

# SEAFOOD

NEW ZEALAND

05

Sailing to the  
South Atlantic with  
the *Argos Georgia*

14

The innovation  
revolution

26

Mapping project  
'more than just  
science'



# 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](http://seafood.co.nz).*

## OUR PROMISE IN PRACTICE

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### OUR CODE OF CONDUCT

**We do not condone illegal behaviour.**

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

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

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

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

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

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

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

**We look after our people and treat them fairly.**

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

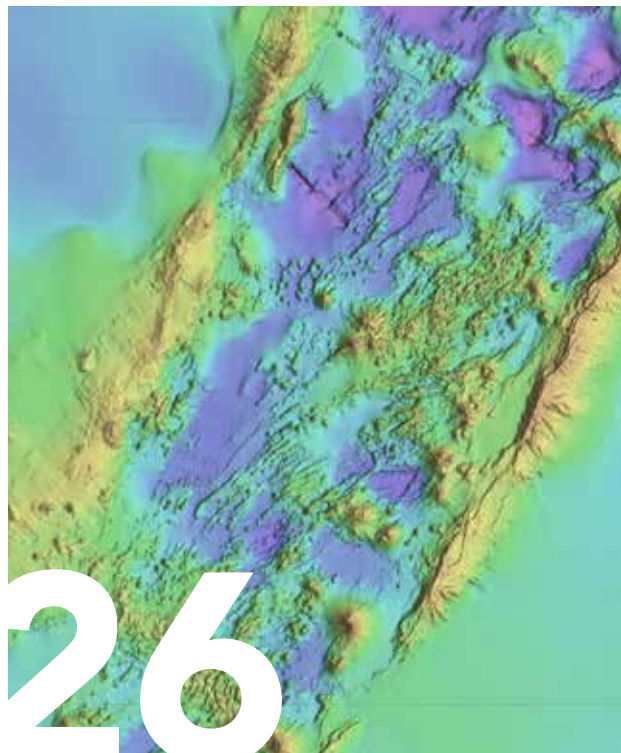
**We will be accountable for delivering on Our Promise and will support increased transparency.**

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

**We give our word**

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## In this issue

### Few things in recent times have concerned fishers like the imposition of electronic monitoring across the entire commercial fleet.

It raises legitimate questions around cost, operation and particularly the retention of intellectual property. Years and sometimes decades of learning exactly where and when to fish most successfully against the competition is about to be provided in fine detail to both the Government and quota holders, in the latter case testing relationships based on mutual trust.

It's little wonder that many of those who go to sea are apprehensive as they ready themselves for the new regime. However, there are positives too, and in this issue they are explored and explained by vastly experienced Nelson skipper Tony Roach in our Faces of the Federation feature. He's looking forward to the change, and says why. Federation president Doug Saunders-Loder also has a word on this subject and on meeting the challenges posed by the Your Fisheries – Your Say consultation.

These are weighty issues deserving of thorough coverage, but only a part of a wide-ranging April magazine. In the cover feature Lesley Hamilton highlights some of the scientific projects that are bringing advances to our industry through the work of Seafood Innovations Ltd as it faces devising a new operational model; Emily Pope investigates a fascinating international project mapping the world's ocean floor; Chris Carey visits John "Fox" Buchanan, another veteran fisherman with many a yarn to tell; and Blenheim photographer Tamzin Henderson supplies words and pictures from her latest adventure, joining a toothfish longliner in the south Atlantic.

Highlighting the breadth of the industry, we've also got the details around Sanford's advance into the nutraceuticals market with Sea to Me, coverage of Seaweek around New Zealand and a range of news stories, industry opinions and photo features on several events. There's even a picture of a man driving an outboard-powered dining table across a lake. Why? You might well ask.

**Tim Pankhurst**  
Chief Executive



# Sailing the South Atlantic fishery aboard *Argos Georgia*

**Adventurous Blenheim-based photographer Tamzin Henderson joined the *Argos Georgia* on a toothfishing trip to South Georgia earlier this year. Here's her report.**

In November 2018, I read that Argos Froyanes had launched two new vessels for toothfishing in the Ross Sea. *Argos Georgia* and *Nordic Prince* are state-of-the-art longliners, 54 metres long and with a crew of around 25.

Designed with safety in mind, the vessels use a moon pool in the hull to haul the toothfish in, they are ice-strengthened and have incredibly modern technology. Fascinated with the new vessels, I contacted Argos to see whether they would consider taking a photographer on board and in early January 2019 I was completely blown

away to receive a reply – would I like to join the *Argos Georgia* on a three-week research fishing trip to the South Sandwich Islands in the south Atlantic Ocean?

I had a mad dash to complete my Personal Survival Training (Thanks Peter Maich from the Westport Deep Sea Fishing School for being so accommodating) before flying to the Falkland Islands, via Auckland, Santiago, and Punta Arenas, Chile. I was on board to photograph the crew, the fishing, and the beautiful scenery. The opportunity was a dream come true as *Argos Georgia* is the nicest vessel (fishing or passenger) that I have ever been on, but as it turned out it was also the biggest challenge I have ever faced, starting with the rope ladder to climb on board.

We sailed from Stanley, Falkland Islands, for two days down to Prince Edward Point, South Georgia for our inspection. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the South Georgia Government have specific requirements to be met which meant the inspection included everything from checking hooks and tori



Approaching South Georgia.



Tagging a toothfish for release.



Crew members packing toothfish.

lines, to flares, immersion suits and our fishing plans. In such a wild and valuable area, no chances would be taken. After passing our inspection we headed south to the fishing grounds near South Sandwich and the Antarctic Peninsula. Our research quota allowed for six lines to be set and for a certain number of fish to be tagged and released. An observer was on hand.

Despite medication, the seasickness was debilitating. On the bad days (of which there were several) I watched the world go by from my cabin window, wishing I could hold my stomach long

enough to be on the bridge or down with the crew. On the calm days I photographed icebergs, whales and seabirds from the deck. One of the noticeable differences on board *Argos Georgia* was the distinct lack of birds around the ship compared to any other vessel I have seen or been on board. Due to the moon pool hauling fish through the hull, the regulation of offal discharge and the bird mitigation devices, the seabirds were just not interested in our vessel. This is a huge breakthrough when seabird by-catch is an industry concern, and significant time and financial



A black-browed albatross.

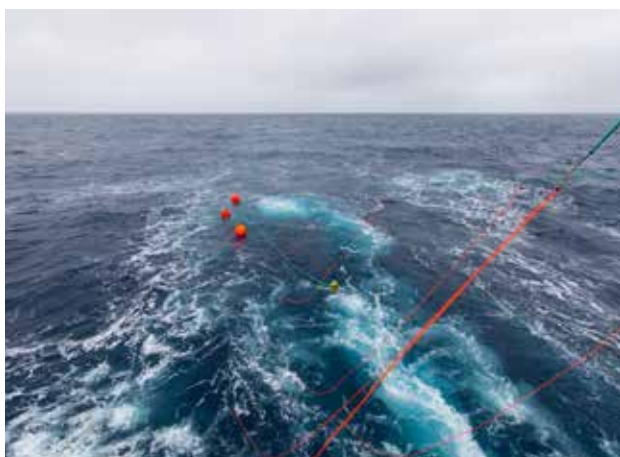


resource has been invested into improving statistics.

As part of my brief, I ventured down to factory where I watched the observers tagging and releasing toothfish, and the crew setting lines, preparing and packing fish to freeze. All processes on board *Argos Georgia* happen below deck so even in the roughest conditions the crew are safe. After working their shifts hauling and packing these massive fish, the crew relaxed in the mess to fantastic meals prepared by the cook – think toothfish, fresh warm bread, and apple tarte tatin for dessert.

After we had set and hauled our required lines, we rolled our way back to Stanley where I was quite ready to settle my stomach and extend my daily meals past water and orange juice. I will forever be thankful to *Argos* for giving me this opportunity and will always feel as though I could have done better but there are some tough lessons to be learnt at sea, especially down in the south.

*This is an edited version from The Photographic Wanderings of Tamzin S. Henderson. For the full story, many more pictures and other blog entries, go to [tamzinnz.com](http://tamzinnz.com)*



Tori lines and no birds at all.



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# Seafood New Zealand's roadshows heading to a port near you

**Seafood New Zealand has begun touring the country's ports again with the 2019 roadshows.**

An initiative that started in 2018, the aim is two-fold – to hear about the issues concerning fishers and to relay the policy and governmental matters going on in Wellington that will impact the industry. The roadshows are also a vehicle to talk about the continuing trust and reputation campaign that is being undertaken on the industry's behalf.

This year, we are travelling with a videographer and you would have seen some of our “voices from the roadshow” filming on Seafood New Zealand's Facebook site. It is a valuable chance to tell stories from fishing ports around New Zealand and to highlight the contribution the industry makes to the

regions and the great job our people are doing.

Seafood New Zealand executive chair Craig Ellison, Fisheries Inshore chief executive Jeremy Helson, Seafood New Zealand chief executive Tim Pankhurst and Seafood New Zealand communications manager Lesley Hamilton have visited Napier, Gisborne, Nelson, Tauranga, Auckland and Lyttleton already – with another six ports scheduled.

Interest in the Fisheries New Zealand discussion paper *Your Fisheries – Your Say* has been strong, with Helson leading the discussion on what will be the most significant changes to fisheries law in 30 years. The paper outlines proposals to improve law around landings and discards and deemed values, the penalty regime, improving the agility of decision making, and technical changes to the 1996 Fisheries Act.

We have attracted good crowds at all ports this year and look forward to seeing you at your place soon.





A close-up photograph of a fisherman's hand wearing a tan and blue striped glove, holding a thin white string. A fresh, silvery fish with a reddish-orange head and tail is suspended from the string. The background is a deep blue, textured ocean surface with small whitecaps and splashes of water.

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# From coast to capsule



Sea to Me's Active Inflammation Management product comes in bottles of 60 or 120 capsules.

**Packed with a long list of health benefits and inflammation management properties, the latest nutraceuticals brand Sea to Me is making waves amongst consumers. Emily Pope speaks with Sanford on the debut of its brand and how Greenshell mussels make the journey from coast to capsule.**

With demand growing for marine extracts and the health properties they offer, entering the nutraceuticals market was an inevitable progression for Sanford.

In 2017, the group acquired Blenheim-based nutraceuticals company ENZAQ – a producer of high quality Greenshell mussel powder.

It was a move that really set the ball rolling, according to Sanford marketing manager Kate Wilkie.

"Nutraceuticals are something that we've explored, particularly in the science focused areas of the company for a long time," she said.

"It was very much about adding value – not changing what we catch or farm but adding value and diversifying away from the traditional techniques and products."

After nearly two years of development and trials, the result is a small green capsule that packs a big

health punch.

Consumers often believe the product is made from the shell, but the truth is different.

"It's a common misconception," Wilkie said. "Our product is 100 percent pure Greenshell mussel meat – some of the best."

It's good news for consumers seeking a super supplement.

Marketed as "nature's multivitamin", just two capsules of Sea to Me each day is said to support joint mobility and assist in managing inflammation. It's also rich in omega 3s, essential amino acids and Glycosaminoglycans (GAGs) – a form of complex carbohydrates which aid in the management of joint health.

