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December 2023 | Volume 31 | No. 06 | Issue 283

Here's to a summer of seafood

Westport Harbour – shaping a safe haven
for the fleet

Aquaculture on show in Canterbury



FirstMate Adverse Event Navigators

FirstMate Adverse Event Navigators: Supporting Our Fishing and Marine Farming Communities

At FirstMate, we deeply value our fishing and marine farming communities. We understand that unexpected events, like adverse weather conditions, can have a significant and lasting impact on mental health and wellbeing.

That's why we're here to offer a helping hand.

We've now got a team of dedicated FirstMate Adverse Event Navigators in the regions hit hard by weather events in early 2023, providing on-the-ground support for fishers and marine farmers from July 2023 to December 2023.

Connecting with you and your communities

These Navigators are deeply involved in your community. Join them at gatherings and BBQs, being held to connect our fishing and marine farming communities.

They'll learn from you, find out what you need and will be developing business continuity resources to enhance community resilience. Keep an eye on firstmate.org.nz for updates and more resources.

They'll be working with other organisations in the seafood sector, such as the Inshore Council, and other supporters such as the Rural Support Trust, to help address challenges impacting on you and the sector.

You can contact us anytime

Thanks to the North Island Weather Event Fund, established by the Ministry for Primary Industries (MPI), for supporting our Navigators.

FirstMate is committed to providing a strong support network for our fishing and marine farming communities, and our Adverse Event Navigators are here to ensure that you have the assistance and resources you need during challenging times.



**Adverse
Event
Navigators**

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EDITORIALS

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From the Chief Executive

Christmas is nearly upon us and for many, a chance to rest will be very welcome after the events of 2023, including cyclones, floods, and other threats to our lives and livelihoods. Of course, for those in the fishing business, Christmas is often a time of more work. The fishing continues and so does the processing and selling, as we focus on getting the best seafood on New Zealanders' tables throughout the festive season.

Another person unlikely to be resting over the festive period is the new Minister for Oceans and Fisheries, who was sworn in on 27 November. Hon Shane Jones is familiar to many as someone with significant experience in the seafood industry. Now, with coalition negotiations complete, New Zealand's new Government has indicated they are keen to get on with their agenda.

I said in my previous editorial in this magazine that seafood people are used to change. We have certainly seen a changing roster of Ministers in the last few years (four in 2023 alone). As an industry, we have worked constructively with all Ministers.

Given that Minister Jones has barely had a moment to get his feet under the table as I write this, we wouldn't want to pre-empt discussions yet to be had, but with the last few years of upheaval, the industry is looking for certainty and stability. What we want from any government is good policy that's grounded in science, and evidence-based management. This includes support for policy, research, and technological innovation across everything we do, from catching and growing seafood without adverse effects on biodiversity, to safe and efficient production processes, and streamlined cost-effective distribution to markets.

We look forward to working productively with Minister Jones on the important issues impacting the seafood industry, just as we look forward to working with everyone inside and outside politics who wants the best for our oceans, our people, and our community.

From next year, you will notice a slightly different look and feel to this magazine as we move to quarterly publications. I look forward to being in touch with as many of you as I can in the seafood world in the year ahead. In the meantime, I wish you the best for the festive season and for the new year. Meri Kirihimete from all at Seafood New Zealand.

Dr Jeremy Helson
Chief Executive

Aurora Fisheries building new factory trawler

Timaru-based Aurora Fisheries, part of the Solander Group, has commissioned a new 80-metre-long factory trawler.

The vessel is designed by Skipsteknisk in Norway and will be built by Tersan shipyard in Turkey – the shipyard's first vessel delivered to New Zealand. Skipsteknisk has previously designed Sealord factory trawlers *FV Rehua*, built in 1997, and *FV Tokatu*, built in 2018, as well as National Institute of Water and Atmospheric Research (NIWA) research vessel *Tangaroa*, built in 1991, and the Crown Research Institute's new research vessel *Kaharoa II*, currently under construction in Spain.

Aurora's new trawler is scheduled for delivery in late 2025, and will replace their existing one, which was not originally built for New Zealand waters. The new trawler will be built and fitted for single pelagic and demersal trawling. Its target catch will be southern blue whiting, jack mackerel, ling, squid and hake – for which there will be ample room in a 2,135 cubic metre cargo freezer. As yet unnamed, the new trawler will be 80 metres long, feature a state-of-the-art bridge and fish factory, and offer maximum energy efficiency. It will be able to accommodate up to 50 people, with spacious living areas and social amenities.



Artist impression of the trawler design by Skipsteknisk.

“Tersan Shipyard and Skipsteknisk have considerable experience in working together in the construction of deepsea fishing vessels. This gives Aurora the confidence to invest in such a significant step forward,” said Paul Hufflett, CEO of Aurora Fisheries.

Aurora Fisheries aims to target a range of species managed through New Zealand's quota management system. With just one vessel, the Solander Group is the smallest player in the New Zealand deepwater fishery, but has its own quota and accesses more through relationships with other companies.

SAVE THE DATE

2024 SEAFOOD CONFERENCE

7 – 8 August 2024, Auckland

Sharing for good measure - New Zealand fishers agree to share Moana Project



Moana sensor programme lead Dr Julie Jakoboski.

Commercial fishers deploying ocean temperature sensors have overwhelmingly approved making their temperature measurements publicly available.

Government funding for the sensor programme under the five-year Moana Project ends in March next year.

To attract continued funding, it is essential to make the data collected by nearly 300 fishing vessels throughout the country's oceans publicly accessible, according to the Mangōpare sensor programme lead Dr Julie Jakoboski.

"It's very difficult to acquire the additional funding needed if people don't have access to the data."

In September, those taking part in the programme were asked to sign new agreements allowing public access to the data acquired from the sensors attached to their fishing gear, or else return the equipment.

None so far have opted out and the opposite is the case - there is a waiting list of those wanting to join the programme.

The initial response was 40 signatures in favour representing more than 50 vessels, with none objecting.

The programme is supported by seafood industry groups Deepwater Council, Inshore Council, Southern Fisheries Inshore, NZ Rock Lobster Industry Council, Pāua Industry Council and Seafood NZ and all were consulted.

"If anyone has any questions or concerns I invite them to call me," Jakoboski says.

It was essential to get the trust and buy-in of fishers when the programme was set up. It was decided that the individual temperature measurements, relayed to a receiver on each participating vessel, would initially be retained by those who had attached sensors to their nets, lines and pots.

The technology and close co-operation between the science and commercial fishing sectors are world leading and is being closely followed internationally.

As of the end of October, the sensors had returned

over 25 million measurements.

The maximum depth was 1795m and the total time underwater by the Mangōpare sensors developed by Nelson-based ZebraTech has topped 74 years.

The MetOcean-led Moana Project has found that for the last two years average sea surface temperatures have been 1.6 degrees Celsius warmer than long-term records in all 12 project forecast regions dotted around the New Zealand coastline.

But the sensor programme's future is in doubt.

"As we know, there is only so much government funding available, so we are looking at all our options to try and keep this vital programme going," Jakoboski says.

"We did suggest the fishing sector pay for it but as some of the fishers pointed out, this is a public good. There are a lot of benefits to it and they are volunteering their time and their vessels to make it happen.

"New Zealand has by far the best collection of coastal temperature data in the world because of this programme and fishers have been core to this. Now the data is going to be available for people to use.

"That's a huge step. It's super exciting.

"I don't think I can overstate how much I respect and appreciate the fishers for choosing to take part and now to sign the agreement allowing widespread access. We couldn't have done it without you.

"It's widely recognised our oceans which are vital to the wellbeing of people everywhere, are changing and warming. If we don't understand the detail of that change we can't plan for the future or the consequences of that change.

"It's high-lighted all over the world that data is important, yet coastal marine temperatures are not well observed.

"The whole world is struggling with this issue and in many ways, we have solved how to cost-effectively gather ocean temperature data that our blue economy depends on.

"We have made a huge step forward in that the data we are gathering becomes more important as time goes on.

"We have the capability to do it now. In 10 years, we are really going to need information on changes over five, 10 years.

"We don't want to have a gap in it. We need to maintain it.

"Worldwide the Mangōpare ocean sensor programme is recognised as an exemplar that other countries should be emulating. There are many countries out there watching us to see what happens next.

"We can either set an example of ongoing long-term success or we can show we weren't able to maintain the programme.

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NEWS

"I feel a responsibility to make this continue."

The estimated annual cost to maintain the programme is \$400,000 to \$800,000.

"Four hundred thousand would provide a base programme to keep the data pathway running and get sensors recalibrated and redeployed to vessels after two years," Jakoboski says.

"That's bare bones. We won't be expanding the programme and our outreach will be less and that doesn't include the ocean forecasting component, something people can use to fish better, to plan for aquaculture.

"We really want to maintain the programme and we want to grow. There is lots more we can do, there is so much potential in a project like this.

"When we make our data public it's going to go to the global telecommunications system through the international fishing vessel ocean observation network.

"They want us in that system and we've had really positive feedback from them.

"I get emails from the world's top oceanographers saying this needs to continue, that we cannot let this stop."

Jakoboski was invited to present at an oceans symposium, Map the Gaps, in Monaco early last month, attended by some of the key organisations that support ocean research.

They included the Prince of Monaco's Foundation and the Schmidt Foundation, founded by multi-billionaires Wendy and Eric Schmidt, the latter a former chief executive of Google.

"Scientists are looking for ways to partner with fishers around the world," Jakoboski says.

She then went on to present at a workshop on low-cost inshore temperature measurement at Ifremer, France's top oceanographic institute.

"We have an opportunity to share what we've done so that other countries can learn from it," she says.

FishServe, the industry's independent administrative entity, is also supportive to the extent it proposes getting the sensor data onto its platform.

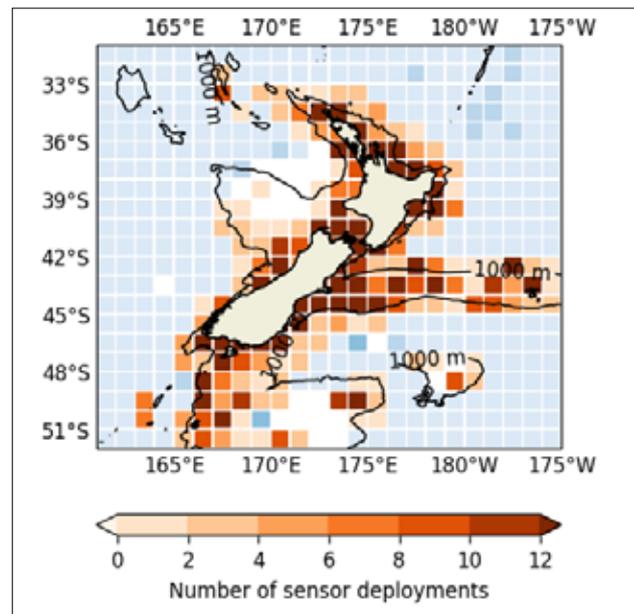
"We have a connection and a direct line of engagement with all fishers and all fishing companies," chief executive Caroline Read says.

