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EDITORIALS

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In this issue

Twenty years ago this magazine's cover story was devoted to a new Sealord trawler, the 66 metre \$28 million Rehua, as it headed for Nelson from Norway. History is repeating. Our cover story this month is devoted to another new Sealord trawler, an 81.75m, \$70 million vessel that is still under construction in Norway and yet to be named.

In 1997 the Rehua was described in these pages as "certainly the most modern and technologically advanced factory trawler on earth". Similar things can be said about the new purchase which, like the Rehua, was designed specifically for the New Zealand deepwater fishery and will carry much innovative machinery and technology.

Such an addition to the New Zealand fleet is not only a demonstration of Sealord's commitment to the seafood industry. It is also a clear vote of confidence in the way the country's fisheries are being sustainably managed. No more powerful signal could be sent to those who continue to knock our industry in the face of ample evidence that fishermen and fishing companies are determined to see the New Zealand seafood resource managed in such a way that it continues to provide food, jobs and profits not just for this generation, but for generations to come.

Sealord's investment comes at a time when the industry has got together to make a Promise New Zealand public, through television and social media, of its determination to ensure the sustainable future of our precious ocean resources. It forms a perfect complement to that message.

There is a lot more to read about in this issue, from stories about new products to a frank question and answer session with Sanford's award-winning chief executive, Volker Kuntzsch, and a catch-up with outspoken former West Coast commercial fisherman Ron Pearson, who tackled the Government over ITQs in the 1980s, and still holds strong views on everything to do with the industry.

Former deepsea skipper Sean Garwood has successfully made the transition to fulltime artist and is soon to see further recognition of his work with a series of stamps being issued by New Zealand Post and a public exhibition of his paintings from Antarctica. A portfolio of his stunning paintings, each taking a month to six weeks of painstaking work, begins on page 26.

You'll also find the story of 76-year-old Lloyd TeNgaio, who's in his 52nd year with the same seafood company. His picture on page 35 will tell you how much he still loves his job.

Tim Pankhurst **Chief Executive**







Kono, the Wakatu Incorporation's food and drinks business brand, has launched a new look drawing on "the power of four".

Kono is Maori for baskets, and Chief Executive Rachel Taulelei said the new branding encapsulated the power of four corners of beautifully woven flax kono from which the business takes its name, four iwi to which the owners whakapapa, and the four seasons.

The business is based in the top of the South Island, Te Tau Ihu, and headquartered in Nelson.

Taulelei said the ancestors of Wakatu's 4000 shareholders lived in Te Tau Ihu for hundreds of years, cultivating gardens and gathering and fishing for cockles, pipi, snapper, mussels, kahawai and crab.

"We have always been gardeners, fishers, orchardists, artisans and providores.

"Through the passage of time, the

world has challenged us to innovate - to become scientists, researchers, wine makers, branders, marketers, viticulturists, and leaders," she said.

The challenge had been accepted without hesitation and today Kono crafted award-winning and worldrenowned products like Tohu and Aronui wines, Kono mussels, Annies fruit bars, Tutu cider and more.

"Kaitiakitanga (guardianship) is one of the core values that directs our business and our relationship with our environment. It's our hope that customers will come to understand our guiding principles and know that products crafted by Kono have at their core a deep and inextricable connection to place. This is reflected by our new tag line, love for the land, respect for the sea." Taulelei said.

"As part of our launch of our new icon, we harvested harakeke grown at our Whenua Matua vineyard. Members of our team wove this harakeke into kono (baskets) which were then filled with gifts from our product range, and given to some of our key supporters and customers. This is a unique koha (gift)



Rachel Taulelei

we could give, and brings the story of our re-brand to life."

A video showing the kono being made – from harvest to completion, is on www.kono.co.nz

Explaining the design, Kono said it referenced traditional art forms and paid tribute to the whenu (strands) of fibre that are the basis of all mediums of weaving. "The combined attributes of strength, durability, unity and flexibility are the hallmark of finely woven products.

"The carving patterns of kaokao (chevrons), niho taniwha (triangles) and hekeheke (lines) are integrated. The positive and negative space are akin to the grooves and notches (pakati and hae) found in elaborate works of carved art and these patterns invoke themes of courage, leadership, exploration, movement, protection, responsibility and care."

A 'K' icon pin can be requested via www.kono.co.nz/#join-in



Sealord Skipper Rex Chapman features in the campaign.

SEAFOOD INDUSTRY'S MEN AND WOMEN TELL THEIR STORIES

The seafood industry's promise to the people of New Zealand is being rolled out through television and social media, giving a commitment to sustainable practices and finding ways to do things better.

The campaign began on July 2, featuring the promise and a code of conduct backed up by web episodes showing life at sea and giving insights that few people outside the industry are aware of.

The country's main seafood companies have collaborated to promote the television and webbased programme.

It features people from

throughout the country employed in catching, harvesting and processing the seafood that drives one of the country's most important domestic and export sectors, talking in their own words.

Seafood New Zealand Chief Executive Tim Pankhurst said the many innovative and exciting developments over the past few years were not always well known.

"We thought it was time to tell our story, which is one of an industry supporting dozens of communities throughout the country – and one of world-leading, cutting edge technology that is making a real difference to the way commercial fishing targets its catch, while lessening its environmental footprint," Pankhurst said.

He hoped people would take the time to watch and listen to the stories, he said.

"We recognise there will always be criticism of the industry – and in some cases that may be deserved but in some others it is a misrepresentation – and that is why we are stepping up to deliver a promise to the people of New Zealand about our care for the environment and intent to deliver best fishing practice."

The campaign is expected to run over three years, in addition to Seafood NZ's day-to-day advocacy work and response to specific issues.

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.



SOURCE STATE OF STATE

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.



Captain Andrew Leachman (right) with his wife Vivian and Rear Admiral John Martin. Picture: New Zealand Defence Force

Navy honours ice pilot

Andrew Leachman's 55 years at sea have culminated in a rare accolade being named an honorary captain in the Royal New Zealand Navy.

Leachman, 71, was honoured in his home town, Nelson, by Navy head Rear Admiral John Martin, with other senior captains in attendance at a special lunch.

He became an ice navigation consultant to the Navy in 2011, especially well-qualified for the role after captaining New Zealand's ice-strengthened research ship Tangaroa for 20 years, including many trips into the Southern Ocean.

In one of several tributes paid to Leachman, Martin emphasised his value to the Navy as an "ice pilot".

"Andrew has a clear and undeniable passion for Antarctica and its beauty, history and strategic relevance to New Zealand. He is widely regarded both nationally and internationally as one of New Zealand's most experienced and respected Antarctic navigators," Martin

"Guys like him - they don't make ice pilots, there's no course - it's a lifetime lived on the sea in that region."

He said Leachman's expertise on a

series of Navy voyages to Antarctica had shown the young ships' companies how to monitor the region more effectively.

"We're sending people down to the roughest, most dangerous part of the planet - they're your nieces, nephews, grandsons or granddaughters and we couldn't do it without the confidence and coaching that comes from our association with Andrew."

In another tribute, former commanding officer of HMNZS Otago, Captain David McEwan, said Leachman had made the navy personnel better mariners and leaders in the Southern Ocean and Antarctic environment.

"He guided us as we grew in our

awareness and respect for the area - he has an extraordinary ability to teach and pass on knowledge, he has an immense knowledge of Antarctic history and the environment that inspires interest."

Leachman, who began his seagoing career boiling cod livers on a trawler out of Grimsby on England's east coast, was reluctant to talk about the honour.

But in an interview with then Fairfax Nelson journalist Charles Anderson earlier this year he said he had loved the seagoing life and would have helped the Navy for nothing.

"It's not a career, it's a life choice," he said.

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David Stone

Grape waste feeds abalone

Australian scientists have come up with a promising aquaculture feed

made from wine industry waste.

Steam distilled grape marc is the heat-treated skins, pulp, seeds and stems of grapes left over after wine is made.

Using it, the South Australian Research and Development Institute (SARDI) has teamed with Tarac Technologies to produce a cheaper, better-performing food source for the farmed abalone industry.

A three-month feeding trial in a laboratory produced improved growth and better food conversion ratio by juvenile greenlip abalone, and is to be followed by a six-month farm trial beginning in November.

SARDI Nutrition and Feed Technology Associate Professor David Stone (pictured) said the new feed, Acti-Meal, had the potential to replace ingredients such as wheat, lupins and soy traditionally used as a carbohydrate and energy source in commercial abalone feed.

It will also be tried on finfish, beginning with barramundi.

"If it works with barramundi it may work for trout, salmon, kingfish and a whole range of other carnivorous species," Stone said.

He said one of the major challenges facing aquaculture was finding sustainable food sources that minimised the use of marine ingredients. Using a waste product such as steam distilled grape marc went part of the way to achieving this. "You don't want to be taking 2kg of fish from the ocean to produce 1kg of fish in a farm."

Tarac produces about 130,000 tonnes a year of steam distilled grape marc, which is also used as a soil conditioner or stock feed.



Scallop fishery closed

Minister for Primary Industries Nathan Guy closed the southern scallop fishery for the second year in a row, citing continued low scallop levels.

The 2017-18 season closure affects scallop fisheries in Golden Bay, Tasman Bay and the Marlborough Sounds. It also includes the neighbouring Port Underwood area.

Guy said the 2016-17 closure of parts of the fishery had allowed the scallop population to be rested, but surveys had shown stocks had not recovered significantly.

"A further closure is needed to give more time for recovery and to carry out important research on the fishery

"Extending the closure for a further year has widespread support from many fishers and the community. The Ministry for Primary Industries consulted with locals on a number of options, and a majority supported some form of temporary closure as the best way to ensure the fishery's long term future."

Guy said the Government had committed \$400,000 over two years to a comprehensive research programme to better understand what caused the decline and options to help scallop numbers to recover.

"Over the next year, MPI will be commissioning new research to assess scallop survival and growth across a range of environments in Tasman and Golden Bay, and in the Marlborough Sounds. This will help determine whether interventions such as reseeding of scallops, reestablishment of shell reefs and changes to fishing gear are likely to be successful," he said.

"It will also help determine what role disease and other factors may be having in suppressing the productivity of the scallop beds."

The top of the south scallop fishery has steadily declined throughout the 2000s, with many reasons suggested but no exact cause identified.

An MPI survey in 2015 estimated the biomass at 203-211 tonnes, the lowest since 1998. The commercial catch sank from 684 tonnes of meatweight in 2002 to only 22 tonnes in 2015.



Crozet wandering albatross

Eye in the sky could catch poachers

A spinoff from seabird research could become a new weapon in the fight against illegal fishing in the Southern Ocean.

Radar sensors attached to 53 juvenile Crozet wandering albatrosses have been used to track the birds' movements as well as recording where they picked up a radar signal from nearby boats.

The XGPS units, weighing less than 35 grams, were developed by New Zealand-based Sextant Technologies, the company that fitted a GPS tracker to the emperor penguin Happy Feet in 2011.

The study, reported on the Kiwi science information website Sciblogs, allowed researchers to determine how much time the birds spend near fishing vessels looking for food. It showed that nearly 80 per cent the tagged birds detected vessels up

to 2500 kilometres from the colony, which is on Crozet Island in the Southern Indian Ocean. Study co-author Susan Waugh, a Senior Curator at Te Papa, said the results provided important information for fishers and conservationists aiming to decrease seabird bycatch.

Another benefit was the ability to allow real-time monitoring of vessels anywhere in the birds' range. One undeclared radar signal, probably from an illegal vessel inside the EEZ, was found during the study.

The authors said the same technology could be fitted to sea mammals and turtles.