"We've received amazing anecdotal feedback from our customers in terms of how much the product has helped them, so we are working on researching the properties in more detail so we can talk to that," Wilkie said.

A capsule format was chosen mostly for consumer convenience but equally for delivering a neutral taste, minimal odour and quick absorption by the body.

"You only have to look at fish oil to understand. You could eat more fish, and probably should, but marine supplements are a popular choice because of the nutrients they offer in such a compact form."

The journey begins with locally grown mussels from Sanford's Marlborough Sounds farms, where they are harvested and transported to the



processing site in Blenheim.

ENZAQ begins by converting the meat into a liquid form – a bit like a mussel soup, Wilkie said.

Using a unique flash-drying process, it takes as little as three minutes to transform the mussels from a liquid into a fully-digestible powder.

The powder is then shipped off to a dedicated site in Nelson, where it's encapsulated in green-coloured vegetable capsules, bottled and delivered to the consumer.

Nothing else is added.

Having the ability to follow the product from coast to capsule is Sea to Me's real point of difference, Wilkie said. It ensures the company delivers a high-quality, premium product every time.

"Other supplement companies may buy ingredients from Europe or Asia, encapsulate it here, then send it back overseas.

"We're not relying on other ingredients, suppliers or people to process those ingredients – we own the whole supply chain and have complete control over the process."

Supplying a pure product that customers have confidence in was a core consideration during development.

"We are constantly looking to improve. It's not just about a premium product, it's also about providing the consumer a level of transparency they might not get with other nutraceuticals.

"The Sea to Me team really cares about doing the best possible thing. We don't take any shortcuts, we don't use any fillers or additives and we work hard to make sure that everything we put out is of the best quality," Wilkie said.

That level of care also extends to the packaging, with the bottles made from 100 percent kerb-recyclable PET plastic. The cardboard box is recyclable too and the freeze-dried pouches compostable.

"Sustainability is a massive concern. We are constantly reviewing what's new, what's out there and what's best practice."

Sea to Me's e-commerce site went live in November, followed by an official launch in February. Having only an online platform caused a little uncertainty at first, but the response has been overwhelmingly positive.

Bright, fresh and simple to navigate, the website is easy to order from and appeals to the modern consumer.

The brand's sole product, Active Inflammation Management, is available to order online in 60 or 120 capsule bottles and if customers like it, they can sign up to a subscription service to receive the product every month without the hassle of re-ordering.

**"We don't take any shortcuts, we don't use any fillers or additives and we work hard to make sure that everything we put out is of the best quality."**

"People really like that, because it's a product that works best when taken on an ongoing basis," she said.

A 14-day trial offer also removes the purchasing barrier and provides customers the opportunity to try something they ordinarily might not.

"It goes back to the integrity piece of being confident that our product works."

With one successful product underway, Sanford already has its sight set on bigger things.

"There's massive potential for growth from the facility and the Sea to Me master brand.

"It's an exciting portfolio we're developing, including a number of different products in the nutraceuticals category."

These products will extend beyond just mussels, using other marine extracts that will form part of the larger Sea to Me range.

"It's an exciting opportunity for our team to make marine extracts and their benefits more available to New Zealand consumers," Wilkie said.

"The launch of Sea to Me is the first step in us achieving that."

*To order Sea to Me, or to try a sample yourself, visit <https://seatome.co.nz>. Enter the code 'SeafoodNZ' at the checkout for a 10 percent discount.*



Greenshell mussels from the Marlborough Sounds are used to produce Sea to Me.





# Your Fisheries – Your Say, a long time coming

Tim Pankhurst



## **The most significant changes to New Zealand fishing law in 30 years are proposed in a Fisheries New Zealand discussion document released earlier this year.**

Submissions on the Your Fisheries – Your Say paper closed on March 17 and while there is industry disappointment at a very short submission period and a lack of detail in the paper itself, the industry would do well to welcome this discussion with open arms, because it has been a long time coming.

The discussion paper covers issues that have been a thorn in the industry's side for decades and been the subject of hundreds of meetings and countless working groups – with no result.

So, despite the paper's shortfalls we should be relishing a chance to get these issues sorted.

The paper's most important aspects are the discussion around landings, returns to the sea and the penalty regime.

Three options are offered around landings and returns, with the thrust being to incentivise fishers to be more selective in their catch.

FNZ admit that the current law is inconsistent, unclear, and hard to comply with.

Option one is to tighten the rules around returning fish to the sea (discarding). All quota management system (QMS) stock would have to be landed, unless they had no economic value – for example, ammoniating sharks. This option would also necessitate removing the minimum legal-size (MLS) requirement and smaller fish that were dead

would still have to be landed. It would also mean all catch would be covered by your Annual Catch Entitlement (ACE) and therefore disincentivise fishers taking small fish, presumably through new, improved fishing methods.

It is worth noting, however, that most fishers are already using larger mesh and using new technology to avoid smaller fish, particularly in deepsea with Acoustic Optical System (AOS) and Precision Seafood Harvesting (PSH).

Option two appears to be less favoured by FNZ but offers increased flexibility for fishers to return fish to the sea. MLS would be retained for those fish currently covered and extended to new species. The rules around which fish could be legally returned to the sea under Schedule 6 would be reviewed to enable fish of lower economic value, compared to the rest of the catch, to be returned.

Option three is purely the status quo, which no one in industry believes is the answer. With the rollout of electronic monitoring and reporting and the likely introduction of some form of cameras on vessels, the current regime is untenable – as FNZ admits, it is difficult to comply with.

FNZ has rated all options against a number of measures; whether the option is practical for fishers, has incentives to reduce unwanted catch, is future-focused and efficient and whether it improves sustainability. Option one gets a high rating for all measures and Option two has two mediums and two lows.

On the issue of the penalties, FNZ proposes to introduce infringement notices for lesser offences, rather than the current system which requires

lengthy and expensive court cases in illegal discarding cases. As FINZ points out, the current penalties regime proposes the same penalty for someone who discards 10 fish as it does for someone who discards 1000 fish.

Currently, a fisher may return fish to the sea in certain circumstances; when the return is part of a fish that has been processed on board, when



Tim Pankhurst

the return was necessary to ensure the safety of a vessel, and when a fisheries officer or observer authorises a return. The paper proposes that fisheries officers or observers not be permitted to authorise any returns to the sea outside those circumstances.

It has also proposed that a new defence be introduced and that is to allow returns to the sea in order to save a protected species. This was sparked by a 2017 incident where a Sanford purse-seiner dumped 30 tonnes of mackerel in order to save a pod of dolphins that had become caught in the net.

So, some sensible proposals but a lot of work to do. The discussion paper is a good start.

However, none of the options are fit for purpose.

A hybrid option that incorporates reporting all catch, returning to the sea where practicable and adjustment of the TACC accordingly is the most sensible approach.

In this case, we would support an option four and would welcome contributing to its development.

Timing is tight, but we have been talking about these issues for 10 years or so and a good amount of work was done by a working party over several years that was subsequently discontinued.

We strongly urge that there be a further opportunity for the affected parties to respond prior to when legislation is drafted later this year, as proposed.

The rationale for that is that there is likely to be a formidable amount of operational detail that will have to be dealt with. This will impact primarily on those fishers at sea but also could have significant implications for quota holders, ACE fishers, licensed fish receivers, retailers and the regulator.

In some cases, different fishing methods or alterations to gear may be required.

These are complex matters and it is in everyone's interest to have practical long-term solutions and a well-considered and agreed transition process.

*Tim Pankhurst is chief executive of Seafood New Zealand.*



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# The innovation

**The hunt is on to find a replacement model for a programme begun in 2005 to drive seafood industry research and innovation. LESLEY HAMILTON reports.**





# revolution

## A partnership that has had a leading hand in changing many aspects of New Zealand's seafood industry for the better is entering a new era.

The industry and the Government have invested \$48 million on research and innovation since the inception of Seafood Innovations Limited (SIL) in 2005. Now the two-stage government funding programme has reached its closing phase.

Initially, the funding was via the Foundation for Research, Science and Technology (FRST) and subsequently the Ministry of Business, Innovation and Employment (MBIE).

SIL is a partnership owned by Seafood New Zealand and Plant and Food Research. However, the MBIE project ends in June next year.

SIL general manager Anna Yallop said research that added value to the seafood sector came in many guises.

"It can be research that leads to the creation of new products for the sector, saves costs for the industry or enhances products that are already in the market."

SIL, through MBIE, funds 50 percent of research and companies the other half.

Yallop said the money that SIL receives goes to pay the research providers.

"All of the funding goes to research organisations like NIWA, Cawthron or universities or companies that can provide specific engineering, science or software development for specific projects. The kind of work that a company can't necessarily do in-house – they might not have the equipment to do it and they might not have the expertise because it's not business as usual."

And, surprisingly, it is less about making use of any waste created by the sector.

"The seafood sector is one of those industries that does something with pretty much everything. They turn by-products into fishmeal, fertiliser or fish oil, so they don't have a huge volume of waste that gets dumped. The driver is often about saving costs or getting more value from the raw product rather than minimising waste."

But SIL's research projects are not just about by-products.

"It could be finding ways to improve processes on board vessels, minimising by-catch, finding ways to find why a species is not thriving in an area – it has to have some type of novelty and requires some scientific stretch."

"It could be a new way of doing something – a new way of developing a product that is already in market. It could be a cheaper way or a more efficient way or a method for processing that retains some bioactivity that a different process might not."

Yallop said companies across many sectors were increasingly approaching research organisations and universities to do more innovation and there were a number of reasons.



"They are realising that even though you are good at making primary sector products there is further leverage to be had. New Zealand is known for having safe food products, that clean green element, so it makes sense for companies to develop new products or enhance products they already have by telling more of a New Zealand story around it."

However, the big driver is certainly value.

"They need to look at a whole-of-resource approach. By minimising the parts of product that you get no value out of you get more value out of what you have."

"So, if they can eke a bit more value out by handling products differently that can save costs. If you have a product that is being roughly handled and it gets downgraded changing and improving your processing techniques may mean you can sell it at a higher price."

"If you think about the regulatory costs for processing products, the cost of landfill, the cost of waste water, the cost of people. You've already invested all that money into processing you may as well get the most money out of it as possible."

There are also companies that are driving innovation in a more sustainable way because it is important to both their company and their customers.

"It's a combination of saving costs and social license, as being environmentally responsible has a spin off for the bottom line as well," Yallop said. "For example, companies are really looking hard at plastics at the moment and there are a range of solutions that are being worked on by industry whether it is minimising, re-purposing or looking for alternatives to plastic. It is certainly a hot topic."

Companies are getting into new areas as well as they increasingly realise that they can de-risk their current



SIL general manager Anna Yallop.

operation by adding products and markets.

"Partnering with people who want to make use of the seafood sector's raw material is a real trend. If you are in the business of processing fish and you want to stick with that, that is fine, but companies are now getting together with new companies to develop products in a

totally new space, or branching out on their own into new areas."

"Going it alone with a new venture is all very good if you have the wherewithal to put in new infrastructure or a plant to develop different products for your company but for others it is often better to partner with someone else. Similarly, companies often can't justify having their own in-house experts in niche areas and there is value in being able to tap into universities and research institutions as and when you need them for specific expertise."

She said once you found your way into one research organisation, that organisation has a network of other places that you could tap into for subsequent ventures. SIL could help by pointing people in the right direction, locating specific companies they needed and linking them with scientists, engineers, funders and investors.

