



MARINE FARMING ASSOCIATION
To Promote & Nurture Sustainable Marine Farming

DECEMBER 2022 NEWSLETTER

CONTENTS

<u>President's Comment</u>	<u>2</u>
<u>Summer & new marine organisms</u>	<u>4</u>
<u>S&C forum</u>	<u>6 - 9</u>
<u>The King Shag Report</u>	<u>10 - 12</u>
<u>A turbo charge to deliver Better Beaches</u>	<u>13 - 15</u>
<u>MFA Book</u>	<u>17</u>
<u>Blue Endeavour decision</u>	<u>18 - 20</u>
<u>Big Day out is back</u>	<u>22 - 23</u>
<u>New Bioactives Centre</u>	<u>25 - 27</u>
<u>Grant the latest to jump the queue</u>	<u>31 - 33</u>
<u>Marine Biosecurity toolbox</u>	<u>35 - 36</u>
<u>New Marine Biosecurity toolbox</u>	<u>37 - 38</u>
<u>Those that feed us are worth fighting for</u>	<u>40 - 42</u>
<u>Green lip mussel spat at Ninety Mile Beach</u>	<u>44 - 46</u>



IMPORTANT DATES

MFA office closes

23rd December 2022

Christmas day

25th December 2022

New Years Day

1st January 2023

MFA office business as usual

9th January 2023

President's Report 2022

As another year draws to a close, I'm sure we're all looking forward to a well-earned break and to spending some quality time with family and friends.

The past 12 months have been full of challenges and change. This seems to be a reoccurring theme across many industries. However, we are a resilient bunch and always seem to find a way through.

One of the biggest challenges we've faced this year is the increased cost of doing business. This has been largely driven by hikes to fuel, wage and consumable costs. These increases have been the biggest we have ever seen, with fuel now more than double last year's price; and who knows where or when the wage spiral is going to end. Essentially, inflation is out of control and the Reserve Bank is hiking interest rates in an attempt to counteract inflation. With a recession forecast for next year and inflation expected to remain high, it's shaping up to be yet another difficult year.

This year, production figures are down across all species groups. This is mainly due to not having enough people to process our products. Some progress is being made through the Border Class Exemption scheme, but the extra 300 workers are still not enough to service the entire seafood sector. In this tight labour market we all need to focus on looking after and retaining our current staff. In more positive news, our products remain in demand and we are receiving record prices at market. It's great to be exceeding the pre-covid price given the current economic climate – long may it continue.

It has been pleasing to see the King Shag project come to fruition. This really has been an immense undertaking that resulted in positive outcomes for the marine farming industry. It has confirmed our belief that we are not having a negative impact on the species. Marine farming is actually providing both foraging habitat and roosting sites for the King Shag. I'd like to thank all those involved.

It was also good to see the restoration project in the Pelorus highlighting mussels as a cornerstone species for seabed health and habitat development. We hope to see this project extend into Golden Bay next year.

Another great initiative is the retrofittable float clamp. This is a classic case of industry working together to solve a common problem. Thanks to all involved, especially Mike Holland from Clearwater Mussels and Wal and Norbert at Sounds Engineering for their tireless efforts in product development. It looks like we'll have prototypes hitting the water before Christmas. This is a step toward eliminating the need for lashing in the

marine environment.

As always, thanks go to the MFA team in the office for another productive year, led by Ned and his sterling efforts on MEP and the key project work; Amber for her steady hand on finances, passion and drive for her work in the environment space; and Alex for her support on everything else and excellent work in the careers space. If you see them around, make sure to thank them personally, I know they will appreciate it.

I wish everyone a Merry Christmas and a successful New Year.



Marine Farm Compliance Audit Programme

**Declarations are Due
31st January 2023**

If you have not sent in your declaration for the 4th quarter, please do so as soon as possible



ONE DECLARATION FORM PER SITE
DUE BY THE END OF EACH PERIOD

November, December, January	(1)
February, March, April	(2)
May, June, July	(3)
August, September, October	(4)

ADVERTISING RATES

1 / 4 Page Advert
Vertical - 87mm x 130mm
Ordinary Members \$25 +GST
Associate / Non Members \$50 +GST

1 / 2 Page Advert
Horizontal - 180mm x 130mm
Ordinary Members \$50 +GST
Associate / Non Members \$100 +GST

Full Page Advert
No boarder - 210mm x 297mm
With boarder - 180mm x 267mm
Ordinary Members \$100 +GST
Associate / Non Members \$200 +GST

Expect to see new marine organisms this summer

Expect exotic marine organisms to appear in new ways this summer.

With elevated sea temperatures forecast and new non-indigenous marine organisms arriving each year you might well see some unusual things around marine farms this summer.

Seventy one non-indigenous species have been recorded in port surveys in the Top of South Island. Analysing the data Barrie Forrest found that the average rate of new species arriving over the past 10 to 15 years is three per year.

Last time we had sea temperatures three degrees above average we were getting calls about an outbreak of the fine filamentous seaweed *Cladophora*. This had already been around for at least 6 years.

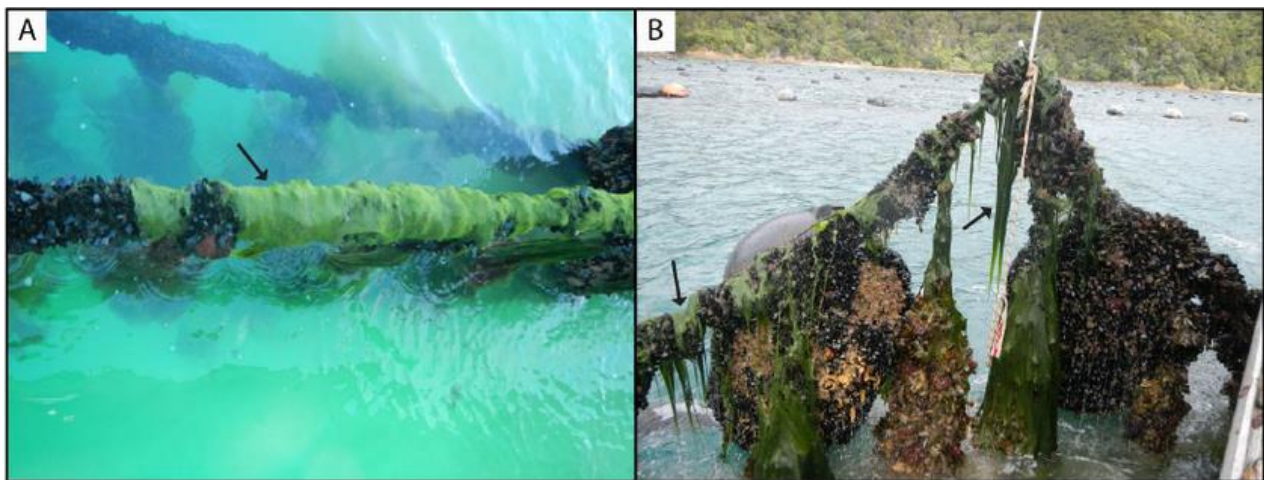


Photo credit: The Cawthron Institute

This pattern of occasional blooming and dying away is common in marine ecosystems, particularly when new organisms are present.

If you are seeing unusual things, please let us know. Remember that in most cases they will be self-correcting. But if not, early responses are better than late.

Peter Lawless

Marine Biosecurity Coordinator
TOS Marine Biosecurity Partnership
Phone: 021 894 363



MOVE

NZ Market Leader for all Aquaculture Transport Solutions

MOVE's specialised fleet of MPI-approved trucks and experienced drivers ensure the highest transport standards are met for these in-demand New Zealand products.



Call Graeme to enquire: 027 246 8978



CH4 GLOBAL
Zero Methane Agriculture

Through sustainable aquaculture production...

we are working to impact climate change at scale, **with urgency.**

If you have consented waterspace that may be suitable for growing asparagopsis, contact us to discuss potential partnerships.

ch4global.com



Making mussels a superfood amid ideas for top of South aquaculture



Making greenshell mussel powder the next superfood ingredient and having Government lead consenting for open ocean farming were among priorities generated at a forum of Marlborough's Smart+Connected Aquaculture group.