"We are really keen to work with the Moana Project to see how we can share their data through our system.

"It makes sense to look for a way to provide a long-term and cost-efficient way to share the information so that it becomes part of the fishing industry's decision-making process.

"Things are changing in our oceans and the Mangōpare sensor data is going to help people navigate better.

"That's going to become increasingly valuable, as seen from the programme's reception across the



Number and location of sensors on fishing vessels in New Zealand waters.

world. As well as understanding our oceans better, it can support our industry to plan their trips with more information. When you've got good data you can make your trips more efficient."

Fisheries scientist Adam Langley on contract to Southern Inshore has been investigating temperature changes in Tasman and Golden Bays comparing Moana Project hindcasts to current sensor data and relating that to snapper trawl surveys.

"Trawl surveys occur in March/April when snapper are thought to be leaving Tasman Bay, so if that timing differs year on year then we could be getting a different sort of signal as to the overabundance of snapper," he says.

"There is some suggestion that is happening. In warmer years snapper will stay around longer in the bay so we could be possibly getting an overestimate of the abundance.

"If there is any longer-term trend – increasing water temperatures, longer summers – then that could be creeping into our assessment, so I wanted to use the Moana model to look at how variable the conditions are."

His conclusion is that there is nothing systematically occurring that gives concern that the trawl surveys are giving a false signal.

He says that apart from a Cawthron Institute buoy off the Motueka river mouth, there had previously been a lack of good temperature modelling in the bay.

"We are only just starting to realise the value of the Moana Project data and the application of it.

"There will be more useful applications.

"We are going to do something similar with hoki on the west coast."

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Post-cyclone project: logging underwater hazards



Pulling up an entire snagged tree – branches and all – from the waters off the coast of Hawke’s Bay. Image Karl Warr.

In the wake of Cyclone Gabrielle, debris and slash washed into the waters off Hawke’s Bay and Tairāwhiti Gisborne. Even 10 months on, debris has made inshore fishing fraught, if not impossible in some places. Now, a new project is contracting skippers to map where they encounter underwater hazards, providing them with much-needed income and a morale boost. Claire Williamson talks to one fisher involved in the project about how it’s going.

Napier-based fisher Karl Warr has been fishing for gurnard and flatfish in the waters of Hawke’s Bay for over 20 years on his modified trawler, *FV Chips*. He fishes fairly close to shore, which means locals are familiar with the sight of his boat.

Fishing in shallower waters also means the debris that washed into the bay in the wake of Cyclone Gabrielle has had an immense impact on Warr’s ability to fish – and has since February.

“I don’t have the capacity to fish far away from home. If we don’t catch, we don’t eat, so my first day

back on the water was five days after the cyclone. I put my gear down and had to stop after 15 minutes,” he remembers.

“It’s a psychological game, that’s the biggest problem. If you put your gear down and have a bad run of getting your gear caught on debris, your mind tells you it’s all like that. You try to be positive and evidence-based, to fend off thoughts that aren’t useful – ‘How long can I keep trying to fish with the resources I’ve got?’ It’s a heavy mental load that has only just started to ease up in the last month or two with the arrival of spring fish.”

From mid-October, Warr – along with five other fishers – has been participating in a hazard-mapping project led by Seafood New Zealand Inshore Council, supported by FirstMate and project-managed by Guard Safety, and funded through the North Island Weather Event (NIWE) Time-Critical Primary Industries Recovery Fund. About four days a month for three months, the vessels set out in pairs between the Hawke’s Bay coast up to the East Cape, identifying and mapping where underwater hazards lurk.

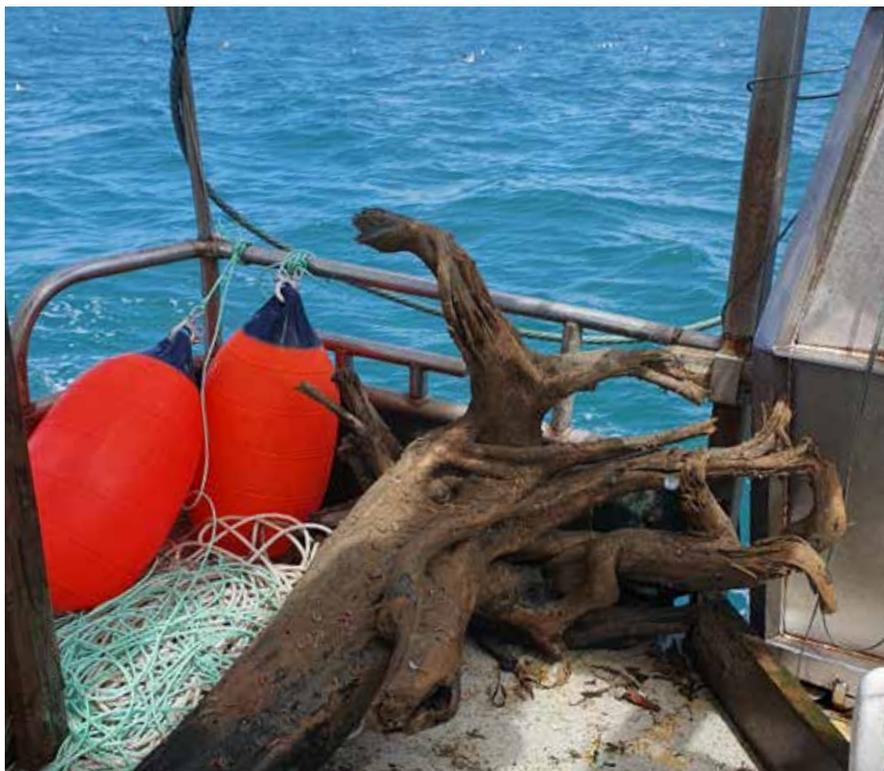
To identify where hazards are, the vessels tow with their normal fishing equipment bolstered with additional safety measures, such as quick-release ropes, should they encounter any significant debris underneath the water.

Participating fishers record their start and end locations, as well as their rough tow line and direction. During the tow, fishers also map any vessel stops or starts as well as when they run into targets – debris. Warr says after he runs into buried debris, he will often turn the vessel and go over it again a few more times to assess if it’s still a hazard or has been sufficiently dislodged. Items that can’t be pulled up and are still safety issues are also mapped and the information passed on to local stakeholders.

“It was reasonably nerve-wracking to start out with,” Warr admits. “You were going into the hornet’s nest, and you knew it. We had whole nets ripped to pieces or torn. But then some tows we’ve had no problems.

“We’ve found quite a lot of buried logs from native

“You were going into the hornet’s nest, and you knew it. We had whole nets ripped to pieces or torn. But then some tows we’ve had no problems.”



A hefty chunk of tree, with part of the root system attached, on the deck of the *FV Chips*. Image Karl Warr.

and exotic trees. Ninety-five per cent are buried with a little piece sticking out. Some act like an anchor and tear the bottom of your net out. Sometimes you can pull out the whole item – the other day we had two feet of stump with roots.”

Warr says the project has sped up the process of safely returning fishing grounds to use, which is especially important to bring business back to the region and ensure local food security should another weather event leave the Gisborne and Hawke’s Bay regions isolated again.

“This project has been much appreciated at my end and has had a massive impact in getting me back on my feet. It’s allowed us to go and open an area that fishers have been too anxious to throw ourselves into, or too hazardous to map on our own,” Warr says.

“It’s fairly bold of the government to have stepped in, so we’re hoping to set a positive example of how effective collaboration with industry can be. This is new ground for helping out fishers.”



A collection of logs, chopped down to a more manageable size, on Karl Warr’s vessel, the *FV Chips*. Image Karl Warr.

Seabird protection – the New Zealand difference



Bird scaring devices.

Baffles and bait management, pingers and hook pods, warp scarers and tori lines, lunar cycles, lumo leads, lasers, side setting, night setting, net tech and more.

There is a veritable A-Z of techniques and technologies to prevent seabirds from interacting with fishing gear. With a mitigation method for just about every situation, the rate of incidental capture in New Zealand waters is on a steady trajectory downwards.

On its own steady trajectory but upwards, is fishers' uptake of mitigation methods on vessels, says SNZ Deepwater Council's Ben Steele-Mortimer. With 90-plus species that breed in New Zealand, Aotearoa is known as the seabird capital of the world. We are also internationally renowned for the development and use of seabird mitigation

techniques, especially in our deepwater fisheries, says Ben.

"We have excellent information to work with, including observer-verified bycatch data in big fisheries like squid, and very strong data sets for protected species interactions.

"New Zealand is known for solid research programmes and robust academic review processes for published studies. Another point of difference is that government-led working groups that commission research are collaborative, with members from environmental groups and industry."

Then there are initiatives such as the Seabird

Smart Awards and the Southern Seabird Solutions Trust – typical Kiwi ways of finding solutions that will stick, Ben says.

The world is watching

Ben gained first-hand insights into how other countries view New Zealand’s mitigation practices when he presented to members of the international Agreement on the Conservation of Albatrosses and Petrels (ACAP) Seabird Bycatch Working Group in May this year.

Ben presented results from the Net Capture Programme, established in 2019 by the Southern Seabirds Trust (which includes industry and the World Wildlife Fund) and Seafood New Zealand’s Deepwater Council, to investigate, innovate and trial mitigation techniques.

The programme’s focus on the southern squid fishery and its overlap with the breeding season and range of many seabird species was notable for the high quality of the data and insights gained. In this fishery, the rate of incidental capture halved in the 10 years to 2020, as verified by Ministry for Primary Industries independent observers present on more than 80 per cent of all trawls during the decade.

Innovation is important, but uptake is key

Innovation is something we excel at, says Ben, pointing to a report commissioned by the Southern Seabird Solution Trust that presents a stocktake of mitigation measures. The report runs to 100-plus pages and describes more than 45 measures in use across surface long-line, bottom long-line, setnet and trawl fisheries.

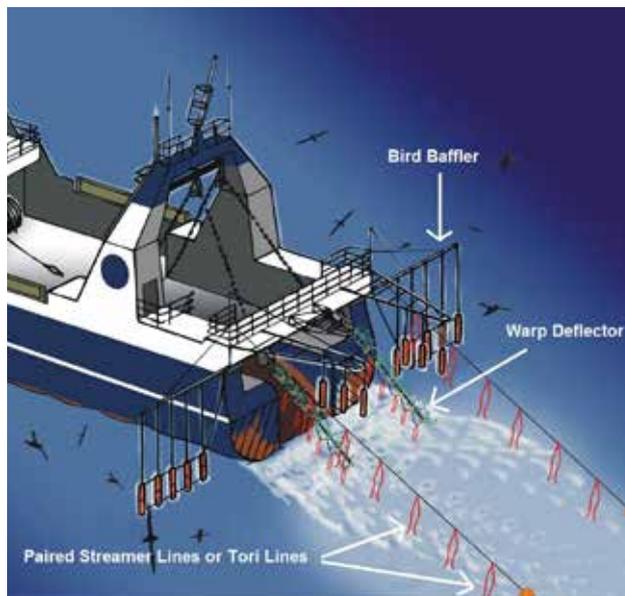
While the innovation is the fun stuff, the evidence of uptake is equally as compelling, especially

across the larger deepwater fleet, says Ben.

