2023 New Zealand Ocean Acidification Conference & Climate Change Resilience in Aquaculture Symposium

17th - 18th of August
Tides Hotel, Nelson

NZOAC
NZ Ocean Acidification Community

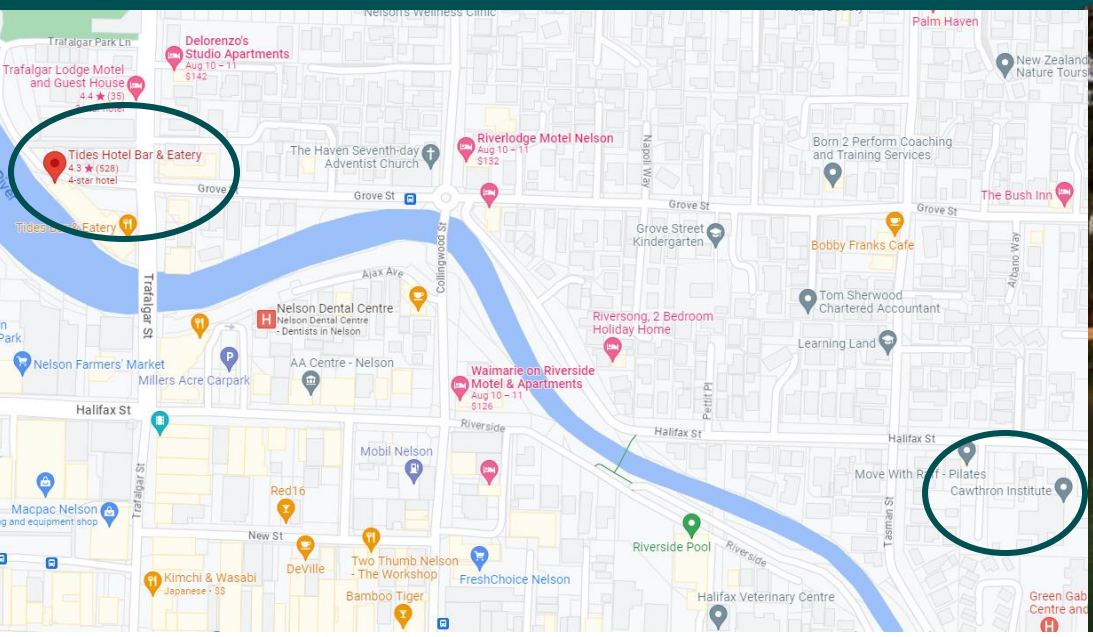
CAWTHRON

NIWA
Taihoro Nukurangi

General Information

Venue: Tides Hotel Nelson on Trafalgar Street

Conference room is to the left of reception



Wednesday 16th August: pre-conference MEDDLE workshop

1-day workshop at Cawthron Aquaculture Park; for pre-registered attendees only.
Designing Multiple Driver Experiments: A hands-on workshop for participants to learn how to use MEDDLE resources to design multiple driver experiments in an ocean acidification context.
Topics include:

- Defining the research question
- Identifying relevant drivers, biological traits and responses
- Experimental designs for multiple driver experiments
- Statistical analysis plans
- Testing your design and analysis with the MEDDLE simulator

This free workshop will be led by Christina McGraw (University of Otago), Peter Dillingham (University of Otago), Holly Koch (Victoria University of Wellington), and Evelyn Armstrong (University of Otago).

Thursday 17th August: NZOAC conference

Presentations featuring three keynote speakers and the latest OA science of relevance to NZ, at the Tides Hotel. Followed by the Ice-melter social event at Cawthron, 98 Halifax St.

Friday 18th August: Climate resilience in aquaculture symposium

Invited speakers from a range of disciplines presenting at the Tides Hotel.

Programme Overview

Wednesday 16th August	Practical workshop day		Cawthron Aquaculture Park (CAP) 139 Glen Road
	8:30 - 9:00	Arrival at CAP for MEDDLE workshop	
	9:00 - 4:15	MEDDLE workshop	
	4:15 - 4:45	Tour of CAP	
Thursday 17th August	NZOA Conference		The Tides Hotel
	8:00 – 8:45	Registration	
	8:45 - 9:00	Welcome and introductions	
	9:00 - 2:30	Science talks including keynotes	
	3:00 - 3:45	Discussion: where to from here for OA research?	
	3:45 - 4:00	AGM - Get to know the OA committee	
	5:00 - 8:00	Ice-melter social event: Wine and graze	Cawthron Institute 98 Halifax St
Friday 18th August	Climate Change Resilience in Aquaculture Symposium		The Tides Hotel
	8:00 – 8:45	Registration	
	8:45 - 9:00	Welcome and introductions	
	9:00 - 4:00	Session 1: Our changing ocean	
		Session 2: Genomics and biotechnology	
		Session 3: Industry experiences and future priorities	
		Session 4: The bigger picture - Where to from here?	
	4:00 - 6:00	After function drinks and nibbles	

Organising Committee

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Thursday 17th August:

