

NZMSS 2025 Conference Programme

	Monday 7 July 2025	
	Exhibitors and suppliers set up	
4.00pm - 6.00pm	Pre-conference Registration - MEC Foyer	
	Tuesday 8 July 2025	
	OPENING CEREMONY	
8:30am- 9:15am	Mihi Whakatau and Karakia Timatanga - Society Welcomes - Welcome from the Mayor	
9.15am - 9.45am	Kai whakanōa - <i>kindly sponsored by Coast and Catchment</i>	
9.45am- 11.00am	Keynote speakers Raymond Smith , Ngāti Kuia Kura Paul Burke , Te Whare Wānanga o Waikato University of Waikato Chair: Oliver Wade	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Emily Giles	Rochelle Constantine
Session 1	Marine Heatwaves and Temperature Stress	Charasmatic Critters
11.00am-11.15am	Environmental warming affects the metabolic expression in a soft sediment bivalve	Biologging reveals sub-surface behaviours of Hector’s dolphins potentially increasing their risk of bycatch
	<i>Orlando Lam-Gordillo, NIWA</i>	<i>Rochelle Constantine, The University of Auckland</i>
11.15am-11.30am	Fishing and Warming Drive Opposing Trends in Densities of Two Spiny Lobster Species on Northern New Zealand Reefs	Monitoring Mangō: Community based marine monitoring
	<i>Benn Hanns, The University of Auckland</i>	<i>Rob Lewis, University of Otago</i>
11.30am-11.45am	Short-term sublethal heat stress impairs growth of the New Zealand cockle, <i>Austrovenus stutchburyi</i>	New Zealand southern right whales – the past, the present, and the future
	<i>* Mira Stenman, The University of Waikato</i>	<i>Leena Riekkola, The University of Auckland</i>
11.45am - 1.00pm	Lunch Break + ECR & Student Networking	

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Location	Awatere/Wairau	Te Hoiere
Session Chair	Rob Major	Harry Allard
Session 2	Restorative Aquaculture Session Sponsor: The Nature Conservancy	Climate Change
1.00pm-1.15pm	Applying the principles of restorative aquaculture in Aotearoa New Zealand <i>Rob Major, The Nature Conservancy</i>	21st Century Climate Change Implications for Physics, Biogeochemistry and Fisheries for New Zealand's Marine Environment <i>Graham Rickard, Victoria University Wellington, te herenga waka</i>
1.15pm-1.30pm	Flexing Their Mussels: Snapper Thrive in Shellfish Farm Habitats <i>* Ash Heaphy, The University of Auckland</i>	Advancing mCDR governance and science: The role of global scientific collaboration <i>Linn Hoffmann, University of Otago</i>
1.30pm-1.45pm	Has a decade of mussel farming helped restore degraded soft sediment habitats? <i>Al Alder, Cawthron Institute</i>	How climate change will impact internal wave mixing around New Zealand – The I-Mix project <i>Erik Behrens, NIWA</i>
1.45pm-2.00pm	Not too late for Tio: recent research informing aquaculture and restoration of the native flat oyster <i>Ostrea chilensis</i> in New Zealand. <i>Zoë Hilton, Cawthron Institute</i>	Species Distribution Models in future climate change scenarios: a management decision-support tool <i>Melanie Hayden, NIWA</i>
2.00pm-2.15pm	Research supporting shellfish aquaculture diversification in New Zealand: from fundamental biology to implementation considerations <i>Jordan Elvy, Cawthron Institute</i>	Transforming coastal lowland systems threatened by sea-level-rise into prosperous communities <i>Scott Stephens, NIWA</i>
2.15pm-2.30pm	The benefits of fish feasting in mussel farms <i>Lucy Underwood, The University of Auckland</i>	The effect of oil pollution and warming on anti-predator behaviour and physiology in coral reef fish <i>* Eleanor Kelly, University of Otago</i>
2.30pm-2.45pm	Evaluating the nitrogen removal ecosystem service beneath mussel farms <i>Drew Lohrer, NIWA</i>	Ngā Hua o Waita <i>Lorraine Eade, Ngāti Rāua / Tokomaru Research Centre</i>