Marine farmers and scientists made up most of more than 40 people who turned out to the workshop (24/11) on how to unlock growth in aquaculture and achieve its target of becoming a \$3b industry.



The forum started with a warm-up exercise

Marine Farming Association General Manager Ned Wells told the forum that the Resource Management Act forced marine farmers to expend considerable resource/energy to defend their existing water space – which has stifled both innovation and growth.

Aquaculture NZ CEO Gary Hooper said the sector has always faced challenges but should be proud of the progress made, reflecting its resilience, adaptability and optimism.

He expressed frustration at the sub-optimal alignment between scientific research and the issues affecting industry daily, causing imbalance between 'blue sky' initiatives and delivering impact for the existing industry.



Ned chaired one of the forum's workshops

Getting mussel powder classified as a superfood was one priority supported by forum attendees. Aquaculture NZ Technical Director Dave Taylor said greenshell mussels offer a range health benefits, with anti-inflammatory properties being the most well-known. The scientific research is suggesting that humble mussel should hold superfood status, like blueberries or turmeric.

He said mussels did present a challenge when used as an ingredient in food such as smoothies due to their smell and taste. Further research was needed on the product offering, but there was market opportunity for mussel powder to be used widely as the next superfood.



Gary Hooper makes a point at the panel discussion which started the forum. Ned Wells, forum organiser Melissa Macfarlane and MPI's Finn Sumner and Nicola Hattersley-Marshall also took part.



AQNZ's Dave Taylor (white shirt) led another workshop

Another top priority from the forum was for Government to work with iwi, aquaculture organisations and other interests to improve the certainty and efficiency for planning and consenting for future open ocean farms.

MPI's Finn Sumner said ambitions for better planning, efficient consenting and sustainable development through resource management reform would apply to aquaculture activities. Fisheries New Zealand was working hard to ensure these objectives could be met for aquaculture development in key growing regions. This includes looking at how national direction can support councils in their critical role, and how central government can practically support spatial planning.

Jodie Kuntzsch, who leads New Zealand's blue economy cluster, told the forum that another priority was supercharging the current amount of hatchery space producing greenshell mussel spat. She said a 'toolbox' of options needed to be urgently developed as breeding more spat would give the industry greater resilience.

Marlborough District Council economic development adviser Mark Unwin told the forum there had been various initiatives to deal with industry waste streams like fish, shellfish and grape marc. This now needed a regional solution across primary industries, science organisations and councils which MDC would help lead.

Another initiative backed at the forum was a standardised approach to data collection across the aquaculture sector. Mussel App founder Ralf Klis said different companies collect data in different ways, making comparisons difficult. Standardising data collection would open up powerful tools such as AI to help improve profitability and decrease risk.

The Smart+Connected Aquaculture forum was brought together by the MFA and the Marlborough District Council.

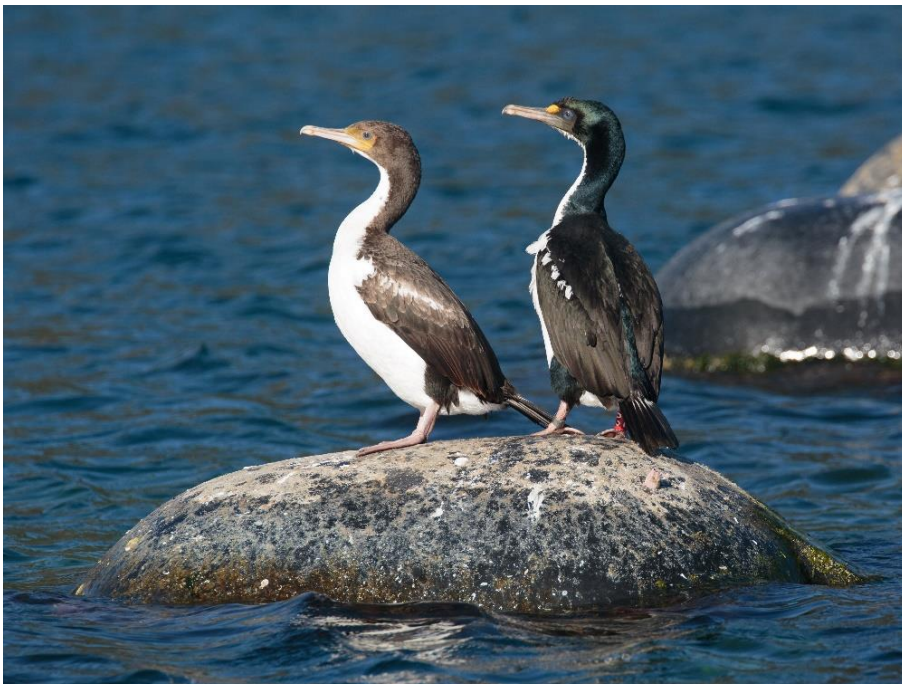
The five priorities developed at the forum will be reviewed by December's Smart+Connected Aquaculture meeting and it's likely working groups will emerge to help drive progress on the priorities.

Brendon Burns

King Shag numbers up and many using marine farms

A three-year study of endangered King Shag funded by MFA, Seaford Innovations Limited and industry members has found bird numbers have increased and make regular visits to mussel farms to forage for food.

Leading ornithologist Mike Bell led the extensive research programme. It included banding chicks and GPS tracking of adult birds to understand aspects of King Shag (kawau pateketeke) foraging ecology, survival and breeding biology. The research project was coordinated through the King Shag Working Group which includes iwi, marine farmers, MFA, AQNZ, MPI, DOC and Marlborough District Council. It followed concerns among some that King Shag, an endangered species found almost exclusively in the Marlborough Sounds, might be declining and marine farms could be contributing.



The 98-page final report (now on MFA website) outlines how aerial surveys of all known roosts were flown on a single morning in late January from 2018-2022 to estimate the total population of King Shag.

The population is estimated at 784 birds, which despite differences in survey methodology over time, is slightly higher than estimated in 2002. This trend was also seen in breeding numbers.

Some 43 birds also had GPS devices attached to track them across the Marlborough Sounds. More than half of the birds (56%) foraged within a mussel farm, this included birds tracked in areas with little mussel farming within foraging proximity. Of 13 King Shags from Duffers Reef, close to many outer Pelorus Sound marine farms, 10 foraged within farms. All 11 birds tracked from Tawhitinui, in central Pelorus, foraged within farms.

“This is the first quantitative data on King Shag foraging within mussel farms and shows that mussel farms do not cause habitat exclusion. It is expected that mussel farms have a neutral impact on King Shag.”

The report says in areas with mussel farms, King Shag appeared to prefer to roost on floats than on the shore, perhaps as this felt safer.

The report says aquaculture is increasing globally and can affect the environment in both positive and negative ways. “For marine seabirds, the impacts may not all be bad. Internationally the impact of suspension culture has been recorded as positive or neutral on marine bird species. It is difficult to determine if our results are positive, as we do not know if foraging in mussel farms improved foraging success. However, we report that mussel farms do not exclude King Shag from foraging habitat, and that farms are used by a large proportion of the population, and for a significant proportion of some individuals foraging. Mussel farms are likely neutral to King Shag, and if a farm is within a King Shags foraging range, it will be utilised to some degree, depending on the individual temperament of the bird.”

The report finds that exposed King Shag colonies in the outer Te Taihuo-te-waka/Marlborough Sounds had significantly lower productivity than more sheltered colonies in the inner Sounds. It also identified climate change driven increases to the severity and frequency of adverse weather events is emerging as a key threat to King Shag. The data also shows that King Shag are regularly disturbed, on average once every 2 days, and this could be at a level that is impacting the population of the famously shy birds.

