#### FEBRUARY 2021 NEWSLETTER

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MARINE FARMING ASSOCIATION

- MARGER

#### IMPORTANT DATES

AQNZ Board Meeting 24 March 2021 (NZ King Salmon)

MFA RDTSC meeting 2 April 2021 10am to 3pm (MFA Boardroom)

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MFA Exec meeting 23 April 2021 11am to 2.30pm (MFA Boardroom)

Wainui Farmers 10 May 2021 10am to 11.30am (MFA Boardroom)

AQNZ Board Meeting 26 May 2021 (TBC)

MFA Environment meeting 14 May 2021 10am to 12.30pm (MFA Boardroom)

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### Presidents Comment

It seems like Christmas is a very distant memory with 2021 already presenting challenges to both our industry & the country.

One of the biggest challenges now is getting our product to market, with countries around the world still in various states of lock down and no sign of that easing soon.

The traditional markets for our products, especially mussels are the food service industry & restaurants. It is a really challenging time for our various industry marketing teams. This will force us to think outside the box and will hopefully we will see some diversification in the way we get our products to our customers.

From a farmer's perspective this has had obvious impacts on our farm gate price, while this is not ideal it is our reality, and we need to remain resilient and think long term.

We still farm high quality, exceptional seafood, and I am positive once the pandemic is under control through vaccines, we will return to the same strong position that we were in pre-Covid.

On the MEP front, as you will all be aware, we have the submissions deadline approaching. Ned has been working tirelessly on this since the release of Variation 1 and 1A on the 2nd of December 2020.

Overall, I remain optimistic that the Aquaculture Provisions will result in positive change for the industry. Achieving controlled activity status, once in an AMA (Aquaculture Management Area), would create a more confident industry and hopefully lead to more investment and innovation.

That said, it will be a number of years before the Plan becomes operative and over the next six months we need to resolve some of the significant issues surrounding its implementation and the transition period. There will be additional member workshops held once we know more about the process.

I hope that any individual/company submissions came together well, and you managed to avoid the usual 'last minute rush'. For those of who chose not to submit, there is still an opportunity to become a party to the proceedings via the section 274 process. We will provide more detail on this in due course.

It was great to see a huge increase in effort with this years "Big Month Out", there was an increase in participation and even people volunteering to do extra areas. Moving forward under the new PMEP our environmental performance is going to be under the spotlight, therefore it is crucially important that we carry on down this track of lifting our performance both on the farms and on the vessels. You will note an increased presence from Darren this year catching up with crews on vessels and continuing to hammer home our environmental messaging and best practice.

We are all looking forward to the mussel festival this year, fingers crossed that the current Covid outbreaks in Auckland do not have an impact. It looks like the festival is going to be the only show in town, so we suggest you get in early and buy your tickets before they sell out. Tickets are selling fast, with double the amount already sold from this time last year. This is not surprising given the talent on show – the lineup includes Robinson, Zed, The Brothers Grimm, Eden Kavanagh, Michael van de Elzen (the food truck guy) and MC Jay Jay Feeney.

I look forward to seeing you all there!

#### Jonathan Large



#### We're interested in buying your mussel farm

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#### MacLab

### Aquaculture NZ Stats

An update on the statistics we normally provide from AQNZ, the statistics that are normally printed in the MFA newsletter are just a small sample of the statistics available through the AQNZ online tool.

We now recommend that you request access to the AQNZ online tool and access these yourself. That way you can change all the parameters to what you would like to see.

To register for access, click on the logo below







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### **Environmental Update**

The MFA Environment Committee has just met for the first time in 2021. We had a very constructive session where we reviewed the 2020 statistics and agreed that even though times are tough due to Covid-19, we should endeavor to roll out our new programmes in Quarter 2 of 2021.

The MFA has been running the current Environmental Certification Programme successfully for the last 10 years, but it is time for a review and a refresh.

#### 1. The Updated Environmental Certification Programme

Our objective is to promote best practice and work with our members to achieve improved environmental performance. An important component is also ensuring that those companies who are already operating at a high level receive the appropriate recognition.

The biggest change from the previous certification system is the implementation of yearly reviews and the introduction of a tiered rating system. Companies who meet the entrance criteria will be awarded one of the following statuses:

- Bronze status
- Silver status
- Gold status
- Platinum status
- Diamond status

The current status of member companies will also be displayed on the MFA website, which we hope will drive continuous improvement, as companies can go both forwards and backwards under the new system.

In 2020, we ran trials of our new certification programme with three companies to ensure we had the assessment metrics correct. All three companies scored Silver or Gold status, pretty good, but still leaving room for improvement. I'd like to thank Just Mussels, Sanford, and Marine Farm Management for being our guinea pigs for the trial.

Our goal for this programme is that companies will strive for Diamond status and that consent holders will assess environmental credentials when engaging contractors, resulting in an overall lift in industry performance.

Focus Areas for 2021 and beyond

- Education for all, there is always more to learn
- Minimizing waste falling in the water from marine farming activity
- Zero floats to landfill, 100% of floats recycled
- Reduction in waste to landfill

- Noise reduction where practicable when replacing vessels and/or engine systems.
- Minimizing light spill from vessels
- Engage more with employees
- Invest in research & development
- Acknowledging social responsibility, consider & care for the communities in which we operate.

#### 2. Beach Cleaning Programme

In conjunction with the new Certification Programme, we have an updated beach cleaning programme set to be released.

This programme will see participating companies given a beach cleaning target based on how many hectares they impact (consented, farmed, harvested etc).

The participating companies will also be assigned specific bays or areas based on where they farm. That way companies will have ownership of certain areas and if there is an issue be faster to respond.

We have also reviewed the areas we clean and the frequency in which we clean them based on feedback from the community and our Environmental Mentor.

#### 3. Technology

We have also been doing some work around how we report beach cleaning and float recovery, historically reports were completed on a paper form, scanned to the MFA, then someone would enter them. While we will never reject any report coming in, we now have some alternative methods.

- MFA website, anyone can submit beach clean data through our website <u>www.marinefarming.co.nz</u> under the Environment tab at the bottom of the page. You can also submit feedback or report float sightings.
- MFA Enviro App, this is in its final stages of testing and once ready will be sent out to anyone who wishes to use it (with instructions). The app works from a smart phone or tablet and runs offline so it will still work if you have no coverage.

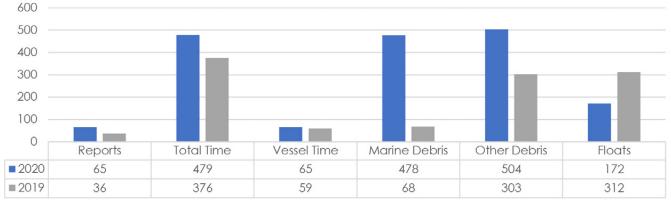
#### 4. Big Month Out

The industry always does a big collaborative beach clean across the Top of the South every December to try and ensure the beaches are sparkling clean from both marine debris and recreational debris before everyone arrives at their baches for Christmas.