The benefit of doing a SIL-type project was that the researchers managed the project, Yallop said.

## Maximising mussels

North Island Mussels Ltd (NIML) is a good example of companies using external research providers for a range of R&D projects with commercial value. With co-funding from the Bioresource Processing Alliance, NIML worked with engineers and scientists from Callaghan Innovation to develop uses for their marine waste stream.

The researchers determined the composition of each by-product and developed prototype products for the company to develop into full-scale production. NIML has that work in progress and expects to have commercial offerings in place within the next 12 months.

In addition to this project, NIML has co-funded further research projects with SIL that investigated methods for improving its mussel harvesting and processing methods using various engineering techniques. Once again, engineers and scientists at Callaghan Innovation undertook the work alongside the company with each project having the potential to provide hundreds of thousands of dollars in increased returns.





## COVER FEATURE

"I am a great believer in not distracting businesses from their core business because a lot of these ideas can be quite high-risk. The idea might have been bubbling away for years but the companies have not had the energy, expertise, time or resources to do it. So utilising SIL, which offers 50 percent funding and manages the project while you get on with your business, is valuable. There is also value in having independent research organisations involved in product development as it often helps with regards to substantiating future claims on your product."

SIL has a healthy stream of projects in the pipeline. There is still funding available on a quarterly basis before the partnership ends next year, but Yallop advises not to leave applying until the last minute.

The first step is finding the right research organisations to do the work, and that's something SIL can help with.

"A lot of companies don't know who to talk to or where to start, so we can find the right combination of scientists, developers or engineers you need to get it to work," she said.

The proposal is written, jointly with the company and researcher, or, if the proposal is over \$200,000 SIL can fully fund the proposal write-up.

"Often companies don't have the time or resource to write their own proposal. That's a service that SIL offer so companies can get on with doing their own business. The proposal will focus on a range of things



Plant and Food research scientist Maren Wellenreuther is researching ways to develop marine fish into farmable species.

including the technical stretch, which means how difficult it is to do and the ability to deliver the project on time and on budget.

"It also focuses on pathway to market, although not all projects have one. If it is a project looking at how to avoid marine mammals in nets that's not going to necessarily have an end product but is still worthy. However, if the end result is a product it will need to have a plan to actually get that into market.

"It also focuses on what benefits to Maori there might be and how much engagement with Maori has gone on. And the proposal must also demonstrate that the project shows a significant benefit to the sector and/or whether capability and expertise is being developed, or there are any environmental or sustainability benefits," Yallop said.

The proposal goes to a research advisory committee which scores it against those measurements.

"These are very experienced people from industry, people who have worked in government and academia and science. They rate the proposal and then make a recommendation to the Seafood Innovations Ltd board which makes the final decision over whether the proposal is accepted for funding. We prefer to do large projects, requiring funding of more than \$100,000 but there is no minimum or maximum – it comes down to how much co-funding the companies can put into the project and the overall value the project will have."

Any intellectual property developed from the projects, as a rule, goes back to the companies co-funding the projects.

So, what happens when the partnership and funding expire in June 2020? Yallop said she was already

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exploring options.

"Part of my role is to work on how a business model could work after 2020. In my discussions with companies there is a real need for a SIL-type model, particularly at the applied end. Things like product development, providing independent assessment of a product will still be needed by the industry after this programme expires. By mid this year I hope to have a plan in place for how that could look because certainty for industry is important."

## Speeding up seabed recovery

Finding innovative ways to speed up the recovery of the seabed under fish farms is being investigated as part of a project funded by Seafood Innovations Limited (SIL).

The seabed sometimes needs to be fallowed (rested) following a period of farming, resulting in production losses estimated to be \$250,000 for every month a company's fish farm licence is out of production.

A first stage SIL project undertaken by the Cawthron Institute and co-funded by New Zealand King Salmon, Sanford, Ngai Tahu Seafoods and Akaroa Salmon has identified methods to remove the sediment to accelerate seabed recovery. It was found that managing the removal of the sediments, rather than allowing nature to take its course by leaving the seabed untouched, sped up the seabed recovery. If this is successfully implemented in a full-scale operation, farm fallow times could be substantially reduced.

As part of the initial project, Cawthron tested a range of potential methods including irrigation with oxygenated water and removing sediment. The next stage involves trialing sediment removal at a semi-commercial scale with vacuum dredging technology, all while following strict conditions to mitigate any potential environmental impacts.

The success of the programme will be determined by evidence of improved seabed recovery. Additionally, low-risk environmental effects, potential uses for the biodeposit sediments in land-based applications, and the ease of use and cost effectiveness of methods used during the project will be considered.

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## Saving seabirds

Ensuring that baited hooks sink below the depths at which seabirds feed is a key mitigation strategy for surface and bottom longline fisheries. Current mitigation methods include deploying tori lines, setting at night or using weighted hooks which are designed to reduce the risk of seabirds accessing baited hooks during setting operations.

A collaboration between Fisheries Inshore NZ Ltd (FINZ), Seafood Innovations Limited (SIL) and The Department of Conservation (DOC) is deploying "wet tags" attached to the fishing gear to record the sink rate and ongoing depth of the gear in the water.

The work involves the deployment of the hardware and software on board participating vessels, analysis of the wet tag data and the development of an adaptive management tool.

The wet tag is a small, low-cost logger which records and transmits automatically.

Increased information on seabird captures in relation to the position of the line will enable seabird risk assessments to be updated to reflect the realities of the interactions of these fleets with seabirds. Information will be available for industry to demonstrate transparency regarding its ongoing commitment to mitigating seabird bycatch.

Information from the tags will be aligned with the ER data to provide information to fishers on catch rates associated with how the gear operated in the water.

The roll-out of electronic reporting on the New Zealand fleet means the fisher will be able to download the data from the tags once the gear is hauled aboard and, if a seabird

has been captured, adjust fishing practices in order to avoid more captures.

The project is being conducted as a collaboration between Wellington-based company Trident, which will analyse the data, FishServe Innovations Ltd, the electronic reporting providers and Zebratech, which manufactures the tags.



Wet tags manufactured by Zebratech.



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# New role in CRAMACs

**Former MPI principal stock assessment officer Julie Hills has been appointed to a new role in the rock lobster industry, regional liaison officer for a consortium of four North Island CRAMACs.**

There are nine CRAMACs (management area councils) whose membership comprises catching, processing and export staff, with Hills to work with CRA 1, 2, 3, 4 and PHC 1.

Her role will extend across administrative and communication support for those CRAMACs and their constituents, coordination of marine biotoxin responses, supervision of industry-generated data collection programmes, advocacy to non-commercial regional stakeholder groups, and oversight of stock assessments and management procedure developments.

Hills has expertise in the development, management and implementation of research programmes –notably in paua fisheries over recent years.

CRAMAC 4 chairman, Graham Olsen, said the NZ Rock Lobster Industry Council and CRAMACs provided



Julie Hills.

fantastic opportunities to work in a busy, challenging, ethnically diverse and rewarding environment and Hills would be an important asset.

She began her new role last month and will be progressively moving around the North Island to introduce herself to the CRAMAC membership and outline her work programme for each region.



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# Bunting on show at Island Bay blessing

Emily Pope



*Mystique and Frances heading out to Tapu te Ranga Island. Photos, Nici Gibbs.*

Wellington's Island Bay Esplanade was abuzz when crowds gathered at the coastline to watch the annual blessing of the fleet ceremony.

Held as part of the Island Bay Festival, this time-honoured tradition has been going strong for over 50 years. Italian and Greek settlers adopted the ceremony after the *Santina* sank in Cook Strait, resulting in a loss of four crew. It's an opportunity for fishermen and their boats to be blessed by local priests and pastors, aiming to ensure a safe and bountiful season.

Fishermen from around the region decorated their boats with bunting and flags and put their throttles on full to zoom out to Tapu te Ranga Island. Spectators watched as the boats returned to be blessed by Rongotai MP Paul Eagle.

Food stalls, several bands, and a summer swim completed the atmosphere-rich February event, along with bagpipes and live commentary on the boats and their history.



*Locals and fishermen enjoying the Island Bay event.*

# 20th Rotoiti boat show a crowd-pleaser



A powered dining table tootles past *Lady Grace* (left) and *Baby Thunder*, both recently built in Whangamata by Harry Nordberg, to classic American plans.

Lake Rotoiti south of Nelson provided glassy water for the 20th annual NZ Antique and Classic Boat Show with 130 trailerable craft of all types taking advantage of the perfect conditions.

A record turnout of more than 3000 people visited the picturesque lake over the weekend of March 2 and 3 to view and enjoy everything from clinker-built rowing boats to highly-polished wooden speedboats, steam launches, jetboats, sailing dinghies and hydroplanes built for racing.

Event director Pete Rainey said the show had “sailed through some pretty poor weather” in the past, without ever cancelling, so it was great to have two perfect days.

“There’s no doubt we have a winning formula with displays on the land in the morning and the opportunity to chat to boat owners, then races on the lake in the afternoon.”

The top prize went to the unglamorous but historic 1934 clinker *Aurora*, which used to carry explosives from Nelson’s Boulder Bank powder magazine for the construction of Rocks Rd, which runs along the coast between the city and Tahunanui Beach.

Owner Dave Gollop has spent three years restoring *Aurora*, which he found in “a sorry state” in an old shed. It still isn’t quite ready for the water, but Rainey said it captured the essence of the show, with classic lines and a story to tell.

One craft that did make it on to the water – to the amusement of the crowd – was an upturned dining table powered by a Seagull outboard.



Racing “kneeler” hydroplanes that competed at Lake Rotoiti in the late 1950s and early 1960s.



# Training review proposes major shake-up

Cathy Webb

**Many of you will have heard about the Government's recent review of the vocational education system. A large focus of public discussion has been around the merging of all polytechnics, to create a single institute that will provide vocational education throughout New Zealand. However, the reform includes two other proposals, including a major shake-up for industry training and Industry Training Organisations (ITOs) and changes to the funding system.**



## What is included?

- A single national institute (New Zealand Institute of Skills and Technology) with regional campuses would be established, replacing the current polytechnics and institutes of technology. The new institute would provide vocational education, including workplace delivery, as well as foundation and other non-vocation certificates, diplomas and degrees, as the polytechnics do now.
- ITOs would not exist in their current form and would be replaced by Industry Skills Bodies (ISBs). these new organisations would have some of the roles of ITOs, as well as extended roles in some areas.
- A unified funding system that allows for all vocational education to be funded in the same way.

## What does it mean for the seafood industry?

The proposal is to give industry and employers a stronger voice and to ensure that training meets the needs of employers. ISBs are to provide skills leadership, and to coordinate industry efforts to identify and plan for future skill needs. They would set skill standards and moderate assessments as ITOs do now but would also co-approve programmes with NZQA and contribute to curriculum development.

The role ITOs currently have around arranging and supporting industry training is to be removed and placed with the vocational education providers. This is likely to be the New Zealand Institute of Skills and Technology, as while the proposals include reference to private training establishments and other vocational education providers, it is unclear how these will interact with the new institute or operate within the new system.