New Zealand Ocean acidification Conference

8:00 - 8:45		**Registration**	
8:45 - 9:00		**Welcome and introduction**	
9:00 - 10:30		**Session 1:**	
9:00	Chris Cornelisen	*Cawthron*	**Keynote:** Ocean Intelligence: Enabling data-driven decision making for a healthy ocean
9:30	Amelia Ritger	*UCSB - Online*	Developing low-cost, simplified, and open-source durafet-based pH instrument electronics
9:45	Cliff Law	*UoO / NIWA*	Accounting for marine carbon dioxide removal
10:00	Lennart Bach	*UTAS - Online*	Invited presentation: Presenting on the Guide to Best Practices in Ocean Alkalinity Enhancement Research
10:15	Linn Hoffmann	*UoO*	Potential side effects of trace metal release from ocean alkalinity enhancement
10:30 - 11:00		**Morning tea**	
11:00 - 12:15		**Session 2:**	
11:00	Kim Currie	*UoO / NIWA*	**Keynote:** A synthesis product for ocean time-series, a systematic approach for global observing of ocean acidification rates
11:30	Abby Smith	*UoO*	Being bimineral in a changing ocean
11:45	Ian Dixon-Anderson	*UoO*	Sand dollar shell chemistry in a changing world
12:00	Peter Dillingham	*UoO*	Pseudoreplication in experiments is, or is not, a sin
12:15 - 1:15		**Lunch**	
1:15 - 2:30		**Session 3:**	
1:15	George Waldbusser	*Oregon State University*	**Keynote:** Sediment buffering to locally mitigate ocean acidification and capture carbon: Some hypotheses on the how, where, when it works and when it doesn't.
1:45	Mary Sewell	*UoA*	OA impacts sperm swimming performance and pH_i in the NZ sea urchin *Evechinus chloroticus*
2:00	Holly Koch	*VUW*	Glimpse into the future with natural analogues
2:15	Denisa Berbece	*VUW - Online*	Acclimatization of Coralline Algae to 'Future Analogue' Environments
2:30 - 3:00		**Afternoon tea**	
3:00 - 4:00		**Session 4:**	
3:00			Discussion: Where to from here for OA research?
3:45			AGM: Get to know the NZ OA committee
5:00 - 8:00		**Ice-melter social event: Wine and graze**	

Friday 18th August:

Climate Change Resilience in Aquaculture Symposium

8:00 - 8:45		**Registration**	
8:45 - 9:00		**Welcome and introduction**	
9:00 - 10:00		**Session 1: Our changing ocean**	
9:00	João de Souza	*Moana Project*	Moana Project - a new way of observing and forecasting the ocean in New Zealand.
9:15	Rob Smith	*Moana Project /UoO*	Understanding the spatio-temporal influence of climate variability on marine heatwaves in aquaculture regions: A New Zealand perspective
9:30	Kim Currie	*NIWA*	Ocean acidification monitoring around NZ
9:45			**Q&A session with the Session 1 speakers**
10:00 - 10:30		**Morning tea**	
10:30 - 11:45		**Session 2: Genomics and biotechnology**	
10:30	Nick King	*Cawthron*	Selective breeding and the way forward for aquaculture in NZ
10:45	Adam Miller	*Deakin, Aus*	Using genomics to inform the management of industries facing new environmental challenges
11:00	Nathan Kenny	*UoO*	Molecular mechanisms underlying resilience to climate change in kūtai
11:15	Jane Symonds	*Cawthron*	Biotechnology and its potential role in climate change adaptation
11:30			**Q&A session with the Session 2 speakers**
11:45 - 12:45		**Lunch**	
12:45 - 2:00		**Session 3: Industry experiences and future priorities**	
12:45	Mike Mandeno	*Sanford*	Mussel industry experiences and future priorities in a changing climate
1:00	Zac Waddington	*NZ King Salmon*	Impacts on salmon and how marine heatwaves have changed how we operate
1:15	Haydn Read	*Te Huata*	Te Whānau-ā-Apanui aquaculture aspirations inside a climate change emergency. How important is what we do now?
1:30	Richard Spelman	*Livestock Improvement*	Resilient dairy: innovative breeding for a sustainable future
1:45			**Q&A session with the Session 3 speakers**
2:00 - 2:30		**Afternoon tea**	
2:30 – 4:30		**Session 4: The bigger picture - where to from here?**	
2:30	Te Rerekohu Tuterangiwhiu	*Cawthron*	Te ao Māori insight on climate adaptation and resilience in our oceans
2:45	Laura Parker	*UNSW, Sydney*	Future-proofing Australia's oysters
3:00	James Butler	*Cawthron*	Adaptation pathways planning for the aquaculture sector
3:15			**Q&A session with the Session 4 speakers**
3:30	**Summing up and group discussion: Where to from here?**		
4:00- 6:00		**After function drinks and nibbles**	

NZOAC Survey: Discussion Session
15:00 - 15:45 17th August

We hope to discuss future research directions, funding streams, collaborations, and opportunities for ocean acidification research in Aotearoa/New Zealand.

To enable this process, we have developed a questionnaire to gather information before the discussion:

https://forms.gle/zmUNs6NQxYTescDN6

Please contribute your thoughts and opinions on the future ocean acidification research in New Zealand.

It is the intention of the Organising Committee to summarise the data provided in the questionnaire alongside the responses and topics raised during the discussion session to provide a synthesis to members of the NZOA community. We also aim to draft a "perspectives" style manuscript to be submitted to an NZ focused journal (e.g., New Zealand Journal of Marine and Freshwater Research).

Please indicate on the form your preference whether your submitted data can be included in workshop discussions and a manuscript, and whether you would like to be a contributor to any outputs that result from these activities.

On behalf of the NZOA 2023 Conference Organising Committee, we thank you for your contributions to both days of the conference

CAWTHRON

Shellfish Aquaculture Research Platform

NZOAC
NZ Ocean Acidification Community

NIWA
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University of Otago
Te Whare Wānanga o Otāgo
New Zealand