The report found most disturbance occurred from Friday to Sunday, a time when mussel industry activity reduces, but recreational boating increases. ||

It suggests the Marlborough Environment Plan should consider preventing further sub-divisions which increase Sounds holiday home numbers and boating activity. Additionally, it recommends measures to reduce boating disturbance at colonies of King Shag as well as further education of recreational boat users and the wider public about the high risk of human disturbance to King Shag.

Mike Bell concludes the report by thanking the many groups and individuals that supported the research. He said the Marine Farming Association deserves special recognition for standing up the King Shag Working Group and ensuring that it functioned well for more than four years.

“The King Shag group is one of the best ‘working groups’ I’ve ever participated in and there have been quite a few! Both Jonathan and Ned deserve credit for their efforts in chairing the Group and I’m grateful to MFA for being such a solid project partner”.

Ensuring that King Shag flourish is an ongoing challenge – but this research is a huge step towards understanding and protecting the species.

Waikaitu 

Have Undaria growing
on your mussel farm
each year?

Get in touch with us!

Help us to make a
positive change for the
environment.

 021 772 989  info@waikaitu.com



A turbo charge to deliver Better Beaches

Darren Clarke is on a mission; to bolster beach cleaning efforts across the top of South coastline and bring in a range of other sectors and supporters.

He's been the MFA's Environmental Mentor for over 10 years. The MFA's Environment Programme started in 1990, the same year the first organised beach cleaning took place.

Now, a revised and extended beach cleaning programme known as the Better Beaches project is being launched by the MFA.

While the marine farming industry will still provide the lead, Darren and the MFA are working to bring in other sectors and businesses. Currently, the marine farming industry spends around 2,000 hours a year cleaning beaches across the top of the south. It's expected this will be able to be increased to 3,000 hours with the Better Beaches project.



This change in part recognises that these days much of the material collected on beach cleans is not from marine farming; and if it is, it's often historic debris exposed by storm events. Plastic from a wide variety of domestic and consumer products is collected.

Darren and the MFA are approaching companies such as soft drink producers, fish bait suppliers and plastic pipe manufacturers to come on board with Better Beaches. Additionally, firms that supply services to marine farmers are being asked to join the initiative. Businesses can choose from five levels of sponsorship from Bronze through to Diamond.

The sponsorships are used to increase resourcing and pay for vessel time and people power. He says a lot of companies are jumping at the opportunity to help. "In today's world, every business must be part of a sustainability programme. A lot of them genuinely want to be part of it."

Darren points out that the Marlborough Sounds alone accounts for 20% of New Zealand's coastline, so with Golden and Tasman bays included in beach cleans, sponsors can really help make a difference.

Some companies don't just want to be sponsors – they want to put their management and staff on the beaches. Darren says this presents some logistical challenges which must be worked through with marine farming companies. These include being able to settle on a good day for weather and the health & safety aspects of having non-crew on a working vessel.

"I'm confident that with the help of the marine farming companies we will get them out there. We really do need to up the ante and take beach cleaning to a whole new level."

All beach cleaning effort remains underpinned by Darren auditing best farm and boat practice and educating the crews to proactively mitigate any debris loss from vessels and farms.

Sponsorships of the MFA's Better Beaches project to date are

(see page 15)

If you would like to get involved with the Better Beaches Project as a sponsor, please let the MFA know.

Ph: 03 578 5044 | E: info@marinefarming.co.nz

Or check out our website - www.marinefarming.co.nz/the-better-beaches-project

Gold Sponsors



Silver Sponsors



Bronze Sponsors





Port Marlborough

Working together to support the marine, aquaculture and tourism industries in Marlborough

03 520 3399 | RECEPTION@PMNZ.CO.NZ

PORTMARLBOROUGH.CO.NZ

It's what's beneath the surface that counts.

OCEANLAW NEW ZEALAND

The only law firm in the South Pacific dedicated to the sea



PO Box 921, Nelson 7040 | Freephone 0800 Oceanlaw | www.oceanlaw.co.nz

MFA Book

Following on from the email we sent to all members back in March 2022, we thought it was a good time to update everyone on progress.

If you missed the news, we are writing a new book, it will follow on from *Lines in the Water*, so it will kick off around the year 2000 and cover the industry progress and changes through to current day.

We have engaged a new writer for this book; her name is Julie Brown, and she will likely be in touch with some of you in the coming months. If you would like to contribute a story or photos for the new book, please get in touch with the MFA directly to facilitate this.

Please note: If you have photos to contribute, photos will need to be of a high quality for printing purposes.

We are hoping to have the book written by the middle of next year, to give us time to proof, index and print. The goal is to release it for next Christmas and to have it available for sale at the Havelock Mussel Festival 2024, which will be the 20th anniversary of the Mussel Festival.

To contact the MFA regarding the book with questions or content, please email info@marinefarming.co.nz.



Blue Endeavour decision arrives, CEO departs

November saw New Zealand King Salmon get approval to establish the country's first open-ocean finfish site in Cook Strait and few days earlier, the resignation of Grant Rosewarne, CEO since 2009.

MFA President Jonathan Large says this hopefully marks the end of a tough period for NZKS and he paid tribute to the former CEO's contribution.

"Grant has been a forceful advocate for both adding value to salmon production and the need to establish farms in cooler parts of the Marlborough Sounds."



"I know that the delays in getting approvals such as that for Blue Endeavour were extremely frustrating for both Grant and his Board, but the recent announcement is respectable parting gift".

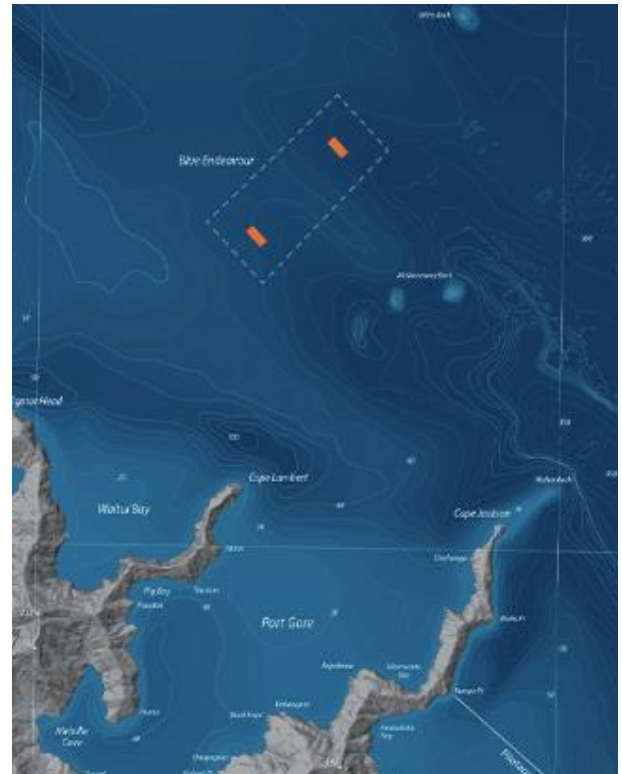
Following a hearing in Blenheim last year, the Commissioners announced their decision to approve the application to establish a farm in Cook Strait, 7km north of Cape Lambert.

The farm is not expected to be in production for at least five years at a cost of \$150-\$200m.

Grant Rosewarne's resignation was effective immediately on announcement on November 1. An international search for his

replacement is underway and in the interim Graeme Tregidga, NZKS GM Sales is acting CEO.

He says this is a first for New Zealand and a significant decision for the aquaculture industry after a process taking six years. The open ocean was part of the company's long-term strategy because it makes logical sense for both the environment and for the salmon in the long term. But the current focus remains on the company's inshore farming production, says the acting CEO.



Labour MP Rachel Boyack says she was very pleased with the Blue Endeavour decision after a “a very challenging time” for NZKS. The company employs a lot of people and it was important for the region that it did well, says the Nelson MP.