The proposal is to create a new funding system that would consolidate funding rates for education provision. The Government has indicated it will

work on the detail of the new funding regime after consultation, and so without that detail it is difficult to determine the impact. However, given that industry training is currently funded at a lower rate than other institute-based training, a unified single funding system can hopefully only be a good thing.

The proposal also includes a role for ISBs in providing advice to TEC on purchasing vocational education priorities and investment. It is not clear how employers will access or apply for industry training funding, nor is it yet clear how ISBs will be funded.

While many of the details of the proposals and how the new system may work are to be determined, from industry's perspective the review was critical, and it was good to see the review team given the mandate to rethink the vocational education system, and to propose such ambitious changes.

The consultation period closed on March 27 and Seafood New Zealand provided a submission, along with contributing to the Primary ITO's submission through the Seafood Industry Partnership Group and our participation on the ITO's Stakeholder Council.

*Cathy Webb is Seafood New Zealand's seafoods standards manager.*





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Don't take chances. Refer to the publication Cook Strait Submarine Cable Protection Zone. This is located on the Transpower website [www.transpower.co.nz](http://www.transpower.co.nz)

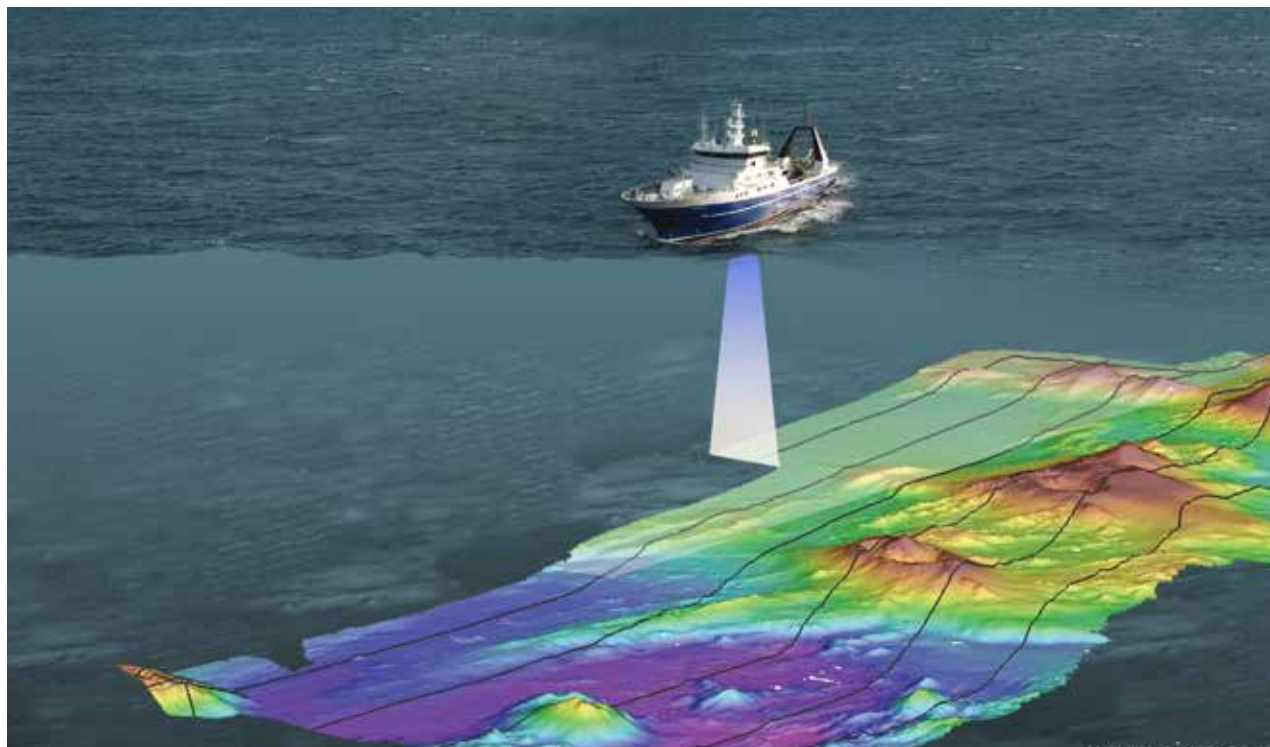
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# 'More than just science' in mapping project



A graphic illustration of how *RV Tangaroa* uses a multi-beam echo sounder to map the seafloor.

**Oceans cover 71 percent of the Earth and yet we know more about the surface of Mars and the moon than we do about the seafloor. An ambitious new project aims to change that. Emily Pope spoke to Dr Geoffroy Lamarche of NIWA on how scientists the world over are joining forces to map what lies under the oceans.**

With just over a decade to do it, the task of mapping the remaining 80 percent of the world's oceans is mind-boggling, says Geoffroy Lamarche.

But its potential wide-ranging benefits would make the high cost and challenging work worthwhile, he said.

Seabed 2030 launched at the United Nations Oceans Conference in 2017 and is a collaborative project between the Nippon Foundation of Japan and the General Bathymetric Chart of the Oceans (GEBCO).

The project has three core goals: to combine all existing bathymetric data into a unified database, to promote the collection of new seafloor data, and to

use this information to generate maps that are freely available to the public.

Fifty countries and 40 international organisations are backing it, along with the Intergovernmental Oceanographic Commission of UNESCO and the United Nations as part of its Sustainable Development Goal 14.

It's more than just a science project, Lamarche said.

"It's not just a bunch of scientists who want more data to publish – it's really for the benefit of mankind.

"This work will be key for understanding ocean circulation, for environmental management and for

securing the safety of our 'blue economy'," he said.

Four regional centres and one global centre will coordinate the mapping process.

A centre in Germany will map the Southern Ocean, centres in Sweden and the United States will be dually responsible for mapping both the Arctic and Northeast Pacific Ocean and one in New York will cover the Atlantic and Indian Ocean.



NIWA marine geologist  
Geoffroy Lamarche.

Lamarche leads the fourth centre, in New Zealand, which encompasses the South and West Pacific Ocean – from the west coast of South America to New Zealand and Australia – right up to Japan, China and South Korea.

This covers 124,000,000 square kilometres and includes the Exclusive Economic Zones of 39 countries.

Before mapping can begin, scientists must first establish a database. Each centre will focus on data discovery, data sharing and identifying and filling data gaps.

"GEBCO already has begun the process of placing freely available acoustic bathymetry data into its bank – these are factual, validated and ready to use," Lamarche said.

The problem is convincing the community at large, whether it be academics, fishers, governmental agencies or the shipping industry, to share their own bathymetric data.

"There's data that we haven't seen yet, but we know exists."

Often, it's privately owned by companies or organisations reluctant to release it for strategic reasons, or because it contains sensitive information.

"We know it's a non-negligible amount and without it, we risk mapping areas where data has already been collected," he said.

Areas where no seabed data exists, data 'gaps', is the third challenge.

This is exactly what Seabed 2030 wants to map.

"We know these gaps are big, but we don't know the full extent yet, or exactly where they are."

Lamarche and his team are relying on the contribution of private data in order to identify and fill these areas.

Mapping of the new areas will be the main focus in three to four years' time once collection of existing data is complete.

Acoustic technology will be the primary tool, Lamarche said.

The concept is relatively simple – Seabed 2030 will divide the seafloor into a large grid and use acoustic methods to determine the seafloor depth for each cell.

"If the cell size is too small, the project could end up with a number of cells without data. If the cell is too big, you run the risk of missing some really substantial features like channels, gullies and seamounts."

A multibeam echo sounder can emit a swathe of up to 800 high-frequency sound waves beneath the hull of a vessel. Each one has a unique frequency, meaning six or seven depths can be mapped in one go.

"We know the sound propagates at 1500 metres per second in water, we know when it was emitted, and we know when it returns. That's how we calculate the water depth."

With only nine percent of the ocean currently mapped in high-resolution, it's unsurprising that Lamarche and his team are constantly discovering new seascape features.

"During my last mapping survey, we discovered some gas seeps that were emitting bubbles all the way between White Island and the coast. We soon realised these were associated with submarine volcanism and geological faults.

"Another scientist mapping in the Arctic discovered iceberg scars on the seafloor that relate to the last glacial movement."

As data is collected it's sent to a global centre in England to be processed and converted into the final product – a bathymetric grid of the seafloor.







Geoffroy Lamarche (centre) with scientists from 14 countries who gathered in Wellington to discuss Seabed 2030.

Each region is only mapped once, and then the information becomes available to all. It's one of the project's founding principles.

The first map was published in March this year, but it is constantly evolving, with more data added as mapping occurs.

It's a little confusing, Lamarche said.

"The map will look complete, but some areas will be filled by satellite data and others will be true acoustic soundings.

"If you zoom into it, you will see it's blurred – meaning there's some features of the seafloor that are missing."

The satellite data will eventually be replaced by the richer, acoustic data as it's acquired, resulting in a more detailed and complete grid.

It isn't a cheap exercise.

The Nippon Foundation has pledged \$2 million a year for Seabed 2030 so far, but the total cost to complete the effort is estimated at a whopping \$4.5 billion. Even that would not be enough, Lamarche said.

"When you know that a big research vessel costs in the order of \$70,000 a day, we're not talking about a small amount of money."

Crowd-sourcing is one method the project is using, leveraging off resources that are already at sea.

With container-ship companies and the fishing industry traversing waters daily, they are in the ideal position to collect and contribute data, Lamarche said.

It's already happening with Dutch survey company Fugro, who partnered with Seabed 2030 in 2017. Four of its deepwater survey vessels have contributed more than 65,000 square kilometres of acoustic data and the company is already planning subsequent mapping trips with additional vessels.

"In six months, they have provided us with data the size of the UK."

Sea mining company Ocean Infinity has also chipped in, donating 120,000 square kilometres of data collected during the search for the missing Malaysian airliner MH370.

Lamarche sees New Zealand as the ideal location for intensifying crowd-sourcing efforts.

His dream is to equip every vessel that leaves New Zealand with a small echosounder. When they arrive back from their journey, regardless of its distance, the data will be downloaded and mapped by Seabed 2030. The process would be even simpler for vessels that already have echo sounders installed.

"The technology is there, but we need the money and the willingness of people to get involved in order for it to work."

Adding a few extra days onto existing surveys is another option being explored.

"We may be able to pay them for the extra days on the basis that they go and map specific sites.

"The fishing industry could be real leaders here."

GEBCO estimate it would take one vessel equipped with a multi-beam echo sounder 350 years to map the seafloor.

Developing technologies to make mapping more

efficient will be key in progressing the project. Autonomous Underwater Vehicles (AUVs) could address this issue, Lamarche said.

A bit like a small robotic submarine, AUVs are preprogrammed by a vessel, its mothership, and sent off on exploratory missions.

"The accuracy is better, the precision of measurements are better and you can operate several AUVs at one time.

"Instead of covering 10 kilometres in one pass, you could cover 50 or 70 kilometres."

A similar technology, Autonomous Barges (ABs), will also be championed.

Because multibeam echosounders are extremely large, it's not always possible to install these on a regular fishing boat or a smaller vessel.

Instead, ABs could travel independently for weeks on end to the remotest parts of the ocean.

The most difficult challenges are human, not scientific, Lamarche said.

"When I talk about Seabed 2030, I begin by asking the audience an important question – 'why should we care about the ocean?'. Everyone comes up with a different reason and they'll all be just as valid as the next."