In 2019, the participation was not great this was mainly due to staffing issues faced by the industry. In December 2020, we decided to embark on a "Big Month Out" rather than a "Big Day Out", this was to allow companies more time to roster beach cleaning around staffing and vessel availability.

We found that the "month out" approach was incredibly successful with many companies offering to clean more areas than allocated. During these December cleans we try to target the known hot spot areas, areas we know are bad and collect waste due to winds & tides and areas that the public use over the Christmas periods like the DOC camps.

This was hugely successful, and we will look to tweak and build on this for Big Month Out 2021.



Big Month Out - December effort

■ 2020 ■ 2019





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### Recreational Boaties Educated in Marine Biosecurity

Recreational boaties on both sides of Cook Strait learned about preventing marine pests from spreading.

The TOS Marine Biosecurity Partnership ran five workshops in November on marine biosecurity and good antifouling practice.

These were done in conjunction with Altex Coatings who provided information and advice on best antifouling practices.

Those attending came away understanding the importance of preventing pest spread and how they could best contribute.

The two key pests, the Mediterranean fan worm and the clubbed tunicate, both travel as hitchhikers on boat hulls. Both pose serious threats for marine farming in the Top of the South. At this stage Mediterranean fan worm has not been recorded as being established in Wellington. If it does get a toehold the risk for the Top of the South and Marlborough in particular rises



sharply. 80% of recreational vessels visiting our region come from Wellington and Mana. Half of those do not visit a port or marina in the region making them hard to track. The best option has been to go straight to them and provide information and awareness.

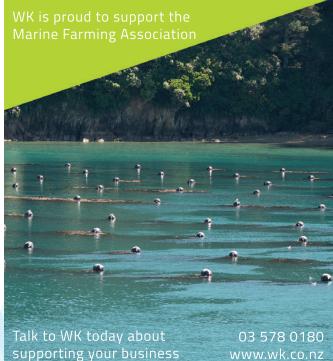
Both these pests are present in marinas in the Top of the South. Diligent efforts by the three councils have either eliminated or suppressed the fanworm in Tarakohe, Nelson, Picton and Waikawa.

The pressure stays on from other parts of New Zealand and rapid identification and action on risk vessels remains essential. Well informed boaties are a key component.

All of those who attended the workshops in Mana, Wellington, Waikawa, and Motueka were keen to help.



wk\*



### MFA Mussel Restoration Project – January & February 2021 Update

#### **Recycled shell experiment**

20 tonnes of mussels were deployed in January at two locations in the inner Pelorus Sound. The team at Aroma harvested the mussels and they were cleared of any nuisance biofoulers by hand before transfer to the seafloor. The mussels were deployed on top of recycled shell and mud/ sand to compare the effects that the recycled shell can have on mussel restoration. The mussels will be assessed every six months to look at survival, density, growth, and condition.

The recycled shell that was deployed in August 2020 appeared to have settled well onto the seafloor, with minimal starfish and some algae growth (See Figure 1). The mussel deployment went well with three plots of mussels on mud and three plots of mussels on shell at both locations. Aquaculture NZ came out to film the mussel deployment and should be releasing a video soon.

#### One-year check on the original mussel experiment

Survival of the mussels that were placed on the seabed one year ago in January 2020 was high across four of the five sites after one year. The highest mortality was at Grant Bay, which had a mean loss of 40% of the mussels, while all other sites were less than 11%. The higher mussel mortality at Grant Bay is likely the result of starfish predation with 135 large starfish being found there, which was more than double the number collected from all the other sites combined. Although the losses of mussels at Grant Bay are disappointing, three of our five sites had more than 94% survival (Maori Bay, Te Mara, Weka).

During our one-year check on the mussel plots we also performed our second biodiversity assessment on the plots. The biodiversity was assessed separately for three different levels: 1) Infauna - including organisms living in the sediment beneath the mussel plots and in the sediment at the control plots, 2) Epifauna - the organisms living inside or on the mussel plots and on top of the sediment for the control plots, 3) Pelagic -the mobile organisms in the water column above and in the vicinity of the mussel and control plots. We are excited to start diving into this data to explore the impact the mussel plots are having on the ecosystem.

#### Third mussel experiment

Our third mussel experiment is in the planning process. We will shortly be submitting a resource consent to the Marlborough District Council and have received our biosecurity approval from MPI. This experiment will take place in the Kenepuru Sound as that is where our current mussels are surviving the best.

#### Havelock mussel festival

The Havelock mussel festival is coming up on March 13th. Trevyn and I will be presenting our work there so feel free to stop by and have a chat about the project. As always, if you have any questions or comments on this project, please feel free to reach out to Emilee Benjamin via email at egol669@aucklanduni.ac.nz.

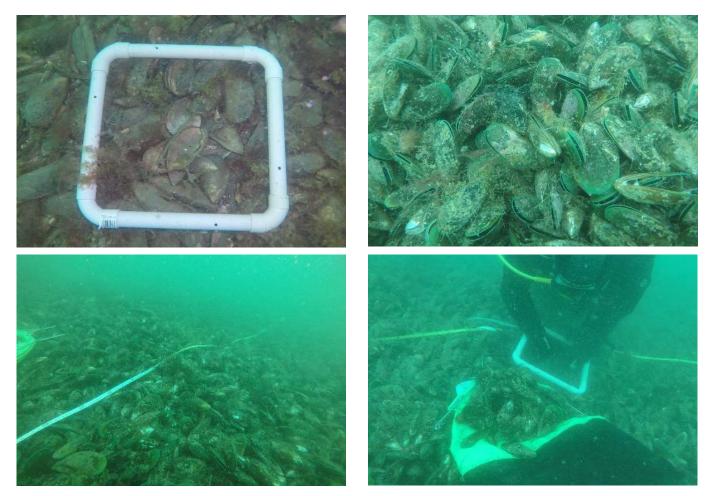


Figure 1:Top Left-Recycled shell layer without any live mussels on top at Fairy Bay. Top Right- Mussels in dense plots the day after they were deployed. Bottom Left-Transect tape running across the newly deployed mussels to measure the distance of the plot. Bottom Right- Diver performing a density measurement of the mussels.







Figure 2:Top Left-Blue cod and spotties on the one-year old mussel plots from the original deployment. Top Right- An I I-armed starfish eating a mussel. Bottom Left- Diver measuring the distance the mussels have spread since first deployed one-year ago. Bottom Right- Diver taking sediment samples from under the mussel plot to assess change over time.





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# Marine farmers focus on sustainability and meeting Covid challenges.