The 2021/22 Seabird Annual Report calculates observed uptake rates, stratified by fishery management area (FMA) and fishing method. The report also provides some analysis of the trends and challenges of implementing mitigation



Richard Wells.



Bird scaring devices.

measures in New Zealand fisheries. For example, the report states that:

- The use of tori lines increased across all surface longline fisheries, except FMA 1, where it remained at 100 per cent. However, the use of line weighting and night setting remained low in most areas.
- The use of warp mitigation increased across all trawl fisheries, except FMA 1, where it remained at 100 per cent. However, the use of offal management and bird bafflers varied across areas and vessel sizes.
- The use of hook shielding devices increased in longline fisheries, especially in FMA 1 and FMA 9. However, the use of tori lines and line weighting decreased in some areas.

Getting fishers onboard starts with... getting onboard

Ben attributes the gradual improvement in uptake rates to the ‘grassroots’ engagement with skippers and a hands-on approach by people like John Cleal and Richard Wells in the early years of industry-led bycatch mitigation programmes.

Richard and John were fisheries specialists with the former Deepwater Group and had secured funding for ‘project after project’ from the Department of Conservation to trial new mitigation measures.

The collaboration between government and industry, backed by operators, skippers and crew who hosted John and Richard on their vessels, started to see results from the outset, snowballing towards the 100 per cent rates now peppered through Seabird Annual Reports.

FEATURE

In 2023, the effort is more on the margins to maintain the rate of uptake and work with some later adopters to refine mitigation plans that will work for their fishery, vessel and crew.

Achieving uptake across a fleet starts with the 'low-hanging fruit' like good fish waste management to deter birds from scavenging offal, and the use of tori lines and bird bafflers says Ben.

"As a first step, mitigation measures have to be integrated with what fishers have already in terms of vessel and gear. Most importantly, if a crew can see that a measure is easy to use and effective, then it's a winner.

"The next steps can be more challenging. Developing tools suitable for dynamic operating environments requires collaborative efforts and at times significant investment and paradigm shifts.

"There's this thing called wharf talk, where word travels fast. Any wharf talk about a bad experience with new mitigation measures would travel across the fleet, often affecting the uptake by other skippers.

"This is why it is crucial to have skippers and operational people involved in the development and trialling process of mitigation projects," Ben says.

Look, think and act

The 'look, think and then act' approach, used widely for health and safety, is equally applicable to seabird mitigation.

"Spatial awareness techniques like this come naturally to crew and skippers who live and breathe health and safety on the sea," Ben says.

"When 1,000 birds start to flock around your boat, and settle on the water waiting for what they hope might be an easy feed, the 'look, think and act' approach kicks in. Fishers will see them, quickly assess and observe, and then adjust what they can by referring to the protected species plans and operational procedures in place for such a situation on their vessel."



John Cleal.

The potential of AI

While Ben, inshore fisheries manager Rosa Edwards and others continue to work with fishers, e-NGOs and government on increasing uptake, innovation continues.

One example is an artificial intelligence (AI) tool that's being used to further reduce incidents of black petrel bycatch.

The risk to black petrels, incurred when they dive for baited hooks as lines are lowered into the sea, has reduced in the past 20 years with the use of mitigation measures on longline vessels. While birds are still caught occasionally, their survival rate is high if they can be released from the hook in time.

The team at Dragonfly Data Science has trained an AI and camera system to identify a trapped petrel and alert the crew, who can then bring the line up and carefully release the bird. The AI tool can spot around 85 per cent of seabird captures, and can do it faster than a person reviewing a camera feed. The best results are when the AI tool is used in conjunction with a person keeping an eye on the lines.

Positively potting

Some fishers have responded to regulatory changes, intended to reduce seabird capture, by changing their fishing methods.

This is no simple feat – vessel, gear, crew, operations and training all need to change. It's expensive, and complicated and it's not something that can be done in every fishery. But where it is possible, the results can be rewarding.

One example is Okains Bay Seafood. Founded by Greg Summerton (Waitaha, Ngāi Tahu), fishing for Okains Bay kaimoana is part of Greg's whakapapa, going back centuries.

Greg's crew fish for ling using the traditional Māori method of potting, taking it to state-of-the-art, high standards of sustainable harvesting.

The crew pot for ling from the Kawatea after years of longlining with hooks. They describe the shift to potting as having 'revolutionised' the way they interact with seabirds to the point they don't need other mitigations.

The practicality of potting means bait is enclosed in the pot, where non-target fish, birds and mammals can't reach it. It's also low carbon emission, highly selective and light on the seafloor. But it's not the easiest method, so kudos to the crew for their success.

Tidal waves revealed in canyon current research



Dr Rob Smith (right) and master's student Andrew Hurley heading out to Saunders Canyon aboard University of Otago research vessel *Polaris II*.

A collaboration between University of Otago researchers and Port Chalmers ling fishermen is revealing remarkable ocean dynamics. Tim Pankhurst reports.

University of Otago's Dr Rob Smith is a student of waves.

On the surface, he is keen to surf the waves that break on the Otago coast but it is in the unseen ocean depths that he is making some remarkable discoveries.

Smith is being assisted by local fishermen in studying powerful currents from offshore canyons, and ancient river valleys gauged by glaciers in the last ice age, that influence the inshore ecology.

He has formed a valuable collaboration with Port Chalmers ling fishermen Haydin Anderson and Layton Kirk to deploy measuring equipment on deepwater pots at the head of deep water canyons.

"Everyone is familiar with waves breaking on the seashore, propagated by the interface between air and sea. Their energy comes from the wind," Smith says.

"Inside the ocean, you can also have internal waves that move on the interface between different layers. They tend to move much more slowly than surface waves. On the surface, the time interval may be nine, 10, 12 seconds whereas internal wave periods may stretch from minutes to several hours."

Such waves can be immense, delivering and dispersing nutrients and larvae.

Whereas surf on a beach is usually only a few metres, these internal waves driven by ocean tides from the offshore depths hitting the sloping continental shelf maybe 20 to 60 metres, Smith says.

"Submarine canyons are a global hotspot for the generation of these internal waves. That process was described in similar canyons in California off Monterey Bay as a tidal pumping system."

Confirmation of similar internal wave dynamics off Otago was fortuitous.

In collaboration with colleague Dr Will Rayment, an associate professor and marine mammal expert, they collected temperature and salinity profiles through the water column from the head of the Saunders Canyon off the Otago Peninsula at about 130m to deeper offshore water.

"What we found was remarkable," Smith says.

"It was a nice calm day, which is unusual. Data collection started at the ebb tide and it took us about six hours when we reached the offshore end of the canyon. We had enough time to do a repeat transect on the flood tide back through the canyon.

"When we examined the data the thermocline in the



Skipper Haydin Anderson (left) and deckie Anaru Parata assisting with ocean current research aboard fishing vessel *Truby King*.

canyon had lifted by 150m. This was a key indicator of internal wave behaviour. The water at the head of the canyon at 120m had the same properties as the water at 300m.

“The presence of unusually cold water at the head of the canyon was likely to have been lifted there by internal waves.”

Smith followed up by placing fixed temperature loggers at the head of Saunders Canyon.

He bought an old railway wheel weighing 110kg for \$110 from a scrap yard and shackled it to 200m of 6mm pot rope attached to a low-drag surface float.

Temperature loggers were placed at regular intervals.

The equipment was left in place for two months to provide time series measurements of temperature at different depths.

“What this revealed was regular pumping of cold water out of Saunders Canyon onto the continental shelf,” Smith says.

Andrew Hurley, a master’s student working under his supervision, established the process is predictable, and tied to local tides. Cold water would rush out of the canyon from around an hour before high tide.

They also found the process shuts down in neap tides and is strongest around spring or king tides.

That led Smith to contact local fishers to share his findings and also to tap into their knowledge.

He had seen commercial fishers at work in the canyons and was anxious not to get in their way.

He also wanted advice on the best equipment to use and the optimum locations.

That was discussed with Haydin Anderson over a beer at the Octagon pub in Dunedin.

“I was particularly interested to hear where they potted and the way the pots are used and the observations they had made themselves,” Smith says.

“They sometimes bring pots up that have a load of sediment or shells like scallops on top. I was interested in hearing that. How did that stuff get there? It is likely the surge deposited that in really stirring up the seabed.”

He also learned about ling, having never seen one.

Anderson was receptive to a collaboration and assisted in the placement of a pressure logger a metre below a surface float, the type marketed as used on *The Deadliest Catch* in the Bering Sea crab fishery, at the head of the Saunders Canyon.

The results astounded them both.

When the wind was blowing from the north the line sat vertically. But in a big sou’west blow the float was pulled beneath the surface to an unexpected extent.

“About 200m of line was lying horizontally on the sea floor,” Smith says. “I find that remarkable, that level of blow down. The fishermen couldn’t believe it.”

The next step was to measure the velocity and direction of such extreme currents.

Doing so is normally difficult and expensive. One method is to deploy a tripod device fitted with an acoustic current meter on the sea floor, similar to something you might find on a moon or Mars lander.

But that would cost up to \$60,000 and would be risky in such a challenging environment.

Instead, Smith opted for a simple solution, to use the ling pots as platforms to collect marine data.

He attached a tilt current meter, a one-metre-long tube like a small drain pipe that floats vertically and waves like a wand in the current, to a pot left for two weeks at the head of the canyon.

The meter measures water temperature, water velocity and flow direction.

The experiment was repeated mid-winter but there was a setback – the pot disappeared.

Anderson found it several weeks later pushed by

currents nearly a nautical mile to the north and the data was retrieved.

Englishman Smith's path to New Zealand was sparked by his first job at the UK Met Office.

"I started there after doing an undergraduate degree in oceanography at the University of Southampton. It gave me a really good taste of what research is like as a career and I was surrounded by people who already had doctorates.

"I thought it sounded like a pretty good deal. You get to spend three years of your life just studying what interests you.

"I looked globally and one of the prerequisites was it had to be at a place where there was really good surf and the University of Otago in Dunedin seemed to hit the spot.

"I came here to do a PhD in the Department of Marine Science related to Southern Ocean dynamics."

His rise was rapid, appointed as a lecturer in marine science, where he mastered his public speaking fears and embarked on his current research.

Smith's time is split 40 per cent teaching into the marine science programme for about half the year, 40 per cent into research and the remaining 20 per cent contributing to administration and sharing knowledge with the community.

This includes providing advice to the NZ Rock Lobster Industry Council's CRA8 sector on changes in lobster condition due to marine heat waves and to Fiordland Marine Guardians.