It was same for Seabed 2030, he said. Understanding what's happening beneath the surface of the ocean is important for a multitude of reasons. It's not just important for scientists, but for the longevity of fisheries, jobs, companies and communities.

The project could be a tool for predicting fish counts, explain why fish are moving and the impact that ocean warming is having.

"If you know the type of seafloor, you've got a proxy for what you're more likely to find. Fishermen will use it all the time."

For Google, the map could help guide the placement of underwater cables and for the tourism industry, the map could indicate the best locations to dive.

Collaboration will be key for Seabed 2030's benefits to be realised.

"Everyone has different views on how they should manage and share data and they think the project is for an important cause, but what we really need is engagement.

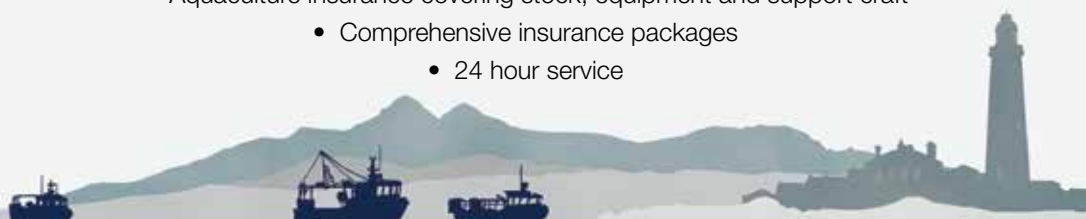
"At the end of the day, how do we manage our seafloor if we don't even know what's there? That's the bottom line."



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# Seaweed makes a splash



Seaweed volunteers at Baylys Beach.

Emily Pope

## Seaweed made waves last month, with thousands attending 248 sea-themed events around the country.

Baylys Beach in Northland kicked off the week-long festivities with a family fun day.

Hosted by the NZ Association for Environmental Education (NZAEE) and supported by Fisheries New Zealand, Seaweed sets out to renew New Zealanders' connection with the ocean.

This year's theme, *tiakina o tatou moana* – care for our seas – highlighted the impact of plastic, litter and other pollutants on marine life.

Hawke's Bay regional coordinator Jake Brookie said it was a good opportunity for people to take part in caring for the sea.

"People often see science as a school subject or profession, but science is a way of looking at the world – observing, questioning, testing and sharing, meaning we can all be scientists."

Cawthron Institute scientist Heni Unwin travelled up and down the country showcasing her interactive tool, a marine plastic tracker. Event-goers got to try out the prototype, dropping a piece of virtual plastic into the ocean to see where it ended up. Feedback will be used to help Unwin and her team develop the tracker further.

Dozens of keen swimmers turned up to the snorkel day activity in Nelson's Cable Bay. Organised by the Tasman Bay Guardians Trust, groups went out with qualified guides to learn snorkelling, experience the region's marine life and learn how to look after it.

The sand sculpture competition in Auckland was the highlight for national coordinator Mels Barton. Children of all ages worked together to create marine-inspired structures and this year's standards were exceptionally high, she said.



Judges Saffron Toms (left), Linda Cooper and Shane Henderson (right), awarding the Smith family with a kayak as the winners of the sand sculpture competition.





Senior Ocean Champion Challenge winner Lorella Doherty with some of the 10,000 cigarette butts she collected to raise awareness of marine pollution.

"I think the best moment was the faces of the family who won the kayak. They really didn't expect to win – it was absolutely priceless."

Two national and seven regional competitions were held as part of the week's events.

Lorella Doherty won the Senior Ocean Champion Challenge for raising awareness on how cigarette butts contribute to marine plastic pollution. She collected more than 10,000 cigarette butts over 10 days from New Plymouth parks and beaches, raising funds to publicise the issue.

Room six from Brooklyn School in Motueka were the winners of the Junior Ocean Challenge category for their "Amazing Race" concept where school students engaged in a series of 25-minute discussions on marine topics.

Ti Kouka class from Waiheke Primary School impressed the judges with their efforts to educate people on coral bleaching, earning them the joint title of Junior Ocean Champions. Room four students from Makauri School also joined the list of winners for their collaborative marine research with sustainable development organisation Nga Mahi Te Taiao.

Keen photographers submitted their images of New Zealand fish species as part of the Fish4all competition. Photos will be used to build a fish identification feature in the Fish4all app, which promotes awareness about sustainable fisheries.

Barton said the response to Seaweed 2019 was fantastic.

"We are getting more groups organising events every year, and many more repeating events year after year."

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# Bring on electronic reporting, says veteran skipper

Bill Moore

**After more than 35 years of fishing, Tony Roach is more positive than ever about the industry's future – and looking forward to the benefits of electronic monitoring.**

The 51-year-old Nelsonian who grew up in a fishing family and started earning at sea during the school holidays has built up a multi-million-dollar business that runs two boats and employs nine men.

Contracted to Talley's for 25 years, he owns the boats but no quota. As fresh fish trawlers his boats are limited to six days at sea but trips were getting shorter and shorter, he said, "because the fishing's so good".

By his own reckoning having spent more time on the sea than on land, Roach was involved in oystering and scalloping in the top of the South in the 40-footer (12metre) fleet and spent many years in the Cook Strait hoki fishery using the 15m *Pursuit* before buying the 21m *Corsair*. He's taken that boat to fish for orange roughly outside the 200-mile limit but these days mainly uses it in the West Coast hoki fishery out of Greymouth or Westport, Cook Strait, the upper East Coast and the lower North Island, fishing in areas three, seven and eight.

He keeps the young crew on *Pursuit* working the inshore fishery during the summer and then mainly on the West Coast targeting flats, cod and gurnard.

"It gives them experience and training with the

idea that they might step up to the *Corsair* one day," he said. "You can't afford mistakes on a bigger boat, it's just too costly. The *Pursuit* is a good training platform for them – not as much pressure, not as many crew."

One of the first with under 28m boats to trial electronic monitoring, using both the Deckhand and Olrac systems and finding strengths in both, Roach said the compulsory digital reporting being introduced this year could greatly benefit the industry.

He admitted to sleepless nights worrying about the loss of his intellectual property built up through his decades of fishing. It was more natural for fishermen to guard their best spots, sometimes even pulling up nets and moving when another boat came into the area.

But with the trust built up through longstanding relationships with quota owners to counterbalance that, he said he saw big advantages in having highly accurate, up-to-date information to improve fisheries management and to combat the industry's critics.

"We get a lot of people poking sticks at us and throwing stones, but most of it's just rubbish.

"Hopefully with electronic monitoring we can get a good picture of what's going on," he said. "We're just fighting the battle on so many fronts, we've got to stand together, get all this information together quickly and accurately and be able to say, 'That's not correct, this is how it is, and here's the proof of it.'"

At the same time, he and other fishermen are seeking guarantees that government agencies won't share the individual information that could undermine their ability to catch the fish, particularly the "marks" they've learned to use over the years.

However, the practical side of electronic monitoring was not a threat but an opportunity, Roach said.

"It's really good. It's simple and quick, it's a lot better than paperwork and you're not going to get so many mistakes because it doesn't let you put the



Tony Roach surrounded by electronics in *Corsair*'s wheelhouse.



Tony Roach with Corsair at the Talley's wharf at Port Nelson.

mistakes in when you're inputting. The beauty of it is that when you shoot and haul the mark you're already on the plotter, the position's already in, so all the repetitive paperwork that we have to do is going to go out the door. It's a time-saver, bigtime."

He said many fishermen had left school early and were prone to making unintentional mistakes with their paperwork, often simple things such as writing in the wrong date.

"We get a lot of forms sent back with basic errors, but it's costing the industry lots of money and time."

The electronic systems would do away with all that.

"We still haven't got to the bottom of the cost, but me and my skipper Les Eves are both on the same page – we can't wait to start using it."

He said it would help the business and sharing the data with Talley's would allow for the catch figures to be available every day, allowing pre-selling.

"That equates to better prices, planes can be

**"Our catch effort is going down all the time, we're doing less days at sea, less days fishing and we're catching our quota easier every year – our fish stocks are getting better."**

booked – it will just make the whole system better."

He is also hoping that the flow of accurate, fast information will allow for TACs to be lifted or lowered where they should be.

"With a bit of luck it will happen faster and instead of seeing a stock change of four to six species a year, we might see 30 or 40 TAC changes. We need

to manage our fisheries better and we need to make money where we can make money – and we just need to be more efficient."

Roach calls himself a passionate advocate for the industry, devoting hours to answering social media critics – and an equally keen recreational fisherman during his leave time. He is disappointed at the lack of support from officialdom when claims of overfishing or bad practices are made.

"Our ministry hasn't stood up and said no, you're wrong, our fish stocks are in good condition – 90-odd percent of our fish are caught from stocks that are sustainable and very healthy," he said.

"Our catch effort is going down all the time, we're doing less days at sea, less days fishing and we're catching our quota easier every year – our fish stocks are getting better."

The biggest problem was getting the fish in the right amounts to the factories and getting "top dollar" for it.

"We've got a set bit of quota on a bit of paper so the only way we can make more money is to reduce our footprint, reduce our fuel costs, and land our fish in better quality – so that all combines in bigger meshes, less discards, less small fish. We're working really hard to make sure that our fish quality is really good, our tows are shorter, and we're still catching more and more fish."

Sustainability and environmental effects were key issues for those left in today's fishing industry.

"People go on about us bottom trawling, it's a bad word, but at the end of the day, we're using a combination of rope and wire for sweeps and our trawl doors are all foiled like aeroplane wings, so they don't have to touch the bottom, or have only a light footprint on the bottom. Because for us, the less drag, the less footprint – everything we can do less, we save fuel and we make more money.

"The things that people point to – we're working so hard to make it better, because it saves us money. All that's a no-brainer."

He said when the electronic data was charted it would show that the inshore boats didn't fish a large area.

"We're continually going back to the same old spots, and we're catching our fish the same way –



A young Tony Roach with an albacore tuna caught off the West Coast.



## FACES OF THE FEDERATION

we'll be able to show them that and the information will be accurate and up-to-date and when they point the finger at us we'll be able to go, 'That's not right. The fish stocks are strong'."

The monitoring would also help fishermen and officials deal with the emerging problems around changes in water temperature that were affecting fish populations, Roach said.

For example, tarakihi and snapper were moving into more southern areas including off the South Island's west coast, and he'd caught snapper more than 20 miles off Farewell Spit. Such changes could force boats away from some areas because they didn't have quota for the fish they were unexpectedly catching.

"The goalposts are shifting all the time and I don't think any of us can keep up with it. This is another thing with the electronic reporting – the flags will come up so fast, it will just make management of the fishery so much better. Accurate information is the only way we're going to be able to move forward, to be quick enough to not send people broke and take advantage when we can, and pull back when we need to."

Roach strongly backs the Federation's efforts and particularly its call for unity.

"We need a voice, and that's kind of all we've got. One of the main problems in the fishing industry is that we don't stand together enough ... we should be backing one another, and we don't do enough of that."



Graham and Tony Roach with a fine pair of kingfish caught on a recreational trip.

His father Graham was a commercial fisherman, his brothers Mark and Dennis still are, and after so many years Roach said fishing is "awesome".