Marine 'rats' will dominate. acidification researchers sav

University of Adelaide researchers say ocean acidification expected in the future will reduce fish diversity significantly, with small "weedy" species dominating marine environments.

In a study just published in Current Biology, the researchers examined species interactions in

natural marine environments at underwater volcanic vents, where concentrations of CO2 match those predicted for oceans at the end of the century. They were compared with adjacent marine environments with current CO2 levels.

Project leader Professor Ivan Nagelkerken said the results showed that total fish numbers rose, but local diversity was lost.

"Small weedy species would normally be kept under control by their predators – and by predators we mean the medium-sized predators that are associated with kelp," he said. "But ocean acidification is also transforming ecosystems from kelp to low grassy turf, so we are losing the habitat that protects these intermediate predators, and therefore losing these species.

"The result is a lot of what are known as weedy species - somewhat the marine equivalent to rats and cockroaches, plenty of them around but no-one really wants to eat them."

Safety campaign underway

A year-long safety campaign aimed at commercial fishing boat crews and operators launched at the NZ Federation of Commercial Fishermen's conference is using cartoon characters to get the message across.

Twenty-eight per cent of fishing crew - more than one in four - are injured every year, with most injuries to hands, lower back, and spine.

The campaign is using cartoon figures Stu, an experienced skipper, and his young son Russell to

focus on six risk areas: fatigue, manual handling, safety on deck, winches, uncovered machinery and intoxication.

Headlined "Safe Crews Fish More", it is a collaboration between the Federation and Maritime New Zealand, with the crews and operators of fishing vessels under 26 metres the target audience.

They will be frequently contacted via Facebook, email, postcards and print advertising, with more details information continuously updated at www.maritimenz.govt.nz/hswa

Federation President Doug Saunders-Loder said the industry had been proven to be high-risk and needed to work on it.

"That's the big companies, our hundreds of owner-operators, Maritime NZ, and crew, too. We all have a responsibility to help each other."

He said every injury at sea affected the whole crew, and could have far-reaching effects and impact on family life, time with friends, and leisure activities.

"Our members work hard and in difficult, moving conditions but every one of them has the right to come home unharmed and the Federation plays their part in ensuring that happens."

Watch your back



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USED HIS LEGS.

DOESN'T EVERYONE? ONE MORNING THE
PAIN GOT SO BAD HE
COULDN'T EVEN PUT ON
HIS BOOTS. BUT NOT BEING
ABLE TO FISH REALLY
BURST HIS BALLOON.



For tips on safe fishing go to www.maritimenz.govt.nz/manual-handling

Safe crews fish more

No te rere moana Aotearoa

No te rere moana Aotearoa

No te rere moana Aotearoa

NEWZEALAND



NEW ZEALAND SEAFOOD INDUSTRY CONFERENCE

OCEANS OF INNOVATION ENHANCING A WORLD CLASS FISHERY

THURSDAY 3 AUGUST, 2017 | TE PAPA

Diverse lineup for seafood conference

The 2017 Seafood New Zealand Conference is taking place in Wellington at Te Papa on August 3, with up to 300 people expected to attend.

Seafood New Zealand Chief Executive Tim Pankhurst said the conference has an interesting and diverse range of speakers.

"This year's theme is Oceans of Innovation – Enhancing a World Class Fishery, and speakers will explore what makes Kiwis such great innovators and what the future holds for the commercial seafood sector." Pankhurst said.

The keynote speakers are 2010 New Zealander of the Year Sir

Ray Avery, who will speak on what makes Kiwis great innovators, and Alex Olsen, head of sustainability at Espersen in Denmark, who will present on seafood in a changing world.

"Avery is a successful pharmaceutical scientist who started Medicine Mondiale, an independent charity that creates low cost medical equipment for the developing world," Pankhurst said.

"Olsen works for Espersen, a seafood processing company in Europe.

"He has an extensive history in food quality assurance and is on various industry organisations, including being on the Marine Stewardship Council's Technical Advisory Board since 2007.

"With his wealth of experience in the seafood industry, it will be great to hear an outside view on how

the seafood industry is changing worldwide."

ANZ Bank Chief Economist Cameron Bagrie will offer a market update, with presentations from the Marine Stewardship Council and the Ministry for Primary Industries looking at the power of certification and new market opportunities.

Jodie Campbell will speak about the sector's new information programme, OpenSeas.

Dr Susan Marshall from Plant & Food and Iain Hosie from Revolution Fibres will highlight innovation occurring in harvesting fish and the use of by-products.

There will also be presentations on collaborative conservation and building trust in the seafood sector.

Finally, journalist Bill Ralston will offer a light-hearted look at September's general election.

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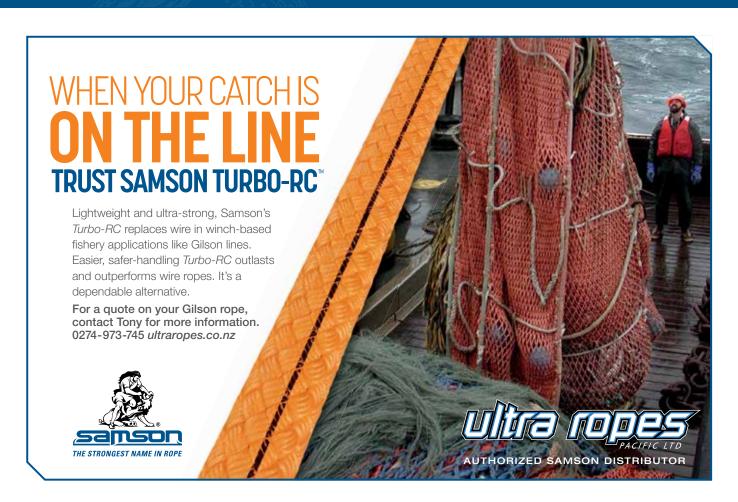














Jain Hosie

Komodo - Revolution Fibres electrospinning production equipment.

Revolutionary new use for hoki skins

Matt Atkinson

A New Zealand company is using a fishing by-product to help create innovative cosmetics.

Auckland-based Revolution Fibres takes hoki skins and turns them into a collagen-rich nanofibre fabric that easily dissolves into the skin.

The product is called actiVLayr - used for anti-wrinkle skin care - and like their technique, it is one-of-a-kind.

Revolution Fibres co-founder lain Hosie said it was a game-changer.

"It is a completely new way of delivering established cosmetic ingredients into the skin," Hosie said.

The collagen in hoki is special not only because it easily dissolves into the skin, but that it can also take on the properties found in other beauty products.

"We were able to take some well-known cosmetic ingredients - grapeseed, kiwifruit extract, honey and all sorts of things - and we could see that the collagen was good at carrying these extracts.

"That's when we knew we had a great cosmetic product.

"Typically a natural ingredient, like manuka honey, is put into a cream and rubbed into the skin.

"What we have done is remove all the ingredients of the cream and we carry just the active ingredients in the collagen as a dry fabric which dissolves into the skin."

The unusual marriage of hoki skins and beauty products began in 2009 when Hosie was working on product development at home ventilation company HRV.

Hosie, HRV owner Michael Perrett and engineer Simon Feasey set themselves the task of creating the world's best air filter.

"I started looking into new technologies that would help us achieve that lofty goal and that was when we started looking into nanofibre," Hosie said.

"We saw an opportunity not just for HRV, but for quite a lot of applications for this technology. We did a lot of market research and went to quite few conferences and eventually founded Revolution Fibres."

Funding for the company came from the predecessor to Callaghan Innovation, the Government's funding arm for science and innovation, with the early days spent looking into different methods to create and use nanofibres.

Hosie and the team still wanted to create the world's best air filter, but as they continued to perfect the process of creating nanofibre they went into the open market in search of a readymade product.

They found many emerging sectors where no manufacturer in the world was creating nanofibre on an industrial scale.

It was motivation to find new ways to create the products on a larger scale than anyone else was.

"In that three years of development we started working with a bunch of new materials and we had our eyes on the cosmetic and medical market, because they were the ones that were starting to show a lot of promise.

"We work with Plant and Food doing some small-scale electrospinning of collagen and are now looking to upscale it"

Electrospinning is the method used to create nanofibres and has been predominantly used to create air filters.

Revolution Fibres took it one step further, creating a new technique called Sonic Electrospinning.

"It came out of our research and development and it's a method that no one else has. It allows us to be able to use a wide variety of materials whereas some nanofibre producers can only make one or two fabrics.

"There is no business in the world mass-producing collagen as a fabric and selling it on the open market."

Revolution Fibres made a decision not to be a cosmetics company and went about partnering with other businesses with established consumer bases.

Confidentiality agreements won't allow Hosie to name the companies are, but he did say some are "global brands".

Revolution Fibres provides the companies with rolls of the actiVLayr fabric, where they can work their magic with it.

"They can then create products, such as under-eye patches, face masks, plasters and all sorts of bandages."

But even with a one-of-a-kind product, getting consumers to change behaviour can be difficult.

"We have a cosmetic product that challenges the way active ingredients are put into the skin.

"It's been exciting, but it's also been a challenge because you have to break down a lot of established supply chains that have made a lot of money."

While they continue to carve out

a niche market for their anti-ageing products, Hosie said they are also seeing encouraging results for acne, skin lesions, and other skin conditions.

Hosie sees hoki skins as just the start. with Revolution Fibres interested in using other by-products of fishing, such as extracts found in shells of shellfish or seaweed that grows in farms.

"Our ability to turn seafood byproducts into a fabric opens up a whole lot of new opportunities."











The new vessel project team, from left, Adrian McGillan, Justin Brough, Dorje Strang, Scott Gillanders, Tony Kuyk, Shaun Ryan. Picture: Tim Cuff



Sealord's base and part of the Port Nelson boat harbour captured by photographer Tim Cuff in this atmospheric night shot.

Bigger, better, faster

Bill Moore

Sealord is taking the deepwater fleet into exciting new directions with its new yet-to-be-named \$70 million factory freezer trawler.

Due to be delivered from Norway in May next year, the 81.75 metre vessel will be bigger than all but Sealord's two 104m New Zealand-flagged BATM-class trawlers - but a generation ahead of them all other respects.

Its on-board factory takes automation to a new level, its Rolls-Royce Bergen engine will give it the speed to target pelagic species like jack mackerel and its electric winch system will generate extra power. Its crew accommodation is of a high standard and its work stations are all ergonomically designed.

With recruitment soon to begin, its 80 crew will be joining the most advanced vessel in the New Zealand fleet, designed for New Zealand conditions and people. Jointly funded by Sealord's 50-50 shareholders, Maoriowned Moana New Zealand and Japan's Nippon Suisan Kaisha, it will fish as far north as off New Plymouth, off both South Island coasts, in the sub-Antarctic and around the Chatham Rise.

Fleet Harvest Manager Scott Gillanders has been with the project since its genesis 2 ½ years ago, when Sealord began looking at ordering a purpose-built vessel - the first since it had the Rehua built two decades ago, also in Norway.

Gillanders said the key difference between the new vessel and the rest of the fleet could be summed up as efficiency – not just through a better propulsion package, but also automation.

This would allow it to profitably catch low-value species - mainly mackerel and squid - as part of its overall catch plan.

"It's got a varied catch plan, a platform that will produce simple, dressed products at a high volume on those low-value species, and do it with such efficiency that we can make it a profitable exercise. Our domestic fleet hasn't been able to do that before."

This will mean heading and gutting on board at high volume when it is catching mackerel and squid, and more processed output - skinned, trimmed fillets - with species like hoki.

Gillanders said the new vessel, to be officially named when it arrives in Nelson, will replace the Fishing Success, a third 104m Ukrainian trawler that left the Sealord fleet last year.