Forsyth Barr analysts looking at the Blue Endeavour approval say it appeared to provide NZ King Salmon with more flexibility than anticipated as it removed a key requirement to stage the rollout of the farms across multiple years. Other key conditions appeared generally unchanged for the project on two six-hectare pens



ALEXANDER HAYWARD
LIMITED

**Registered Valuers,
Property Consultants, Arbitrators.**

Specialising in all aspects of Marine Farm
Valuation including
**Processing, Shore Bases,
Specialist Plant and Machinery**

**Experienced in all
NZ Aquaculture Regions**

CONTACT **Lex Hayward** dip VFM, FNZPI, AAMINZ

Phone: **03 578 9776**
Level 1 - 20 Market Street
Blenheim
Fax: 03 578 2806
email: valuations@alexhayward.co.nz



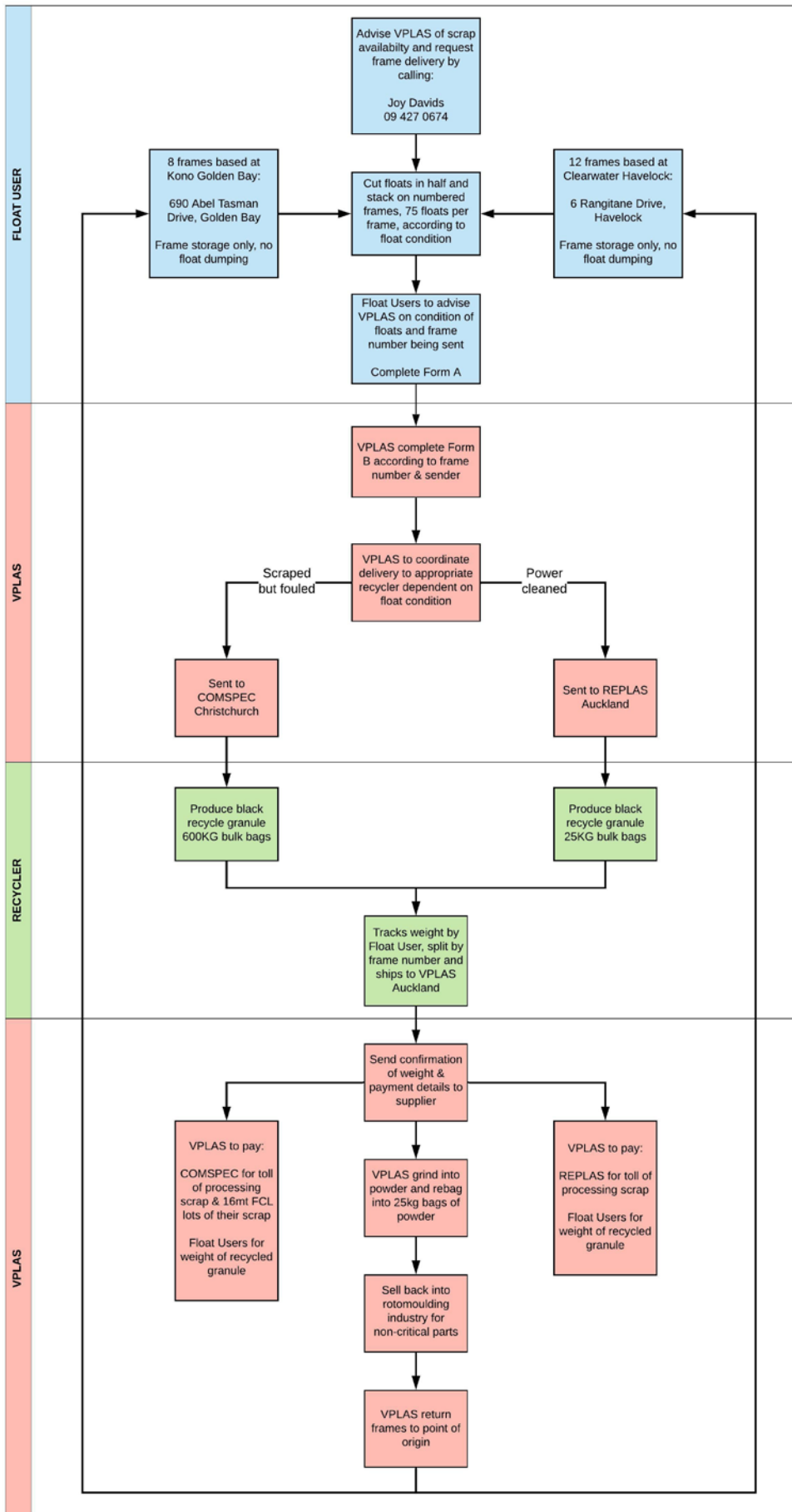
**Our SRL training
schedule is now
confirmed for 2023**



MARITIME

**Please follow the link for
further details:**

www.sisnz.co.nz/skipper-course-srl/



Big Day Out is back

One of those pre-Christmas rituals - the annual December effort to clean up Sounds beaches before the holiday makers arrive is again underway.

MFA Environment Committee chair Grant Boyd is expecting to see a big effort across the weeks leading up to Christmas.



The team at last year's Big Day Out

“The purpose of the Big Day Out is to give the Sounds a spruce up before the Christmas holidays. While it used to be focused on one day, now we programme a full month of extra effort.

“This ties in better with the operational requirements of the industry vessels and crews. Our focus is on hotspot areas and

those more frequented by recreational users - especially high-usage areas such as DOC public areas and any camp sites.”

Companies have been assigned the same areas as last time – if there are any issues please let the MFA know.

Grant says Big Day Out is now an integral part of the wider Better Beaches initiative, previously known as the MFA Industry Beach Cleaning Programme..

“Big Day Out ensures that all aquaculture users of the Sounds are doing, and seen to do their bit with vessel crew and time.”

He says loose floats remain a particular focus because of their visibility in the marine and beach environments. “So, everyone is encouraged to keep a sharp eye out for those.”

Amber who runs Big Day Out for MFA asks everyone to report their cleans using one of the following ways:

- Via a form available on board
- Via the [MFA website](#)
- Or by using the MFA Enviro app which can be downloaded from the google or app store.



A good look for Industry

REID TECHNOLOGY

leaders in solar power

Sealite SL15 1-2nm

Sealite Advantage

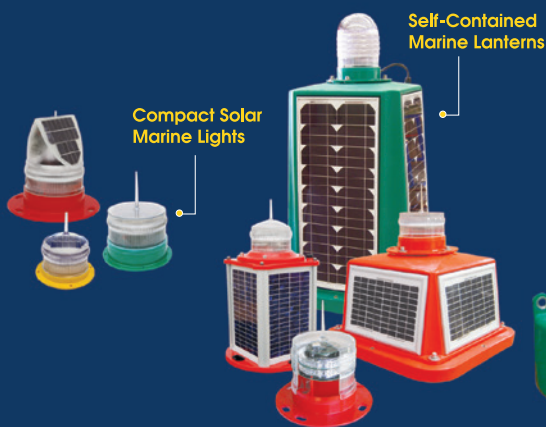
- User adjustable flash code
- User replaceable battery
- NiMH battery for long service life
- Completely sealed and self-contained
- IP68 water-proof
- Advanced LED compact lamp



"Trusted by more than
200 government agencies
worldwide..."

Marine Navigation Aids

Manufacturing the widest range of LED lanterns, including solar marine lights, heavy duty marine lanterns, navigation buoys, barge lights, leading lights and monitoring systems.



Full range of Marker,
Navigation and Ocean
Buoys up to 3mt in
diameter



RF Synchronised Solar LED Lanterns



Poseidon Safe Water Mark, Australia



Sealite's Nautilus
2.2mt diameter
ocean buoy with
SLC420 solar marine
lantern, Australia

REID TECHNOLOGY
leaders in solar power

Supplied by: Reid Technology Limited
Tel: + 64 9 489 8100
Web: www.reidtechnology.co.nz

Product enquiries to sales@reidtechnology.co.nz

Sanford's new Bioactives Centre opens

Sanford says the hidden properties of many species of New Zealand seafood will be explored and unlocked with the opening of its new marine extracts plant in Blenheim.