The University of Otago has the unique advantage



Haydin Anderson (left) and Anaru Parata aboard Truby King harvesting ling caught in deep water pots set at the head of Saunders Canyon off Otago peninsula.

of being in close proximity to a large network of submarine canyons.

Within 15-20km of shore there are seven distinct canyons, easily accessible by the university's 21-metre research vessel *Polaris II*, skippered by ex-commercial fisherman Bill Dixon and his relief, Mark Elder.

But time on each voyage is expensive, costing several thousand dollars in fuel and crew costs.

The partnership with local fishers removes that cost.

Haydin Anderson has fished the Saunders Canyon for 12 years aboard his vessel *Truby King* with current deckie Anaru Parata and well knows the weather patterns.

"If it's blowing hard from the west or sou'west through Foveaux Strait we won't go fishing," he says. "You just get hammered by the tide. It's the same thing, about an hour before high tide."

He assumed his floats were pulled a couple of metres below the surface in big currents and was astounded to

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FEATURE

learn they were being pulled to the sea floor.

"It's incredible for a float to go to the bottom and then pop back up. It's crazy really. I don't even know how it is possible."

He was also surprised at the big temperature variations in the water pulses from the canyons.

He has not noticed a significant change in catches although there are sometimes fluctuations from one year to another.

He fishes 50 ling pots, big square cages measuring 1.2m that weigh 120kg.

They are baited with squid and set for 24 hours.

Some of the eel-like ling are monsters, 40kg plus, and Anderson wonders how they are able to wriggle into the pots. He cut the head off one whopper and was unable to force it through the pot opening.

The catch, headed and gutted, is landed at Harbour Fish in Dunedin, who also handle the valuable swim bladders, known as sounds, that are dried and are in high demand in China.

A number of other species are caught in pots, including octopus, blue cod, red cod, tarakihi, groper and sea perch.

Anderson largely fishes the Saunders Canyon while fellow skipper Leighton Kirk targets the Karitane Canyon aboard *Southern Pride*.

Both will continue to assist with Smith's research,

provided a proposed large marine reserve does not close off their fishing grounds.

"They've put a big box there where everyone fishes," Anderson says.

"I'm really grateful to Haydin and Leighton in this work," Smith says. "It is an awesome collaboration.

"This is early days in our research programme investigating the oceanography of these submarine canyons. It's a research relationship I hope we can develop more.

"It's particularly important in this area where you've got a relatively small day fleet operating out of Port Chalmers. It supports a good number of local jobs.

"These are the folks starting to see some interesting, and in some cases concerning, changes in the marine ecosystem around the Otago Peninsula. Last summer, we were seeing large numbers of kingfish, and snapper were caught off Tairoa Head That is pretty much unheard of.

"Those who are out there every day are going to see these changes first.

"If scientists don't hear and don't know about what's changing, we are not in the position to understand those changes and what the implications might be for local fishermen.

"There are going to be winners and losers from climate change and warming oceans, and we might lose some species and gain others."



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FEATURE



2023/2024



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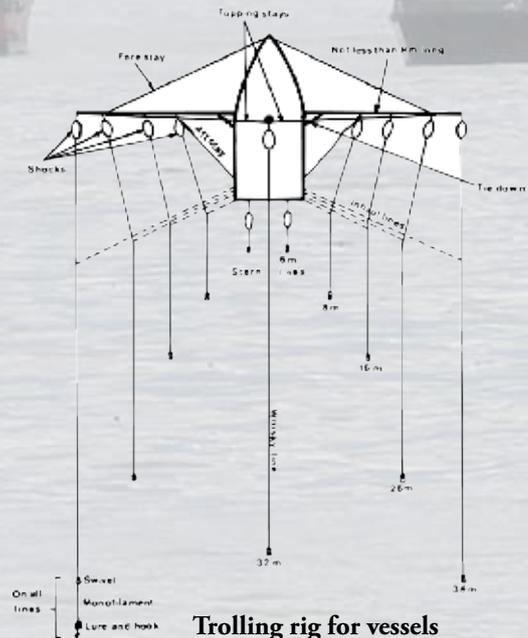
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Here's to a summer of sea

Summer is here, the holidays are on the horizon, and we are all looking for ways to kick back, relax and spend quality time with whānau. Of course, one of the best ways to do this is by heading to one (or more!) of the country's food festivals. Read on for a taste of what's coming up, as well as several recipes from Michael Van de Elzen you can easily make at home.

The blue waters of Lake Ruataniwha in Twizel. Image Hunter Smith.



food



Enjoying a day of seafood and wine in the sun at Twizel Salmon & Wine Festival.



Flash fish sandals on show at the Twizel Salmon & Wine Festival.

It's easy to see why people flock to Aotearoa New Zealand's regional food festivals. They are a great opportunity for locals to support the businesses near and dear to their hearts while noshing on some first-rate festival fare. And since many festivals are in stunning, scenic locations, they're a destination in and of themselves for a well-deserved summer holiday.

And as 'summer' is synonymous with 'seafood', kaimoana often plays a starring role.

For those in the industry, festivals are an equally important way to stay connected with regional communities and their people. It helps us put faces to the products Kiwis already know and love, plus it's a welcome financial boost to the many small and medium, family-owned regional businesses that are the beating heart of our seafood sector. For the industry, festivals are great opportunities to engage with locals and visitors, keep up with culinary trends and make sure we stay focused on what really matters to the people we are fishing for – so we continue to provide the fresh, sustainable food people love.

Seafood New Zealand is proud to showcase seafood-centric festivals across the country, as they are a key way to bring the best kaimoana from the

waters of New Zealand to tables everywhere. Here's just a few you can look forward to this season:

Twizel Salmon & Wine Festival 24 February 2024

The 18th iteration of this well-known festival will bring thousands of people right to the shore of Lake Ruataniwha in Twizel – the Mackenzie District's largest town. Twizel has strong ties with aquaculture, with brands such as High Country Salmon and Mount Cook Alpine Salmon taking advantage of the region's pristine, glacier-chilled waters to farm healthy, high-



Mount Cook Alpine Salmon and Aoraki Salmon are two of the seafood brands anchoring the Twizel Salmon & Wine Festival.



One of the community activities at Seafood Saturday is a fish filleting demonstration.



Free fish n' chips for kids was one of the highlights of the inaugural Seafood Saturday in Nelson.

quality salmon. People are invited to bring camping chairs, picnic blankets or even small sun tents to set up by the water and enjoy the Twizel sun (or even take a cheeky dip).

The event is anchored by a Salmon Hub, which features cooking demonstrations and opportunities to learn about the area's different salmon offerings. But there are also plenty of food stalls and local wine and beer offerings, plus live music to get everyone grooving. We can't think of a better way to celebrate salmon than this.

www.twizelsalmonandwinefest.com

Seafood Saturday 9 March 2024

Brought to you by Seafood New Zealand, the inaugural 2023 event in Nelson was such a success we are back on board for 2024. Seafood Saturday is a true celebration of the breadth and depth of Nelson Tasman's seafood sector, and the kaimahi who make it possible.

There will be a free, family-friendly Community Hub throughout the afternoon, with children's crafts and activities on the street and in the Nelson Provincial

Museum, fish n' chips and seafood burgers, seafood food carts, fish filleting demonstrations and cool tech on show, making this a budget-friendly festival for all.

But the starring event will once again be the ticketed seafood and wine degustation long lunch, which will see some of Nelson's best restaurants crafting a bespoke tasting plate of sustainably caught kaimoana for diners which will be expertly paired with one of the region's best wines. Tickets sold out in two weeks last time, so register your interest for 2024 on the website now. This is not an event you'll want to miss!

www.seafoodsaturday.nz



Shell decorating with paint, glitter and sparkly pom-poms at Seafood Saturday.



A cheerful sunflower-festooned scarecrow gets a lift to better enjoy the music at Hokitika Wildfoods Festival.



Festivalgoers in funky squid hats pose for a group photo at the 2023 Hokitika Wildfoods Festival.

**Hokitika Wildfoods Festival
9 March 2023**

If you are feeling adventurous, the Hokitika Wildfoods Festival is the place to go. Since 1990, this annual festival has drawn visitors to the wild and unique West Coast for more unconventional (but tasty) food offerings. If you can eat it, it goes on the plate.

Though huhu grubs and ‘mountain oysters’ get most of the attention, you will also have your choice of traditional kaimoana such as whitebait, pāua, pipi and mussels. Just leave some room for



Whitebait on sale at Hokitika Wildfoods Festival to support Soroptimist International.

something new – seagull eggs, baby octopus and jellied fisheye shots have graced the menu before. Who knows what 2024 will bring!

Revelers can also expect a lineup of stellar New Zealand bands, while the fashion-forward can enter the Feral Fashion competition and invent a wild alter ego.

www.wildfoods.co.nz

**Havelock Mussel & Seafood Festival
16 March 2024**

Another long-standing and much-anticipated tradition, this festival at the Havelock Domain epitomises summer in the Marlborough Sounds.

The highlight is certainly the native Greenshell™ mussel, with lightning-fast shucking demonstrations and competitions that teams practice for months in advance (plus plenty of mussels to eat). But the event also champions King salmon and the Pacific oyster, both of which are carefully raised and harvested from the pristine water of the Sounds.

Music, top-quality Marlborough wines and beer, cooking demonstrations by celebrity chefs



Talley's taking on the competition at the eGo Media Mussel Shuck. In 2023, the Talley's Motueka team shucked their 200 mussels the fastest.

and a kids' zone round out the event, which is celebrating its 20th iteration this year.

www.havelockmusselfestival.co.nz

If these festivals haven't gotten you excited enough about seafood this summer, we have plenty of recipes from Michael Van de Elzen's latest book, *Good from Scratch* on pages 26 - 29.

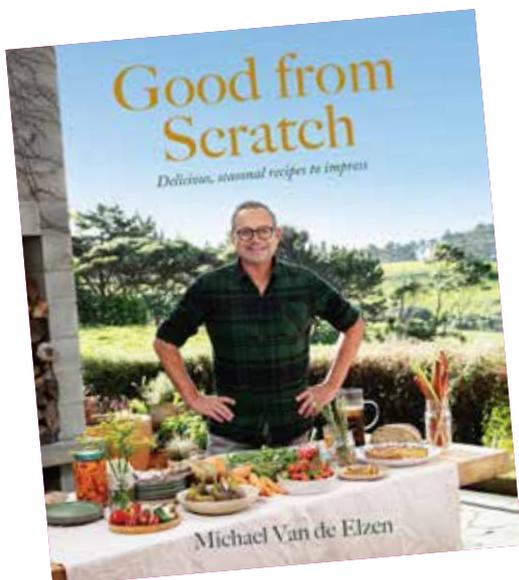


Marlborough's green hills rise in the background of the Havelock Mussel & Seafood Festival, as attendees dance the day away.



Platters of juicy mussels on offer at the 2023 Havelock Mussel & Seafood Festival.

Seafood from scratch. Summer



Edited extracts from *Good from Scratch* by Michael Van de Elzen, photography by Babiche Martens. Published by Allen & Unwin NZ, \$49.99.