"Some of our current employees are concerned that this vessel is going to come in and that we're going to sell off some of our existing vessels. We don't have any plans to do that."

The new vessel was different to the other eight because of its ability to catch so many species and its capacity to economically process and freeze the lower-value catch.

"That's what makes it unique and that's why it's not a replacement for any of the other vessels we've got in our fleet," he said.

The level of automation means that the new vessel needs a crew of up to 50, only half as big as for the Ukrainian boats to catch and process the same volume of fish. Those boats could only operate economically because of their lower labour costs and capital outlay and their onboard maintenance work.

"We've come through with something absolutely ground-breaking here," Gillanders said.

Sealord chose Skipsteknisk to design the vessel, the same company it went to for the Rehua in 1996.

"They specialise in fishing vessels and they have a very good reputation for building boats that work," he said.

The Rehua is 66m, the new vessel nearly 16m longer and significantly bigger - the top of the Rehua's wheelhouse would reach the bottom of the new one

In common with about 15 trawlers already in service around the world, the core design is ST118.

Gillanders said this was a proven trawler design that Sealord knew would be capable of fishing in New Zealand waters and catching our species.

"We've had to make a lot of changes in terms of the deck layout, the winches, the factory layout and operation because of the uniqueness of our fishery and species we catch."

He said the engine package would be a lot more fuel-efficient and the winch package was electric, only drawing energy when needed, and able







A typical cabin layout on the new vessel.

to double as a generator when shooting the trawl gear away.

"We've come a long way. It'll produce a megawatt of power when it's paying the gear out, a huge amount of power, so as it's shooting the gear we can actually throw that energy back into the shaft generator and power the propulsion."

He said the main engine Sealord chose was Rolls-Royce Bergen's latest mid-weight package, lighter and more fuel-efficient than ever.

"It has the ability to catch the faster-swimming species like mackerel because we've got the horsepower to do it, but when we're fishing other slower-swimming species like southern blue whiting or hoki we're able to dial the package back so we're not burning that higher volume of fuel through the engine. There's a lot of efficiency with that."

Sealord will begin making crew appointments soon, starting with engineers and skippers. The intention is to promote from within the existing staff, particularly with key positions, but with 80 to 100 jobs to be filled, there's also the opportunity to bring in new people.

"We want to strike a balance – we don't want to rob the experience out of our existing fleet just for the sake of putting them on to a new vessel. Although this is the newest latest greatest thing, we still need to maintain that level of experience in our existing fleet."

A life at sea with its long absences from home isn't for everyone. There

is some difficulty getting Kiwis to pursue it, and Gillanders said the new vessel had been designed to provide the best possible working and living environment.

It will come with a fully-equipped gym, two lounges - one a movie theatre – and other "time out" spaces in different areas.

Rooms have been carefully planned with close attention to details like soothing colours in the cabins. Ergonomic design has been used to provide adjustable work stations and benches. Everything had been closely looked at, Gillanders said, "right down to where we place handrails to make sure people can get around the vessel with ease and brace themselves well, and the chairs we're selecting for mess and the couches in the cabins".

Trip lengths will vary depending on the species being caught. The main targets will be hoki and southern blue whiting. High-volume species such as jack mackerel and hoki could mean trips as short as three weeks, but the vessel is capable of staying out for double that time during the off-season when it will fish for ling, squid, and barracouta as well as mackerel. Home port is Nelson but around half of the port visits will be to Dunedin.

Gillanders said Sealord could hire crew from anywhere in New Zealand, and in the case of newcomers, the first requirement was a genuine wish for a career at sea.

"There's some sort of quality in a person that firstly can go to sea and wants to go to sea. Some people like the idea of it because when you look at the money and the time off, those two things alone should suggest that it's going to be a great lifestyle."

He said Sealord was a leader in providing training and development in an industry with great opportunities for those who want to build careers.

"We've taken people on who have come in green, they've had no job before, they might be fresh out of school, they might have had a couple of jobs and not done particularly well, and we've developed them right through.

"Some of those people have started off right at the bottom and they've worked their way up, and they're now skippers. The money they're making is equal to a general manager of a large organisation."

Crew members would also earn significantly more than in equivalent jobs onshore, Gillanders said.

"We start at around \$40,000, which doesn't sound high, but that's for basically a trainee coming in, someone that's green. The factory manager will be making over \$100,000 a year."

Those who would succeed were people who would be happy being at sea for weeks at a time, he said.

"Someone who likes that lifestyle of going away for a period of time, coming home and having a nice long period off so that they can do whatever they want to do - relax, spend it with their family, go on holidays. It fits with people who have families but also people who don't, and want to go on adventures. That's the sort of person we're really looking for."



Dorje Strang with a finely-built exact scale model of Sealord's new deepsea factory trawler. Picture: Tim Cuff

needed something new it's symptomatic of New Zealand's entire fleet. All these boats are getting older, they're starting to break down more and more often. It's just like a car. One day you've got to replace it."

"The owners of Sealord

Shapely model arrives at Sealord

Bill Moore

Sealord's new flagship won't leave Norway until next year but already there's a shapely model of it on site in Nelson.

Built at 1 to 75 scale by a specialist marine model-making company in Korea and delivered last month, it's an exact model of the vessel's external configuration, based on the actual Norwegian design plans.

Sealord Fishing Operations Project Manager Dorje Strang said the model had a dual purpose – it was part of a shipbuilding tradition and would go on display, but was also an aid in understanding how the new vessel would look and how it compared with the rest of the deepsea fleet.

"When you build a high-rise building or a sports stadium, generally the architects will develop a working model to scale so you can see exactly what the project is going to look like at its fruition," he said.

"This is like that. We can compare it with all our other models to get a

gauge on what the ship looks like. You can run a scale ruler over that model and get exact dimensions if you want to.

Strang, a main driver of the vessel project, said its inception grew out of the problems around the performance of older trawlers at sea. Breakdowns were a frustration to the onshore team, the seafarers and the Sealord board.

"The owners of Sealord needed something new - it's symptomatic of New Zealand's entire fleet. All these boats are getting older, they're starting to break down more and more often. It's just like a car. One day you've got to replace it."

He said the new vessel would be a big step up for both Sealord and New Zealand, with worldclass fishing technology, crew facilities, electronics, and factory equipment. It incorporated 20 years of technological advances since the last deepsea trawler built for New Zealand, the Rehua.

"The biggest thing is the scale of the vessel and its low operational costs."

With around an extra 2000 horsepower more than the Rehua it would have close to the same fuel burn, Strang said, and would handle and process a higher daily catch rate with a comparable-sized crew.

"The future of fish processing is in these large highly-automated seagoing factories. That's where the efficiencies are, that's where the ability to really obtain the quality products is, and New Zealand's lucky enough to have an amazing fisheries resource allowing us to utilise these types of vessels."

He said the \$70 million purchase showed Sealord's confidence in the way New Zealand's fisheries were being sustainably managed.

"You wouldn't do it if you were concerned about the fish not being there to catch.

"Likewise, the markets are strong and things are good. Not only that, if you're going to be a fishing company, you've got to have fishing boats. They're no good to us when they're broken down and tied to the wharf."

Describing himself as "well and truly wedded to the project" and about to head to Norway on his fourth shipyard visit, Strang said he was excited by the approaching completion of a job that had "taken every day and every night of every week".

"It's a once in a lifetime opportunity," he said.



Taking shape in the shipyard.

Automation on the factory floor

Bill Moore

Like a giant puzzle Sealord's new deepsea trawler, the first built specifically for the New Zealand fishery since the Rehua in 1997, is being pieced together in a Norwegian shipyard.

While the assembly and final build is happening at Simek's shipyard, where the superstructure has been built, the eight hull blocks have been fabricated in Poland.

Construction is on target for the vessel to pass into Sealord's hands in March next year and it will then have sea trials before setting off on a 40-day delivery voyage to Nelson.

It is expected to be fishing from May. Like Sealord's other vessels it will be equipped to use Precision Seafood Harvesting. It will operate on a nowaste system, able to produce headed and gutted high-volume species, skinned and trimmed fillets of highervalue fish, high-grade fish oil for later refinement, and fish meal.

Its Rolls-Royce Bergen nine-cylinder main engine will produce 5400kw or 7200 horsepower and give a cruising speed of 16 knots, increasing the range of fish it can target. It has an advanced electric winch package that can produce as well as consume power, and the latest navigation and communication systems.

Sealord has tried to match componentry to New Zealand agents to maximise the investment in New Zealand businesses, and it has tailored the design to make life at sea as comfortable and safe as it can.

However the new vessel's most impressive innovations are around automation. Its specifications include a fully integrated onboard grading, filleting, processing and freezing system and a transport system for palletised products from the processing deck to the cargo holds.

This was a considerable advance on what other New Zealand factory trawlers could do, said Sealord Fleet Harvest Manager Scott Gillanders.

There are automatic size-graders and two automatic heading and gut-sucking machines that can each process more than 300 fish a minute, providing a major labour saving.

"These machines are very automated, they're very safe, and they can put through a huge volume that you can't currently do with the technology in the New Zealand fleet at the moment." Gillanders said.

Skilled operators are still needed and some parts of the processing can't yet be automated – but most can.

Machines will fillet, trim and skin species like hoki before quality control and packing.

Packing the fillets is still done manually but unlike in the current fleet, when freezers are loaded and unloaded manually, that will be automated on the new vessel.

Once the packed boxes are placed in

trays, they are automatically loaded into and out of the freezers.

"They then go into what we call a hotel, which is basically a freezer room, which identifies each box of fish and stacks it into a shelving system.

"We deal with a lot of different sizes of fish and different sizes of fillets and we could be dealing with dressed fish of different species, and so it's important to have this hotel to separate all that out.

"Once there's enough of one particular size and particular species, the operator will see that come up, he'll hit a button, and a robot will then palletise that product."

From that point the fish is ready to be shipped out to the customer. The pallets are cling-wrapped and sent to the hold by an automatic elevator system.

An operator will then use a seagoing forklift to stack the pallets in the hold and use a strapping system to hold them tightly in place.

Unloading the boat is similarly streamlined.

Gillanders said this has always been hard work.

"It can be hazardous, particularly around fingers and working in a cold environment, and we do really struggle to get labour here in Nelson to do that sort of undesirable work."

As an example, 70 people are used to manually unload the Rehua.

But the new vessel will arrive with the catch already sorted and palletised.

"It will be forklifted back on to the elevator, it will come up to a hatch on the side of the boat and be presented to another forklift. From there it can be direct loaded into a container, or we can load into the coolstore," Gillanders said.

"At the moment those 70 people throw the boxes on to pallets, it comes off but it's all mixed, and we then have to put it through another process where it has to be sorted and re-palletised.

"It's saving an enormous lot of double handling."

Key specifications:

- 81.7m length overall, 17m beam
- Rolls-Royce Bergen nine-cylinder 5400kw (7200hp) main engine, 1070 cu m fuel
- Auxiliary diesels, 1300kw, 680kw

- 3 60-tonne trawl winches and automatic trawl operation system
- 8 sweep line winches, 18 tonne, and 8 auxiliary winches
- Forward and midship deck cranes
- Fully automatic freezer system, capacity 150 tonne/day
- Freezer hold 1750 cu m
- 2 fish meal holds 400 cu m and 320

The Sealord fleet

- Otakou, 42m, fish hold 130 tonnes
- Thomas Harrison, 42.5m, fish hold 180 tonnes

- Aukaha, 45.2m, 340 tonnes frozen product, 70 tonnes fishmeal
- Ocean Dawn, 64.05m, 540 tonnes frozen product, 160 tonnes fishmeal
- Rehua, 66m, 660 tonnes frozen product, 170 tonnes fishmeal, 40 tonnes fish oil
- Will Watch, 74.4m, fish hold 530 tonnes
- Meridian 1 and Profesor Mykhaylo Alexsandrov, 104m, fish hold 1200
- New vessel, 81.7m, fish hold 1300 tonnes, 300 tonnes fishmeal, 60 tonnes fish oil

History does repeat

From Seafood New Zealand, March 1997:

"The \$28 million Rehua is a new

generation freezer trawler, particularly in its hull design and sea keeping characteristics.