"I've had help, but I've had no handouts. It's all done off hard work," he said. "Every kilo of quota I fish I pay a lease on, ACE costs and government levies. I pay my share to be in the industry and I'm doing pretty well."

"It's just getting better and better. I just love fishing. The industry is in good shape and the people who are in it these days are good operators. We're striving to do better, and I think we're doing a really good job now."



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# From the president: Federation working hard on future management regime

Doug Saunders-Loder

It has been a busy time for the Federation over the past months as we get our heads around electronic reporting and now, the recently released consultation document *Your Fisheries – Your Say*.

We are working closely with Fisheries Inshore NZ (FINZ) and other SREs to develop a meaningful submission on the future of our fisheries management regime. There are major problems with MPI's understanding of the practical side of our business and the extent to what advice it might take.

It's interesting that the consultation document allows anyone the opportunity of providing an opinion in respect of commercial fishing, particularly when the authors themselves lack the necessary understanding of the business. This document is not about managing our fisheries – it seeks to manage us, and our fear is that everyone with a view on commercial fishing based on poor education or understanding gets to provide their opinion, regardless.

That said, we have presented our case strongly.



Doug Saunders-Loder.

We will continue to engage with MPI and work to streamline the system.

The industry has needed more meaningful engagement on the matter of managing "returns to the sea" (amongst other issues) for 30 years. This is at least an opportunity to do that, but the number of calls I have had over the past weeks relating to the submission document and the poorly-constructed line of questioning has been astronomical.

The Federation has supported the industry view that seeks better managing of landings and returns to the sea based on a landscape of improved electronic reporting and monitoring. Whilst we strongly support the need for the use of increased technology we remain concerned about MPI's lack of attention to detail and the silence that surrounds industry concerns about cost and the security of intellectual property.

In other news, we have been working with MNZ to develop a more closely aligned working group charged with resolving a number of practical issues that affect fishermen in their everyday lives. Rationalisation of costs on annual charges for certain survey requirements, colour-blindness, engagement on delivery and cost of tickets and a dedicated push from the Federation in developing a series of safety awareness resources is also high on the agenda.

Make sure that you take the opportunity of registering for the Federation conference which this year, will be held in the Copthorne Hotel at Paihia in the Far North on May 30, with the AGM to follow the next day. There will be the regular partners' programme on May 31, featuring a sightseeing bus trip for partners who don't want to attend the AGM.

Registration will be on the NZ Federation of Commercial Fishermen webpage at [www.nzfishfed.co.nz](http://www.nzfishfed.co.nz). Delegates will be directed to a dedicated registration page.

*Doug Saunders-Loder is president of the NZ Federation of Commercial Fishermen.*

# Know the signs of drug and alcohol abuse

**Workplace drug and alcohol use has the potential to pose a significant risk to the New Zealand commercial fishing industry, writes Kirk Hardy.**

Most vessel owners and operators don't have the expertise to recognise or manage an employee under the influence of drugs or alcohol.

New Zealand's larger, corporate, deep-water fishing operators have professional alcohol and drug policies in place and regularly drug test, but many medium to small independent operators remain unprepared and vulnerable should a drug issue arise.

Introducing policies, procedures, testing and rehabilitation programmes can seem mind-boggling when you just want to get on with the business of fishing, however, staff under the influence of drugs or alcohol can cause enormous damage to a commercial fishing operation and employers should not turn a blind eye to it.

Even when it's obvious a worker is under the influence, it can be difficult to know how to confront them. Situations can move rapidly from simple questions to a personal grievance lawsuit – and damage the skipper-crew relationship.

How do you approach an employee? How do you verify a worker is under the influence? What do you do when a drug test is returned positive? How do you prevent it from happening again?

At The Drug Detection Agency (TDDA) we recommend that fishing vessel owners and operators clearly outline their standards and expectations on drug use and testing and do it before the first day on the job. Make it clear that you are a drug-free workplace committed to staff health and safety.

These first conversations with employees must be consistent with your written drug and alcohol policy, which itself needs to be written clearly and regularly renewed to reflect a changing environment. If you don't have one, get an expert to create one for you. Also ask an expert for advice on drug screening.

A professional, accredited drug tester will put a regular programme in place and discuss what tests will work for you. They will let you know whether you need hair testing, on-site urine testing, urine collections and lab analysis – or a mix of tests.

Some corporate fishing organisations, whose crew remain at sea for long periods, are now using pre-



Kirk Hardy.

employment testing to help stop drug and alcohol issues from ever boarding their vessels.

It's important to note that pre-employment testing is focused on identifying substance use disorders. It helps identify long-term, consistent drug use and therefore risk, which is why hair testing is often used. Approximately 3.8 centimetres of hair can show the last 90 days of drug use. On fishing vessels, where severe workplace accidents can occur, it is important that drug testing be conducted by accredited companies and professionals. Don't take chances by relying on DIY kits.

Pick a scientifically-backed programme for the workplace that trains managers to identify someone under the influence and then shows them how to document the case. Good programmes will also come with easy reporting and documentation tools, such as an app.

As commercial fishing operators, you know the industry is one of the most dangerous, which is why you can't afford to tolerate drug use when people's lives and livelihoods are on the line.

*Kirk Hardy is the chief executive of The Drug Detection Agency, which has 57 operations throughout Australasia and has ISO 15189:2012 accreditation for workplace drug testing.*



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# Ups, downs, but no regrets for this old Fox

Chris Carey

**When knocked down by a dodgy accountant and failed business partnerships, John “Fox” Buchanan had the strength of character to pick himself up and start again.**

Born in 1942, Buchanan started life on a farm up the Turnbull River, 4kms inland from the Westland settlement of Okuru.

“We eventually left ‘Spooky-ville’ and moved to the Waiatoto, which was really where I grew up.”

I asked how he got his nickname.

“I was sort of hypo; I reckon I had that H2D3 or whatever it is. I hated afternoon sleeps. Mum would come looking with the dogs but I’d hide in the pigsty. My uncles said I was as wily as an old fox.”

While a school was eventually established in Haast, to young Fox it was just a distraction.

“I didn’t have much schooling. Mum loved the correspondence because it was good for lighting the fire. It was my uncles that showed me all the useful things like how to sharpen an axe and other practical stuff.”

He was just 12 years old when he went fishing.

“Freddy Cain was a roadman and with Dad away a lot at sea, he was like a grandfather to us kids. He had a clinker about 12-14 feet long and we’d work around Jacksons and the Flowerpot; sometimes out as far as Grouper Rock.”

Buchanan was sent to board at Marlborough College and while there, was introduced to scuba diving. Jacques Cousteau became his hero and the adventures of the *Calypso* kept him captivated. Back in Haast, he spent every moment of spare time spear fishing, freeing props fouled by pot ropes and looking for lost outboard motors.

The Cascade River and whitebait played a big part in the Buchanan family story.

“I remember my uncle and me catching 136 kerosene



John “Fox” Buchanan.

tins in one day,” he said. “They were coming up so thick they you couldn’t see the bottom of the net. We had 4 gallon kerosene tins with holes in them to drain the bait then we’d transfer them into ‘export tins’ which were nice shiny ones, and solder the lid. Sometimes we’d get piss all for them because there was so much about.”

When the whitebait weren’t running, there was always venison.

“We’d have to fly the meat out and I remember one time with Des Nolan in the Auster jam-packed with venison. And the dogs – they were jammed in too. You could hardly breathe in there. ‘Course when you’re working dogs on venison they’ll lose condition because there’s not enough fat in it. But it makes them fart – it’ll knock you down from a hundred yards. Well, we take off, got up a bit and they all farted at once. It’s not like you can open the door and get out.”

In 1959, aged 17, Buchanan went crayfishing with his father on the *Bonita*.

“One of the things Dad used to say was ‘never leave fish to find fish’ and by hell he was right.”

Recalling diving in Fiordland, Buchanan said the sheer undersea walls had ledges packed with crays, so the fishermen would tie the floats to the trees.

“The pots would swing in against the walls and the crays would crawl in. So we had half our pots inside to cover us if the weather was crook. If I wasn’t diving, I was climbing those slippery slopes lugging the fresh water hose, because the *Bonita* didn’t carry much water.”



Compass Rose in Greymouth.





*Cascade* off the West Coast, with the Southern Alps as a backdrop.

About 1963 his uncle Bill got out of whitebaiting and sold his shares in the *Cascade* Whitebait Company to Buchanan, making him a full partner in the family business.

Buchanan also bought the little *Cascade* off his uncles for £5000 (\$10,000).

"She'd carry the whitebait from the *Cascade* River to Jacksons before the airstrip was built. She was a beautiful bar boat, very full in the bow and I fished her for crayfish until I had enough money to put a £20,000 (\$40,000) deposit down on the *Compass Rose*. It was a massive amount and I was only 22 so Mum went guarantee for me."

Powered by a 150hp 6L3B Gardiner and built by Roger Carey of Picton, the 51-foot (15.5 metre) *Compass Rose* was launched in 1964.

Buchanan worked it out of Jackson Bay, chasing sole and crayfish with George Veale and his cousins Peter and Cliff Eggeling as crew.

"Mainly we potted for crayfish, sometimes we trawled for them when they were on the run. After one trip George went home and bought a house and a brand new Ford station wagon!"

Eyeing an opportunity to expand, Buchanan bought the *Jeanette*, built by Jack Guard of Nelson.

"John Hammond, my brother-in-law and the 'Cookie Monster', Barry Russ, ran her. He was a tough and very funny bastard."

"The *Jeanette* crayfished mostly because the only wet fish we could sell were soles and sometimes you'd couldn't even sell them. I remember they were only going to give us 1s 6d (15c) a pound so a meeting was called in the Gilmour."

A man was handing out towels, telling the fishermen they were to cry into. When he got to Buchanan he said, "Oh that's right, you've got two boats. Here's two towels."

With Buchanan becoming more involved with the whitebait business, his cousin Peter was given more responsibility running the *Compass Rose* when he was at the *Cascade* River during the season. Realising the potential in processing the catch and with both boats doing well in the inshore, Buchanan decided to get out of catching whitebait altogether. Prior to 1977, most of the

whitebait bought by the Jackson Bay Whitebait Co was sent to Feron's, Christchurch or Timaru, for freezing and eventual sale. Now approximately one-third was going to Westland Processors, Fox's new freezing and packing plant in Hokitika. The little *Cascade* was sold but was sadly lost while under tow to new owners in Wellington.

However, when his accountant was convicted for theft, Buchanan's world came crashing down.

"He'd been writing out cheques like there was no tomorrow. It turned out I was doing a whole lot better than I thought I was. Five or six big businesses in Greymouth also went under. He'd even stole from the church. People were running around with shotguns so the cops got him out of town before he was killed. Anyway, I got cleaned out. I had boats, no money and the tax department was after me for £10,000 (\$20,000)."

Facing bankruptcy, Buchanan went cap in hand to his bank.

"All I wanted was enough money to go to sea, 1000 gallons of fuel and enough for stores, bait and stuff. All I got was, 'There's the door'."

With the help of a local businessman, he secured a loan settling accounts with those who wanted payment and grateful to those who had faith and were prepared to wait until he was back on his feet. And that's when he went to sea for 16 weeks.

"Never got off her the whole time. It was a week past Christmas and we hadn't realised. Oh what did we have for Christmas dinner you ask? Baked beans on toast! The wire mesh pots were deteriorating and we were patching them with binder twine. Actually they fished bloody well like that."