Marine farmers from across the top of the south gathered at the new Queen Charlotte Yacht Club in Picton late last year for the annual conference of the Marine Farming Association, representing 60% of New Zealand's aquaculture production.

The focus was on the sustainability of the industry and how it had successfully responded to the impacts of Covid-19. Dana Carver from DairyNZ spoke about some of the sustainability challenges faced by the dairy sector and the change programmes they have implemented to address them. Kirsty Harkness from Mount Base Wines talked about the importance of resilience and the need to innovate when facing challenges.

Kiwibank Chief Economist Jarrod Kerr told the 100 attendees that banks were overly conservative in their initial forecasting of the Covid-19 contraction, although there will be impacts on the global economy for years to come "We always under-estimate the adaptability of business," he said. One off-set for New Zealand was that our national brand had 'sky-rocketed" internationally assisting all export sectors, as well as tourism and immigration, when they resume.



Kiwibank's Jarrod Kerr

Lawyer Quentin Davies gave marine farmers some insights into the National Environmental Standards for Marine Aquaculture which came into force in December, alongside the notification of the aquaculture provisions of the new Proposed Marlborough Environment Plan. Mr Davies said the creation of Aquaculture Management Areas in the Sounds 'will give certainty to the community and to industry.'

The MFA conference and awards dinner were the first events held at the new QCYC premises, with volunteers and junior sailing crews turning into waiters and caterers. Profits from hosting the event will go towards the club hiring a professional coach to mentor up and coming sailors. MFA General Manager Ned Wells said the organisation was pleased to support the Club's fund-raising efforts. "The venue was the perfect place to hold a conference centred around the ocean and the Club did a fantastic job hosting the event".

Kevin Oldham won the Donaghys Outstanding Marine Farmer Award. MFA President Jonathan Large said Kevin's expertise in risk management helps all marine farmers, including through the Covid lockdown. "He also drives MFA strategy sessions and is constantly looking for ways the industry can improve their practices through research and development. "



MFA first to use fantastic new facilities at QCYacht Club

Golden Bay's Darren Clarke and his family won the MFA Merit Award for their relentless dedication, particularly to protecting the environment of the top of the South.

Darren is the MFA's Environmental Mentor and he and his wife Jackie are sometimes up at 4am to brief mussel boat crews about the importance of not letting debris go over the sides and other requirements. The family collect floats which have come off



RAEME DINGI FOUNDATION

Hamish Oakley looks on as Kevin Oldham speaks



Darren Clarke gets his award from MFA GM Ned Wells

marine farms across Golden Bay, have removed tonnes of debris (mostly not aquaculture related) from Rabbit Island near Nelson and spent hours bagging Sounds rubbish for collection. Many a fishing trip with the family or mates have seen the fishing put on hold for beach clean-ups.

Blenheim's Aiden Gane started working in marine farming on leaving school at 17. Earlier this year he gained his skippers ticket and now at 19 has a crew working under him.

"The day his ticket came through he grabbed hold of the wheel and hasn't let go yet, even with the boss onboard," said MFA vice-president Gary Brown in announcing Aiden as the winner of Aquaculture Direct's Recent Entrant Award.



Aiden Gane was chuffed with his Recent Entrant Award



'Father of salmon industry' Mark Gillard with Jonathan Large

Vaughan Ellis won MacLab's Environmental Award for the key role he played in getting funding and support for a three-year research project on the restoration of mussel beds on the seabed in Pelorus Sound. While in its early stages the project has already attracted television coverage at home and abroad and early stage success suggests it may provide a blueprint for other restoration projects in other areas.

The Research and Development Award, sponsored by mussel farmers Tohora Nui Ltd was won by James Aitken from NZ King Salmon who is working at Cawthron Institute on a project to determine optimal feed conversion ratios for king salmon to achieve economic and environmental improvements.

A special award was given to Mark Gillard who last year resigned from NZ King Salmon after being involved with the company since 1985. Jonathan Large says Mark is regarded as 'the father of the salmon industry' in New Zealand and had contributed enormously to its growth and success.



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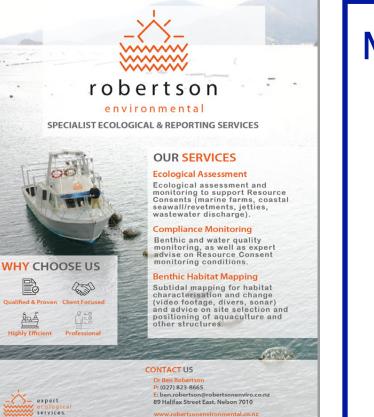
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### Technology, innovation & communities the keys to aquaculture's future

Access to good data and the use of artificial intelligence is now key to the future of aquaculture, coupled with innovation and good community engagement.

These were the themes emerging from the fourth Smart+Connected Aquaculture forum held in Havelock late last year. More than 50 attendees - mostly marine scientists, marine farmers, council, and government agency representatives – attended the now annual forum.

Five keynote speakers kicked off workshops which developed several projects which the Smart+Connected Aquaculture group will now support. Past forums have sparked a new mussel spat hatchery research program, seen industry cooperation to recycle mussel floats and blue mussels turned into products rather than being sent to landfill.

Jemma McCowan who is the General Manager of Brands and Sustainability for NZ King Salmon started the day by saying aquaculture companies had to be brave in opening their doors and demystifying what happens on marine farms. Her workshop developed the idea of Ocean-I, outward-facing cameras placed on industry vessels and farms to show seafood connoisseurs around the world in real-time the wonderful locations where our farms are located.

Jemma will work with others to support this project in seeking to develop the technology.

Sanford's General Manager of Innovation, Andrew Stanley, told the forum



Mike Mandeno and Jemma McGowan at forum



Marlborough Harbourmaster Luke Grogan

that every other primary sector was using artificial intelligence (or supercomputing). The challenge for Marine farmers was that they could not step out the door and see their species growing. "We can't see what's going on under the water." He says marine farmers need to become data-rich using tools like predictive modelling to make the industry more productive.

Marlborough Harbourmaster Luke Grogan introduced a presentation on tidal mapping of the Sounds saying that four ships had grounded in the Tory Channel in the last 15 years.

Dr Peter McComb of Ocean Numerical is now measuring the complex, strong flows of water in and out of the Queen Charlotte Sound. This alongside the council's multi-beam mapping of the Sounds is reducing grounding risks.

MDC Coastal Scientist, Oliver Wade, says with the Pelorus Sound now mapped, council wants to collaborate with the aquaculture industry to use its data for a range of improvements including assisting safer vessel movements and understanding the seafloor around farms.

Cawthron Institute's Dr Norman Ragg, a scientist working on climate change, says while a range of agencies were generating data there was no easy way to upload, collate and share information which existed. "You've often got to go out there with your own thermometer."