"Since 1993 the company [Sealord] has upgraded its fleet by adding five modern vessels but Rehua is the first fillet trawler specifically

designed for New Zealand fishing and port conditions from the bottom up. Rehua has got the very latest technology and the highest standard of fittings ... the finish of the interior is without equal in the New Zealand fishing fleet, yet built at a fixed price."



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Lou Christensen

A sample Verification of Status Card.

Ring-fence deadline looming

Maritime NZ is saving up to 200 "tickets" each week as the September 1 deadline for ringfencing approaches. More than 5000 seafarers have ring-fenced their older and legacy certificates so they can keep using them to work.

"We're in the home strait and encourage everyone with expiring certificates to do it," said Maritime NZ Personnel Certification Manager Lou Christensen. "It's free and easy. Jump on the website and get started. Give us a call if you get stuck."

Christensen's team has been wrangling applications for months now. They've sent VoS (Verification of Status) cards that list a person's ring-fenced tickets the length of New Zealand.

"We've literally sent them to seafarers from Cape Reinga to the Bluff. We even hand-delivered them to Kaikoura after the earthquake," she

More than 30 seafarer certificates can be saved. If a ticket has previously expired, you can revive it by requesting it to be ring-fenced.

Christensen said seafarers winding down in their careers should still ringfence. "If there's a chance you might want to use your tickets down the track - ring-fence them. You get to keep them and it doesn't cost you anything.

"Ring-fencing crosses generations - we've had people in their 30s right through to their 90s choose to safeguard their qualifications. The 90-year-olds ring-fenced because their certificates mean something to them."

As an added bonus, those who've ring-fenced can win a float-free EPIRB valued at \$995, by simply telling a mate by sharing Maritime NZ's ring-fencing post on Facebook or sending them an email via the Maritime NZ website.

"Distress beacons save lives. You can be a lifesaver too by getting your mates to ring-fence," Christensen said.

"We're reeling in those remaining seafarers. Five thousand is a significant milestone, but we want as many people to ring-fence as possible before the cutoff on September 1. As the saying goes, 'It ain't over till it's over.' "

Ring-fence your tickets here: www.maritimenz.govt.nz/ringfence or phone 0508 669 734



SAVE YULK SEAFARER TICKET.

RING-FENCE BY SEPTEMBER 1ST OR IT'S A GONER.

Thousands of seafarers have already ring-fenced their old and legacy certificates with Maritime NZ for life.

Ring-fencing keeps all your options open, including moving into SeaCert at a later date.

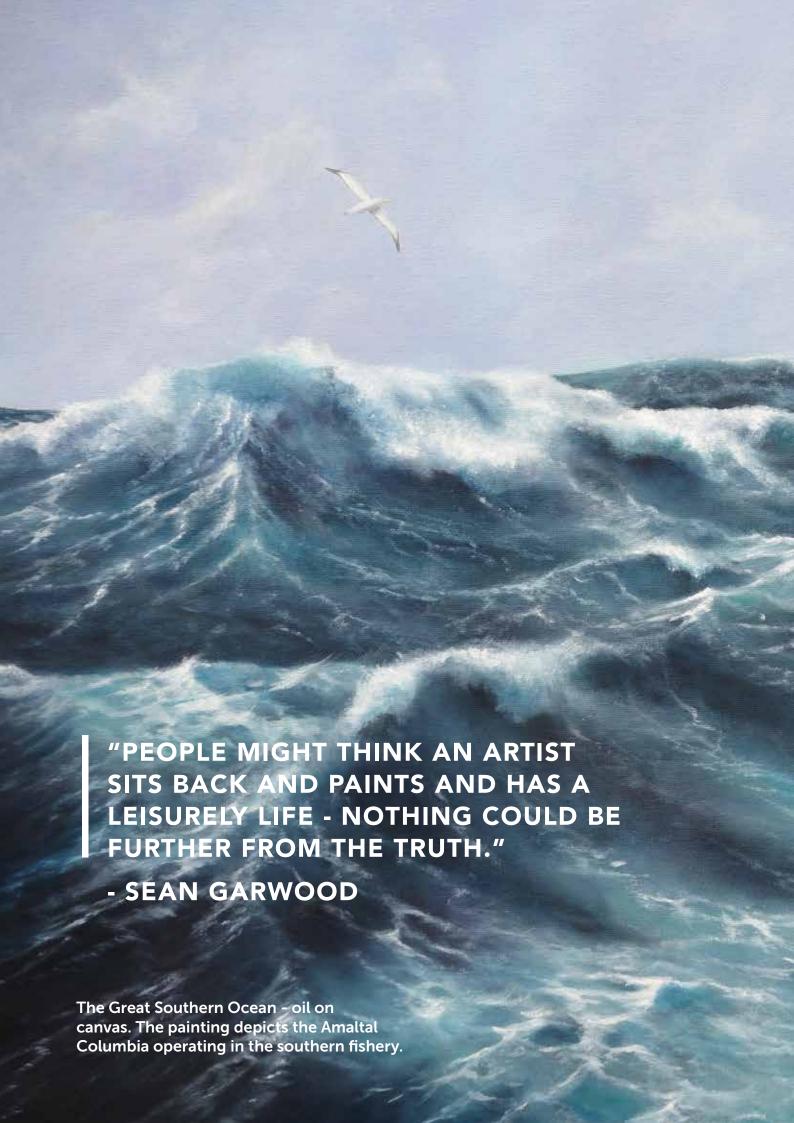
If you would still like to ring-fence let us know by 1 September 2017. Otherwise your tickets will expire from 2 September this year.

Check online and ring-fence your tickets now. **maritimenz.govt.nz/ringfence**

IT'S FREE AND EASY TO DO.











A cropped section showing detail of one of the Antarctic paintings - Shackleton's ship Nimrod arriving at Cape Royds.

Former skipper's **Antarctic** odyssey nears end

Bill Moore

Former deepsea skipper Sean Garwood routinely puts four to six weeks of fulltime painting into a single canvas, labouring over every tiny detail. But his current mission has lasted for two years.

Garwood, 54, has poured his energy and heart into a series of paintings depicting the Antarctic huts put up by the Scott and Shackleton expeditions of the early 1900s, and what's been left intact inside them. He's also painted Scott's Terra Nova traversing the Southern Ocean

and the arrival of Shackleton's Nimrod.

There are 16 canvasses in all, to be exhibited in Christchurch early in October to coincide with the Antarctic Season Opening programme. Six of them are also to be reproduced as postage stamps by New Zealand Post.

Many photographers have visited the Ice over the years and Garwood himself took around 2500 images during his 10day stay in 2015, as well as sketching as much as the cold would allow.

However, so far as he knows he's the first painter to have documented the huts on canvas in this way, using the photographs as his guides for the "close focus realism" of his art, each picture close to what he saw, but filtered through the lens of artistic licence.

In the case of the ships, he had nothing but a few photographs of what they looked like and produced the scenes from his imagination, drawing on his 27 years at sea, including time working in the Southern Ocean.

Garwood began his seagoing career straight from school and earned his Deep Sea Master's ticket at 21 possibly the youngest ever to do so in New Zealand. He fished on many vessels and around many countries.

Son of another self-taught and successful realist painter, Michael Garwood, he always harboured the desire to eventually switch to a painting career. In 2006 he made the crossing and since then his workplace has been an upstairs studio alongside his Nelson home.

Garwood prides himself on producing works that he hopes will be bought because of the feelings they evoke, and become heirlooms handed down the generations. He's often at work before 6am and doesn't take his breakfast until two hours later.

"Once I've got a couple of hours under my belt, I'm on a winner, the pressure is off, and I know I'm going to get a good day's work in," he said.



Sean Garwood in his Nelson studio working on one of the Antarctic paintings.



A cropped section from a painting of artifacts in Scott's hut.



An earlier painting - The Smoke House.

With such close-focus work every brush-stroke counts and mistakes are hard to fix.

"People might think an artist sits back and paints and has a leisurely life nothing could be further from the truth. It's stressful at times, you think about all the time, every day, all day, at night, you're going to bed thinking about it.

"When this exhibition is over it will have consumed me for over two years. It's a massive commitment. As long as people get enjoyment out of looking at the paintings, then my work is done."

The works for this series were planned to be painted in the style of artists in the early 1900s.

Many are close-ups of what the explorers left behind, saved almost as if they'd just walked out the door. Garwood is full of praise for the help he got from Antarctica New Zealand and the conservation work of the New Zealand Antarctic Heritage Trust, preserving the huts and their contents.

A percentage of his sales will go to the trust for future conservation and maintenance work.

"New Zealanders should be aware of the amazing work the heritage trust has done to restore and maintain those huts,' Garwood said. "Through my paintings I want to raise the public awareness of what's down there and what's been done."

It was an honour, he said, to have the paintings chosen by New Zealand Post, ensuring that they will be seen by thousands of people who won't get to the exhibitions.

Garwood said he left the sea knowing his time was up in that career, but it has never left him.

"I miss it terribly. There's probably not a day that goes past without somehow having a flashback to fishing. I think it's something that you cannot get out of your system. Once you're a fisherman or a mariner, it's with you for life."

He looked forward to drawing on his good memories of life at sea for future marine paintings.

"I know I'm going to get a lot of joy from that - and if I can do it for many years to come, I'll be happy."

And he remains a staunch supporter of the fishing industry, believing that the wrong message gets too much of an

"We shouldn't be seen as the villains of the ocean - we're the friends of the ocean, we protect it - we don't use fertilizers, we don't kill the ground, we're simply harvesting wild fish and managing that harvest with one of the top management systems in the world.

"I believe that New Zealand fishermen are among if not the best in the world, without a doubt. I've fished with a lot of nationalities and I honestly can say that the skill of New Zealanders is second to none."

To see more: www.seangarwood.co.nz



Volker Kuntzsch

'Better never stops' for Sanford head

Sanford Chief Executive Volker Kuntzsch headed off executives from around the world to be named 2017 Person of the Year by Intrafish at the Brussels Seafood Show. He tells Bill Moore there's a long way to go before reaching his goal of making Sanford the world's best seafood company.

You've been here for just over 3 1/2 years. How have your views on the New Zealand seafood industry changed in that time?

My view regarding the opportunities for the sector hasn't changed and I am very encouraged by the growing determination to communicate more transparently and build the public trust and respect our industry deserves. At the same time I have come to the realisation that an operational focus still often outweighs the need for capitalising on the appeal of our New Zealand provenance and the efforts going into delivering great seafood sustainably. This is an excellent story to tell and I believe the industry can capitalize on this by taking a wider customer and consumer-led perspective.

Your stated goal is to make Sanford into the best seafood company in the world. How far along that path have you come? Where do you rate Sanford right now?

You may ask, what does being the "best seafood company in the world" actually mean? To me it isn't about simple metrics like being the biggest. What it could include is being an employer of choice, a preferred supplier, having keen investors, being responsible for great value creation, a sought after company for guiding global thinking on sustainability, producing award-winning reporting and known for leading sustainable practices.

In some cases, I am very proud of what we have achieved already. However, we still have a long way to go, perhaps another three years or perhaps, as a former All Black coach said to us recently, better never stops.