2.45pm-3.00pm	Five star accommodation and room service for parore in mussel farms <i>Andrew Jeffs, The University of Auckland</i>	
3.00pm - 3.30pm	Afternoon Tea	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Nick Shears	Scott Stephens
Session 3	Kina and Kelp	Blue Carbon
3.30pm-3.45pm	Quantifying rocky reef biodiversity and barrens in Te Taihu / Top of the South. <i>Anna Berthelsen, Cawthron Institute</i>	Blue carbon stocks in Aotearoa New Zealand's coastal wetlands and prospects under rising sea levels <i>Andrew Swales, NIWA</i>
3.45pm-4.00pm	What Would Jasus Eat? Prey preferences of the spiny lobster (<i>Jasus edwardsii</i>) for two barren-forming sea urchin species, <i>Evechinus chloroticus</i> and <i>Centrostephanus rodgersii</i> <i>Hayley Nessia, The University of Auckland</i>	Characterization of the regional and global divergence of <i>Macrocystis pyrifera</i> to better understand the role of giant kelp habitats as a blue-carbon sink <i>Emily C Giles, Cawthron Institute</i>
4.00pm-4.15pm	How do kina form barrens? <i>* Lily Hasshaw, The University of Auckland</i>	Marine protection as a tool for enhancing carbon cycle functionality in coastal soft sediment ecosystems <i>* Tegan Evans, The University of Auckland</i>
4.15pm-4.30pm	Variable recovery of rimurimu forests across Tōtaranui-Queen Charlotte Sound following kina removal <i>Nick Shears, The University of Auckland</i>	
4.30pm - 6.30pm	Poster Session and Icebreaker/Welcome Function (drinks & canapes) - Exhibitor Hall	

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Wednesday 9 July 2025		
9.00 - 10.00am	Panel Discussion: Marine Education across the Motu Facilitator: Al Alder	
10.00am - 10.30am	Morning Tea - kindly sponsored by the Marine Farming Association	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Katie Littlewood	Drew Lohrer
Session 4	Restoration 1	Anthropogenic Impacts
10.30am-10.45am	<p>Korikori Tuangi! The potential of cockles to enhance ecosystem functioning in degraded estuaries</p> <p><i>* Natalie Prinz, The University of Waikato</i></p>	<p>Ecological Implications of Human Induced Disasters: Evaluation of Sub-canopy responses at Astrolabe Reef/ Otāiti Post Rena Disaster</p> <p><i>* Lizzie Thompson, The University of Waikato</i></p>
10.45am-11.00am	<p>Where to Settle? The Use of Substrate to Facilitate Juvenile Mussel Recruitment in Restored Green-lipped Mussel (<i>Perna canaliculus</i>) Beds</p> <p><i>* Luke Johnston, The University of Auckland</i></p>	<p>Freshwater inputs and desiccation regulate species replacement and rewiring processes underpinning intertidal community assembly</p> <p><i>* Anthony Gillis, University of Canterbury</i></p>
11.00am - 11.15am	<p>Setting targets for ecological recovery of seagrass and other key habitats in Te Awarua-o-Porirua</p> <p><i>Rachel Parry, Greater Wellington Regional Council</i></p>	<p>Physiological Responses of Benthic Epifauna to Organic Enrichment from Salmon Farming</p> <p><i>Rebecca McMullin, Cawthron</i></p>
11.15am-11.30am	<p>Turbid Waters Impact Shellfish Restoration</p> <p><i>* Brandy Biggar, The University of Auckland</i></p>	<p>Spatial variability of potential microplastics in an intertidal fish gut: a case study in Wellington, New Zealand</p> <p><i>* Anna Resende, Victoria University of Wellington</i></p>
11.30am-11.45am	<p>Understanding germination triggers; The first steps towards improving seed-based seagrass restoration success rates in Aotearoa, New Zealand</p> <p><i>* Eleanor Brettle, The University of Waikato</i></p>	<p>Physiological Responses of Guam's Dominant Shallow-Water Corals to Nutrient Enrichment</p> <p><i>Ciemon Caballes, University Of Guam</i></p>
11.45 - 1.00pm	Lunch + NZMSS AGM (Te Hoiere room)	
Location	Awatere/Wairau	Te Hoiere
Session Chair:	Flavio F. Ribeiro	Anna Madarasz-Smith