It was after the fourth unload that they hit "the Run".

"It was sheer bloody hard work but I knew I had to do it or I was out the back door. I was lucky to have Peter and Cliff because they were hard working buggers. Now finally I could come home, pay all my bills with plenty in the bank. It was a fresh start."

With the *Cascade* Fishing Co as security and a suspensory loan from the Rural Bank, Buchanan began another venture, forming the Open Bay Fishing Co. Wanganui Boats won the contract to design and build two 70-foot (21m) trawlers. The steel *Cascade* slid down the



*Westbay*, mirrored in a glassy sea.



## SALT OF THE OCEAN



First boat, the little *Cascade*.

ways in 1980, the aluminium *Corsair* soon followed.

Designed primarily for the inshore with a freezer capacity of 40 tonnes, the large-capacity winches allowed the boats to move comfortably into other deepwater fisheries.

Now a director of four companies – the Cascade Fishing Co, Open Bay Fishing Co, Westland Processors (fish) and Westland Frozen Product (venison), Buchanan was burning out.

"I was stressed out of my head like a Gardiner starting to two-stroke so something had to give and I reluctantly sold the *Jeanette* and the *Compass Rose*."

With Greymouth their home port the *Cascade* and *Corsair* had to be good bar boats.

"They had big bluff bows, plenty of buoyancy in the forepart, not all flared out and pretty, so when you'd stop against that big wall of water, the rudder or prop doesn't come out and the wave goes past you. A heap of bloody spray coming over but it wouldn't be green."

In 1983, trawl surveys looking for orange roughy were carried out off the South Island's West Coast with disappointing results. The conclusion? There was no commercial fishery for orange roughy off the West Coast. Unconvinced, the Open Bay Fishing Co applied to the Fishing Industry Development Grant Fund Advisory Committee (FIDGFAC) and was given 160 tonnes of exploratory quota.

In 1985 another survey was done and this time 85 tonnes were caught sparking a coordinated three-week survey using nine commercial boats. They caught 260 tonnes, with the highest catch rates taken from the Cook Canyon.

"MAF continued to tell us there wasn't a commercial fishery down there but we knew there was; we just had to find it. And we did. We mowed those bloody things over. There was so much money coming in, it was amazing."

In 1993, Open Bay amalgamated with Westland Processors to form the Westbay Fishing Co. Two vessels were imported; the *Sandvik*, a Sweddishtwin-rigger, and the *Sette Marie* from Gottenburg, renamed *Westbay* and *Claymore* respectively.

It was while Buchanan and his wife were enjoying a break under the tropical sun that an ill-advised investment decision by his partners saw his world come crashing down again.

"Westbay Fishing Company, Westland Frozen Products – I had to sell the lot, boats and all, to bail the bloody thing out. It was so sad but I just wanted out."

Moving to Australia, the Buchanans bought the 65-foot (20m) *Aurelia*, sailing extensively around Australia's Top End and the islands of the Vanuatu group.

"Cruising on that yacht were the best years of my life."

Today, Buchanan's shed and his passion for woodworking keep him occupied during retirement.

Looking back, he said he'd been hardwired to trust people "when maybe I shouldn't have".

"I grew up in Haast where you went up and shook a man's hand. Your word was your bond."

But he didn't hold any grudges, Buchanan said.

"You know, we trained a lot of guys, gave them a leg up. Seeing them become very successful, well that makes me proud. I remember telling [Westfleet director] Craig Boote once, 'If you're going to make a move, poke the rock first to make sure it's solid, then make your jump'."

"I've always been willing to give it a go, to do my best. If you get knocked down, well the only way forward is getting back up, isn't it."

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# Conference registrations open

## Registrations for the 2019 New Zealand Seafood Industry Conference are now open.



This year the conference will move to New Zealand's tourism capital, Queenstown, with the technical day on Thursday August 8 and the conference on Friday August 9.

The theme is Blue Growth – Charting Seafood's Future, looking at how one of New Zealand's key primary sectors can best position itself for future growth and success.

Rabobank International's Gorjan Nikolic is the Sanford keynote speaker. Topics across the two days include the industry code of conduct scorecard, protecting property rights, fisheries management reforms, how a small and remote trading nation like New Zealand can negotiate the

tricky waters of international trade, electronic reporting, a preview of Ocean Bounty series three, and much more.

We have a great array of speakers. Details of the full programme will be available soon on the Seafood New Zealand website [www.seafood.co.nz/conference-2019](http://www.seafood.co.nz/conference-2019)

Seafood NZ has negotiated accommodation rates at the conference venue and neighbouring hotels. Details are on the website along with links to Air New Zealand for group flight bookings.

Get in quickly to secure accommodation and flights at reasonable prices.

# Calling all seafood industry stars



**Excellence and innovation in the seafood industry are again being rewarded with the Seafood Stars Awards that will be presented at the New Zealand Seafood Industry Conference this year.**

Seafood New Zealand chief executive Tim Pankhurst said the awards were a great way to reward innovation and excellence within the industry "and tell stories about our seafood, our people and our ongoing commitment to sustainability".

"We are seeking nominations now and urge you to select your star achievers and tell us why you think they are the best choice."

Seafood Star Awards will span all facets of the industry and will be presented to those who have made a significant contribution:

**Future Development Innovation Award**, presented to the entity that has developed a new technology that does one of the following:

- reduces waste by adding value to by-products or waste, or
- reduces adverse impacts on the marine environment of fishing or farming seafood, or

- reduces adverse impacts of fishing or farming seafood on protected species, or
- increases the efficiency of production of seafood, or
- makes a significant contribution to health or science

**Young Achiever Award**, presented to a person, 35 years of age or under, who has demonstrated that he or she has made a positive difference to the seafood industry, and has the potential to continue to develop as an effective and respected seafood industry leader or role model.

**Longstanding Service Award**, presented to a person who has demonstrated that he or she has made a substantial positive difference to the seafood industry over many years, and who has been a highly effective and respected seafood industry leader.

The awards will be presented at the 2019 New Zealand Seafood Industry Conference on Friday, August 9 at Rydges Lakeland Resort Queenstown.

Nomination forms can be downloaded at [www.seafoodnewzealand.org.nz/industry/seafoodstars](http://www.seafoodnewzealand.org.nz/industry/seafoodstars) or request from Karen.oliver@seafood.org.nz

**Nominations close on June 28.**

# 'Bluffies' in shorter supply

The much-awaited Bluff oyster season, which runs March to around August, is underway but the catch this year will be well down on last year.

The licence-holders have agreed to limit the catch to 7.5 million oysters, down from 10 million last year and just half of the Total Allowable Commercial Catch of 15 million.

There are 12 vessels fishing Foveaux Strait for the delicacy, the major player being Barnes, a cooperative of eight companies including Skeggs, Sanford, United and Independent. Barnes has around 65 percent of the catch with Ngai Tahu the next largest. Foodstuffs supermarkets also have a small holding.

Commercial oystering first began in New Zealand at Stewart Island in the 1860s but was closed in 1877 when the beds collapsed due to over-fishing. In 1879 oystering began again when larger beds were found in deep water closer to Bluff, mainland New Zealand's southernmost settlement at 46.4131° S, 168.3475° E.

The oysters are slow growing in the turbulent, freezing Foveaux waters and are around nine years old when harvested.

This year you will pay \$25 per dozen for the oysters in Bluff and around \$30 elsewhere.

And if you were hoping to attend the celebration of all things oyster in Bluff this year you will be disappointed. The Bluff Oyster Festival on May 25 is already sold out.



Some of the juicy Bluff oysters snapped up at last year's Bluff Oyster and Food Festival.





# Bluffie sliders



## Ingredients

- 1 cup cornflour
- 1 cup self-raising flour
- 1/4 teaspoon cayenne pepper, to taste
- 2 eggs
- 2 tablespoons milk
- 2 dozen fresh Barnes Wild Bluff Oysters, drained
- Vegetable oil

## Method

In a mixing bowl, add the first 3 ingredients; stir to combine. In another bowl, combine the egg and milk; whisk to combine. Dip oysters in egg mixture, then dredge in flour mixture. Add oil to depth frying pan or electric fryer; heat to 180 degrees. Fry oysters in oil until golden, turning once. Drain on paper towels and serve immediately.

## Plating

Cut a fresh brioche bun  $\frac{3}{4}$  the way through, open bun slightly and half fill with slaw, fry oysters and place four fried oysters on the slaw and serve immediately.

## Slaw Recipe Ingredients

- 1/2 head green cabbage finely shredded
- 1 large carrot, finely shredded
- 1/2 cup best-quality mayonnaise
- 1 tablespoon sour cream
- 1 tablespoon grated Spanish onion
- 1 tablespoon sugar (to taste)
- 1 tablespoon white vinegar
- 1/2 tablespoon dry mustard
- 1 teaspoons celery salt, salt and freshly ground pepper

## Directions

Combine the shredded cabbage and carrot in a large bowl. Whisk together the mayonnaise, sour cream, onion, sugar, vinegar, mustard, celery salt, salt, and pepper in a medium bowl, and then add to the cabbage mixture. Mix well to combine and taste for seasoning; add more salt, pepper, or sugar if desired.

Recipe courtesy of Barnes Oysters and Simon Henry, Chef at Emberz Restaurant, Invercargill.

## Sealord tightens iwi ties

**Sealord, 50 percent owned by Maori, has signed a new agreement to work alongside iwi in a partnership to create growth and value for both.**

The agreement Nga Tapuwae o Maui ('following in the footsteps of Maui') gives Sealord access to annual catch entitlement (ACE) of 36 iwi groups in a deal set to increase efficiencies and see greater than 80 percent of profits returned to iwi. The long-term arrangement is intended to provide stability for Sealord, which has invested heavily in new fishing technologies and modernisation of its fleet.

It will mean about 60 percent of the iwi quota held in deep-water fisheries including hoki, orange roughy, jack mackerel and silver warehou will be caught on Sealord's vessels. It will also provide iwi members opportunities for training and employment.

Ngati Porou Seafoods Group CEO Mark Ngata said the signing of the agreement was "a watershed moment" in the history of Maori fisheries.

"This unique partnership very much aligns with the intent of the Maori fisheries settlement, which envisaged Maori working collectively together, large and small, for the benefit of all. This is what our tipuna fought so hard for," he said.

Sealord board chair Whaimutu Dewes – also chair of Moana New Zealand which jointly owns Sealord – said while Sealord signed a similar agreement with some separate iwi collectives in 2014, this deal was different.

"This is not just about increasing returns – it is a business decision that is founded on tikanga Maori where all parties are taking learnings from earlier arrangements to better manage our fisheries assets."



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## Chathams paua plan agreed

**The Government, the commercial fishing industry and local communities have agreed on a new plan to reverse the decline in the Chatham Islands paua fishery. This marks the first localised management plan approved by a fisheries minister since 2007.**

The Chatham Islands paua plan covers procedures such as handling, harvesting and landing paua, biosecurity measures, protecting paua from theft, the use of underwater breathing apparatus by divers, access to the sea over private property and how to report shark sightings. Detailed management

measures will also be developed yearly for the fishery in a discussion with relevant parties.