What are the key changes you've made towards that goal?

There are many. We have already made organizational changes, restructuring reporting lines within the business and building up our focus on people and our internal culture. We

have also put the customer front and centre. On top of that, we have changed our emphasis to fresh fish from frozen, added an innovation section to the business who are looking at smarter ways to get the most out of New Zealand seafood and we have added a communication function to Sanford too.

And what, specifically, do you still need to do to reach it? How will you know when you've arrived?

I will feel we have got there when we have our people engagement scores at greater than 80 percent, which I know is an ambitious number, but we want to aim high. We also want to achieve a higher EBIT from each kilogram of fish, which requires continued emphasis on branding and innovation, and, crucially, have all our relevant stakeholders agree that we make a positive difference both in seafood and in the wider business environment.

We are currently implementing a people strategy that will take us to reaching our objectives in that regard. Improving the value per kg fish caught or harvested requires further investment into innovation and branding to reduce the commodity share of our portfolio further. There is no quick fix to this, but we've made good progress already.

In a broader context, what are the main opportunities and challenges facing the New Zealand industry?

The opportunities are many. We can better utilise brand New Zealand to talk about the provenance of our beautiful seafood. We can also utilise the relative success of the Quota Management System to our benefit - it is a very successful and largely effective system and we need to talk more about this and about our fascinating industry generally. I also believe we need greater collaboration on the world stage amongst industry partners. After all New Zealand is a small country which plays only a minor role in global supplies. There is also opportunity to work together to fish smarter to reduce our environmental impact and to improve our joint marketing and branding to focus on high end customers globally.

The challenges are many also and include the difficulty of bringing different stakeholders to the table to manage this important resource from a wider ecosystem based perspective. We need to talk more than we do already. We also need a clear national ocean policy, in my view led by a Ministry for the Oceans, although I appreciate this isn't a view shared by everyone. Our access to fish is protected by our property rights and quota ownership, and our use of the oceans resources must be complemented by an ethic of responsibility and care. This means working with communities and other users on the water, and being transparent in the management of these precious resources.

What's your view on aquaculture as compared with the wild-caught fishery? Which has the best future and greatest potential for this country?

Future success, in my view, will come from utilising the image New Zealand has internationally, so our focus should be on creating more high value opportunity through aquaculture of selected species in sheltered areas, but we should also determine what is best practice in offshore farming where the animals and fish in our care are kept away from threats such as plastic pollution. I do not believe we should invest in land-based fish farming as space is limited in New Zealand, but instead, we should make the most of Kiwi ingenuity to breed more resilient species adapted to future ocean conditions, such as ocean warming.

Our wild catch holds tremendous potential because of its New Zealand origin and our good management, and should be branded as such. We must continue developing more selective and sustainable ways of harvesting our fish and New Zealand can play (and is playing) a leading role in this context. Getting there will require greater collaboration amongst all stakeholders, including the regulator. Ecosystem based management has to be introduced to bring all stakeholders impacting on the ocean ecosystem to the table and figure out how to manage this valuable resource.

And what about the relationship between the commercial and recreational sectors?

Most of us agree that we need to find ways of utilizing the ocean's resources in a shared manner. I believe there is only one approach that will get us there and that is science-based interaction. We must avoid discussions that are overshadowed by emotions and uninformed biases. The challenge is a broad-based recreational representation doesn't really exist. Yes, there are very active voices in the recreational sector and some of them make very good points about key issues in fishing, but my on-the-ground experience is that these don't always speak for the broad array of rec fishers out there, so we need to work through the political arena and in that I have found there is often reluctance to deal with the topic.

Our seafood production is tiny in a world sense. Should New Zealand companies be more collaborative in production, distribution and marketing?

Absolutely yes, as I've already outlined. There is huge opportunity for arowth here.

Does New Zealand make too much of being "clean and green" or not enough?

Not enough, but we need to underpin that with more decisive action to ensure credibility. We can still enjoy the image globally because of the natural beauty of our country, but we have to be more ambitious in our target setting to live up to expectations created through international agreements like emissions reductions agreed in Paris. New Zealand is not doing enough in that regard.

If you could make one point to the New Zealand population as a whole, what would it be?

Ninety-six percent of New Zealand's territory is ocean. Let's spend more thought on that and see the seafood industry as a credible stakeholder that wants to ensure a healthy, sustainable future for the ocean to ensure its own future. We need your support in that!





Dr Randall Bess

What we learned in Western **Australia**

It's time to debate where to go with New Zealand's recreational fisheries before a crisis point is reached, writes Randall Bess.

Since early 2016 the New Zealand Initiative, a Wellington-based think tank, has researched ways to improve New Zealand's recreational fisheries.

The late Sir Douglas Myers had a passion for fishing. I was fortunate to hear first-hand from him about what fishing used to be like and how it had changed during his lifetime.

Sir Douglas would recall the abundance of fish species 60 or 70 years ago. To him, the decline in fisheries abundance was the result of destructive behaviours across all fishing sectors, but particularly the commercial sector. His more recent fishing trips in Northland did little to convince him that species commonly taken by recreational fishers had rebuilt sufficiently.

Sir Douglas funded the New Zealand Initiative's research on finding ways to improve recreational fisheries. Policy recommendations were released on

August 1. Public meetings will be held in the South Island during August, and in the North Island during September and early October. These meetings provide opportunities to debate the recommendations before they are finalised and presented to the new government late this year.

Our first report, What's the catch? The state of recreational fisheries management in New Zealand, concludes that while New Zealand has developed the Quota Management System that has been admired overseas, little attention has been given to reforming the management of recreational fisheries.

The report asserts that if changes are not made to the way recreational fisheries are managed, New Zealanders can expect further constraints on access to fisheries resources. Now is the time to debate where we want to go with our recreational fisheries before we get to the crisis point that often characterises recreational fisheries overseas.

But it is important to learn lessons from other fishing nations that have grappled with population growth, coastal development and conflicts in shared fisheries.

The second report, The Overseas Catch, The state of recreational fisheries management abroad, is based on research of the red snapper fishery in the United States' Gulf of Mexico, the northern California recreationalonly red abalone fishery, the halibut fishery in British Columbia, Canada, and recreational fisheries in Western Australia.

Particularly impressive was the way Western Australia's Department of Fisheries has been preparing for increasing demand for recreational fishing and ensuing inter-sectoral conflicts that can adversely affect the management of fisheries.

For this reason, Western Australia was chosen for the next step in the research. This involved the New Zealand Initiative and the USbased Environmental Defense Fund taking a group of New Zealanders involved in the recreational, commercial and customary fishing sectors to learn from Western Australia's example. The Ministry for Primary Industries was also represented in our May 2017 visit to Western Australia.

We were interested in learning about Western Australia's unique sectorlevel representative arrangements. Recfishwest represents all recreational fishing interests, and the Western Australia Fishing Industry Council (WAFIC) represents all commercial interests. Both are recognised by the Government of Western Australia as the peak bodies or central points of contact and referral for sector-level issues. And both have fully-funded service level agreements with the Department that include representation, along with consultation, engagement and promotion of key sustainability messages.

Most importantly, the sector-level representative roles and service level agreements have changed intersectoral dynamics for the better. The representatives are encouraged to work together to find solutions that benefit both sectors for the long term. We heard from Dr Andrew Rowland, Recfishwest's CEO, of how Recfishwest supports some of WAFIC's initiatives. We also heard from John Harrison, WAFIC's CEO, who has a background in recreational fishing sector representation.

In other words, both representatives' leaders understand public expectations regarding access to healthy fisheries resources and the need for transparent and accountable management. But, both emphasise that they continue to have their differences. It is how they approach their differences that leads to improved dynamics and, therefore, better management of shared fisheries.

We were impressed by the widespread public support the Department has for the way it manages recreational fisheries, despite some severe restrictions in place on recreational fishing access and fishers needing to pay licence fees. What we found is that these fees are supported because they are used to fund sectorlevel representation and projects and research that benefit recreational fishing.

Furthermore, we learned from discussions with our Western Australian counterparts about improved methods for collecting catch and effort data on recreational fishing, and ways to reallocate total catches over time. The Department, along with Recfishwest and WAFIC, are developing marketbased and administrative reallocation processes, which are supported with new legislation.

The Initiative's third report, The Future Catch, Preserving recreational fisheries for the next generation, will set out our policy recommendations.

They reflect much of what we learnt in Western Australia and elsewhere regarding the steps that will improve shared fisheries for all fishing sectors.

After the report is released in early August we want to hear the public's views so we can propose change that has public support. Details about the public meetings are on the Initiative's website https://nzinitiative.org.nz/ research/fisheries-project/

The details will also be circulated through other channels, including fishing clubs and local media.

Lastly, it is important that what we discuss collectively as final recommendations upholds the secure rights associated with quota holdings

and the principles of the Treaty of Waitangi and related Treaty settlement obligations.

We encourage your participation.

- Dr Randall Bess is a Research Fellow at The New Zealand Initiative. He has researched and published articles on New Zealand's fisheries. He worked for the Ministry for Primary Industries and Ministry of Fisheries for 13 years, and before immigrating to New Zealand, he commercially fished in Alaska.

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Raymond Mitchell at the opening of Fishing the Bight re-enacts the moves he made for the camera in the 1970s when he was 18, this time with small paper rig rather than the real thing.

Timaru fishing exhibition proves a hit

Bill Moore

The South Canterbury Museum's exhibition "Fishing the Bight" is proving highly successful at trawling up visitors and evoking memories of times past.

The exhibition, which runs until September 2, explores the history of Timaru's independent commercial fishermen who have been plying their trade in the inshore fisheries of the Canterbury Bight since the early 1900s.

The industry started with tiny boats and primitive nets and over time grew, providing jobs and money for the local economy. Eventually Timaru became one of the largest fishing ports in the

The impetus for the exhibition was the work of oral historians Linda Hepburn and Ruth Low. In 2014, they received funding from the Ministry for Culture and Heritage to interview 20 local fishermen. Their aim was to capture the stories, particularly of the old-time fishermen, before they were

What the historians found was a story of boom, bust and change, as individual fishermen struggled to cope with changes that potentially threatened their livelihoods. The impact of government controls in the 1980s was to see a fleet of upwards of 50 boats reduced to today's tally of just 17.

The interviews also revealed a story of hard workers who woke at 3am to start their day in the waters off Timaru, fiercely competitive but willing to risk their lives to help others in times of crisis. Stories of fishing families, where

generations worked on family owned vessels, of "mates" and "boys" who worked long hours, and of the owners and entrepreneurs who grasped opportunities that sometimes ended in success, but other times in failure.

The museum's Curator of Documentary History, Tony Rippin, said there had been a great response from the public and the fishing community, with a lift in visitor numbers.

"We had a fantastic turnout of fishermen at the opening and since both current and past members of the industry.

"Some of them were the subject of the interviews, but many others have also spent time enjoying the dozens of images we have on the multiple touchscreens in the space. Many of them spent quite some time over the photographs, recalling past boats or swapping stories."

Rippin said the exhibition wouldn't have been possible without the work of the two oral historians or the fishing community members taking time to share their stories.

More recently Robert Odey had been instrumental in either supplying the various equipment like craypots, radios, a mast and nets, or sourcing items like dolphin pingers from others.

"The exhibition has evoked a positive vibe for local fishermen, who are enjoying their story being told," Rippin said

It comes at a time of upturn in Timaru's fishing industry, with Sanford hiring 100 people in the last year to take its workforce there to 436.

Pictures courtesy of South Canterbury Museum, Timaru.