Andrea Strang who has been involved with mussel spat monitoring in Golden and Tasman bays for 15 years says that artificial intelligence could help with monitoring spat size, health, and mussel species.

In February 2021, the Smart+Connected Aquaculture group will arrange a meeting for all the stakeholders to begin a data collection and collation group – This group will be referred to as "HEAD" Harnessing Environmental & Aquaculture Data.

Marlborough Sounds oyster grower Aaron Pannell who is now exporting his revolutionary FlipFarm technology to 10 countries, says all innovation takes time and was not always successful at first. FlipFarm was the fifth oyster farming system he had developed. Research was not linear – there was no "Eureka" moment – it was more like a spider's web where many different ideas are connected, and each must be worked through.

Aaron's workshop group has asked Aquaculture NZ to lead the creation of an Aquaculture Innovation Support Hub, starting with a website that can link people with a good idea to contacts and advice on issues such as sourcing funding, exporting and Intellectual Property protection.

AQNZ and the Marine Farming Association will also be involved in developing another idea emerging from the Havelock forum – a hub in Marlborough for reducing plastic waste in the sector.

Plant and Food's Dr Susan Marshall told the forum that the 'aquaceuticals' sector is growing fast with the world looking for natural products that worked and were safe. The biggest challenge was a lack of processing facilities.



Aaron makes a point



Outgoing Value+Innovation group chair Zane Charman

MBIE's Endeavour Fund has recently granted \$16.28m to Plant & Food to help develop more green manufacturing for marine co-products.

Smart+Connected Aquaculture's outgoing Value + Innovation group chair Zane Charman says the range of ideas emerging from the 2020 forum was outstanding.

"We brought together all those with an interest in good science and assisting great outcomes for the aquaculture sector and this forum again saw the willingness to progress those ideas. Marlborough, the wider top of the South and all of New Zealand benefit from these forums and I'm proud to have been involved."

With another successful forum concluded, Zane Charman announced he was stepping down as Value+Innovation group chair to focus on project work with NZ King Salmon as well as his own work in aquaculture which includes research on developing a second spat hatchery – an idea which emerged at the 2019 Havelock forum.



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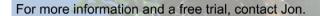


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### DOC and recreational fishers working together to 'tackle' marine bycatch

Recreational fishers in the Marlborough Sounds are being encouraged to use a new app to report accidental capture of marine protected species, in a bid to help scientists better understand the impacts of recreational fishing.

The Department of Conservation (DOC) is teaming up with hapu and iwi, fishers, community groups, councils, research and conservation organisations, and Fisheries New Zealand to reduce accidental catch and increase awareness of protected species.

Starting today, DOC is asking marine recreational fishers in the Marlborough Sounds to anonymously report accidental capture or interaction with mammals such as dolphins and seals, seabirds, sharks and other marine protected species.

"A recent survey shows that recreational fishers want to reduce their impacts," says Dr Karen Middlemiss, Marine Science Advisor at DOC.

Fishers in the Sounds are encouraged to download the new 'Protected Species Catch' app, speak to DOC staff at a boat ramp, or dial 0800 REK FISH to report any interactions.

A key element of this work is also increasing national education and awareness about marine protected species and provide resources for fishers to learn how to identify them.

"New Zealanders are lucky to have the ocean on our doorstep that we can use for recreation and to gather kai. It's important that we all play our part in looking after it."

"Recreational fishers are aware their hobby relies on a healthy and thriving marine environment and we want to do all we can to reduce accidental catch of protected species. This project aims to help support wider efforts to reduce the decline of marine protected species and protect biodiversity – helping us to leave a healthy ocean for future generations."

It's hoped the project will lead to a better understanding of the nature and extent of accidental catch – which species are being caught, where, and by what fishing methods.

Every year, around 575,000 recreational fishers harvest nearly 11 million fish and shellfish species in New Zealand waters. However, we currently have very little data on what impact this has on marine protected species, including marine mammals, fish, seabirds, reptiles, and corals.

Building on the work in the Marlborough Sounds, DOC plans to develop a national reporting program in 2021. Find out more about the programme at www.doc.govt.nz/recreational-fishing-bycatch

#### Contacts

Casey Spearin, Marine Communications Advisor Mobile: +64 27 384 2068 Email: cspearin@doc.govt.nz

#### **Background information**

- The Aotearoa/New Zealand Biodiversity Strategy is committed to reducing fisheries bycatch of marine protected species to zero by 2050.
- DOC has set up a regional discussion group and will hold regular meetings with Marlborough Sounds iwi, conservation groups, and other stakeholders to share ideas and information.
- This work programme is based on social science-we don't want recreational fishers to simply comply with reporting, we want them to also become active participants in protecting our marine species.
- This project is not about punitive action against fishers who may inadvertently catch marine protected species. This programme is intended only to understand the nature and extent of accidental catch (i.e. what/where/ how).
- Data collected from the study will help determine the nature and extent of the issue and help us to work with fishing communities to reduce harm to our taonga species.
- DOC is also publicly sharing self-reporting data from fishers to further encourage community support.

### Me Need You!

This summer (Dec20-Feb21) DOC is asking fishers for their help by reporting any accidental catch of protected species.

Please help by *anonymously* reporting any protected species you interact with while out fishing.

 Report using the app, phone number, or speak to DOC staff at the boat ramp
Take a photo of any protected species you eatch

If you do catch anything by accident, dont worry it's not illegal - but you do need to report it.

This information will help us to work with fishers like you to keep our oceans healthy and productive



Download and report anonymously via the App 'Protected Species Catch'



Phone: 0800 REK FISH

Or speak to DOC staff at the boat ramp

See the shinyapp link for a map of all reported catches docnewzealand.shinyapps.io/protectedspeciescatch

View the website / QR code for more information. doc.govt.nz/recreational-fishing-bycatch





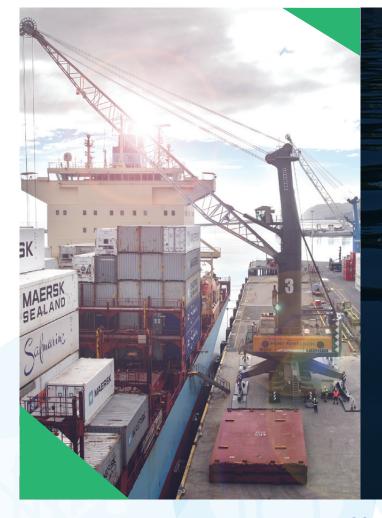


#### A+ Checklists

The A+ Checklists for 2020 calendar year, are now available for uploading your company's information online at <u>www.aplus.org.nz</u>.

Following on from the A+ presentation at the MFA conference, to provide for better reporting. Checklists have opened earlier this year and are due for completion by 28 February.