The \$20 million plus Bioactives innovation centre will make the most of the beneficial properties of several of Aotearoa's under-appreciated marine products. It is creating new jobs for scientists and technicians in Marlborough and will eventually employ up to 48 people.

Sanford's GM of Innovation, Andrew Stanley says the plant will do two key things.

"Firstly, Sanford Bioactives will take marine products which we already know have beneficial properties. That's products like Greenshell mussel powder which has proven anti-inflammatory and joint health benefits. We already make it, we already sell it, it is very popular. Our new Bioactives centre introduces new tech and equipment which gives us a chance to double and eventually quadruple our output.



“Secondly, there are the new areas of marine extracts and science we are going to explore. Some of these are confidential for commercial reasons, but the potential is huge, given that Sanford is a fishing and aquaculture company that works with more than 100 different marine species. We already know quite a bit about some of their hidden properties and we will be working to discover more. This science is being done with great partners like Cawthron, Plant & Food and Massey University. And our Blenheim plant will be a home for much of that work.” Sanford CEO Peter Reidie says some of the products Sanford will be making in Blenheim can sound like science fiction the first time you hear about them.

“Hoki skin collagen is one of those. Sanford has been producing this at a relatively small scale. We extract the collagen from the hoki skins and then one of our partners turns it into a nanofibre. That fibre is then woven into beauty masks which melt on contact with damp skin, delivering the collagen deep into the dermis.

These sell out in South Korea, showing that there is huge potential to grow and to make the most of a product, in this case a fish skin, which many people would previously have seen as waste.

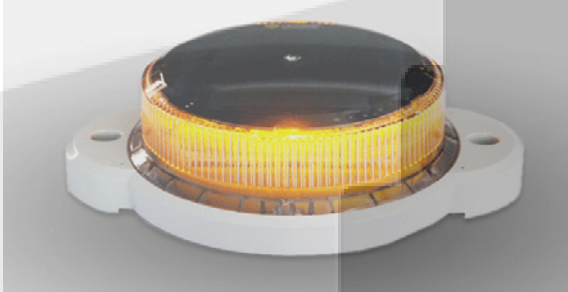
“This all fits with Sanford’s strategy to improve the value utilisation of the entire fish and eliminate waste. We see this approach as key to sustainability and getting more value out of New Zealand’s precious seafood.

“Blenheim is currently world famous as a centre for beautiful New Zealand wines. We believe it can and should become famous as a home for marine products and extracts that can take the world by storm.” Mr Reidie says “what we know already is very exciting – more jobs, better value for our seafood – but what we don’t know yet is equally exciting. What are the products of the future that will come out of this plant? They could be anything from new beauty products to compounds with medical benefits. There is so much potential from seafood such as our Greenshell mussels, which are unique to New Zealand, and we can’t wait to see what our Bioactives team will do in the future.”

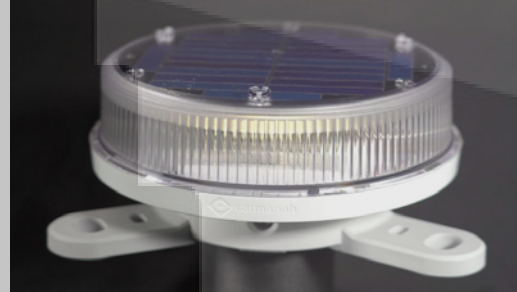
**SABIK
MARINE**



**Aquaculture Light Applications.
SPECIAL MARK & CARDINAL MARK
1-3NM M550 & 4NM M660 SABIK LANTERNS**



- Fully Self-contained, Programmable, IP68, up to 3 NMs
- Weighs just 400gms.
- 15 Year design life & 3 Year warranty. Made in USA



- Fully Self-contained, Weighs 800gms, IP68, up to 4 NM
- Bluetooth Programming using Smartphone up to 50 Mtrs
- 7 Year battery. All colours. Bird Spikes incl as standard
- 15 Year life & 3 Year Warranty. Made in USA

SENSOR SYSTEMS (NZ) LTD

Ph: (09) 275-4578 Email: mark@sensorsystems.co.nz

www.sensorsystems.co.nz

MUSSEL FARMERS

Here at Talley's we are eager to continue expanding our Grower base, as our Shellfish business continues to grow.

To do this WE WANT YOU!

We offer highly competitive prices across all mussel grades, to process through our factories in Blenheim and Motueka, producing;

- halfshell
- marinate
- meat and
- nutraceuticals products.

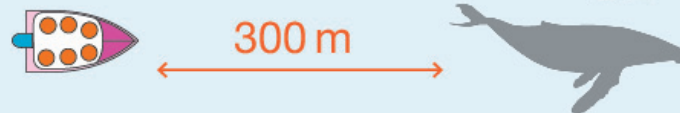
If you are interested, please **contact us**

Jordy.Taylor@talleys.co.nz

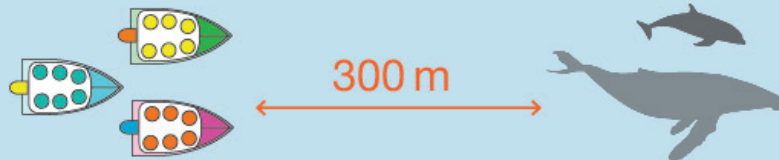


Simple rules for boaties when interacting with whales and dolphins

Don't travel faster than idle or 'no wake' speed within 300 metres



No more than 3 vessels within 300 metres



Do not obstruct their path. Approach from a parallel/ slightly rear direction



Do not swim with dolphin pods containing juveniles



Stay 50 metres away from any whale or orca



Stay 200 metres away from any baleen/sperm whale with a calf



Do not swim with whales or orca



www.doc.govt.nz

New Zealand Government



Department of Conservation
Te Papa Atawhai

You are welcome to tie up to a mussel farm if you want to fish **(many say its the best spot)**

When you're navigating near mussel farms you need to know the following:

- Always keep a good lookout
- Never exceed 5 knots when navigating around mussel farms
- Avoid entering mussel farms at night
- Orange floats mark the ends of each mussel line
- At night, mussel farms are marked with yellow flashing lights. The light sequence is a group of 5 flashes every 20 seconds. Fl (5) 20s
- Please loop a rope through the handle of a black or orange float (not lights / navigational aids.)
- Don't tie onto the backbone or growing ropes as you will chaff the ropes
- Don't fish through the lines between the floats
- Keep propellers well away from the lines, propellers are like knives

If you find a float - it's a marine farmers' property. Please call **0800 433 2747** to alert us.

This is also a number to call to report any concerns about our environmental performance.

Boaties using the coastal environment in the Top of the South - Please ensure your hull is free from unwanted organisms before entering Sounds waters.

If you have any concerns about environmental issues at a Marine Farm call the **Environmental Hotline** on **0800 433 2747**



Grant the latest to jump the queue

Sanford's Floating and Farm Development Manager, Grant Boyd has joined a group of Sanford managers who've all 'jumped the queue' for a good cause.

Grant's effort in this year's "Drop for Youth" Marlborough event saw him the top fundraiser from more than 100 people all jumping out of a skydiving plane in May to raise funds for the Graeme Dingle Foundation Marlborough.

"I thought it was time I pushed myself outside my comfort zone again, to raise money for our local young people. I'm a big believer in the work Graeme Dingle Foundation are doing with our next generation," Grant explains.

Grant raised \$9,150 - and that contributed to a total which was \$36,852 higher than the charity's own target of \$100k!





Ted Culley presented Grant Boyd with the trophy at the Drop for Youth Awards

Grant Boyd with Kandoo Kiwi – as he prepares to “Drop for Youth



As a result of his sterling efforts, Grant was awarded the Graeme Dingle “highest fundraiser” trophy at the recent awards evening. The trophy has been awarded six times since 2013 – with Sanford’s legend Ted Culley winning it three times and Zane Charman (then working for the company) once, and now Grant. National Operations Director for Lion Nathan, Geoff Matthews, is the only non-Sanford’s person to win it so far.