Part of the Timaru inshore fleet pictured in the



Lloyd TeNgaio

Still going strong after five decades

Fiona MacMillan

Lloyd TeNgaio loves his job. So much so, it is fiendishly difficult to keep him away from it.

At 76, he has no intention of retiring and says he would go mad if he was stuck at home. But he's not in a comfortable office job, with a warm seat and a view. He works every day inside a giant fridge at the Sanford fish factory in Auckland.

Lloyd's title is Factory Admin, but he could just as easily be referred to as Factory Father, he's been there so long. He is currently in his 52nd year at Sanford and things have certainly changed in that time.

"Now we have quality control. Not only that, but our facilities have improved 100 percent," he said.

"We had the market and we moved here in 2002. The facilities here are much, much better and we can't place enough emphasis on health and safety, everything's centred around health and

Lloyd is a stickler for doing things the right way. When we visited him at work,

he made sure we were properly kitted out and that we were washing our hands and staying in the right places. He likes order, something he puts down to his early days in the armed forces.

"Being ex -army, I get here, I tidy up, I get everything organised ... our gloves and aprons, smocks, everything's got to be spot on. I normally get here half an hour before everyone else."

That means starting as early as midnight, if a night shift with an early finish is required. But the hours and the cold don't seem to get to him. He makes sure the refrigerated room where he's working is kept at zero degrees year round. Lloyd puts his hardy constitution down to being keen on keeping fit. When he was younger, that meant tennis games and running with his son. Now that his boy is a well and truly grown-up 50, he limits himself to swimming at the weekends.

He's also cut back on his music. Lloyd was a professional saxophone, clarinet and trumpet player with the band, Sonny Day and the Sundowners. They played the dance halls in Auckland and toured a little, rubbing shoulders with the likes of Ray Columbus and the Invaders.

In the days before television, the dance halls were packed, Lloyd said. "You'd meet a lot of fine people."

These days though he continues to move to his own rhythm in the Sanford factory. He's proud of what he does and how the business and the industry have transformed over the years and unsurprisingly, his colleagues at Sanford are all very proud of him.

His manager, Steve Keeves, said Lloyd was a very good influence in the workplace.

"He is someone who can relate to such a wide variety of people and he can talk to anyone across age differences or cultures. That's been such a great thing to have in the factory and when you think about the transformations Lloyd has seen in his 51 years at Sanford, what an achievement to be a valued part of it all the way through."



Graham, Matt, Nadine and Nick Taylor.

Family's five generations of fishing

Matt Atkinson

For the Taylor family, fishing is in the blood.

Five generations have worked the waters off the north east of the South Island.

Graham Taylor was the fourth generation to start fishing and runs Legacy Fishing out of Picton with his wife Nadine.

Graham's journey to fishing was a less than conventional one.

"I left school and became an electrician. After I did my apprenticeship I went and did an overseas stint then when I came back it was the early 90s and there were just no jobs," he said.

"Dad needed a crew at the time and I have been fishing ever since."

The fishing tradition began with Graham's great-grandfather 100 years ago.

"He lived down in Kaikoura and crayfished from a clinker dingy using ring pots.

"Grandad didn't fish but his brother did. He came back from the war and things were tight in New Zealand so he went into fishing in Kaikoura as well.

"Dad was a fisherman most of his life here in Marlborough, he fished for years off the Wairau Bar and out of Nelson. He was trawling, scalloping and tuna fishing and he would have fished for over 40 years." Graham said he had expected to return to fishing, just not in the way it happened.

"It was something that has always been in the blood. I guess it is a pretty attractive lifestyle. I probably got into it early than I thought I was going to, but in hindsight it was good timing."

Graham and Nadine started Legacy Fishing in 1994 when they bought the *Waima*, leasing

rock lobster quota from Graham's father.

It was Nadine's first taste of life on the water; she had grown up on an Awatere Valley farm.

"It was exceptionally hard for me to come from an office environment to crewing and I suspect it was exceptionally hard for Graham to skipper with a novice crew, who knew nothing about fishing and wasn't particularly strong," Nadine said.

"But because we were starting our business together and our lives together, we were young and hopeful and we made it work.

"I'm not going to be all romantic about it, it wasn't like discovering a second me, I had to grow to enjoy it, but I loved working with my husband and we made it fun."

After three years working on *Waima*, the Taylor family grew, first with Matt and then 18 months later, with Nick.

"With Matt I kept crewing until a couple of months before he was born. In fact I got so big at the end of my pregnancy that Graham had to help me into my leggings each morning, the other guys used to give us a bit of grief about that," Nadine said.

Nadine went back fishing for

a short time after Matt was born, but ended up back on land not only helping run Legacy Fishing but working for PauaMAC7 and the Paua Industy Council and on the Picton Federation of Commercial Fishermen committee.

"Once you become involved in fishing as a spouse you either throw yourself into it or you develop a life entirely of your own.

"I chose to throw myself into the fishing industry."

The Taylors' business has grown in the 20 years since; they sold *Waima* and bought two new vessels; *Fugitive* for rock lobster and the *Joy Marie*, a trawler.

Graham is shore manager now and Nadine, along with still helping run the business, a Marlborough District councillor.

Both boys are grown too; Matt studies at Victoria University in Wellington and Nick is the fifth generation Taylor to fish.

"Nick left college last year and he went and did a fishing cadetship with Talley's, did a few trips with them, but now he has come and joined the family fishing company this year," Nadine said.

Graham said Nick has taken to the job "like a duck to water".

"He was always the one who was keenest on the boat, he's always wanted to be a fisherman since he was able to walk," Graham said.

Matt is also pulled towards a life on the water.

"When he comes out with his degree he's talking about going into the Navy, so maybe the salt in the veins has just rubbed off in a different direction."



Innovation on the frontline – Steve Jones, Sanford skipper, is a proud user of Precision Seafood Harvesting. He loves it for the quality of the fish he catches and because the undersized fish can swim away unharmed.

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Ron and Debbie Pearson in January 2015 at Talley's wharf in Motueka. They leased the Sea Legend from Graeme and Sue Bennett for the 8-week West Coast tuna season.

QMS still rankles with former inshore spokesman

Chris Carey

As a deckhand on the FV David Baker I recall going into the water to help the skipper of the Trojan II who'd got into serious difficulties trying to clear gear from around the prop after broaching on the Westport bar. It was very cold and we were probably hypothermic. It was Ron Pearson with the Sarabande II who came to our rescue.

An avid spokesman for inshore fishermen, Pearson faded from the fishing scene soon after the introduction of the Quota Management System.

"I left the industry in '87, disillusioned at the introduction of quotas particularly as there were more fishermen who rejected it than Taffy Martin and the Federation had for its introduction," he

Born in 1948, Pearson attended Westport South Primary and Buller High School but found the whole school thing "pretty average". Rowing on the Buller River or biking out to Charleston held more appeal.

He worked for three years in the Westport Foundry. While recovering from a motorbike accident he spent the following year moving between jobs and completing a correspondence course in mechanics before finding work with Dave Caldwell at his Westport garage.

"Dave taught me a lot but I had itchy feet and I left a year later and got a job as a mechanic at Denniston workshops. That lasted a year."

Pearson drove earthmoving machinery for his brother Ray but 10 months of that was enough.

"I thought I could make more money from fishing than contracting. I knew Peter Devine and Les Clarke quite well and they both seemed to do all right."

Peason was 24 when he bought the Wendy, a 30 foot (9.1 metre) doubleender.

"I paid Mack McCready \$900 for her. She had a Rustin Rover engine, a light truck diff and a flat belt-driven winch, pretty basic stuff."

However as keen as he was, Pearson had never actually been fishing.

"Peter Devine had the 36 foot Kawatiri and offered to take me out. We sailed about 4.30am and went to the Steeples where he lifted a set of pots. Then we went off Granity and set away the trawl gear," Pearson said. "I don't know what I expected but to my amazement, the net and doors disappeared!

"I'm forever grateful to Pete. He showed how to tie a codend, how to set the doors up, back chain's distances, measure warps to estimate the spread, use a block of wood over the side to guess the speed, where logs and other fasteners were. He hammered it home about watching the weather and the bar conditions, always! How did he know these things? 'Trust me', was his answer."

With only 14 hours of tuition Pearson was wondering how he was going to cope physically and mentally fishing single-handed. However, if he was going to do this, it was time to get serious so it was off to school to get his "inshore ticket".

Ron "day fished" for flats, gurnard and red cod and while the Wendy allowed him to get started, she was too small.

"I bought the Ajax off Brian Kenton. She was 36 foot with a canoe stern and a rebuilt 4 cylinder Lister. It cost me \$12,000 which in '73 was a lot of money, but she had refrigeration. Up 'til then a deck hose spraying over old jute sacks was all I had to keep the fish cool."

Pearson fished her briefly out of Timaru, Akaroa and Nelson. With the help of Chris and John Guard he built dredges, but wasn't particularly fond of scalloping.

"I remember Tragedy (Rick Tregidga) on the Spray telling me he'd steam out 'the Cut', turn his brain off and scratch like a hen all day."

In later years, Pearson found the idea of having to fish a resource in decline simply to keep a fishing licence current "kind of dumb". Always open to ideas, an article in a national fishing magazine got him thinking about twin-trawling.

"It did seem to fish better than single gear but I gave up on it after a while. Ajax was too narrow; I'd smacked the prop a few times with the dummy door when hauling and there were always problems with landing and setting away two codends."

In 1975, Ron passed his 2nd Class DTE and Deep Sea Mate's ticket. The following year he bought the French built Sarabande II from Nelson Fisheries.

"That cost me \$26,000! She had a tired old 180hp Cat D333 but she could carry 15 tonne down below."

He fished the West Coast as far south as Jacksons Bay, describing the Sarabande II as an excellent "bar boat".

"I broached twice in the 10 years I owned her. She was very forgiving however my first effort was a bit of a disaster."

With a breaking sea on the Grey bar, Pearson decided to heed the advice of a former nautical tutor; backing up when you risked being "pooped" by a "big one".

"She was buried under a mountain of water. All you could see was the bow, a little of the wheelhouse and the funnel belching black smoke. We broached and it was debatable which way to go but I managed to turn up the river. Everyone has different ideas on crossing a bar but I never, ever tried that again."

Ron describes his working

relationship with Nelson Fisheries as "not great". Following a few altercations with management, it was time to move on and refinancing with the Rural Bank gave him the freedom to do so.

"I sold all my fish to Peter Talley. He paid better, gave good service and was always approachable."

It was the late '70s and while Ron "paired-up" with a number of boats taking advantage of the snapper fishery in Tasman Bay he wasn't convinced.

"Bottom trawl worked well on species like snapper but wasn't great on flats but I'd always thought if you couldn't catch more than double what others were getting by pairing, why bother?"

He became very active with Search and Rescue including the salvage of a number of vessels. Following an inquiry into the Hawea sinking, those actively involved with SAR duties were asked to become civilian advisors. Appointed the Marine SAR Advisor for the Westport area, he said the lack of communication between the Rescue Coordination Centre and those "out there on the boats" was of real concern.

With the QMS just around the corner, Pearson began looking to the deep water. Fishermen could apply for exploratory orange roughy quota but there was no guarantee of an allocation.

"I'd been up to Napier to see what they were doing. Mike Terry, Mandrake, Frank Shirley were doing ok so I came back to Westport and gave the boat a bit of a birthday."

In 1985, Sarabande II was fitted with a new engine; the 195hp Cummins 883 swinging a new 4-blade prop provided 2 tonne of bollard pull. New winches holding 2300metres of warp, sweeps and bridles allowed Pearson to fish comfortably in 600 fathoms.

