665 tonnes.
- Export value to Thailand, Poland, Canada grew significantly.
- Export value of squid has grown by 81 percent compared with the same period in 2018.
- Seafood exports have moved back up to fifth place on the list of top commodity exports.

EXPORT STATISTICS

EXPORT NZ\$FOB*

All figures in this section are based on export data provided by Statistics New Zealand and analysed by Seafood New Zealand for six months to June 2019. Seafood exports to the end of June 2019 totalled NZ\$1,022mil with more than 141,665 tonnes exported.

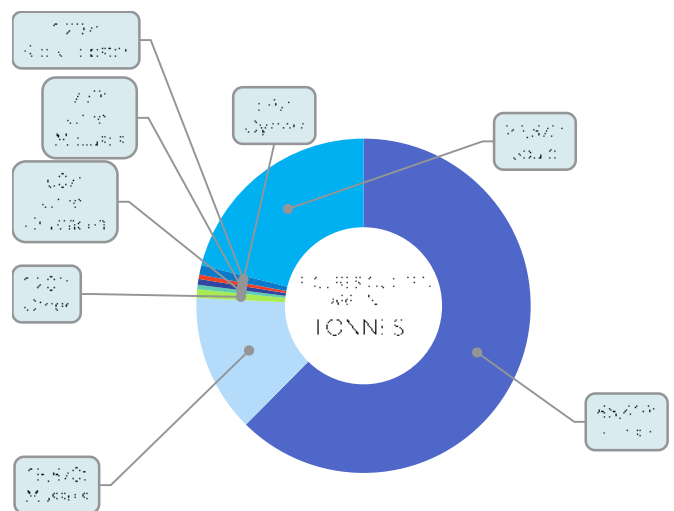
Export value (YTD to June 2019) = NZ\$1,022mil



EXPORT TONNES

Finfish species accounted for 62 percent of export volume with squid accounting for 21 percent and mussels accounting for 13 percent. Rock lobster and other crustacea make up a small proportion of export volume but contribute a significant percentage of the total export value.

Export volume (YTD to June 2019) = 141,665 tonnes



Source: Export data, Statistics New Zealand, Seafood New Zealand.

FOB = Free on board. The value of export goods, including raw material, processing, packaging, storage and transportation up to the point prior to loading on board ship.

EXPORTS BY COUNTRY

China, the United States and Australia maintain the top three positions as our key seafood export partners. The value of exports to Thailand grew by 65 percent this period, primarily due to the increase in the volume of tuna being exported to Thailand. Other markets such as Canada and Poland also saw significant growth.











Top 10 Export Countries by Value (YTD to June 2019)

	Country	2019	2018	% Change
1	China, Peoples Republic Of	\$370m	\$286m	29 ▲
2	United States	\$244m	\$112m	29 ▲
3	Australia	\$113m	\$120m	6 ▼
4	Japan	\$45m	\$47m	4 ▼
5	Spain	\$35m	\$36m	3 ▼
6	Thailand	\$33m	\$20m	65 ▲
7	South Korea	\$28m	\$21m	33 ▲
8	Hong Kong	\$25m	\$22m	14 ▲
9	Poland	\$20m	\$10m	100 ▲
10	Canada	\$18m	\$9m	100 ▲

EXPORTS BY SPECIES

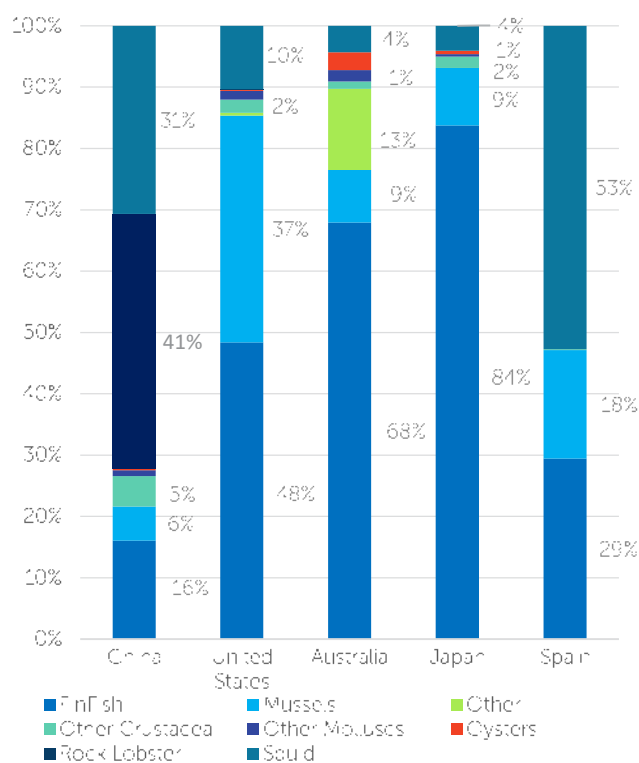
The export value of squid increased by 81 percent, on the same period in 2018, with better prices and increased volumes, representing a very good squid season. Salmon and mussels have also shown good growth up 35 and 25 percent respectively.