To celebrate the season, we've reached out to Michael Van de Elzen, well-known chef and television presenter. In his latest cookbook, *Good from Scratch*, he showcases seasonal, classic recipes with a twist – including some using New Zealand's best kaimoana. He shares some of the highlights here. To get more of the great ideas you see here, we recommend treating yourself to his book.



Beer-Battered Gurnard with Spring Onion Stove Cakes

When I was a young chef, I used to keep adding more and more ingredients to recipes, as I felt the more complex the recipe the better it had to be. Later I found out this wasn't always the case. Take this beer batter, for example. Beer. Flour. Salt. Crispy and perfect.

Prep time: 35 minutes

Cook time: 20 minutes

Serves: 4–6

- 4 large Agria potatoes, peeled and halved
- Fine sea salt, to taste
- 2 tablespoons butter
- 2 spring onions, finely sliced
- 1 litre (35 fl oz) canola oil for deep-frying
- 4–6 skinless, boneless gurnard fillets, halved lengthwise
- 2 tablespoons grapeseed oil
- Watercress leaves and lemon wedges for garnish

Beer Batter

- 330 ml (11¼ fl oz) bottle beer
- 150 g (5½ oz) plain flour
- A pinch of fine sea salt

Place the potatoes in a pot and cover with cold water. Add a little salt and bring to the boil, then reduce the heat and simmer until tender. Drain into a colander straight away and cover with a clean tea towel to allow to steam dry. Return the potatoes to the pot and, using a potato masher, mash in the butter. Taste and

adjust the salt. Fold in the spring onions.

To make the beer batter, pour the beer into a mixing bowl, add quarter of the flour and whisk until smooth. Continue to add the flour until you have a thick but still pourable batter. Stir in the salt.

To deep-fry the fish, place the canola oil in a pot and heat to about 170°C (325°F). Test the temperature by dropping in a spoonful of batter. If it is hot enough, the batter should gently fall to the bottom of the pot before rising up again to a slow bubble.

Run one fillet of fish through the batter, then carefully and gently swirl it into the oil, holding on to the last bit for a couple of seconds before dropping it in (this stops it from sticking to the pan). Repeat with a second piece of fish. Cook until golden brown. Drain on paper towels while you repeat with the rest of the fish.

To cook the stove cakes, heat a large, heavy-based frypan over a medium heat and add the grapeseed oil. Using a large steel spoon, scoop out a quenelle of spring onion mash. Lower it into the frypan and repeat with the remaining mash. Gently fry on the one side until a good golden crust is formed on the base. Using a fish slice, carefully turn and cook the other side until golden brown.

To serve, divide the stove cakes and fish between 4–6 plates. Garnish with watercress and lemon wedges.

plus holidays equals seafood!



Charred Squid with Chilli Honey Syrup

You can make this dish at any time of the year, but use fresh squid if you can and make up the pickled cucumber relish as close to the time of eating as possible — it keeps those peanuts crunchy and the flavours individual. You can swap out the squid for fish, pork or barbecued chicken thighs.

Prep time: 30 minutes

Cook time: 5 minutes

Serves: 4–6

- 8 squid tubes
- 1 tablespoon grapeseed oil
- Flaky sea salt, to taste
- 1 recipe chilli honey syrup (see below)

Pickled Cucumber Relish

- 1 cucumber, cut into batons
- 1 small red onion, finely sliced
- ½ recipe basic pickling brine (see below)
- 150 g (5½ oz) roasted peanuts, roughly chopped
- 1 tablespoon grapeseed oil
- 1 red chilli, finely sliced
- 1 small handful fresh coriander leaves, chopped
- Juice of 1 lemon
- A pinch of chilli powder
- Flaky sea salt and cracked pepper, to taste

To make the pickled cucumber relish, place the cucumber and onion in a bowl. Pour the cold basic pickling brine over the vegetables and allow to sit for 5 minutes to pickle. Drain well. Add all the remaining ingredients and toss to combine.

Cut along one side of each squid tube and open it out like a book. Cut off the lumpy ends to form a neat rectangle and score on a 45-degree angle on both sides. Place in a bowl with the oil and salt and toss to coat.

Heat a barbecue to a high heat. Char the squid for 2 minutes on each side.

To serve, arrange the pickled

cucumber relish on a platter, top with charred squid and drizzle with chilli honey syrup.

Chilli Honey Syrup

Prep time:

5 minutes

Cook time: 30 minutes

Makes: 2 cups

- 750 ml (26 fl oz) white wine vinegar
- 450 g (1 lb) caster sugar
- 2 red chillies, finely sliced
- ½ cup honey

Place the vinegar, sugar and chillies in a medium pot, bring to the boil and then reduce to a simmer until the mixture has reduced by a third.

Remove from the heat and add the honey. Allow to cool to room temperature. The syrup should be the same consistency as superglue; if it's too thick, add a little hot water. Store in the fridge for up to 1 month.

Basic Pickling Brine

Prep time: 10 minutes

Cook time: 5 minutes

Makes: 1.25 litres (44 fl oz)

- 700 ml (24 fl oz) water
- 500 ml (17 fl oz) cider vinegar
- 1 cup sugar
- 5 cloves garlic, peeled
- 4 bay leaves
- 1 tablespoon peppercorns
- 1 tablespoon coriander seeds, toasted
- 1 tablespoon fennel seeds, toasted
- 1 tablespoon mustard seeds, toasted
- ½ tablespoon fine sea salt

Combine all the ingredients in a pot and bring to the boil, stirring, until the sugar and salt have dissolved. Allow to cool, then store in the fridge for up to a month until required. It can be used hot or cold. For cold pickles just add your prepared vegetables. For a hot pickle, boil the brine first.

Use the brine cold for pretty much any vegetable that you want to have a raw crunch. Just prepare the vegetable then submerge it in the brine for at least an hour. Pickles will keep in the fridge for up to 1 month.



Charred Fennel & Leeks with Smoked Fish, Lentils & Pickled Mayonnaise

This is a very substantial salad, perfect for sharing amongst many. For best results, hot-smoke the fish just before making the salad. If you have pickled onions left over, they are a perfect little flavour booster for many dishes.

Cook time: 45 minutes

Prep time: 45 minutes

Serves: 4

- 6 small red onions, cut into rings
- ½ recipe basic pickling brine (see above)
- 500 ml (17 fl oz) water
- 1 vegetable stock cube
- Juice of 1 lemon
- 12 baby fennel bulbs
- 6 baby leeks
- 1 cup le puy lentils
- A pinch of fine sea salt
- 1 recipe pickled mayonnaise (see below)

- Flesh of 1 hot-smoked fish, shredded, about 500 g (18 oz)
- 1 cup watercress leaves
- Fennel tips and fennel flowers for garnish
- Sourdough to serve alongside

Place the onion rings in a bowl. Bring the basic pickling brine to the boil. Pour the brine over the onions and allow to sit for at least 30 minutes to pickle.

Place the water, stock cube and lemon juice in a large pot. Bring to the boil, then reduce to a simmer. Add the fennel and leeks, then cover with a piece of baking paper with a couple of holes in it to let the steam through. Simmer gently for 30 minutes, then turn off the heat and allow to sit until required.

While the fennel and leeks are cooking, place the lentils and salt in a medium pot and cover with water. Bring to the boil then

reduce the heat and simmer until tender.

Heat a cast-iron frypan over a medium heat. Remove the fennel and leeks from the braising stock. Cut the fennel in half lengthwise, then place cut-side down in the dry pan. Keep an eye on it as it starts to char, and remove it when it's well coloured. Repeat with the leeks but keep them whole.

Drain the pickled onions, reserving ¼ cup of the brine to use in the pickled mayonnaise.

Drain the lentils and transfer to a large bowl. Add the smoked fish, watercress and half the charred leeks and fennel. Dress with 2 tablespoons of the pickled mayonnaise.

Spread out the lentil mixture onto a platter and top with the pickled onions, fennel tips, fennel flowers and the remaining charred leeks and fennel.

Serve with any extra pickled onions, the remaining pickled mayonnaise, and the sliced sourdough on the side.

Pickled Mayonnaise

Prep time: 5 minutes

Makes: 2 cups

- 3 egg yolks
- ¼ cup reserved pickling brine from the onions
- 1 teaspoon dijon mustard
- 300 ml (10 ½ fl oz) grapeseed oil
- ¼ teaspoon fine sea salt

Place a mixing bowl in a pot to hold it in place while you whisk. Combine the egg yolks, pickling brine and mustard in the bowl and whisk quickly while you slowly add the oil. Once all the oil has been added, whisk in the salt. Transfer to a jar and chill until required. Store the mayonnaise in the fridge for up to 4 days.

Delicious and nutritious? The science says so

Need even more reasons to prioritise putting New Zealand's kaimoana on your plate?

In 2023, the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO) published the results of the Joint FAO/WHO Expert Consultation on Risks and Benefits of Fish Consumption. Its panel of 21 international experts included several with close ties to New Zealand – Katherine Bathgate from Food Standards Australia New Zealand and Jeane

Nicolas from the Ministry for Primary Industries.

Although the full report is still to come, initial scientific evidence is pretty clear: eating fish and shell-fish – whether farmed or wild-caught – provides high-quality energy, protein and a range of other nutrients important for health.

Here are some key takeaways from the summary report:

- Strong evidence exists on the benefits of eating



Farm Seafood Chowder

My version is made from scratch using a roux, light spices, kūmara and a freshly hot-smoked fish.

Prep time: 30 minutes

Cook time: 1 hour 15 minutes

Serves: 6–8

- 1 smoked fish
- 6 cloves garlic, peeled
- 1 teaspoon grapeseed oil
- Flaky sea salt and ground white pepper, to taste
- 75 g (2½ oz) unsalted butter
- 2 carrots, peeled and diced
- 1 leek, halved lengthwise and finely sliced
- 1 onion, diced
- 1 tablespoon curry powder
- 1 teaspoon smoked paprika
- ¼ cup plain flour
- 1 kūmara, peeled and diced



- 500 ml (17 fl oz) cream
- Fresh parsley for garnish

Fish Stock

- 2 kg (4 lb 8 oz) white-fleshed fish frames, washed
- 2 carrots, peeled and halved
- 1 onion, peeled and halved
- 1 cup chopped leek
- 1 cup chopped fennel (optional)
- 10 peppercorns
- 2 bay leaves

Shred the smoked fish, discarding the skin and reserving the bones for the stock and the flesh for the soup.

To make the fish stock, place all the ingredients in a large pot and cover with cold water. Bring to the boil, all the while skimming off the bubbles and fat that float to the surface. Once the stock boils, quickly reduce the heat

and simmer for another 20 minutes. Turn off the heat and allow the stock to settle for 20 minutes.

Use a ladle to gently scoop out the fish stock and strain it through a clean cloth into a clean pot. Start scooping from the top and discard the final 20% of the stock where the solids have settled. You should have about 1.5 litres (52 fl oz).