Any marine farmers wishing to join the programme or need help getting set up can contact Karen Mant at AQNZ by email: aplus@aquaculture.org.nz



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#### Te Atiawa are at the forefront of aquaculture for iwi in Te Tau Ihu (top of the South.) Antoni Bunt recalls the history of Te Atiawa's involvement and commends a key role played by the MFA...

Antoni Bunt's whakapapa links him to Totaranui (Queen Charlotte Sound) including the area around Tory Channel, once famous for its whaling and sealing activity. Today these environs are key for Te Atiawa's increasing involvement in the much more sustainable industry of aquaculture.

Te Runganui o Te Waka a Maui was originally formed by Te Tau ihu iwi consisting of 8 members as a transition point for iwi to set themselves up. Three left early in the piece, with the remaining five iwi pooling their resources and forming a commercial arm, Te Tau Ihu Ltd.

This was headed by our elder statesmen Jim Elkington, John Mitchell and Barry Mason. They secured Te Tau Ihu scallop quota, purchased paua and fish quota and were fortunate to acquire two farms gifted by a Pelorus family who understood the cultural and aspirational values of iwi. This helped us on our way to commercial farming. John Mitchell also secured our additional interests in the ringroad system.

Eventually Te Tau Ihu Ltd ran its course, dissolving as iwi went about their own business and aspirations.

Te Atiawa formed its own company Totaranui Ltd to develop its marine interests with the first two directors being Tom Norton and myself. We formed a view that aquaculture was going to be the future and a two-pronged approach was taken; Tom managed our farms as they became reality while I chaired Totaranui for 17 years and managed the political arm for 20 years.

Tom was our stalwart he put all our nuts and bolts together he was our finisher, he was the achiever.

In the early marine farm development period preference was given to land owners - a recognition that the Sounds was tough country to operate a viable business be it fishing farming or lodges.

On that basis my own iwi whanau were entitled to the same privileges as whanau-held land in many cases under multiple ownership in Queen Charlotte and Port Gore; so marine farm applications were made on that basis.

Alan Riwaka submitted some of our customary interests under the proposed Coastal Plan in the Tory Channel area. Former Marlborough District Councillor Michael Briggs did recognise the iwi's case and allocated two sites at Tio Point, Oyster Bay in Tory Channel.

Totaranui Ltd applied for a 100-hectare site in East Bay, the first iwi to itself

do the necessary work from benthic survey onwards and progress an application through the system. There were over 100 objections, most from outside interests and many living in Germany! The application failed but was reviewed several times by Council and was considered under the settlement for space.

Another application was made in a JV with Sanford and Ngati Apa for a 24ha site in Port Gore. However, under the then emerging Marlborough Environment Plan Port Gore had been nominated as an important high-value environmental area. It was ironic that Port Gore was mostly poorly land owned by Iwi whanau. The application was turned down on the basis that people looking down from the road to Titirangi above Port Gore may see farms and tourism could be impacted along with shipping. Again, this was ironic given several years later the Crown allocated water space in Tory Channel, the inter-island pathway, for marine farms.

At the same time, we had the same farm access issues going on in our other two rohe namely Tasman and Golden bays. When we couldn't get Port Gore and East Bay areas within our rohe, we thought we are really going to have to create some heat here. We used every forum available, eventually getting heard by the policy makers.

Te Atiawa, along with Ngati Tama and Ngati Rarua, sought manawhenua recognition rights and these were acknowledged by Environment Court judge Shonagh Kenderdine.

Iwi also took their case to the Waitangi Tribunal. Our Kaumatua such as George Martin provided key evidence of ancestral marine farming of several species. It was of huge interest to the tribunal.

Iwi were supported at the hearing by the then Marine Farming Association Executive Officer Graeme Coates who also administered MFA Ring Road spat-catching in which several manawhenua iwi had interests.

The Waitangi Tribunal required the Marlborough District Council to look for more space and this also applied to Tasman and Golden bays. Then the Maori Commercial Aquaculture Settlement Act 2004 gave coastal iwi 20% of aquaculture space created after 1992. With the Crown setting the allocation rules Te Atiawa received a 2.5% share.

Te Atiawa has since leased water space to Sanford and to NZ King Salmon with which it developed a JV to create the Clay Point farm in Tory Channel. There's also involvement by Te Atiawa in the Maara Moana partnership which is developing mussel farms in Golden Bay with other iwi and commercial partners.

Former MFA President Rob Pooley recalls the prolonged efforts over nearly 30 years by many people including Te Atiawa to get Maara Moana to the point where it now has lines in the water. It took nearly 30 years from the first applications to fruition. He says he and others got to the stage where they

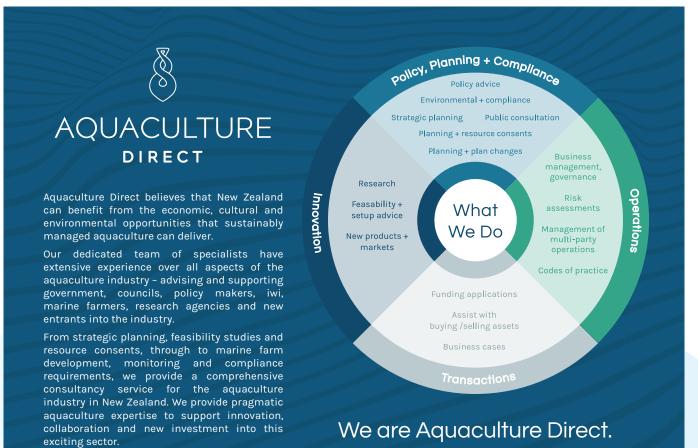
were fearful that some of them would die before this was sorted. The Golden and Tasman Bay applications were unique says Rob in that they provided for 20% of the sought for space to be for iwi. This was ground-breaking as it predated the 2004 act which allocated 20% of space.

I also credit Graeme Coates for helping bring through these opportunities. In the early days, Graeme was right up with the cultural rights. He provided the biggest impetus and played a big role. We are grateful for that.

The ambition now for Te Atiawa is to create a vertically integrated aquaculture company.



Meanwhile, Antoni Bunt is doing what he loves – trolling in his 42nd season for albacore tuna off the West coast every summer in his vessel Tantramar. Salt in the veins.



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

### TEAM business survey – impact of Covid-19

The Council and The Economic Action Marlborough Group (TEAM) would like to better understand the ongoing impacts of COVID-19 on the Marlborough business community, to carry out necessary and appropriate actions as part of ongoing economic recovery. We are seeking the input of as many businesses as possible, large and small within all business sectors from across the Marlborough region.

This survey asks about the impact of COVID-19 on your business, business confidence and future expectations, and helps with identifying funding opportunities.

The survey takes about 10-15 minutes to complete.

SIL Research is conducting this survey on behalf of the Marlborough District Council and TEAM. SIL Research is an independent Market Research company and, as a member of the Research Association of New Zealand, strictly adheres to defined market research practices to preserve anonymity and confidentiality of the information you provide.