Graeme Dingle Foundation Marlborough uses the funds raised to support young people aged 5 to 25 years old, with more than half of the region’s young people reached by its transformational programmes.

Regional Manager for Graeme Dingle Foundation Marlborough, Kelvin Watt says Grant has been a “stalwart supporter. He’s mentored in our Career Navigator programme for five years in a row, helping lots of Marlborough college students find a pathway beyond their college years. He’s also been known to put his body on the line – in his wild ‘Crossing the Cook’ idea, and now in Drop for Youth” says Kelvin.

In 2016 Grant and (fellow Sanford employee at the time) Zane Charman paddled across the Cook Strait to raise \$30k for the Foundation.

“It’s so generous of people like Grant and the companies in the marine farming sector. We can only do what we do, because of support like this, ” says Kelvin Watt.

The Drop for Youth trophy is constructed around the carabiner and piton used by Sir Graeme Dingle and Murray Jones in 1969 - when the two Kiwis became the first to climb all six classic European mountain faces in a single season, including the Matterhorn and the Eiger. Perhaps that’s where Grant is off to next?



We're interested in buying your mussel farm

Thinking of selling? If your mussel farm is located at the Top of the South we are interested in purchasing your farm at a very competitive price.

Contact Scott Gillanders / scott.gillanders@maclab.co.nz / 027 649 0239

MacLab



AQUACULTURE DIRECT

Aquaculture Direct believes that New Zealand can benefit from the economic, cultural and environmental opportunities that sustainably managed aquaculture can deliver.

Our dedicated team of specialists have extensive experience over all aspects of the aquaculture industry - advising and supporting government, councils, policy makers, iwi, marine farmers, research agencies and new entrants into the industry.

From strategic planning, feasibility studies and resource consents, through to marine farm development, monitoring and compliance requirements, we provide a comprehensive consultancy service for the aquaculture industry in New Zealand. We provide pragmatic aquaculture expertise to support innovation, collaboration and new investment into this exciting sector.



We are Aquaculture Direct.

bruce@aquaculturedirect.co.nz | aquaculturedirect.co.nz

Marine Biosecurity Toolbox Programme

Researchers, partners and end-users from Aotearoa New Zealand and abroad came together this month at Patuharakeke Iwi's Takahiwai Marae in Northland for a two day wananga to celebrate research achievements and future directions for the MBIE-funded Marine Biosecurity Toolbox research programme. In its fourth of five years, the collaborative research programme aims to develop science-based tools and technologies that empower governments, tangata whenua, industry and the public to effectively mitigate biosecurity risks. The research highlights of the third programme year are collated in this SUMMARY DOCUMENT. Highlights include promising results in trials of new antifouling technologies, eco-engineered surfaces that help katai (*Perna canaliculus*) thrive, eDNA detection technologies



and methodologies, and the development of domestic pathway models for invasive species that can be spread around Aotearoa New Zealand by commercial, recreational and aquaculture network vessels. The meeting was attended by 38 programme partners and supporting end-user delegates from Scion Research, Patuharakeke Te Iwi Trust, Cawthron, Deakin University, University of Otago, Macquarie University, Durham University, Northland Regional Council, Auckland Council, Marlborough District Council, Waikato Regional Council, Biosecurity New Zealand and Department of Conservation.



havelock mussel and seafood festival'23

11 MARCH 2023, 10AM-6PM, HAVELOCK DOMAIN

MARKET FRESH SEAFOOD	ENTERTAINMENT Feat: JORDAN LUCK BAND
CELEBRITY CHEF SIMON GAULT	LOST TRIBE AOTEAROA JODY DIREEN & MORE

Tickets from:

havelockmusselfestival.co.nz




PLATINUM SPONSORS

New Marine Biosecurity Toolbox programme

New Marine Biosecurity Toolbox programme research explores antifouling potential of bubble and trapped gas layer technologies

Biofouling occurs when microorganisms, plants, algae and other small animals accumulate on structures underwater. Although a natural occurrence in marine environments, it is a problem for marine industries and owners of coastal and offshore infrastructure like ports and marinas. Biofouling causes damage to surfaces, can interfere with the performance of moving parts and creates drag on vessels. It can also create attractive surfaces for non-indigenous pest species to settle on, aiding their unwanted spread.

The development of solutions that prevent biofouling on submerged infrastructure is one of the key objectives of the Marine Biosecurity Toolbox, a research programme led by Cawthron Institute and funded by the New Zealand government's Ministry for Business, Innovation and Employment. Cawthron's Healthy Oceans Manager, Dr Grant Hopkins, leads the antifouling technology development workstream through the Toolbox programme and is involved in a number of research projects with colleagues at Cawthron and partner organisations that aim to develop biofouling solutions.

"This is a global issue that causes major losses in productivity and creates environmental and biosecurity threats, and it's not being effectively managed because the solutions just aren't available yet - that's something our researchers in the Toolbox team are very keen to change," Hopkins says.

"Research we have done to date indicates that bubbles are really effective at preventing biofouling – we published a study in 2020 after a year of laboratory and field trials which showed that bubble streams can not only stop organisms from settling on surfaces but can also remove recently settled larvae, which is great.

“What we are now working on is the development and testing of bubble producing systems, and this is tricky work!

“Do you just put bubble diffusers beneath a structure that requires constant electrical supply and continuously blast a stream of gas at the surface, or can you do it periodically, and if so, at what intervals?”

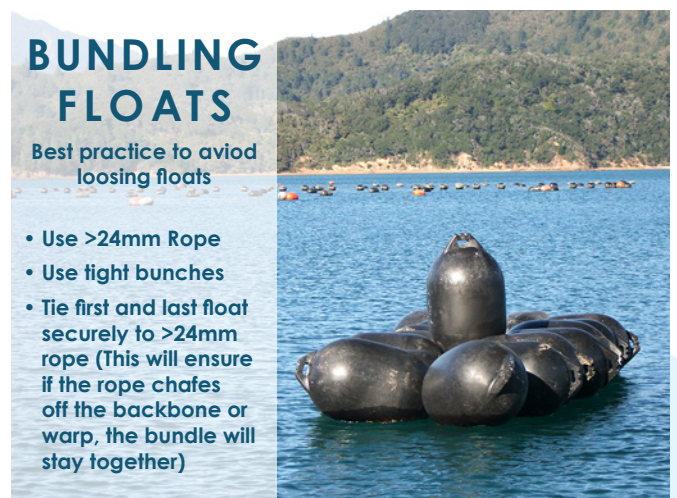
“Or, are there ways of trapping pockets of gas against these surfaces to create a protective barrier? There are plenty of questions and avenues to explore, so we’re working on a few, with a new trial currently underway at Waikawa Marina in Picton.”

To read more about the research, including work with Durham University researchers on methods to trap gas at the liquid-solid interface and create an antifouling ‘gas cushion’, check out this case study on [Cawthron’s website](#).

MFA Newsletter Stories

If you have a story that you would like to see published in our newsletter, please forward it to info@marinefarming.co.nz for consideration.

Our newsletter comes out every two months – February, April, June, August, October, and December.



BIRDS, SPIDERS AND BUBBLES

Drawing inspiration from the natural world to develop new solutions to aquatic environmental challenges

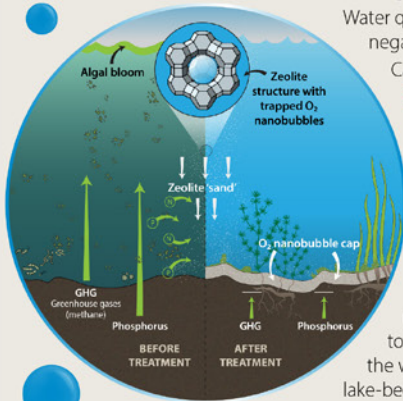
Bubbles are an amazing natural phenomenon. They're beautiful, fun to play with, and a bit mysterious, but they're also proving to be quite useful! New research and development by scientists at [Cawthron Institute](#) and their research partners is revealing they could also be a powerful tool to address challenges in aquatic environments.