Add the reserved smoked fish frames to the stock and simmer for 10 minutes. Strain. This is your smoked fish stock.

Preheat your oven to 180°C (350°F) fan-bake. Place the garlic in a small pan with the oil and a little salt. Roast for 10 minutes or until golden.

Melt the butter in a large, heavy-based pot over a low heat. Add the carrots, leek and onion and sweat slowly without adding colour. Add the curry powder, smoked paprika and roasted garlic and fry for a further minute. Add the flour and cook out over a medium heat for 4–5 minutes, continuing to stir. The flour should gain a little colour, but make sure it does not catch on the bottom of the pot.

Slowly add the smoked fish stock to the flour roux a little at a time, whisking between additions to ensure there are no lumps. Add the kūmara and bring back up to a simmer. Add the smoked fish flesh and continue to simmer for 30 minutes. Stir in the cream. Taste and adjust the salt and white pepper.

To serve, ladle into bowls and garnish with parsley.

fish during all life stages: pregnancy, childhood and adulthood. For example, improved birth outcomes are associated with eating fish during pregnancy and reduced risks for cardiovascular and neurological diseases are associated with eating fish as an adult.

- General population studies have shown that benefits and individual effects to eating fish vary depending on overall diet, individual characteristics of the person and the fish eaten (e.g., fish species and food preparation methods).

Although the experts consulted by the WHO and FAO say more research will be needed to draw sound scientific conclusions about specific health outcomes and to refine fish consumption recommendations by region, or to a specific type of fish or shellfish, they were clear about how many important health benefits there are to eating fish throughout your life.

Those are some tasty facts Seafood NZ can get behind!

FirstMate – helping those in need

By FirstMate Co-Chair, Justine Inns

As you will know, FirstMate is a charity, set up to help and support those that work in the commercial seafood sector; fishers, marine farmers and their whānau, with their mental health and wellbeing. In the last few months, we've been focusing on supporting those that were seriously impacted by the storms at the beginning of the year. The fact that we have fishers and marine farmers still impacted all these months later, really shows the level of devastation and how important it is for us to be on the ground to support them.

Part of our work has also been to raise awareness of the impacts these events have on our communities, and you may have seen one of several stories in the media recently.

Newstalk ZB

Zak Olsen shares his own mental health journey as a commercial fisherman and his work with FirstMate. He talks depression, burnout, shift work, fishing and finding a way back to joy with special guest host Mick Andrews and psychotherapist Kyle MacDonald.



To read the online article on www.newstalkzb.co.nz please scan the QR-code



SCAN ME

Hawke's Bay Today

Commercial fishers say their catches are down and there's still debris and sediment heaped on the ocean floor of Hawke's Bay, as the impacts of Cyclone Gabrielle linger seven months on.



To read the online article on www.nzherald.co.nz please scan the QR-code



SCAN ME

TV3, 6pm News

The challenges the seafood community faced in the wake of the recent cyclone. Tune in to catch commercial fisher and FirstMate Navigator Rick Burch's first-hand account of the community's struggles, and to gain a deeper understanding of the impact adverse weather events can have on local fishers and their livelihood.



To watch the news item online on www.newshub.co.nz please scan the QR-code



SCAN ME

“It’s a wonderful acknowledgement of the value our seafood sector groups see in coming together and supporting their staff and other professionals that work in the sector.”

As we’ve talked about in previous articles in this magazine, we were provided with funding by the Ministry for Primary Industries to set up and deliver our services in 2021, with that funding coming to an end in February 2024.

We are very excited to share that we’ve generously been provided funds by several industry groups, that will enable us to continue to provide our important services to June 2024.

The donations total \$135,000, including \$100,000 from Seafood New Zealand, \$20,000 from Aquaculture New Zealand, and \$15,000 from the Rock Lobster Industry Council. ShipWreck Relief Fund have also kindly donated \$30,000 to FirstMate. The organisation, which provides relief to families when family members has been lost at sea, is supporting the mental health and wellbeing focus that FirstMate brings to the sector.

Receiving funding has been crucial for our sustainability and to be able to continue to provide our services – it will literally change and possibly save lives. It will allow us to continue supporting our Navigators to connect with our fishers through events, resources, answer the 0800 237438 phone line, respond to emails and be where our fishers and marine farmers need them most.

It’s a wonderful acknowledgement of the value our seafood sector groups, to see in coming together and supporting their staff and other professionals that work in the sector. We’re enormously grateful for their support.

We know that people are engaging with FirstMate – and we have a service that people want to know about, because we’ve had a 306 per cent increase in Facebook likes since July, reaching over 66,000 people through our organic Facebook. Instagram has had a 1,332 per cent increase in followers since July, reaching over 7000 people. LinkedIn has had over 130 per cent increase in followers.

And to help people see the value of what we do, we’ve just released our 2023 Annual Report, a first for FirstMate. This provides a clear overview of everything we delivered from July 2022 to June 2023. This means there is total transparency for anyone who wants to see how we function as a charity and the value we offer.

And finally, check out some of the other ways that we’re sharing powerful stories about those working in the seafood sector.

ACC Video & Story

Health and safety advocate Darren Guard has lost many mates to the sea and has also come close to losing his own life. So, he’s used funding from ACC to set up MarineSAFE – an online training programme to help fishers stay safe at sea.



To watch the video online on www.acc.co.nz please scan the QR-code



Hook, Line & Sinker

Check out the first episode of the Primary Matters podcast series featuring Darren Guard. ‘Hook, Line & Sinker’ is all about FirstMate and the guidance and support we offer to people in the seafood sector and their whānau.



To watch the episode online on [facebook](https://www.facebook.com), please scan the QR-code



Morning Rural News, segment on RNZ on 3 October.

FirstMate Adverse Event Navigator for Northland Zak Olsen shared his journey of receiving crucial support from FirstMate when he needed it most and spoke about his desire to give back to the seafood industry and support the wellbeing and mental health of fellow fishers. Check out the recording starting 2:13 minutes.

To watch the episode online on www.rnz.co.nz, please scan the QR-code



The only constant is change

Caroline Read, CE FishServe

As Christmas arrives again, it's easy to focus on whānau and kai. Since arriving at FishServe, my family has given me the job of providing the kaimoana at our whānau Christmas dinners in the Wairarapa. This year I have 3kg's of Chatham Island hapuka to delight the family with, which I picked up on a fantastic trip over in June. It's a great tradition, and one I hope to continue well into the future. It makes me think back to my childhood summers when fishermen would drop off a cray on their way home from the coast, as part of the manaakitanga that was shared between the local farming families and visitors to the coast. Back then though, none of the people involved



Caroline Read.

knew the word manaakitanga and it was before the quota management system was in place. Now there are a lot less farmers, many more lifestyle and holiday homes, no school and a fishing business delivering sustainably caught kaimoana. The

only thing that is certain is that change always happens and we have a duty to make the most of it.

FishServe is no stranger to change, which may seem surprising since we have spent almost a quarter of a century focused on administering the quota management system. In that time so much has changed in both the regulations and the technology, enabling better administration, and we have continually evolved to ensure that we can do the best job possible to support the industry to meet its obligations under the Fisheries Act. This means serving a community that relies on sustainable fisheries for their continued existence.

After a significant shift of our FishServe system into the cloud earlier this year, in the past few months we have changed the fishing year for the Mussel Spat collectors (GLM9), established an automated system to support ACE transfers of OEO4 substocks based on catch split per centages and drafted and rolled out FMA Disposal Guides for the country to support fishers with the changes to the regulations this year. We find ourselves finishing up for Christmas proud of our role in supporting Aotearoa New Zealand's fisheries and reminding everyone that the office (and helpdesk) will be closed from Christmas eve to the 3rd of January.

So from all the FishServe team, safe fishing over the holidays, and Ngā mihi o te Kirihimete me te Tau Hou!



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Fisheries Compliance – protecting our fisheries

By Steve Ham, Director Fisheries Compliance, Fisheries New Zealand

Around this time last year, MPI's Fisheries Compliance function formally became part of Fisheries New Zealand. This move has come with many benefits through better coordination between Compliance and the other parts of Fisheries New Zealand.

Compliance is Fisheries New Zealand's largest directorate with around 385 dedicated staff and volunteers working from 22 locations across the country. Over half are Honorary Fishery Officers (HFOs) – volunteers providing extra eyes on the coastline. Most of them have a strong interest or background in fisheries and give good advice on recreational fishing and the rules.

Most people do the right thing, so a lot of our work is about educating. However, there are those few who deliberately break the rules and we take stronger action ranging from fines to prosecution. This is an important part of fisheries management to help ensure our ocean resources remain healthy and productive.

We have Fishery Officers patrolling on land and by sea. We also have a team of people analysing data and information so we can focus our efforts where they are needed the most. With electronic catch reporting and position reporting we're monitoring a lot of information which means we can be more targeted and efficient in our work.

Over recent years we've had an increase in



Steve Ham.

commercial fishers coming to us for advice. We really welcome this and are always happy to talk. People can contact our regional offices if they have questions about fishing rules – the locations and phone numbers are available on MPI's website.

Our EEZ is one of the largest in the world and

"... However, there are those few who deliberately break the rules and we take stronger action ranging from fines to prosecution. This is an important part of fisheries management to help ensure our ocean resources remain healthy and productive."

New Zealand vessels fish in several international fisheries, from the Pacific to the Southern Ocean. So, it's not only our waters that we want to see managed well – we also support our Pacific neighbours by helping build their fisheries management and compliance capacity. We work with other agencies to place our people alongside fisheries staff in several Pacific countries to provide training, advice, and mentoring. This helps strengthen fisheries management and supports sustainability across the wider Pacific region.

As we head into summer, recreational fishing activity will ramp up, particularly during the holiday season. We'll be running our summer advertising campaign encouraging people to download the free NZ Fishing rules app – please share this with your friends or whānau who are heading out for a spot of recreational fishing during the holidays.

We'll be increasing our compliance patrols as we normally do at this time of year to make sure people are following the rules, and to help educate any new fishers. With our extensive coastline we can't be everywhere, so we also rely on communities to help be the eyes and ears in their local areas. We ask anyone who sees suspicious fishing activity to report it though our 0800 4 POACHER line (0800 47 62 24).

We know commercial fishers don't just think of the sea as their workplace. Many also fish for fun, or for the proverbial feed. I hope you get some time away from work this summer to enjoy your friends and whānau, and the ocean that we all rely on.

Mana, mauri, and prosperity for salmon products from Ōnuku



Ōnuku Marae.

“Our activities are guided by the harbour as a wāhi taonga / sacred treasure. Having a benchmark that’s about restoring mauri / life-force essence brings us back to the close relationship of our ancestors with the natural world — and keeps us focused on sustaining a future for our mokopuna / future generations.”

Te Rūnanga o Ōnuku

This unique Te Ao Māori way of thinking and doing business could be the secret to a gold-plated salmon industry that’s as sustainable as it is profitable.