Survey link: <a href="https://www.research.net/r/sil-TEAM2021">https://www.research.net/r/sil-TEAM2021</a>





## Seaweed – aquaculture's third pillar, says Cawthron

Seaweed as a food source is set to become the third pillar of New Zealand's aquaculture industry alongside finfish and shellfish, says the Cawthron Institute.

It has been awarded \$3 million through MBIE's Catalyst: Strategic fund to investigate the potential of the red seaweed, Karengo and the microalga Chlorella as everyday alternative protein sources for everyday foods.

Both types of algae have high protein content but require an innovative approach to fully realise their nutritious potential. Cawthron Institute will work alongside researchers from the Riddet Institute, hosted by Massey University, the University of Auckland, and Plant & Food Research, as well as Singaporean research partners.

Research lead Cawthron's Dr Tom Wheeler says the research team's varied expertise will help fill vital knowledge gaps that currently prevent the full commercial and health-promoting potential of these algae from being realised.

"We are seeing increasing demand for alternatives to meat and dairy for nutrition. Algae are a promising source of ingredients for future foods which can be produced more sustainably, with lower environmental impact and greater health benefits.



Seaweed is a super food - Dr Tom Wheeler

He says the research has several key goals: to develop a protein extraction method from these algae that retains their valuable attributes; to investigate the extract's performance when used as an ingredient in food products; to understand their detailed composition using cutting-edge analytical approaches; and looking at health-promoting effects and nutritional benefits.

Cawthron Institute are experts in the biology of algae and compositional analysis of foods and aquaculture systems.

"So, our key contribution is the knowledge about how to isolate valuable components from these algae and eventually how to grow them," says Dr Wheeler. Riddet Institute, the University of Auckland, Plant & Food Research and Singaporean researchers have expertise including in food science and technology, as well as plant extraction and enrichment.



The National Algae Centre will be built at Cawthron Institute this year.

Cawthron Institute has been investigating Karengo's superfood potential alongside industry partners Te Runanga o Ngai Tahu and Wakatu Incorporation since 2019 under the High-Value Nutrition (HVN) National Science Challenge. Dr Wheeler says it provides an excellent knowledgebase to support further research.

"Seaweed is set to become the third pillar of New Zealand's aquaculture industry alongside finfish and shellfish and this kind of research and development will inform investment and policy making that supports the sustainable long-term growth of the industry."

The latest funding for algae research at Cawthron Institute follows 2019 Provincial Growth funding of \$6m for it to develop a National Algae Centre.

Cawthron has more than 30 years of expertise in algae research, from microscopic level through to the impact of algae in our marine ecosystems. It is one of only a few organisations worldwide to specialise in extracting high-value bioactive compounds from algae. Cawthron also has one of the largest living algae collections in the world, which underpins international research.

The National Algae Centre will be a bridge from science to industry, connecting R&D to commercial application. Micro algae and macro algae (seaweed) is an area of global growing interest due to its unique properties.

The Centre, which will support up to 30 new local jobs, is due for construction this year.

### Tracking the Source of Spat

Despite the importance of wild spat sources to the Greenshell<sup>™</sup> industry, very little is known about the larval movements of these mussels.

Of key importance is understanding the pathway taken by the larvae from their parents to the eventual location that they settle as spat, whether into a wild mussel bed or onto a spat collection rope. Mussel larvae are literally the size of a pin-head and mostly transparent, so following them at sea is impossible. However, new tools are available that can help.

High resolution genetics can help to identify the parental populations of settling spat, by looking for sets of genes they have in common. However, you first need to know the sets of genes that are present in the wild adult populations that may be the source of the spat, by sampling and genetic "fingerprinting" the adults.

A second tool is tracing changes in the chemistry of the tiny larval mussel shell. Because the shell is laid down in layers as the larva grows it is possible to match the chemical signature of the shell to the chemical signature of seawater in different areas – so that the pathway through different water masses can be determined from the shell signatures.

To the right: Spat sampling lines heading out to sea to capture spat for chemical shell signatures to determine their larval pathways.



Above: Wild green-lipped mussel bed off the coast of Opotiki in the Bay of Plenty which has been sampled to determine the genetic fingerprint of the resident mussels.





Mussels from wild population sampled for genetic fingerprinting.

Both methods are currently being applied in the Bay of Plenty as part of the Moana Project - a major national research project aimed at better understanding the importance of ocean processes for our important seafood species.

The research methods require sampling of wild mussels and spat across the entire Bay of Plenty so that the sources of the larvae can be identified with genetic fingerprinting, and the pathways can be determined with larval shell chemistry.

The combined results, which should be available next year, will help to reveal larval mussel pathways for the first time in New Zealand. This knowledge will help us to understand more about how far mussel larvae travel and the ocean processes they rely on for being transported from their parents to their eventual settlement location.



Jonathan Gardner - Victoria University, Andrew Jeffs -University of Auckland.



# Family passionate about the environment

In the middle of 2020, the industry became aware of an Instagram page called "The Frayed Knot Project". The page asked the industry to step up and be accountable for its waste and asked to collaboratively start solving some of the waste issues being seen by Shelley King and her family at Manaroa.

"It is time to take action. Starting today, #earthday2020 we are beginning The Frayed Knot Project. Using our creativity to create awareness and our practicality to search for solutions.

We want to effect change; we are at the end of our rope over rope. If the #newzealandmussel industry want to promote themselves as a sustainable seafood, please step up and make this sustainable. Take up this challenge. Show the world the innovation we kiwis are renowned for.

Let's get the discussion started".

In June 2020, Amber from the MFA reached out to Shelley through her Instagram page and the connection to the industry was made and the "discussion" started.

At the start of July, Ned and Amber from MFA drove out to Shelley's beach at the head of Manaroa. Upon arrival, we narrowly missed an encounter with her feisty triplets who were so wound up over rubbish that they were going to give us a piece of their minds. Luckily for us Shelley had overheard them that morning and had sent them out on the farm for the duration of our visit.

We headed on to the beach with Shelley & Trevor Offen (another local) who showed us what their concerns were and discussed the challenges they face with the industry.





Shelley was great and made us very aware that she did not hate our industry nor want it gone, she wanted to work with us on some solutions. It became apparent early on that we had room for improvement on the communications front, as she wasn't aware of the amazing initiatives we had in place to mitigate our impact on the environment. That said, we know we have a long way to go and our beach cleaning program will need to be in place for years to come.

Late July 2020, the MFA organised an industry deep clean of the beach. This was a fantastic morning at Manaroa where 42 people from industry and the Manaroa community all pitched in together, with an amazing 255kg of debris and 17 floats removed from the beach.