Then the rules changed - there would be no exploratory quota, effectively pulling the rug out from under Pearson and others who had invested heavily.

"It was all politics, all BS. I had an overdraft of \$80,000 with no fish plans and no packages. But MAF must have been listening because quota was eventually offered to those who had

shown a commitment."

One of a handful of small boats. Pearson believes he was the first 48 footer to successfully catch orange roughy off the South Island's West Coast, working the Cook Canyon from 400 to 550 fathoms.

"I'd had a Frank and Bryce wing trawl and a 4-seam trawl but no net monitor. The first shot was only 5 cases but by the 5th trip I'd got the whole 'fishing blind' thing sorted and the last tow was 8 tonne '

Whether from curiosity or to prove a point, Pearson took the Sarabande II to the Chatham Rise and while he may have had the Certificate of Competency to allow him to operate that far offshore the boat certainly wasn't surveyed for

"I was fishing a little 'glitch' on the chart, in 500 fathoms. I'd got hooked up for an hour or two thinking how ridiculous this was. We caught about 8 cases. The Cordella, Skeggs's 1500 tonne factory trawler, was fishing outside us and she only got about 50. Overall I caught 58 tonnes of roughy, most of it on the West Coast."

Pearson has never believed in the QMS, which he said was promoted by "the Blue Book of lies" and rushed through with little consultation. He certainly didn't agree with the concept of Notional Quotas, a process he believes invented more fish than had ever been caught.

"I'd invested heavily but there were others who received quota without any commitment or intention whatsoever."

He was convinced that given the opportunity to work together, the Government and fishermen would have come up with a more workable plan and one still based on a total allowable catch.

"The West Coast South Island was opposed to the introduction of quotas and the Port Liaison meetings held around the country came up with a number of viable alternatives."

In September of 1985, Pearson took Petition 1985/285 to the Beehive and in May 1986 he put his case to the select committee.

"The petition's underlying theme was the goals under the QMS were unachievable and that stable fishing communities were under threat."

With two significant submissions in support and despite the Select Committee "highly recommending" his petition, Pearson faced a political road block, hugely disappointed by the lack of support from his member of Parliament and an utter lack of response from the Ministry.

Seeking a reply from the Minister of Fisheries, he went to the Ombudsman and under the Freedom of Information Act, went searching for answers. When he presented his findings at the Federation of Commercial Fishermen's conference in Invercargill, many an eyebrow was raised.

"I quote: the object of the quota system is to capture the super profits of companies and some individuals. Well, the Minister was gobsmacked. Where did you get that from? Long story short, the Westport Fishermen's Association had a vote of no confidence in the executive and resigned from the Federation and many in Greymouth stopped their subscriptions."

Further public meetings and a publicity campaign by several fishing communities did little to halt the QMS freight train, he said.

"Some fishermen asked for their names to be removed from the petition when it became apparent that the piece of paper they'd get would be a great asset either in cash or as an investment. So a lot sold out and you have the result of that today - much of the quota owned by a few who now hold the strings like puppet masters."

The final nail in the coffin came when his petition was declined by the Cabinet Legislative Committee. He likens the post-QMS period to that of a "White House investigation" - half-truths, payouts, smoke and mirrors and deals done behind closed doors.

With hindsight Pearson believes he could have done better. It was about playing politics and he was new to the game. After a lifetime in the industry

fighting for what he believed were better conditions for fishermen, Ron was left wondering.

"I was pretty gutted by the way things had gone and so in 1987 I too sold out. Now 30 years later we celebrate but as we predicted, control of their industry by the fishermen has been lost to the processors and absentee quota holders interested only in investment with no desire in getting their hands wet."

He points to the once thriving fishing communities of Westport, Akaroa, Nelson, Motueka and Greymouth.

"The Blaketown pens were once full of bright, well-maintained boats looking sharp. Look at them today - they're run down and neglected through no fault of their owners.

"Take fish prices - they haven't changed significantly for decades but the costs associated with catching it have sky-rocketed and the financial returns in most cases are unsustainable. If you're fishing for a company and working to a sustainable fish plan then you are probably doing okay, but try doing a mum and dad or father and son operation. I believe it's very unlikely you will make it."

While some fish stocks are doing better than they were Pearson believes it is due to the steady attrition of boats and effort rather than a result of good fisheries management.

"Bycatch was a problem back then and 30 years later it still is, and as for Deemed Values; they're simply unfair and unacceptable."

Pearson believes there is a future in the inshore for those who are driven but with so much stacked against them many are turned away or simply give up.

"You need to see you have a future in it but again, it all comes back to quota. A boat isn't worth anything without a viable quota package and without quota you're forever beholden to those who have it because they have total control over your life and livelihood.

"They dictate what you will catch and what price you'll be paid and there's no guarantee you'll get the fish next year

either. Heaven forbid should you have the audacity to query your fish plan or the price. You're staring down the barrel of a loaded gun doing that.

"You know, we weren't cowboys back in the '80s, we didn't rape and plunder, in fact we often asked for restrictions but all too often we were ignored. Many fishermen I talk to today are just as disillusioned now as I was then."

He said 30 years was a long time when something wasn't working as it was designed to, but it could be fixed.

"I believe what it needs is input from those directly involved with their fishery - only they need to be listened to this time, not ignored."

So, what did happen to Ron Pearson? Living part of their lives as sea gypsies, Ron and Debbie Pearson spread their time between New Zealand and Australia.

"We're never far from the sea. We have a yacht in which we cruise the South Pacific and for the past few seasons we've leased boats to go tuna fishing - just Debbie, myself and no quota to worry about."



Ron Pearson's Sarabande II at Westport's refuelling wharf in 1985.



My Food Bag co-founders Cecilia Robinson, Theresa Gattung and Nadia Lim.

My Food Bag's meteoric rise

Matt Atkinson

My Food Bag has fast become a standout Kiwi success story.

In the five years since the home food delivery service was founded it has gone from a small start-up to one of New Zealand's biggest providers of

The business is the brainchild of Cecilia Robinson, who founded it with husband James, celebrity chef Nadia Lim and partner Carlos Bagrie, and former Telecom chief executive Theresa Gattung.

From that starting team of five, they have grown to 120 staff and an estimated \$130 million in revenue.

It is hard to single out one aspect of

the business for its rapid rise, but their healthy and delicious recipes, and the ease of ordering and cooking them, are right at the top of the pile.

Cecilia Robinson, who serves as the co-chief executive with James, said always trying to get the best for their customers has been the key to My Food Bag's success.

"We have listened to what our foodies have asked for and then responded to this. As a team, we always work harder to deliver more for our foodies." Robinson said.

"At My Food Bag our foodies are at the heart of everything we do. We work harder to get better so we can deliver more to our foodies. I care about our brand love and delivering on our foodie promise – that is what is really important to me."

My Food Bag has had seafood on the menu since day one, forming an integral

part of the business.

With an estimated 50,000 customers, that means sourcing a lot of seafood and from a reliable source.

"In the last 12 months Moana New Zealand supplied approximately 250 tonnes of seafood to My Food Bag across almost 25 species," Robinson

"Our supplier relationships across our entire business are incredibly important to us. We consider our suppliers business partners and value their support in delivering a high-quality product to our customers week-onweek."

With exceptional year-on-year growth, Robinson and her team have continuously found ways to keep the business moving forward.

In 2015, Kevin Roberts, the former chief executive of advertising behemoth Saatchi and Saatchi, was named



Cecilia Robinson Nadia Lim

"In the last 12 months Moana New Zealand supplied approximately 250 tonnes of seafood to My Food Bag across almost 25 species."

executive chairman, bringing a wealth of experience in branding and consumer behaviour.

They have also sold a large portion of the company to Australian private equity firm Waterman Capital - part of their plan to eventually list on the New Zealand Stock Exchange.

"Working toward a possible IPO is only a natural extension of this as we want to give Kiwis the chance to have ownership of something which is quickly becoming a Kiwi institution," Robinson said.

"Our long-term vision and strategy is to 'create stronger and healthier communities throughout New Zealand'. We want to fill New Zealand with My Food Bag foodies. To achieve this, we will continue to innovate, challenge and extend."

Signing up Kiwis nationwide has seen them extend their product range to not just include the standard food bag, but create gluten-free, gourmet, veggie, and lunch bags.

Two of their newest options are Fresh Start, aimed at consumers wanting to reduce their calorie intake, and Bargain Box, for families working on a budget.

"As a business we believe that

innovation is at the heartbeat of everything we do and we will always continue to innovate to better meet our foodies' needs. We have only just begun and as My Food Bag continues to grow and evolve that will become even more evident. There are definitely some of our most exciting initiatives yet on the horizon," Robinson said.

While Robinson doesn't seek a high public profile, Lim is the organisation's face.

When My Food Bag launched, Lim was fresh off winning the second series of MasterChef New Zealand, using the new found fame to catapult herself into one of the country's most recognisable chefs.

The University of Otago-trained dietician's "nude food" cooking style, which celebrates fresh, unprocessed food, is well received by consumers and has had a heavy influence on My Food Bags recipes.

Seafood fits perfectly into this mantra, with fish in particular, being important for a healthy and balanced diet

"Fish is a very nutritious food; it's a complete protein, meaning it contains the full range of amino acids, including the nine essential amino acids that our bodies can't make and have to get from food sources, needed for a huge number of important bodily functions – everything from making enzymes and hormones to growing and repairing your muscles and body tissue," Lim said.

"Fish is also low in saturated fats and many fish, particularly the oily kind, are high in heart-healthy mono and polyunsaturated fats."

Lim said with so many different My Food Bag options, there was something for everyone.

"For our Fresh Start recipes that are under 450 calories per portion, we focus on baking and poaching. Poaching fish in a warming curry sauce is perfect for winter.

"For our family-focused recipes typically found in My Family Bag, we use more pan-frying and crumbing as these methods are typically more kidfriendly – with recipes such as a healthy fish burger or homemade fish and chips. And when we want something more indulgent for My Gourmet Bag, a pan-fried, crispy skin fish dish is always a winner."



Lemon panko crusted fish with mixed chips, roast garlic aioli and slaw

My Food Bag Classic for Two

Ready in: 35 minutes Prep time: 20 minutes Cook time: 25 minutes

Serves: 2–3

TIP: the slaw could be made in advance and stored covered and undressed in the fridge. Dress slaw just before serving.

Ingredients: mixed chips

200g gold kumara, scrubbed and cut into 1cm-thick chips

200g potatoes, scrubbed and cut into 1cmthick chips

1 ½ teaspoons kumara spice mix (see recipe below)

Ingredients: roast garlic aioli

1 clove garlic (leave skin on) 2–3 tablespoons mayonnaise

Ingredients: lemon panko crusted fish

300g skinless, boneless, white fish fillets 1/3 cup panko breadcrumbs

2 teaspoons olive oil Zest of 1 lemon

Ingredients: slaw dressing

1 ½ teaspoons extra-virgin olive oil

1½ teaspoons vinegar (e.g. red wine, white

¼ teaspoon runny honey

½ teaspoon mustard (e.g. Dijon, wholegrain)

Ingredients: slaw

1 carrot

½-1 beetroot

1–2 handfuls mung bean sprouts

1½ tablespoons roughly chopped mint

To serve

1 lemon, cut into wedges (use zested lemon)

Kumara spice mix

Mix together ½ teaspoon garlic salt, ½ teaspoon dried rosemary, ½ teaspoon paprika and 1 teaspoon lemon pepper seasoning.

Preheat oven to 220°C. Line two oven trays with baking paper.