Innovating when things are already going swimmingly, having solid relationships based on trust, and sharing information openly are also part of a plan for a quadruple bottom line for salmon from Ōnuku — a bottom line of people, place, culture, and profit.

Research from the Sustainable Seas National Science Challenge with Ōnuku Rūnanga near Akaroa has found that salmon from Ōnuku (farmed for Akaroa Salmon) has enormous potential to return even higher profits in more markets with its unique Indigenous story and values.

Research findings suggest that the unique people and processes that create salmon products in Ōnuku

produce a special something about the salmon. When consumers understand what that is, they’ll likely buy more and pay more. That special something is known as a credence attribute. For Māori, this includes their comprehensive knowledge system within a Māori worldview and an unbroken connection with the marine environment.

Chair of Te Rūnanga o Ōnuku, Rik Tainui, says the work the Rūnanga had already been doing, combined with the latest research, shows what’s possible. They’d looked at potential tourism businesses and what was possible in aquaculture. Earlier research had found that people in the Rūnanga prioritised protecting the environment and taonga over jobs and profit.

“When we started these projects, for me, it was around sharing the vision of what might be possible



Drone shot of salmon pens.

for us if we continue down this pathway. It was around sharing our vision for restoring the mauri of our harbour, says Rik."

Buying a stake in Akaroa Salmon was a way to do it all — enhance the mauri of people and place and be profitable and sustainable.

Lead researcher, Jay Whitehead says, 'there's no tension in making money and doing good. It's this balance between the two.'

The research case study

recommends focusing on product differentiation and price premiums. Other recommendations include exploring the potential to sell into new markets like Korea and Thailand, developing systems and processes to increase price premiums, targeting consumers who place importance on country of origin, and constructing and communicating an identity based on authenticity and the unique story of Ōnuku.

That unique story, says Jay, was the focus of the report for this case study. "It's around authenticity and there's this incredible opportunity and export markets where people are looking for premium products that have a story behind them. It's just a commodity without that."

"It's this amazing model of being super financially successful with this much bigger, broader impact on top of that. You see it in all of Ōnuku, where it's the best of new technologies and management and engineering solutions and governance, and indigenous wisdom traditions, and they're all coming together to create this new sort of approach to creating intergenerational wealth in a real sustainable way."



Cutting-salmon.

"That's definitely where Māori businesses are excelling as they're taking on the whole value chain. They're saying, well, we want to control this product from the very beginning, right through to when it reaches the consumer and that's not the typical model for Agribusiness — and it's an incredible opportunity."

Rik agrees, "we've been on that harbour for 800 years or so. I'm generation 26. I'm not a salmon farmer, but in my mind, we have a unique opportunity to track the whakapapa of our salmon smolt from day one to the day its fully grown and processed. We could sell the story of an Ōnuku branded salmon to the world and get a premium price for it."

Jay adds, 'what I'm super excited about with Ōnuku, is that they're sort of riding the wave of this innovative new model of economic development that I think is world leading in lots of ways.

And we're not seeing it in the wider corporate world. I see a lot of these innovations coming out of Māori businesses and Ōnuku are sort of the exemplar of this for me."

This work is based on timelines of 100s of years. The next steps will be about exploring multi-level aquaculture systems to get more value and increase sustainability, says Jay.

"Exploring multi trophic aquaculture systems is a massive step to being able to sell a truly high value premium product to international consumers and attract the financial returns. No product should leave New Zealand without a significant premium.

Rik says that these multi-trophic systems offer real potential for reducing nitrogen load through seaweed, mussels, or bottom feeders.

"We're a small country. We're never going to feed the world, but we can give them the very best. And we don't necessarily have to be huge to be the best."

Read the research on the Sustainable Seas National Science Challenge website



Westport Harbour – shaping a safe haven for the fleet



The grab hopper dredge *Kawatiri* at work.

The northernmost port on the South Island's West Coast aims to punch above its weight by offering a comprehensive suite of commercial services and comfortable facilities for fishing crews.

Significant improvements to harbour facilities over the last three years were enabled with \$4 million won by Buller District Council from the Ministry of Business, Innovation and Employment's Provincial Growth Fund.

The removal and renovation of the old jetties in 2021 made way for an impressive new mooring facility for commercial and recreational fishing crews. Boats now berth at the new floating pontoon marina, where power, water, ice, fuel and wharf facilities for unloading catch are available.

With renovated shower and toilet blocks, a laundry a stone's throw from their boats and improved security, fishermen are enjoying a greatly enhanced port experience.

Safety first for skippers

Spearheading the port's safety-conscious agenda is newly appointed harbourmaster Domonic Venz, who has a nautical background as broad as it is deep, including considerable experience as a

safety inspector and investigator for Maritime New Zealand.

"We appreciate that skippers coming into Westport are the experts when it comes to their own vessels. To support this, we provide skippers with as much good-quality information as we can to ensure their safe passage in and out of our harbour," Venz says.

Skippers are encouraged to plan ahead by contacting the port team to discuss timing and getting into port ahead of the weather.

The new Westport Harbour website provides access to high-quality bar soundings (updated at least once a fortnight) and tide, river flow and local weather information to help skippers plan their trips and make informed decisions before they cross the Westport Bar into the safety of Westport Harbour. Also available from the website homepage is the Buller River webcam, which provides two views of the river mouth at five-minute intervals, as well as a time-lapse of the previous day's images.

"We do our best to keep the bar as well-managed as possible. It is critical that skippers observe bar safety guidelines, which include only crossing an hour either side of high water and always making an



The new floating jetty.

‘all ships’ call on VHF Channel 14 on every entry and exit,” Venz says.

Making way for new users

Westport Harbour and its port facilities are managed by Buller District Council. The port has always been used by commercial, recreational and primary industry entities alike. Holcim New Zealand Ltd shipped its locally made cement out of the port for decades until closing its aged plant in 2016.

The void left by this major port user will be soon filled, however. Westland Mineral Sands plans to use a self-propelled barge to transport locally mined mineral sand out into Buller Bay. At sea, the sand will be loaded onto a ship and sent to China for processing.

Talley’s Westport fish processing plant is opposite the port and this proximity means it is convenient for skippers to offload their fish, refill the ice and have a bite to eat at a local food outlet before heading back out to sea.

The grab hopper dredge *Kawatiri*, in her distinctive red livery, is a familiar sight in and around Westport Harbour and plays a key role in keeping the port viable. Her job is to maintain a

CROSS THE WESTPORT BAR

SAFELY

- 

Check the weather and river conditions
westportharbour.co.nz
- 

Make an ‘all ships’ call on
VHF Ch. 14
on every entry and exit
- 

For harbour enquiries, call
0800 497 8427

IF IN DOUBT, DON'T CROSS



BULLER DISTRICT COUNCIL
Westport Harbour



FEATURE



Westport in the olden days.

safe navigation channel, from the tip heads upriver to the old Holcim cement wharves, as the river continuously changes the natural buildup of sand and silt on the seafloor around the river mouth.

The future is looking bright

The Westport Harbour team is always seeking feedback from port users to improve peoples' experiences.

"I am very excited about the future of the Westport Harbour. We have some exciting developments on the horizon which will further enhance skippers' experiences and safety when landing their catch at Westport Harbour," Venz says.

Take a look at the Buller River yourself from the webcam on the homepage of the Westport Harbour website: www.westportharbour.co.nz



SCAN ME

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Aquaculture on show in Canterbury



Sean Pennells (Sanford), Susan Whyte (Mt Cook Alpine Salmon), Kyle Oates (Sealord and Westport Deepsea Fishing School), and Ben Pierce Mussel Farmer.

At this year's Canterbury A&P show, Young Fish joined in on the Clash of the Colleges event courtesy of Agri Futures, marking the first appearance for the seafood industry in the rural games style event. Clash of the Colleges is a dynamic initiative encouraging young New Zealanders to explore and pursue careers in the food and fibre sectors by combining competition with education to inspire the next generation.

The day saw more than 300 students from eleven schools between Timaru and Hanmer Springs, participate in a competition to tie on mussel floats. The speed and workmanship demonstrated by the students was impressive given many students hadn't even seen a mussel farm before, going to show there is certainly a strong, practical talent pool coming through in the younger generation. It was equally impressive to see several students return to the site after the main event to continue racing their peers!

As well as showcasing the practical side of mussel farming, the Young Fish team included a range of people from the wider sector, including Kyle Oates, a



Students compete in the mussel float tying competition.

senior deckhand at Sealord and tutor for the Westport Deepsea Fishing School, Ben Pierce a mussel farmer, two salmon farmers, Susan Whyte and Sean Pennells, and Kirsten Norfield from Aquaculture New Zealand. The diversity in the team allowed conversations about careers pathways to flow towards all corners of our industry.

Ben Pierce commented on the day, "It feels like a great thing we're doing, many of these kids would have never stopped to consider joining the seafood sector, and probably don't have a clue what that career might look like. Having a memorable presence at these sort of events helps to place our industry front of mind at a time in life where the kids are being bombarded by career options"

The possibilities don't stop at tying mussel floats! There have already been suggestions for several other industry skills to be turned into competitive events, including net mending, grapple throwing, fish sizing and more. As Young Fish embarks on a mission to help attract new young talent to the industry we look forward to seeing these possibilities turn to reality. For now the challenge is to work on translating the excitement from this year's event into some meaningful employment.

In other news for Young Fish, we're excited to be ramping up our work in 2024. We will be visiting new seafood regions, providing access to maritime training, attending more events like the recent A&P show and plenty more. To make this all happen we will be looking to bring on a team of young people to drive this work, so keep your eyes peeled if this sounds like you!

Register through the website (www.youngfish.co.nz) and follow our Instagram, LinkedIn and Facebook to stay up to date!

Stephen George Page: Born to fish

6th June 1967 – 16th July 2023



Stephen on the helm, with Oldson (also RIP) looking on behind him.



Stephen's boat *Equinox* at Waitangi wharf/harbour Chatham Islands.

Stephen was a proud 7th generation Chatham Islander of Ngāti Mutunga descent, who knew he was born to fish. He left school at 15 to pursue his love of the sea, following his tūpuna Howard Page (his grandfather) who gave him his first deckhand job, George 'Old son' Page (his father), and uncles George Herbert and Clifford Whaitiri - all great cray and cod fishermen of Wharekauri, Chatham Islands.

His second deckie role was with his dad. Being an early riser Stephen would agree to meet early at the boat to go fishing and if George didn't turn up on time, he'd take his dad's boat (the *Paula Jane*, named after Stephens two sisters) and go without him as there was never time to waste when it came to fishing.

With income from his deckhand jobs he brought his first boat the *Cost A Lot* to dive for paua and kina when he wasn't crewing. Stephens catch cry was "hammerdown" and he was always in a hurry, taking every opportunity to purchase better diving boats so he could catch more, faster. He had the *Kristie Lee* built by Wayne Clements and his last dive boat was the *Shaggy*.