Session 5	Aquaculture and Fisheries in a changing world Session sponsor: Plant and Food Research	Soft Sediment Systems
1.00pm-1.15pm	<p>Shellfish carbonate in sediments: assessing historical baselines, dissolution dynamics, and carbon storage beneath shellfish farms, Marlborough, New Zealand</p> <p><i>Sean Handley, NIWA</i></p>	<p>Climate-related drivers of estuarine macrobenthic functional redundancy and resilience</p> <p><i>Drew Lohrer, NIWA</i></p>
1.15pm-1.30pm	<p>Fast-tracking finfish climate change adaptation</p> <p><i>Leteisha Prescott, Cawthron Insititute</i></p>	<p>Aotearoa New Zealand's marine carbon cycle in a changing climate – current understanding and future directions</p> <p><i>Scott Nodder, NIWA</i></p>
1.30pm-1.45pm	<p>Developing marari/butterfish (<i>Odax pullus</i>) aquaculture: an herbivorous marine fish species with potential for aquaculture diversification in Aotearoa/New Zealand</p> <p><i>Flavio F. Ribeiro, The New Zealand Institute for Plant and Food Research</i></p>	<p>National Benthic Health Models: a tool for estuary health assessment in Aotearoa</p> <p><i>Dana Clark, Cawthron Institute</i></p>

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Session Chair:	Flavio F. Ribeiro	Anna Madarasz-Smith
Session 5 (cont'd)	Aquaculture and Fisheries in a changing world Session sponsor: Plant and Food Research	Soft Sediment Systems
1.45pm-2.00pm	New Open Ocean Ecosystems: a multidisciplinary programme to explore novel biofouling management strategies for open ocean aquaculture.	Environmental drivers of <i>Atrina Zelandica</i> habitat suitability in Tauranga Harbour
	<i>Peter Bell, The New Zealand Institute for Plant and Food Research</i>	<i>* Brooke Ellis-Smith, The University of Waikato</i>
2.00pm-2.15pm	Pilchards to pellets: The role of diet format and digestive performance of juvenile tāmore/Australasian snapper (<i>Chrysophrys auratus</i>)	Modelling spatial distribution of estuarine ecosystem function using a bathymetrically-informed Bayesian Network
	<i>Erin Bell, The New Zealand Institute for Plant and Food Research</i>	<i>* Grady Petersen, NIWA</i>
2.15pm-2.30pm	Breaking BaD: cutting marine aquaculture pest and pathogen connections in coastal aquaculture	Organic and inorganic carbon stocks and potential vulnerability in marine sediments around Aotearoa NZ
	<i>Ben Knight, Cawthron Institute</i>	<i>Scott Nodder, NIWA</i>
2.30pm-2.45pm	Size-specific reduction in kelp consumption by kina exposed to lobster and blue cod predator cues	Determining the relative contributions of Hawkes Bay Rivers to marine sedimentation following Cyclone Gabrielle
	<i>* Joseph Curtis, University of Otago</i>	<i>Melanie Hayden, NIWA</i>
2.45pm-3.00pm	An ecosystem approach in the Hauraki Gulf via fisheries plans: how far have we come?	Shell shocked: Anthropogenic stressors and their impact on the health of a key estuarine bivalve (<i>Austrovenus stutchburyi</i>)
	<i>Martin Cryer, Hauraki Gulf Fisheries Plan Advisory Group</i>	<i>* Lolita Rynkowski, The University of Waikato</i>
3.00pm-3.30pm	Afternoon Tea	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Sean Handley	Glenis Paul
Session 6	Biosecurity	Virtual Reality (VR) Marine Experience
3.30pm-3.45pm	Development of a Submersible Dredge Planer (SDP) for large-scale and effective removal of exotic Caulerpa in Aotearoa New Zealand	VR Marine Experience - explore & connect to Aotearoa's diverse marine environments using VR technology. <i>sign up for one of the 25 min sessions at the registration desk. Limited spaces available so be sure to sign up on arrival at conference .</i>
	<i>Derek Richards, Northland Regional Council</i>	
3.45pm-4.00pm	Preparing for the rising tide of aquatic invasive species.	