Using bubbles to clean up degraded lakes

Water quality is poor in many of Aotearoa New Zealand's lakes with negative effects on the environment and people.

Cawthron freshwater researchers have been funded by [Ngā Pae o te Māramatanga](#) and the [Biological Heritage National Science Challenge](#) to explore the use of tiny nanobubbles of oxygen to lock in nutrients stored in lakebeds, preventing algal blooms caused by low dissolved oxygen and high phosphorus and nitrogen levels in the water. The nanobubbles may also reduce emissions of greenhouse gases.

The trial, run by Cawthron freshwater scientists Drs Sean Waters and Simon Stewart and Professor Gang Pan of [York St John University](#), involves forcing oxygen nanobubbles into a natural mineral called zeolite which is then applied to lakes. It is thought to work in two ways; removing algal material and nutrients from the water as it sinks to the bottom, and then oxygenating the lake-bed sediments, reducing the further release of nutrients.

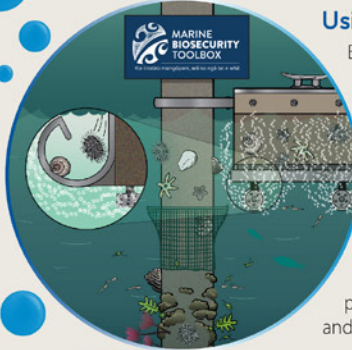


Using bubbles to prevent biofouling

Biofouling occurs when microorganisms, plants, algae and other small animals build up on structures underwater. It causes damage to boats and coastal infrastructure and is a biosecurity risk with international ships transporting invasive species.

Cawthron scientists and their research partners have been working on solutions to this problem through their involvement in the Cawthron-led, government funded [Marine Biosecurity Toolbox](#) research programme.

The first solution under development is the use of giant bubble making machines underneath marinas to disturb the water and prevent biofouling species from settling on the bottom of boats and on structures like marina pontoons.



Birds, spiders and bubbles

You've probably heard the term 'like water off a duck's back' – it's because waterfowl and seabirds alike are renowned for their watertight feathers.

Researchers at [Durham University](#) have found a non-woven polypropylene fabric that has similar waterproof qualities to these feathers, and a plasma-treating process that mimics the effect of preen oil, to trap a layer of gas against a surface underwater.

They've also drawn inspiration from the Diving Bell Spider and its incredible underwater breathing technique when figuring out how to maintain the trapped gas layer, by using a bubble machine to direct short bursts of air bubbles at the surface every few hours.



Find out more

Our researchers are planning more research and development to take these technologies from the lab to the field, finding the most affordable and efficient techniques for scaling up their use. Read more about [these innovations](#) here.

Thanks to our research funders and partners



Those that feed us are worth fighting for

It's been a tough year with fuel prices rocketing and general price increases across the board.

"I don't want to sound all doom and gloom because there is a much for us to be thankful for. But I also don't want to negate how hard it's been for many of our fishers, marine farmers and aquaculture whanau", says Darren Guard, Managing Director Guard Safety and who supports FirstMate operationally.

"There is a journey of change happening right now in the seafood sector, with new cameras, Dolphin Threat Management Plan (TMP) restrictions, Electronic Reporting, and policy coming that is impacting all of us.

"You add in the Fisheries Amendment Act changes and there is a lot that we are all grappling with. Everyone is trying to find new mode of operations after COVID-19.

"But no one is alone and FirstMate is here to support them through the voyage. As with all voyages there will be peaks and troughs but rest assured, FirstMate are here to try to smooth the waters.

"I'm passionate about our sector and I believe in us. Every fisher, every seafood worker, every marine farmer, every single one of you, adds value and provide an amazing product to feed the world. "Those that feed us are worth fighting for." And FirstMate has been with the industry through it all. Over 170 fishers and whanau have got in contact with FirstMate, resulting in over 700 interactions.



**IT'S TIME TO PUT OUR
SEAFOOD
WHĀNAU
FIRST**

If you, your crew, or family need support to navigate what's ahead, get in contact.

Call **0800 ADRIFT**
0800 237 438
www.firstmate.org.nz

first mate
SUPPORTING OUR
SEAFOOD WHĀNAU

Geoff Donley, FirstMate Chair, says “it’s both humbling and an indication of how tough things are, that fishers and their whanau know who we are and know how to get in contact”.

“We’ve been approached by people from across the country, and people who haven’t reached out before are beginning to get in contact for advice and support, with 15 new contacts in the last month alone.

“Our goal is to offer people and businesses the support they need to better navigate the pressures and complexities that come with the job and rise to any potential challenges.”

There are a wide range of reasons for why people connected with FirstMate. “Our seafood whanau have been in touch to talk to us about everything from COVID-19 to quota cuts, to electronic reporting support to compliance and policy stressors,” Donley says

“Fishers and their whanau often just needed a friendly ear that understand what they’re going through. For some who contacted FirstMate, we were able to connect them with counselling support, welfare support, business services or administration services.

“We encourage marine farmers to reach out if they need support,” Donley says.

FirstMate is run by people who understand what it means to be part of New Zealand’s dynamic and challenging seafood industry. The team has a deep knowledge of the seafood sector and they know what you might be going through because many of them have been through it too. Now, they want to give something back to the sector by helping others.

Currently, FirstMate have 13 navigators on hand to offer that support. And next year, the focus is on bolstering their numbers so there are more people in every port in New Zealand.

“We know that when you pick up the phone or email us, it’s a huge step”, Guard says.

“You may have been thinking for some time about where to get advice and support, and taking that moment, getting in contact – it’s courageous but we know it can be intimidating too. We’re here to let you know that it doesn’t matter how big or

small the issue is – we’ll understand. And there will never be any judgement. We will always put you first. And we’ll always try to find a way to help you, either directly or by connecting you with the people that can”.

Over the last year, FirstMate has worked hard to be in the places that you are, holding workshops and attending events so as to offer support directly and in-person, and have so far held seven wellbeing workshops across the country; 11 community outreach events; 33 industry engagements; and attended seven events.

“If we’re not talking, we’re not moving forward,” says Guard. About FirstMate New Zealand: We’re a charity set up to support the health and wellbeing of hardworking people and their whanau across the commercial seafood sector.

Lee Cowan FirstMate



robertson
environmental

OUR SERVICES



Ecological
Assessment



Compliance
Monitoring



Habitat
Mapping

Dr Ben Robertson

P: 027 823 8665

E: ben.robertson@robertsonenviro.co.nz

www.robertsonenvironmental.co.nz





Have you signed up & started your free online training voyage with MarineSAFE?

- ▶ All 8 MarineSAFE modules are free for industry!
- ▶ You also get a certificate after completing each MarineSAFE module AND you have access to various free templates to support MOSS and HSWA systems onboard



Sign up to get started on your MarineSAFE voyage today at www.marinesafe.nz

Determining the source of green-lipped mussel spat harvested from Ninety Mile Beach

Romain Chaput – Moana Project

Victoria University of Wellington

Around 80% of New Zealand's entire Greenshell production comes from spat harvested from Te Oneroa-a-Tohe - Ninety Mile Beach. Despite the importance of this spat supply, the location of the adult mussel beds that produce these massive quantities of spat remains unknown. This lack of knowledge poses a risk to the long-term sustainability of the mussel aquaculture industry because the adult mussel source for the spat cannot be safeguarded.

The Moana Project is a government funded research project which enables advanced ocean modelling and genetic tools, to help solve some of the major issues facing the management of important kaimoana species. These tools have been directed toward identifying the adult mussels which provide the spat at Te Oneroa-a-Tohe - Ninety Mile Beach.