With hard work and the ongoing support of his whānau, Stephen bought the *Paula Jane* from George and his mum Anita and was finally following his true passion. He added to his fleet with the *Flinders Bay*

in 2001, followed by the *Equinox* in 2006 when he retired the *Paula Jane*. He continued running both the *Flinders Bay* and *Equinox* until 2016, when he worked the *Equinox* only.

During his 41 years of diving and fishing on the Chatham Islands, he gained his Inshore Ticket in 1986, his Commercial Launchmaster in 1988 and his Coastal Ticket in 2001. Stephen was booked in for further study in August 2023, but sadly went to bed on 15th July ready for an early start the next day and did not wake up, leaving us in the small hours of 16th July 2023.

On the water, Stephen had unparalleled skills, yet he was more than a master fisherman, he was a one of a kind person who embraced life and who he was. He never held anything back and forged his own path, always at full throttle. Stephen had the biggest, kindest heart with a wicked sense of humour, who would go above and beyond to all who needed his help.

Stephen is dearly missed by everyone who knew him, but particularly by his wife Tracy and step children Jay and Keanu and Aaliah, his mother Anita, siblings Jane, Robin, Paula and James, and nephews Tāne, Cruz and Toa whom he showed the meaning of the expression "teach a man to fish and he can feed a whānau and others for life."



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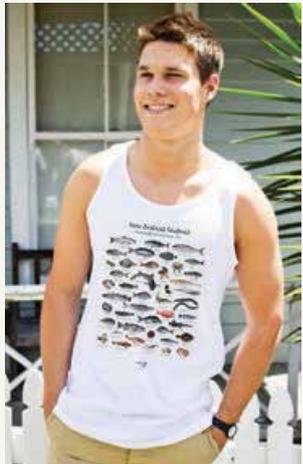
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5434 IMAGE CRAY BOAT LIQUIDATION SALE

LOA 13.3m x B 3.8m x D 0.9m
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Galley . Gas stove & Dickinson diesel stove
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5417 POTTER/LINER. MAKE
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Capt Cabin + 2 crew cabins
Good galley saloon
Split winches. 100 miles
survey Expiry Sept 2023
KEEN SELLER - POA



5385 TRAWLER & NETTER
Roger Carey Built 1964
15.1m x 5m x 2.4m
Cummins NTB55 240hp
ZF box 3.4:1. Fuel 2,500 ltr
Split winches. Net roller
500m Dyneema. 2 x trawls.
Set net drum. 4 Berths
Good electronics
Fish hold 222 fish bins, 9 ts
New 5 yr Survey Coastal
March 2023 **\$180,000**



5328 TRAWLER & LINER
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Detroit 6V/92 TI DDec 291hp
Allison 4.5:1 gearbox
Fuel 3650L, Water 500 L
Fish hold squared for 400 bins
Winches 1,000m x 13mm
Good electronics
Accommodation for 3
Surface & bottom line drums
Offshore Survey 100 miles
POA

5433 LONG LINER TUNA TROLLER

Aluminium, built Canada 1975
LOA 17.6m x B5.6m x D2.5m
Caterpillar 3406 bottom end rebuild
November 2022. 50kVA genset
5 berths 2 cabins
Ice maker, water maker, 25-30 tonnes hold
Long line gear. Tuna poles. Good electronics
Very well set up.
New survey November 2023
\$260,000

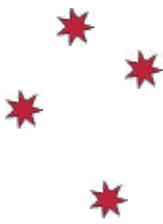


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WESTPORT DEEP SEA FISHING SCHOOL

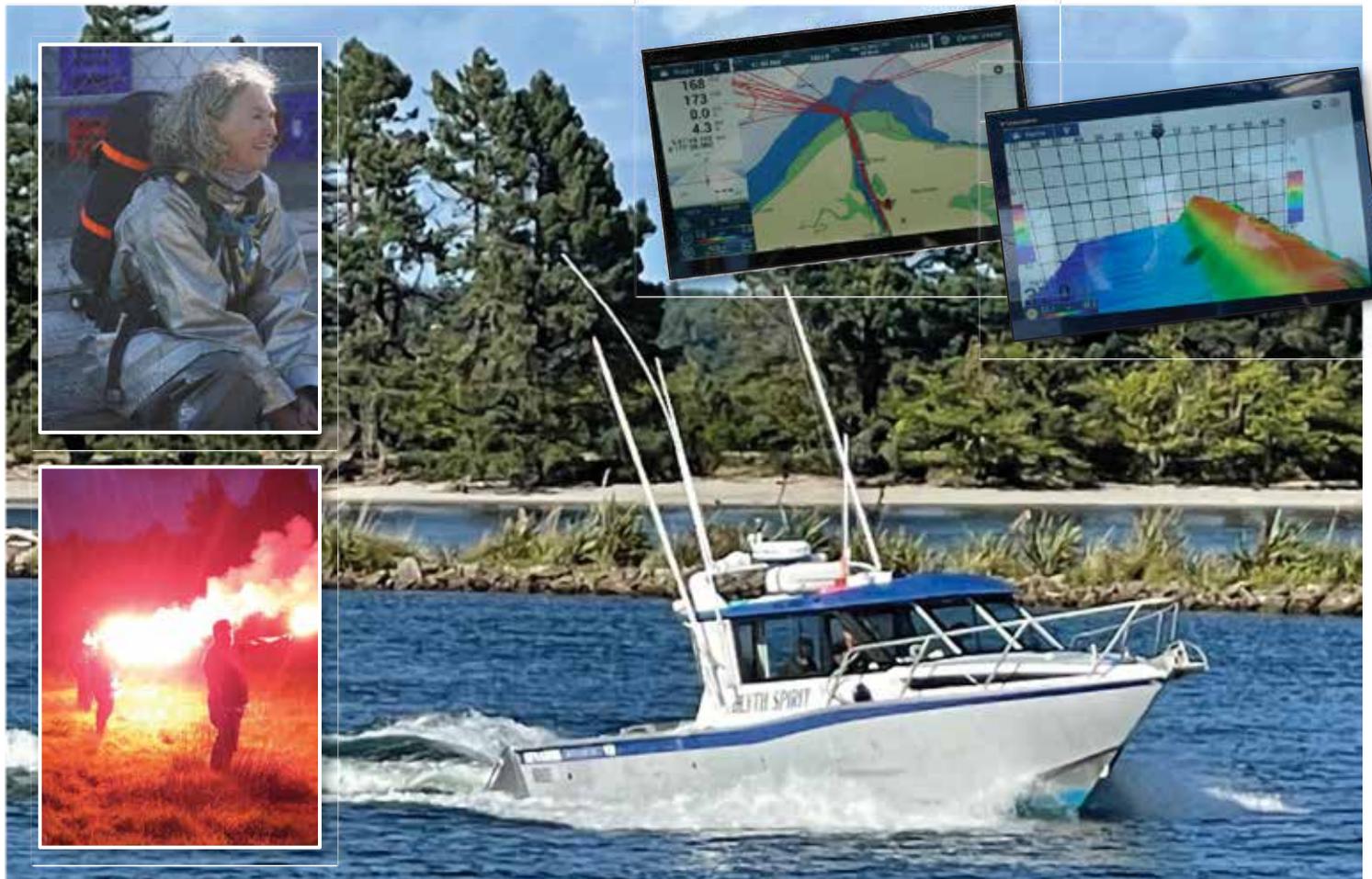
Maritime Training – All courses on demand – No Student Fees for 2023

- Advanced Deckhand Fishing
- Skipper Restricted Limits
- Skipper Coastal Offshore
- MEC6 & MEC5



For enrollments, scan the QR code and apply online.
No fees offer to New Zealand Residents and Citizens only.

STCW Basic (fees apply for these short courses)



CONTACT PETER ON: 0274 507585 | 0800 DEEP SEA – 0800 333 7732
info@deepsea.co.nz | www.deepsea.co.nz

SFMblue

A WHOLE NEW MARKET AT THE CLICK OF A BUTTON

SFMblue is an online digital trading platform connecting buyers, suppliers, fishers and wholesalers of quality seafood. It is a fast, intuitive, and user friendly tool that will transform the way you trade seafood.



DIVERSE RANGE & ACCESS

Easy and efficient procurement and ordering tool for purchasing seafood.



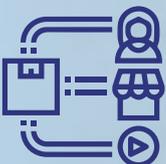
SET PRICE SALES

Use SFMblue to sell fresh product at set price, including while it's in transit to auction.



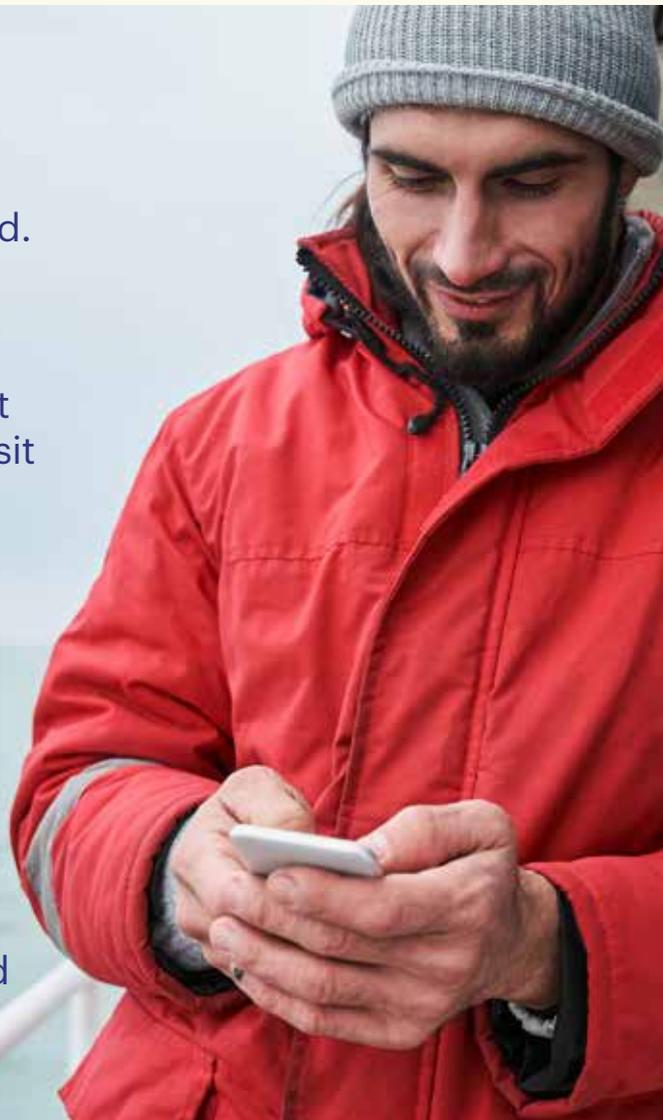
TRACKING & TRACEABILITY

Receive notifications on how your purchase is tracking and when it's available to collect.



NEW SALES CHANNELS

No longer just a market for fresh seafood. List your frozen, processed or long-life product on SFMblue.



Scan the **QR code** or head to **SFMblue.com.au** for more information on how you can join today.



Contact us:
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