Shelley had been collecting rubbish from her local beach with the help of her three young children for the past six months. Together they had gathered three bags with over 20,000 pieces of plastic rubbish. When Amber & Ned visited at the start of July, Shelley had asked if we could take what she had collected and recycle it, at the time we could not recycle rope, so Shelley decided to hang on to her collection until we had the ability to recycle it.

Mid-August 2020, Darren Clarke the MFA Environmental Mentor headed out to visit Shelley and to look through her waste. Shelley had questions about what some of it was and Darren was able to help. He also went armed with the knowledge that we could now recycle the rope she had.

The next day at the MFA Environment meeting there was a discussion about heading out to Manaroa to collect Shelley's debris to get it recycled. We asked around the room to see who could do this and Sanford answered the call.

Thanks to cooperation between the MFA and Sanford's Grant Boyd, Skipper Ben Armstrong and crew of Tyler Materoa and Caleb Murray paid Shelley and her family a visit on the mussel barge Lady Marie.

Shelley, her partner and three kids were thrilled to receive a visit. Their three bags of rubbish were collected, and they got to hop on board the Lady Marie for a looksee. They had a good chat with Ben on plastics and sustainability in the mussel industry, including how we are working to improve industry standards and procedures, and how Sanford aims trial various options to help minimise our environmental impact. The Frayed Knot Project is an initiative backed by Shelley's family, friends, and community, that advocates for a solution to aquaculture plastic pollution in New Zealand.

As Ben says, "Most of us love the area we work in and want to protect it for our kids and the future generations. We care just as much as Shelley and her family do and we will do our best to continue to get better at what we do and challenge the industry to be better in maintaining our pristine environment". MFA, Sanford and the industry are looking at alternative natural fibre ropes and products, as well as enhancing the use of water space such as turning over products cleaner and faster. We know there is a lot more work to do - it is healthy to be challenged by like-minded locals who we can also connect with to gain insight and support.



Left; Shelley's kids observing the Lady Marie docking at the wharf.

Below: Shelley's kids and Skipper Ben on the Lady Marie, sitting on the three bags filled with rubbish collected by Shelley and her family. The kids are holding gift cards presented to them as a thank you from the MFA Environment Committee.



### We would like to take this opportunity to communicate some of the initiatives we do have in place:

- The MFA has an Environment Committee who are committed to continuous improvement & change. There are 14 members who meet every 2 months, with all the large companies represented. It is chaired by Grant Boyd from Sanford.
- We have an Environment Mentor who educates the crews in their natural habitat.
- We run workshops to train & educate vessel crews.
- We have an induction video which our members can use to train their crews on best practise.
- We have revamped the MFA Environmental Certification programme, which will focus on continuous improvement. Companies will need to apply annually so we can ensure their standards are not only being maintained but improving. This is set for release Q2 2021.
- We have revamped the MFA beach cleaning programme, so that everyone in the Environment Programme has specific beach cleaning areas and a beach cleaning target based on their overall impact (hectares farmed). This will allow us to monitor how well companies are doing with their cleaning and we can intervene if needs be. This program has had input from the community and industry in its redevelopment. This is set for release Q2 2021.
- The MFA produce a bimonthly digital newsletter that anyone can have access to. This used to be members only, but we realized that we have not been doing a great job of communicating to the communities in which we operate so it is now an open publication. <u>https://www.marinefarming.co.nz/sign-up-to-receive-mfa-newsletter/</u>
- The MFA also produce a Crew update monthly so that we can directly communicate with the vessel crews rather than communicating via their companies.

#### In the Research & Development space:

- Compostable rope is being trialled through Sanford and at this stage they are leading the way with various trials in the water and on land.
- Clearwater is trialling a pin system for floats in Golden Bay to eliminate lashing floats with rope to the backbone.
- A new type of float and attachment system has been developed which would also eliminate lashing floats to the backbone with rope. Phase 2 of this project could see an attachment system developed for use with the existing float design.
- We can now recycle rope.

- 100% of our floats that can no longer be reused are now being recycled into things such as toolboxes and culverts. <u>https://www.marinefarming.co.nz/grind-the-floats/</u>
- Aquaculture NZ's A+ programme engaged a 3rd party independent verifier this year for their programme to take it up another notch <u>https://www.aquaculture.org.nz/2020/04/15/a-sustainability-report/</u>
- The industry is working with the Sustainable Business Network to look at minimizing plastic use throughout industry operations, this encompasses the factories, packaging etc as well.

The MFA has a strong focus on the environment and sustainability in fact it was the theme for our conference in November 2020.

We will not give up; we will keep pushing this focus because we believe it is crucial.

Please keep providing feedback to us, the MFA are only 3 people and it is hard for us to get out and see everything, so feedback is fantastic.

https://www.marinefarming.co.nz/feedback/

Also, if you are cleaning, could you please complete our online beach cleaning forms so that we are getting a true picture about what is happening out there.

https://www.marinefarming.co.nz/beach-clean/

https://www.marinefarming.co.nz/float-report/

### **Mussel Farm for Lease Tasman Bay**

6 line spaces available

Currently 5 lines installed that can be made available to a lessee to purchase at realistic prices

A good opportunity to farm mussels or hold spat with low capital costs.

### Contact John Wilson 03 547 5331 or 027 248 8064

### Havelock Mussel Festival, full steam ahead...

Havelock, the 'Greenshell Capital of the World,' and gateway to the Marlborough Sounds.

The Havelock Mussel and Seafood Festival, being held on March 13, has been a hugely important event on the local calendar since 2006, celebrating the very special New Zealand Greenshell Mussel, NZ King Salmon and the Pacific Oyster which are farmed in and around the waters of Havelock.

It is a fun day out for the family, with food stalls, music, competitions, and kid's activities, all in a stunning location.

In June this year, Laura Tyser & Kim Weatherhead 'Two Birds,' won the contract to run the festival in conjunction with the committee.

"Our goal is to enhance and improve the Havelock Mussel Festival, which is already very successful. We feel it has been going from strength to strength every year. We just want to put our own touch on it. It's nice for a couple of girls to shake things up a bit."

The festival committee are keen to make the festival more interactive, to encourage people to move around the event and see all the different things on offer.

The festival committee are very focused on supporting local, in addition to Wairau River wines, Independent liquors beer & cider, there will be the exciting addition of Elemental Distillers 'Marlborough Dry Gin'.

Celebrity chef Michael Van de Elzen will be in action in the culinary tent. "We are very excited to have a fantastic double headline act, Nelson singersongwriter Robinson and New Zealand rock legends Zed.

This fabulous double banger will be supported by Eden Kavanagh.Born in Rangiora, this half Kiwi, half Irish performing artist has divided her time between Ireland and New Zealand growing up. From her sultry intimate vocals to impressive powerhouse house belt Eden is a young up and coming artist not to be missed.