Industry organisation PauaMAC4 developed the plan on behalf of paua quota owners and harvesters and with the support of the Chatham Islands community, local iwi and imi – Ngati Mutunga o Wharekauri and Moriori – and the Maori Fisheries Trust, Te Ohu Kaimoana. All submissions were in support during the consultation round and Fisheries Minister Stuart Nash also indicated his approval in a letter to PauaMAC4.

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## Primary sector export value climbs

**New Zealand's primary sector exports continue to exceed expectations with revenue forecast to grow 6.9 percent on the previous financial year.**

The Ministry for Primary Industries' Situation and Outlook Report for March forecasts primary industry revenue to reach \$45.6 billion for the year to June, three percent more than December's forecast.

Fisheries Minister Stuart Nash said he was heartened by forecasts of higher export volumes for seafood in key markets, especially China, the US and Europe.

"Growth in seafood export earnings from China has been phenomenal in the past four years. China

is a key market for our rock lobster, orange roughy, squid and mussels," Nash said.

"It's also encouraging to see mussel production and exports have recovered from problems with algal bloom in the Marlborough Sounds in mid-2018."

Seafood export earnings generally are forecast to increase 5.8 percent to \$1.9 billion in the year to June. Meanwhile, exports of innovative processed foods – such as vitamin and mineral tablets and dietary supplements – are growing faster than previously predicted.

## Court decision welcomed

**The commercial seafood industry welcomed the successful prosecution of the directors of Hawke's Bay Seafoods, saying illegal behaviour would not be tolerated by the industry.**

The three directors, Antonio, Giancarlo, and Marcus Giuseppe D'Esposito were fined a total of \$1,086,673 at Wellington District Court on charges relating to falsely recording and selling bluenose. The defendants were also ordered to pay \$418,500 in redemption fees for the return of four fishing vessels that were forfeited to the Crown after the offending.

Seafood New Zealand chief executive Tim Pankhurst has applauded the prosecution brought by the Ministry for Primary Industries and, at the sentencing, supplied a sworn affidavit to the court

condemning the behaviour.

In the affidavit, Pankhurst said there was no place in the industry for those who flout the system.

"We have a very clear code of conduct that says illegal behaviour will not be tolerated.

"This is theft – both from the people of New Zealand and the quota holders."

Further, the bluenose fishery the theft was committed in had been in decline and the unrecorded catch left a big gap in attempts to accurately assess the biomass, Pankhurst said.

"As an industry, we are collectively committed to transparency and doing the right thing. The actions by Hawke's Bay Seafoods undermine our efforts to be responsible guardians of the resource."

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# Economic review

of the seafood industry December 2018

Welcome to the latest update on the economic performance of New Zealand seafood. This edition provides provisional data for the year-to-date to December 2018.

## KEY RESULTS FOR THE PERIOD:

- Seafood exports for 2018 reached NZ\$1.817m, compared with NZ\$1.792m in 2017, however the volume of seafood products exported dropped by 10 percent.
- Export value to China grew by 10 percent compared with 2017.
- Export value of squid has grown by 46 percent compared with the same period in 2017.
- Seafood exports have dropped to seventh place on the list of top commodity exports.

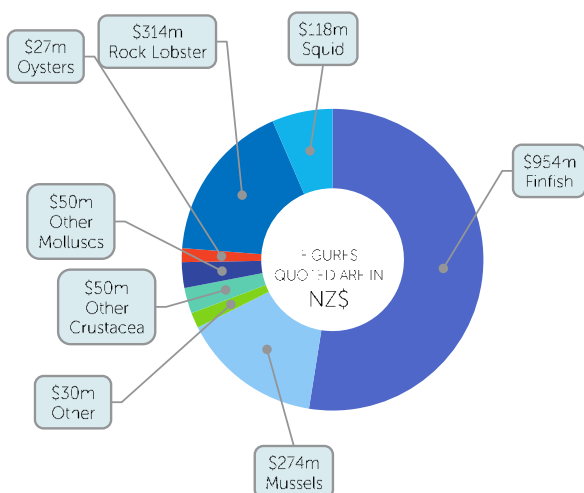
## EXPORT STATISTICS

### EXPORT NZ\$FOB\*

All figures in this section are based on export data provided by Statistics New Zealand and analysed by Seafood New Zealand for the full year to December 2018.

Seafood exports to the end of December 2018 totalled NZ\$1,817mil with more than 267,901 tonnes exported.

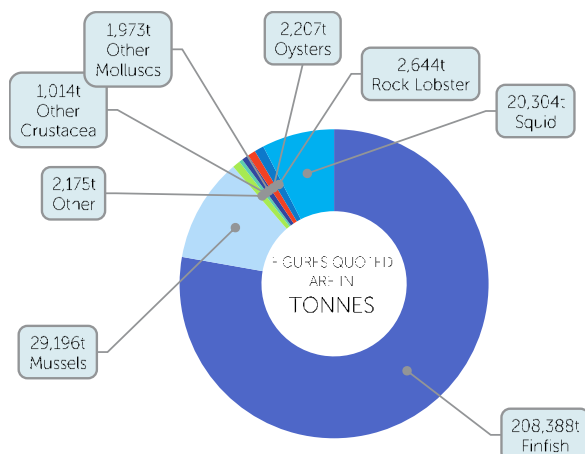
Export value (YTD to December 2018) =  
NZ\$1,817m



### EXPORT TONNES

Finfish species accounted for 77 percent of export volume with mussels accounting for 11 percent. Rock lobster and other crustacea make up a small proportion of export volume but contribute a significant percentage of the total export value.

Export volume (YTD to December 2018) = 267,901 tonnes



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

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

## EXPORTS BY COUNTRY

China, Australia and the United States maintain the top three positions as our key seafood export partners.

The graph to the right shows diversity in the mix of products for the top five export countries. Rock Lobster continues to be the main product by value exported to China.











### Top 10 Export Countries by Value (YTD to December 2018)

	Country	2018	2017	% Change
1	China, Peoples Republic Of	\$597m	\$541m	10 ▲
2	Australia	\$250m	\$243m	3 ▲
3	United States	\$221m	\$230m	-4 ▼
4	Japan	\$109m	\$114m	-4 ▼
5	Spain	\$62m	\$51m	22 ▲
6	Hong Kong	\$53m	\$56m	-5 ▼
7	Poland	\$45m	\$35m	29 ▲
8	South Korea	\$42m	\$51m	-18 ▼
9	Thailand	\$37m	\$29m	28 ▲
10	Germany	\$26m	\$32m	-19 ▼

## EXPORTS BY SPECIES

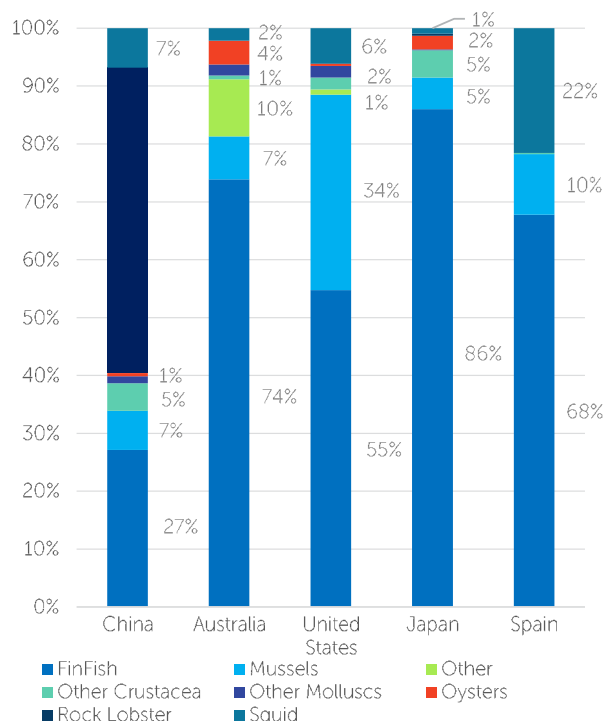
The export value of squid increased by 46%, for the 12 months to December 2018, returning to the values of 2016. Jack mackerel and ling have also increased in export value by 11% and 9% respectively.

### TOP 10 EXPORT VALUES (NZ\$)

	Species Name	2018	2017	% Change
	Rock Lobster	\$314m	\$281m	12 ▲
	Mussels	\$274m	\$308m	-11 ▼
	Hoki	\$234m	\$229m	2 ▲
	Squid	\$118m	\$81m	46 ▲
	Salmon, Pacific	\$77m	\$74m	4 ▲
	Ling	\$73m	\$67m	9 ▲
	Mackerel, Jack	\$68m	\$61m	11 ▲
	Orange Roughy	\$53m	\$54m	-2 ▼
	Paua	\$37m	\$36m	3 ▲
	Snapper	\$33m	\$33m	0








Source: Export data, Statistics NZ.

### Composition of Exports to Top 5 Trading Partners (YTD to December 2018)



## EXPORTS OF MAIN COMMODITIES

Exports of the main commodities for the 12 months ended December 2018 saw a 17% increase in export value on the same period for 2017, with fish, crustaceans and molluscs increasing by 10%.

	NZ EXPORTS OF MAIN COMMODITIES (NZ\$)	2018	2017	% Change
	Milk powder, butter, and cheese	14,337m	12,712m	13 ▲
	Meat and edible offal	7,433m	6,121m	21 ▲
	Logs, wood, and wood articles	5,239m	4,258m	23 ▲
	Fruit	3,232m	2,370m	36 ▲
	Mechanical machinery and equipment	1,840m	1,487m	24 ▲
	Wine	1,738m	1,557m	12 ▲
	Fish, crustaceans, and molluscs	1,642m	1,496m	10 ▲
	<b>Total Exports</b>	<b>57,521m</b>	<b>49,006m</b>	<b>17 ▲</b>

Source: Overseas merchandise trade, Statistics NZ.

\*Fish, crustaceans, and molluscs (excludes fishmeal & processed oils, powdered products)

# Auckland Fish Market launch



WWF chief executive Livia Esterhazy (left) with National Party Fisheries spokesperson Ian McKelvie and Seafood New Zealand executive chair Craig Ellison (right).



Greg Johannson (left) with Gary Hooper and Ian Proudfoot (right).



Auckland MP Phil Goff (left) with Fisheries Minister Stuart Nash and Sanford chair Paul Norling (right).





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SPD1, SPD8  
SPO1  
SSK3  
TAR1  
TRE7  
YEM1, YEM9

## QUOTA SHARES FOR SALE

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KIC2  
LEA2  
OYS  
PAD5, PAD7, PAD8  
PIL  
SUR7A

## CRAYFISH ACE WANTED TO PURCHASE

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CRA4  
CRA5  
CRA6  
CRA7  
CRA8  
CRA9

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Tenders close  
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5PM (NZST)

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## 61<sup>st</sup> Annual NZFCF Conference and Annual General Meeting



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**Thursday 30th and Friday 31st May 2019**  
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Go to [www.nzfishfed.co.nz](http://www.nzfishfed.co.nz) to register online  
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## FORMAL NOTICE OF MEETING

The 61st Annual General Meeting of the New Zealand Federation of Commercial Fishermen (Inc) on Friday 31 May 2019, at 10.30am  
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3 berths  
Toilet/shower  
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2 x net rollers  
Bottom long line drum. Surface long line drum  
Good electronics  
MNZ Survey 100 miles

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## #5086 TUNA LONG LINER

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