	<i>Tim Riding, Biosecurity New Zealand</i>	
4.00pm-4.15pm	Surveillance of <i>Sabellia spallanzanii</i> using the Boxfish remote operated vehicle	
	<i>Oonagh Daly, Environment Canterbury</i>	
4.15pm-4.30pm	Policy, management, and the 'Level of Fouling' scale to transform marine invasion risk reduction from recreational boats	
	<i>Kathy Walls, MPI</i>	
4.30pm-4.45pm	In hot water - the potential for thermal treatment for controlling the highly invasive seaweed <i>Caulerpa brachypus</i> in New Zealand.	
	<i>* Michele Rogalin Henderson, The University of Auckland</i>	
4.45pm-5.00pm	Aquaculture Leading the Way in Marine Biosecurity: A National Perspective	
	<i>Dave Taylor - Aquaculture New Zealand</i>	
from 5.30pm	Free Evening - no scheduled events	

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Thursday 10 July 2025		
9.00am-10.00am	Keynote Speakers Dan Hikuroa , Waipapa Taumata Rau University of Auckland - <i>kindly sponsored by the NZ National Commission for UNESCO</i> Abby Smith , Ōtākou Whakaihū Waka University of Otago Chair: Emilee Benjamin	
10.00am - 10.30am	Morning Tea - <i>kindly sponsored by Salt Ecology</i>	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Silke Bieda	Katie Littlewood
Session 7	Aotearoa and the UN Ocean Decade	Restoration 2
10.30am-10.45am	Halfway point: the UN Decade of Ocean Science and Kāhui Manaaki Tangaroa – the New Zealand National Decade Committee <i>Dan Hikuroa, New Zealand National Commission for UNESCO</i>	Revitalising the Gulf: a guidance framework for marine habitat restoration in the Hauraki Gulf / Tikapa Moana / Te Moananui ā Toi <i>Al Alder, Cawthron Institute</i>
10.45am-11.00am	Bringing the world to Aotearoa and taking Aotearoa to the world: Takeaways from the UN Ocean Conference in Nice, June 2025 <i>Anna Campbell, YEPT & James Nikitine, Blue Cradle</i>	Building for Biodiversity: The Role of Ecology in Seawall Design <i>Jesse Burns, EOS Ecology</i>
11.00am - 11.15am	Te Tautiaki Hoiho – Yellow-eyed Penguin Trust: Our Coastal Response to the Plight of Hoiho <i>Anna Campbell, Yellow Eyed Penguin Trust</i>	Site and seasonal influence on transplantation success of adult seagrass <i>Dan Crossett, Cawthron Institute</i>
11.15am-11.30am	Should our ocean be part of the solution to Climate Change? <i>Katherine Short, F.L.O.W. Collaborative Ltd</i>	Reviving the Seabed: Enriching biodiversity and habitat complexity with mussel shell material from aquaculture <i>Emilee Benjamin, The University of Auckland</i>
11.30am-11.45am	Advancing Ocean Literacy Through Connection, Collaboration and Recreation <i>Patrick Burnham, Sir Peter Blake Marine Education And Recreation Centre</i>	Mai i Whangamoa ki Horoirangi, mai i uta ki tai - working together for marine habitat mapping <i>Harry Allard, Nelson City Council</i>
11.45am - 12.00pm	The voice and rights of the ocean <i>James Tremlett, Ocean Rights and Kinship Alliance</i>	Wakapuaka Co-restoration, Mai i Whangamoa ki Horoirangi, mai ki uta ki tai: A multi-agency inter-generational marine ecosystem restoration project supporting whānau values <i>Dan Crossett, Cawthron Institute</i>
12.00-1.00pm	Lunch + WOAA (Women of Aquaculture Aotearoa) meeting	
Location	Awatere/Wairau	Te Hoiere
Session Chair:	Al Alder	Ben Knight
Session 8	He Tai Pari	Motion of the ocean
1.00pm-1.15pm	A collaboration of mātauranga Māori and western science for the monitoring of pipi (<i>Paphies australis</i>) in Tauranga Harbour <i>Tyla Kettle, Boffa Miskell</i>	Deep Water Renewal, Vertical Mixing and Oxygenation in a Temperate Fjord in Aotearoa / New Zealand <i>* Jackson Beagley, University of Otago</i>