And our second supporting act is the famous "The Brothers Grimm" who will be hitting the stage with their gold-plated classic rock hits, the crowd will be dancing, singing, and tapping their feet from the minute they walk into the pavilion.

The organisers are confident the only thing that would stop the festival from going ahead would be a Covid level change or a major weather event.

"We will take our instructions from the Ministry of Health, if it's safe then it will be full steam ahead. Marlborough deserves a great day out and we're intent on providing it!"

To find out more, visit.

www.havelockmusselfestival.co.nz or Facebook & Instagram

The Havelock Mussel and Seafood Festival will be held on 13 March 2021 -Havelock Domain 10am-6pm.

Tickets are available from the ASB Theatre, <u>www.asbtheatre.com</u> and your local Marlborough i-SITE.







## havelock mussel and seafood festival

13 March 2021 10am-6pm Havelock Domain

ROBINSON

TICKETS FROM 0800 842 538 with celebrity chef OR Ticketek.co.nz/musselfest TICKETEK Michael Van de Elzen

WWW.HAVELOCKMUSSELFESTIVAL.CO.NZ 🚹 🕑



















### From Prize fighting to Fish Wrangling

In 2014 Japan-native Kazuto 'Kaz' Senga, found himself at a bit of a loose end. Injury had cut short a promising professional fighting career and he was back in Japan working casual shifts on commercial fishing boats.

Kaz, now 38, had grown up in the Caribbean where his Dad had worked helping Government's establish sustainable fishing programmes. A promising athlete, the young Senga won a wrestling scholarship to the University of Arizona and there got caught up in the fighting scene and turned professional. He fought in Thailand and across Europe but in 2010 injury forced him out. He found work at a gym in Sweden training others but when that dried up he wound up back in Japan.

'I didn't really know what I wanted to do'. It was very difficult to get into the Japanese fishing industry. 'It was then I discovered aquaculture'. He knew he wanted to study offshore so he started applying to degree programmes at universities around the world. He got a welcoming response from Nelson Marlborough Institute of Technology's aquaculture staff and he was also keen 'to see what goes on in New Zealand'.



Former professional fighter turned aquaculture farmer, Kazuto Senga, examines the latest crop of salmon in the NMIT wet lab.

In 2016 Kaz graduated with eight others from NMIT's two-year diploma aquaculture programme. From there he spent three years working on New Zealand King Salmon's marine farms where, he says, what he had learned on the NMIT course made a big difference to how he approached his work.

'At the start a lot of guys didn't think much of the knowledge that I'd gained on the course, they dismissed it. But things changed. There were a few issues particularly with aspects of feeding and environment, and people were starting to appreciate an aquaculture education.

'I also found that I was pro-active, had a good work ethic and took responsibility on the job', he says.

While he was initially committed to finfish farming, Kaz is keen to build a career in the industry. He recently switched to mussel harvesting, and is now working for Wakatu Incorporation's food offshoot Kono. And this year he is planning to enrol in the NMIT Maritime School's Skipper Restricted Limits programme with the hope of becoming a marine farm boat skipper in the future.

As an international student Kaz studied full time toward NMIT'S aquaculture diploma. Traditionally full-time study was the main route for those keen to develop in the industry. However, this year NMIT introduced a new part-time Certificate in Sustainable Aquaculture programme where students can enrol on a blended learning programme and fit this in around full-time work. The Certificate programmes are also free to the student as the Government is picking up the fees under the Targeted Training and Apprenticeship Fund (TTAF). The part-time programme is taught through online materials, recorded and live online sessions and an on-campus block course later in the year. Students can also enrol during the year with intakes to the hatchery, husbandry, and industry experience courses available in May, July, and September respectively (see Aquaculture enrolments jump with new programme).

#### Aquaculture enrolments jump with new programme

NMIT's brand new aquaculture certificate is proving a big hit with students. From a standing start the level 3 programme has enrolled 34 new students this year with a third taking up the chance to study a blended course with online and practical blocks courses.

'We are thrilled with the enrolments so far', says Programme Lead Specialist Craig Prichard, 'and we are particularly keen to grow enrolments through the year among aquaculture industry staff'.

He said the beauty of the programme for those already in the industry is they can join course intakes in May, July and September and complete the four courses programme in a year of blended online learning and short block courses. The aim is that people can fit this in around full-time work commitments, he said. The Level 3 and 4 offerings are also free to the students as the Government is picking up the tab under the Targeted Training and Apprenticeship Fund (TTAF).

Meanwhile this year's 23 full-time students will complete the four-course certificate programme in one semester and move onto the level four certificate later in the year.

The new level 3 and level 4 certificate programmes, which replace the former aquaculture diploma, are designed to give students a solid grounding in fish and shellfish biology, plus farming and conservation practices. The courses also cover some of the emerging aquaculture sectors such as seaweed. Once completed some students could potentially go on to study fulltime toward NMIT's aquaculture degree and postgraduate qualifications.

### **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.

The due date for articles is the 20th eg: for something to appear in the February edition we will need it before 20 February.



Best practice to aviod loosing 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)







### Marine Farming Industry - we thank you!

Every week, almost 3,000 Marlborough young people are directly impacted by Graeme Dingle Foundation programmes. We connect kids with mentors and role models and teach important skills and values to prepare our young people for the workplaces and communities of the future.

We empower kids to overcome life's obstacles.

Now with three transformational programmes in



Empowering kids to overcome life's obstacles Whakamanawatia ngā tamariki kia eke panuku





Marlborough:

**"Kiwi Can"** builds lifelong skills, positive relationships and qualities like integrity, respect and resilience among primary school children.



"Stars" pairs all Year 9 students with senior college students trained as peer mentors. Stars supports Year 9s as they undergo the tricky transition to college and adolescence. Stars builds trusting relationships that enable students to reach out to each other in times of need.



**"Career Navigator"** is our unique mentoring programme which connects college students with local industry, career pathways and eye-opening opportunities.

Thanks to Ted (Sanford), Jono (MFA), Paul and Damian (New Zealand King Salmon) – and all their supporters - who together raised over \$44,000 in Drop For Youth 2020.



A big thumbs up from the thousands of local kids who will benefit.

Graeme Dingle Foundation Marlborough is 99% funded by local business and community support.

If you'd like to know how you or your business could partner with us, contact: Kelvin Watt on 021 420 962 or kelvin.watt@dinglefoundation.org.nz





Sanford - proud Platinum sponsors of Graeme Dingle Foundation Marlborough since 2013

### Carmanah M550 1-3 NM Lantern

This Solar LED Marine Lantern is ideal for Aquaculture applications.



- Fully Self-contained, Programmable, IP68, up to 3 NMs
- Weighs just 400gms. Direct swap for M502
- 3x NiMH AA batteries 5 Yr life. \$30.00/set to replace.
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- 7 Yr battery. All colours. Bird Spikes incl as standard
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