Toss kumara and potatoes on first

- prepared tray with a drizzle of oil, kumara spice mix and season with salt and pepper. Bake for about 15 minutes then add garlic to tray. Roast a further 10 minutes, or until garlic is tender and chips are golden.
- Pat fish dry with paper towels and remove any remaining scales or bones. Cut any larger fillets in half, then season with salt and place on second prepared tray. In a bowl, combine panko breadcrumbs, oil and lemon zest. Gently pack crumb onto fish and press down to adhere.
- When chips have 7 minutes cook time remaining, bake fish (on rack higher than chips) for 5 –7 minutes (depending on thickness), or until just cooked through.
- In a large bowl, whisk all slaw dressing ingredients until smooth. Grate carrot; peel and grate beetroot. Add all remaining slaw ingredients to bowl with dressing and toss to combine. Season to taste with salt and pepper.
- Squeeze garlic out of skin and combine with mayonnaise in a small bowl, mix well to combine.

To serve, divide mixed chips and lemon panko crusted fish between plates. Serve slaw on the side with a dollop of roast garlic aioli. Squeeze lemon juice over fish just before serving.

Science Challenge sets big goals

Matt Atkinson

The Sustainable Seas National Science Challenge has some lofty ambitions.

It states its objective as being to "enhance the value of New Zealand's marine resources, while providing a healthy environment for future generations".

The Challenge has brought together 181 researchers, 34 organisations and is funding 38 projects.

It is easy to see why the Challenge's Director Dr Julie Hall calls it a "complex beast".

But Hall also acknowledges that's why it is so exciting.

"We aim to improve the management of the marine environment in New Zealand, and we have the challenge of working with a whole range of disciplines," Hall said.

This meant bringing ecologists, physicists, social scientists, lawyers and policy people together in one room, all talking about the same issues from different perspectives.

Steven Joyce, then Science and Innovation Minister, announced the challenge in 2014 with \$31.3 million in funding over five years from the Ministry of Business, Innovation and Employment.

This includes a cap of five per cent on administrative costs.

The challenge is broken into two fiveyear periods, with a review from MBIE in 2018 to determine whether phase two will be given the green light.

Joyce, at the time, said it had the potential to transform New Zealand into a world leader in sustainable marine economic development.

"This Challenge will build on New Zealand's world-class marine research to allow us to better understand the human-induced and other changes affecting our oceans and the implications of those for our management of marine resources," Joyce said.

"The research will allow us to develop an ecosystem-based management (EBM) approach to inform the way we govern and use our marine resources."

Hall described EBM as a "holistic and inclusive way to manage the competing uses for, demands on, and ways New Zealanders value our marine environment".

"The key thing about EBM is that it's holistic," she said.

"Instead of considering an aquaculture farm here and a discharge there and fishing there and considering all these things individually, it actually takes a holistic approach."

The research for the 38 projects in phase one is primarily focused in an area at the bottom of the North Island and the top of the South Island with a case study area in Tasman and Golden Bays.

They come under six different categories; Our Seas, Valuable Seas, Tangaroa, Dynamic Seas, Managed Seas and Vision Matauranga.

These range from looking at Kaitiakitanga in practice, how "social licence" is understood in New Zealand to looking at different ways to protect mussel farms from ocean acidification.

However, in a project so far-reaching there is not a single mention of the Quota Management System.

"This will be considered in phase two, post 2019," Hall said, "One of the reasons being the fisheries legislation is under review.

"We have submitted to that legislative review, not in terms of what we believe it should look like, but around EBM and the research that we are doing that would support the development of EBM in New Zealand."

The challenge has a programme called Ecosystem-based management within New Zealand's existing legislative framework, and it references the Resource Management Act 1991 and Exclusive Economic Zone and Continental Shelf Act 2012 - but no mention of the OMS

Hall stresses the challenge is not a decision-making body, but is tasked with creating a knowledge base to support ecosystem-based management implementation.

There is strong representation from the seafood industry within the Challenge's administrative structures.

Sanford CEO Volker Kuntzsch sits on the challenge's board, and Aquaculture NZ CEO Gary Hooper, Fisheries Inshore NZ CEO Jeremy Helson, and Te Ohu Kaimoana Aquaculture Manager Kirsty Woods all sit on the Challenge's stakeholder panel.

The stakeholder panel also includes representatives from Forest & Bird, World Wildlife Foundation and the Environmental Protection Agency.

The panel is not the only place with a diverse range of talents and opinions, in fact Hall said bringing groups together that haven't always seen eye-to-eye was part of the plan.

"One feature of the Challenge is that projects are well integrated, comparing data and ideas, and working together.

"One of the underpinning aspects for the science challenges was 'best teams'. What is the best team in New Zealand to do this piece of work?"

With 38 projects, funding has been staggered and now results are slowly coming in, but with only a 2019 finish line there isn't a high priority on getting the work done fast, but rather getting it done right.

That applies not only to the research but to the overall Challenge structure, which meant the first round of funding was approved in late 2015, with the research starting in 2016.

Even so, there are already encouraging results coming in - waste mussel shells have been used to make water more alkaline and slow down the effects of ocean acidification on mussels.

Hall is currently putting together her yearly review for MBIE and will learn more in September as to what will be needed for phase two to be given the go ahead.

Learn more about the challenge and the projects at sustainableseaschallenge.co.nz

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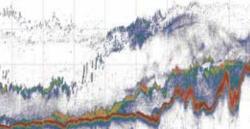
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Economic review

of the seafood industry to May 2017

Welcome to the latest update on the economic performance of New Zealand seafood. This edition provides provisional data for the year to date to May 2017.

KEY RESULTS FOR THE PERIOD:

- Exports totalled \$753mil for the period, with China continuing to be the top market by value.
- There was a slight decrease of 3 percent in export volume overall.
- Salmon exports have grown by 27 percent compared with the same period in 2016.



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 the year to date to May 2017.

Seafood exports to the end of May 2017 totalled NZ\$753mil with more than 127,760 tonnes exported.

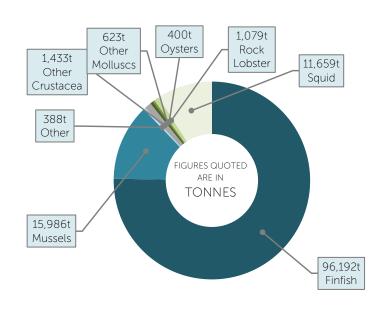
Export value (YTD to May 2017) = NZ\$753m

\$54m Squid \$116m Rock Lobster \$5m Oysters \$397m \$12m Finfish Other Molluscs FIGURES QUOTED ARF IN \$44m NZ\$ Other Crustacea \$5m Other \$120m Mussels

EXPORT TONNES

Finfish species accounted for 75 percent of the total export volume with shellfish (including paua) accounting for 13 percent and squid accounting for 9 percent. Overall there was a slight decrease in total export volume of 3 percent when compared with the same period in 2016.

Export volume (YTD to May 2017) = 127,760 tonnes



EXPORTS BY COUNTRY

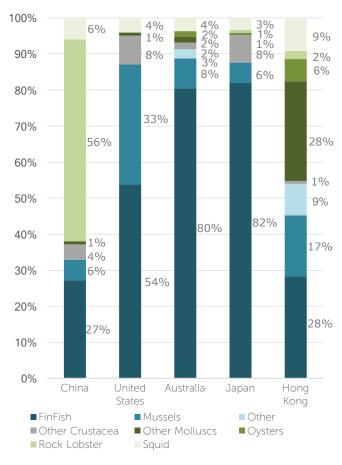
China, the United States and Australia continue to maintain the top three positions as our key seafood export partners. Spain saw a decrease in export value during this period, primarily due to the lower volume of squid and ling exported.

The graph to the right shows diversity in the mix of products for the top five export countries.

Top 10 Export Countries by Value (YTD to May 2017)

Country	2017	2016	% Change
1 China	\$218m	\$251m	-13
2 United States	\$119m	\$110m	A 8
3 Australia	\$100m	\$105m	-5
4 Japan	\$45m	\$41m	10
Hong Kong	\$22m	\$22m	0
6 South Korea	\$21m	\$19m	1 0
Spain	\$20m	\$34m	-41
8 Thailand	\$16m	\$20m	-20
Canada	\$16m	\$10m	6 0
South Africa	\$12m	\$10m	a 20

Composition of Exports to Top 5 Trading Partners (YTD to May 2017)



EXPORTS BY SPECIES

Salmon saw a 27 percent increase in export value, along with toothfish and jack mackerel which also saw increases of over 20 percent but there was also a decrease in export value for squid and rock lobster, when compared with the same period in 2016.

TOP 10 (NZ\$)	EXPORT VALUES	2017	2016	% Change
	Mussels	\$120m	\$128m	-6
**	Rock Lobster	\$116m	\$146m	-21
-	Hoki	\$68m	\$73m	-7
· Affi	Squid	\$54m	\$76m	-29
**	Mackerel, Jack	\$32m	\$26m	A 23
-	Antarctic Toothfish	\$29m	\$24m	1 21
-	Salmon, Pacific	\$28m	\$22m	A 27
	Crustn, Molluscs extract	\$22m	\$19m	1 6
_	Ling	\$21m	\$22m	-5
	Orange Roughy	\$20m	\$22m	-9

Source: Export data, Statistics NZ.

EXPORTS OF MAIN COMMODITIES

Exports of fish, crustaceans and mollusc, for the first five months to May 2017, decreased by 5 percent on the same period for 2016. However, overall there was a 5 percent increase in export earnings of all New Zealand's main commodities partly due to a 21 percent increase in dairy export value.

	ORTS OF MAIN ODITIES (NZ\$)	2017	2016	% Change
	Milk powder, butter, and cheese	5,688m	4,699m	^ 21
77	Meat and edible offal	3,287m	3,179m	A 3
	Logs, wood, and wood articles	1,737m	1,650m	^ 5
4	Fruit	1,307m	1,234m	A 6
	Fish, crustaceans, and molluscs	678m	714m	-5
T	Wine	641m	596m	A 8
Oo	Mechanical machinery and equipment	617m	674m	-8
	Total Exports	22,265m	21,229m	_ 5

Source: Overseas merchandise trade, Statistics NZ.



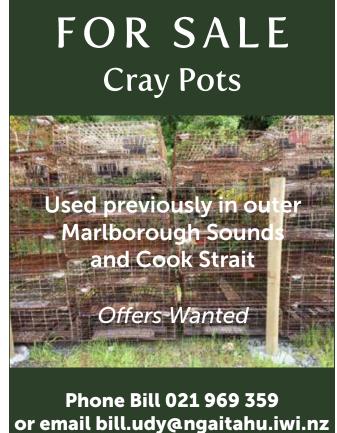


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HPB 2	800 KG	LIN 7
LIN 2	100 KG	SCH 7
RCO 2	137 KG	SPO 7
SCH 2	200 KG	TAR 7
SNA 2	176 KG	TRE 7

Species / Area	ACE Equivalent
BAR 7	100 KG
HPB 7	5100 KG
LIN 7	133 KG
SCH 7	2620 KG
SPO 7	216 KG
TAR 7	500 KG
TRE 7	100 KG

TENDER CLOSES 6TH OCTOBER

Highest or any Tender not necessarily accepted ACE Equivalents are correct at time of Tender Placement

> Send to: Area 2 & 7 Tender PO Box 31 032 Wellington 5010

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GSH 7	24 KG
GSP 7	12 KG
НРВ 7	700 KG
LIN 7	2658 KG
RIB 7	336 KG
SCH 7	1270 KG

Species / Area	ACE Equivalent
SKI 7	397 KG
SPE 7	147 KG
TRU 7	9 KG
HPB 8	300 KG
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WWA 8	9 KG
RIB 8	268 KG

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Danish survey



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6 berths

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