TOP 10 EXPORT VALUES (NZ\$)

	Species Name	2019	2018	% Change
	Squid	\$188m	\$104m	81 ▲
	Mussels	\$183m	\$146m	25 ▲
	Rock Lobster	\$151m	\$147m	3 ▲
	Haddock	\$65m	\$61m	7 ▲
	Salmon, Pacific	\$42m	\$31m	35 ▲
	Haddock	\$34m	\$30m	13 ▲
	Mackerel, Jack	\$29m	\$32m	9 ▼
	Orange Roughy	\$26m	\$26m	0
	Antarctic Toothfish	\$18m	\$17m	6 ▲
	Snapper	\$17m	\$16m	6 ▲








Source: Export data, Statistics NZ.

Composition of Exports to Top 5 Trading Partners (YTD to June 2019)



EXPORTS OF MAIN COMMODITIES

Exports of the main commodities for the 6 months to June 2019 all saw an overall increase in value. Fish, crustaceans and molluscs having the biggest increase at 20 percent. Seafood is now the fifth highest export earner for New Zealand.

	Exports of main commodities (NZ\$)	2019	2018	% Change
	Milk powder, butter, and cheese	7,888m	7,018m	12 ▲
	Meat and edible offal	4,604m	4,335m	6 ▲
	Logs, wood, and wood articles	2,720m	2,412m	13 ▲
	Fruit	2,072m	1,887m	10 ▲
	Fish, crustaceans, and molluscs	948m	793m	20 ▲
	Mechanical, machinery and equipment	881m	855m	3 ▲
	Wine	879m	781m	13 ▲
	Total Exports	30,961m	28,705m	8 ▲

Source: Overseas merchandise trade, Statistics NZ.
*Fish, crustaceans, and molluscs (excludes fishmeal & processed oils/powdered products)

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Alluminium fully insulated deck box
5m by 2.4m by 1.358m
Middle compartments 3060L each, end compartment 2158L, 1 end compartment lowered by 400mm. Total weight 1,020 kilos
\$20,000.00 + GST



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Surface long line gear for sale: 20 mile all drum with 3.5mile line \$15,000.00
Also 4 trace bins with approx 1,500 traces in top condition. A variety of floats.
Ice box 1.4m by 1.4m by 1.3m deep.
Price negotiable

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PAD8, PAD9
SCH1, SCH7, SCH8
SPD1, SPD3, SPD4, SPD5, SPD7

SPO1, SPO8
SUR2B
TRE7
YEM1, YEM9

QUOTA SHARES FOR SALE

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GMU1
KIC
OYS
PAD5, PAD7, PAD8
PIL
SUR7A - 10 tonne

BOATS FOR SALE

4.8 mtr Allenco alloy dory- Honda 60Hp 20 hrs, GPS, Sounder, Spotlight, full cover, on alloy trailer - \$35,000 + GST

13.3 mtr wooden trawler, built 2009, Dong Feng D683ZLCA3B \$500,000 + GST

14.87 mtr alloy cray/dive/kina, Scania DS114 330kW, twin disc gearbox, Aussie pot hauler - \$275,000 + GST

17 mtr steel trawler, built 2016, Scania DI113071M (400Hp) \$3,250,000 + GST

7.5 mtr Sea truck, alloy 2 x 225Hp 4 stroke outboards, haul-out trailer - \$65,000 + GST