1.15pm-1.30pm	Working in partnership to explore seafloor habitats around Te Pātaka o Rākaihautū/Banks Peninsula <i>Fiona Shanhun, Environment Canterbury</i>	Drivers of recent extreme upper-ocean warming on Campbell Plateau <i>* Cassidy Collier, University of Otago</i>
1.30pm-1.45pm	Tiaki Moana: A Pacific Regional Dialogue on Marine Conservation and OECMs <i>* James Nikitine, Blue Cradle Foundation</i>	Glider Oceanography: Marine Research in Aotearoa with Autonomous Technology <i>Alain de Verneil, NIWA</i>
1.45pm-2.00pm	Hauraki Gulf/Tikapa Moana Te Moananui-ā-Toi proposed marine protection monitoring — an update <i>Emma Kearney, Department of Conservation</i>	Integrating Next-Generation Biophysical Models to Environmental Management of Marine Ecosystems <i>Romain Chaput, Cawthron Institute</i>

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Location	Awatere/Wairau	Te Hoiere
Session Chair:	Al Alder	Ben Knight
Session 8 (cont'd)	He Tai Pari	Motion of the ocean
2.00pm-2.15pm	Metabarcoding and machine learning provide complementarity for biofouling community monitoring on open ocean aquaculture structures in Tasman Bay and Pelorus Sound	Population genetics and connectivity of a high-dispersal larvae marine invertebrate, the New Zealand Sand Dollar <i>Fellaster zelandiae</i>
	* Tian Tian, Plant and Food Research	* Ian Dixon-Anderson, University of Otago
2.15pm-2.30pm	Time to Put BOFFFF to Bed: Why We Need to Stop Talking About Big, Old, Fat, Fecund Female Fish	Remote sensing of change in Aotearoa New Zealand coasts and oceans: satellites, aerial vehicles and AI
	Armagan Sabetian, Auckland University Of Technology	Matt Pinkerton, NIWA
2.30pm-2.45pm		Syndiniales Distribution along the Munida Time Series Transect
		Sajini Dissanayake, University of Otago
2.45pm-3.30pm	Afternoon Tea	
Location	Awatere/Wairau	Te Hoiere
Session Chair	Erin Bell	Dan Crossett
Session 9	Finfish Aquaculture	Novel monitoring methods
3.30pm-3.45pm	A twisted tail: visualising early spinal deformities to improve mararī/butterfish aquaculture	Monitoring Temperate Reef Health: Harnessing Passive Acoustics to Assess Ecological Risks in Aotearoa
	Ria Rebstock, Plant And Food Research	* Fiona Chabbey, The University of Waikato
3.45pm-4.00pm	Acoustic conditioning of tāmure (snapper, <i>Chrysophrys auratus</i>) and araara (trevally, <i>Pseudocaranx dentex</i>) using a pūtātara, traditional Māori wind instrument	Enhancing environmental DNA detection of Aotearoa New Zealand longfin and shortfin eels through targeted primer design
	Warren Fantham, Plant And Food Research	* Therese Miller, The University of Auckland
4.00pm-4.15pm	Building an aquafeed ingredient business for Aotearoa	CREST (Coastal Receiving Environment Scenario Tool) for Assessing How to Improve Ecological Health of Estuaries/Harbours
	Damian Moran, Plant And Food Research	Mike Chen, DHI, NZ
4.15pm-4.30pm	Effects of formulated diets on the growth and health performance of sub-adult butterfish (<i>Odax pullus</i>) in captivity	Fibre-optic cable interferometry monitoring in the southwest Pacific: Application to tsunami early warning
	Charlie Barker & Nicole Jerez, Plant And Food Research	Richard Kellett, GNS Science
4.15pm-4.30pm	The use of black soldier fly larvae meal (BSFLM) produced in New Zealand as an alternative ingredient in aquafeeds	Quantifying Interdependence of Anthropogenic and Subsea Activity via Ocean Currents using Acoustic Doppler Current Profilers (ADCPs)
	Leonardo Magnoni, Plant And Food Research	Will Reis, Sonardyne International Ltd
4.30pm-4.45pm	Karakia Whakamutunga Conference Close	
6.30pm-11.30pm	Conference Dinner - Whitehaven Room, Marlborough Events Centre	