Backtracking spat landing at Ninety Mile Beach

Larval mussels drift for up to six weeks before settling on seaweeds. The detached seaweed with attached mussel spat then drift just above the seafloor before arriving on the beach for harvesting. During both stages of drifting the mussels may be transported considerable distances by ocean currents. Using computer-based models of ocean currents, we backtracked the spat from Te Oneroa-a-Tohe - Ninety Mile Beach to primary settlement areas, where the spat are settling onto seaweeds, and then further back to mussel beds.

We identified four locations where mussel spat were most likely to be settling onto seaweeds prior to being washed onto Te Oneroa-a-Tohe - Ninety Mile Beach: A) around Tiriparepa - Scott Point at the northern end of the beach, B) just offshore of the middle of the beach, C) just offshore at Ahipara Bay at the southern end of the beach, and D) close to the coast at Te Kohanga - Shipwreck Bay at the southern end of the beach (Figure 1).

Starting with these four larval settlement sites, backtracking was

used again to trace the most likely larval paths – enabling the three most important source adult mussel beds to be located: 1) Ahipara, 2) Tiriparepa - Scott Point and 3) Hokianga (Figure 2). Overall, the modelling indicates that despite the potential for ocean currents to be bringing the mussel spat to Te Oneroa-a-Tohe - Ninety Mile Beach from adult mussel beds much further away, the spat supply looks to be provided mostly by adult mussel beds located at both ends of the beach.

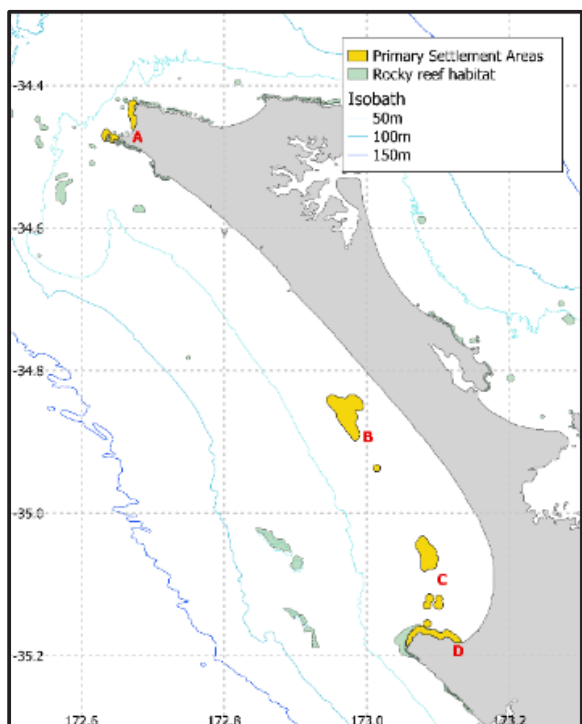


Fig. 1. Four most likely locations (yellow areas) where mussel larvae are settling onto seaweed off Te Oneroa-a-Tohe - Ninety Mile Beach.

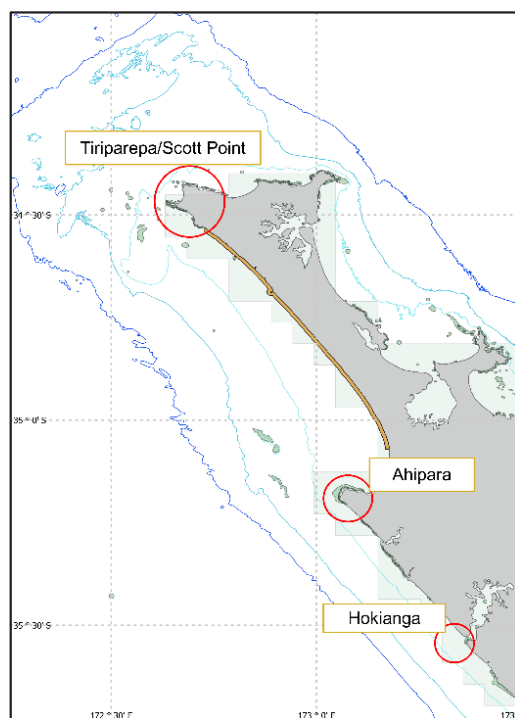


Fig 2. The three locations of adult mussel beds that are the source of larvae which supply the spat material harvested from Te Oneroa-a-Tohe - Ninety Mile Beach.

Advanced genetic tools were then used to attempt to confirm the findings from the modelling, that spat harvested from Oneroa-a-Tohe - Ninety Mile Beach mostly comes from adult mussels living at the beach. Genetic tools can measure the extent of interbreeding between populations in different locations. The genetic analyses showed that wild mussels from Te Oneroa-a-Tohe - Ninety Mile Beach and Kaitaia spat are all very similar genetically but were different from mussels from more distant locations (e.g., Raglan, Cook Strait, Wellington, Christchurch). In conclusion, both the genetic analyses and ocean modelling both clearly indicate that Kaitaia spat are derived from local (e.g., Ahipara, Tiriparepa / Scott Point, Hokianga) mussel

beds and not from distant mussel beds. This is the first clear demonstration of the source locations of the adult mussels that are the source of Kaitaia spat which is critical as a seed source to the Greenshell industry



Developing your Marine Farm?
Need a lawyer who understands aquaculture?

Call us on
03 578 4229
for the very best legal advice.

Aquaculture Legal Experts

Quentin Davies and Emma Deason have extensive experience in aquaculture related legal matters, and are available to help you with

- > Resource Consents
- > Aquaculture Law Reform
- > Strategic Planning

Gascoigne Wicks is a full service law firm, so we can help with all your other personal and business legal matters.

Call us now...



Proud supporters of the Marine Farming Association



Quentin Davies



Emma Deason

79 High Street | enquiries@gwlaw.co.nz | www.gascoignewicks.co.nz | T: 03 578 4229

BUNDLING FLOATS

Best practice to avoid losing floats

- Use >24mm Rope
- Use tight bunches
- Tie first and last float securely to >24mm rope (This will ensure if the rope chafes off the backbone or warp, the bundle will stay together)



KEEP THEM ON BOARD

CONTROL YOUR WASTE



Aquaculture Light Applications.

SPECIAL MARK

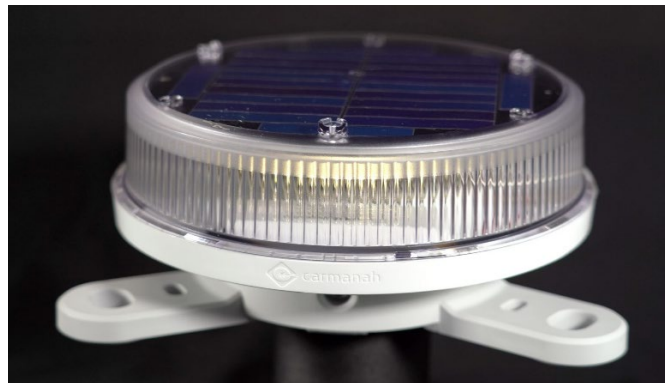
Solar 1-3NM Sabik M550 Lantern



- Fully Self-contained, Programmable, IP68, up to 3 NMs
- Weighs just 400gms.
- 15 Year design life & 3 Year warranty. Made in USA

CARDINAL MARK

Solar 4NM Sabik M660 Lantern




- Fully Self-contained, Weighs 800gms, IP68, up to 4 NMs
- Bluetooth Programming using Smartphone up to 50 Mtrs away
- 7 Year battery. All colours. Bird Spikes incl as standard
- 15 Year design life & 3 Year warranty. Made in USA

SABIK MARINE  **SENSOR SYSTEMS (NZ) LTD**

Ph: (09) 275-4578 Email: mark@sensorsystems.co.nz

www.sensorsystems.co.nz

A decorative string of warm white lights is draped across the top of the page against a dark red background.

The staff at the Marine Farming Association would like to take this opportunity to wish you all a safe and happy holiday season.

The office will be closed from 24th December 2022 to 6th January 2023.