16.8 mtr steel trawler, built 2012, Scania D111259M (350Hp) \$2,500,000 + GST

19.10 mtr steel trawler, built 2004, Cat 3412E (635Hp) \$2,250,000 + GST

14 mtr GOP McManaway, MTU 530Hp, 2014 - \$250,000 + GST

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Talley's



2019/2020



ALBACORE TUNA SEASON

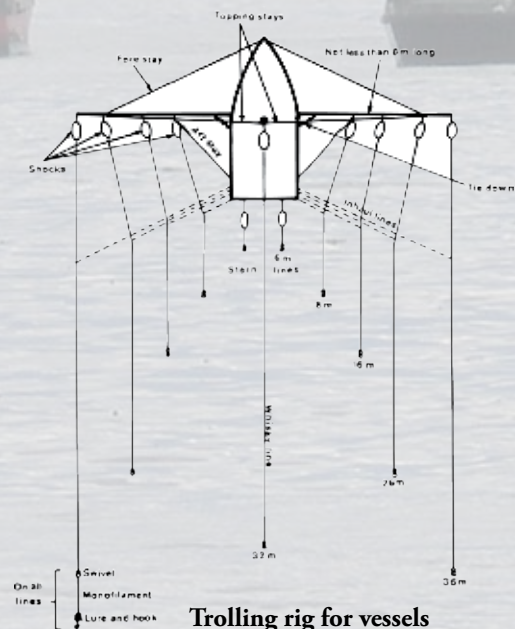
Talley's wish to welcome all Albacore Tuna fishermen to the South Island fishery where we operate the only complete chain of tuna receiving depots.

These buying stations are:

• Picton	Alf Reid		027 450 0501
• Nelson	Larry Moses	03-548 0109	021 438 387
• Motueka	Ricky Smith	03-528 2800	021 766 196
• Tarakohe	Alf Reid		027 4500 501
• Westport	Kerry Paterson	03-788 9175	021 353 912
• Greymouth	Geoff Drake	03-769 9070	021 743 074
• All other Ports	Geoff Drake	03-769 9070	021 743 074

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- Use of our slurry bins
- Speedy payment
- Ice supplied



We would like to buy your tuna, and will unload your vessel at any of the above buying stations.

We will help you gear up your vessel so if you need assistance please phone us.

Should you have a vessel that needs a skipper or, be a skipper who needs a vessel, please don't hesitate to call us. We welcome all enquiries.

PLEASE CONTACT

Doug Saunders-Loder

Talley's Group Ltd - PO Box 5, Motueka 7120

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#5113 COASTAL KAURI TRAWLER

L14.3m x B4.1m x D2.1m Kauri hull, Totara deck
Gardner 6LX main. Gardner 2:1 gearbox
4 tonnes (70 bins) fish room
Survey valid to September 2021
Double drum winch with 250m x 14mm rope
per side. Net roller.
3 props. 3 nets. Spare winches.
Good electronics. Vesper Marine AIS.
Owner retiring from fishing.

\$90,000

#5098 STERN TRAWLER MAJOR UPGRADE 2017

L 15.44m x B 5.1m x D 2.13m. Carvel plank
Detroit 8V71 rebuilt 2017
Alison box 4.5:1 rebuilt 2017
Ice hold 296 cases – relined 2017
4 berths forward. Good electronics
Big split winches. 450m Dynema warp.
Hydraulic next drum
Nets, doors tuna poles
100 mile survey valid to March 2020

\$180,000



#5106 FISHING VESSEL 125 HRS SINCE NEW

LOA 14.6m x B5.00m x D1.98m
Cummins C series, de-rated. 255hp 125 hours
ZF 3:1 gearbox . x 2 totally separate 3ph - 50 HZ
4 cyl Kubota 12.5 kVA kW 9.6
Fuel 8,000 litres, water 2,200 litres
Refrigeration 19 cbm fish hold. Good galley
5 berths. Skippers cabin. Automatic flush toilet.
Shower. Good electronics
VIRTUALLY NEW VESSEL CONDITION

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#5104 FRESH FISH TRAWLER
1974 by Breekveld
L 19.8m x B 5.2m x D 2.7m
Detroit 60 Series 425hp
29kVA genset
20 tonnes ice hold
Separate winches. Net roller
Hot water, toilet/shower.
Survey 100 miles

POA



#5038 LINER TROLLER
NETTER - REBUILT 2002
20.6m x 5.4m Gardner 8L3E
9kVA genset.
30 tonnes plus ice hold
4 bths fwd + skippers cabin
Moana 40mile drum with
bottom line rope. 25 mile
drum ashore. Set net roller
& nets. 100 mile survey
to Feb 2020

\$265,000

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