



The NZMSS & NZFSS Joint Conference 2022

Programme

from 21/11/22 (changes may apply, please check the Whova App for latest information)



DAY ONE: MONDAY 21 November	
Venue	WG 306
1600 - 1930	Registration opens
Venue	Exhibition Hall
1700 - 1900	Icebreaker function

DAY TWO: TUESDAY 22 November						
Venue	WG 306					
0730 - 1830	Registration					
Venue	Exhibition Hall					
0730 - 0830	Arrival Tea & Coffee					
Venue	WG403 (overflow WG126)					
0830 – 0915	Welcome & Housekeeping					
Keynote Speaker						
0915	Welcome Address Kingi Maroake					
1000-1030: Morning Tea						
Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Aquaculture & Fisheries	Environmental indicators	Science, management, conservation and policy	Cumulative effects of multiple stressor impacts & management in the coastal zone	Climate Change	Values and knowledge for fish futures
1030	Identifying habitats of particular significance for New Zealand fisheries management Hannah Mello	Monitoring estuarine water quality with remotely-sensed parameters in Tauranga Harbour Zhanchao Shao	What does no net loss of river extent mean in practice – exploring the tension between Policy 7 and Regulation 57 Justine Quinn; Mark Lowe	Ecological consequences of Cumulative Effects Simon Thrush	Chlororespiration in the scleractinian coral <i>Acropora millepora</i> Ashleigh McNie	Fish futures: reimagining freshwater ecosystem management in Aotearoa Joanne Clapcott
1045	Assessing the Vulnerability of <i>Perna canaliculus</i> to Marine Climate Change Christopher Roach	A New Zealand pelagic copepod as a model to assess the risk of emerging contaminants Louis Tremblay	Calm waters to swift currents: BOPRC's path to NPS-FM implementation for water quality attributes James Dare; Vanessa Cotterill	Using ecological response footprints to understand and manage cumulative effects Jasmine Low	Aotearoa New Zealand blue carbon resilience credits: Feasibility assessment Anna Berthelsen	Disturbance as a mediator of interactions between trout and galaxiids: what we do and don't know Angus McIntosh
1100	Smart tools for salmon aquaculture: understanding drivers of mortality allows for future adaptation in a climate-affected coastal environment Ben Knight	Seabirds as environmental indicators: migratory connectivity and stress physiology of northern common diving petrels Brendon Dunphy	Monitoring design to verify the benefits of freshwater management actions Olivier Ausseil	Frameworks to manage for marine ecosystem recovery Rebecca Gladstone-Gallagher	Impacts of climate change on the thermal structure of a large warm-monomictic reservoir Matthew Prentice	The combined effects of flood disturbance and introduced trout on population dynamics of native non-migratory galaxiids Rory Lennox
1115	Promoting a more sustainable aquaculture for New Zealand farmed abalone Natalia Bullon	Heavy metal pollutants in the northern muttonbird, Ōi/Grey faced petrel (<i>Pterodroma gouldi</i>) Inka Pleiss	Watching for fish hooks: BOPRC's path to NPS-FM implementation for ecological attributes Alastair Suren; Erin Fox	Risk assessment frameworks to guide cumulative effects management in marine spaces Joanne Ellis	Climate change has arrived in Te Moananui ā Toi/Hauraki Gulf - with novel and unexpected impacts on rocky reef ecosystems Nick Shears	The importance of adult and egg carrying capacities, and recruitment limitation in amphidromous fish meta-populations Finnbar Lee
1130	Immediate and early benthic biogeochemical responses to low levels of organic enrichment expected around	Monthly sampling reveals deposited fine sediment levels increase the most during stable flow periods:	Developing a Holistic Lakes Management Framework Ebrahim Hussain	A multi-partner initiative to turn the tide in estuaries: project description and initial results. Drew Lohrer	Impact of the amphipod <i>Themisto gaudichaudii</i> on ecology and carbon export in	Isolation management to protect threatened fish species: a review of progress

	future offshore aquaculture sites Michelle Simone	Implications for stream invertebrate communities, sediment monitoring and management Noah Davis			the Southern Ocean Svenja Halfter	Martha Jolly
1145	Measuring deposition footprints of aquaculture using in situ oxygen flux measurements David Plew	Characterising Drying and the Response of Freshwater Macroinvertebrates Elysia Harcombe	Umbrella species: Which taxonomic groups serve as useful surrogates for other aspects of marine biodiversity in Aotearoa, New Zealand? Andy Jordan	Improving estuarine health: why can't we get it right Judi Hewitt	Restoration of saltmarsh in the face of climate change: reflections from regional council Josie Crawshaw	The good the bad and the ecology: diverse perspectives on trout in Aotearoa Robin Holmes
1200	Overexploitation and decline in kelp forests inflate the bioenergetic costs of fisheries Stephen Wing	Making sense of long-term continuous data: Dissolved oxygen and ecosystem metabolism in Auckland rivers Janine Kamke; Roger Young	Let's talk about dirt – DOC's coastal sediment programme Helen Kettles	Panel Discussion	Rafting away: Could New Zealand marine invertebrates survive in a future, warmer Antarctica? Frances Perry	Floods, drought, barriers and trout – current and emerging pressures on native freshwater fish Nixie Boddy
1215	Exposure to <i>Alexandrium</i> spp. impairs the development of Green-lipped mussel (<i>Perna canaliculus</i>) embryos and larvae Hannah Greenhough	Automated estimation and reporting of ecosystem metabolism from continuous dissolved oxygen monitoring in Northland rivers Manas Chakraborty	Advancing Ecosystem Approaches in the Hauraki Gulf Through Fisheries Plans Martin Cryer		What we do in the shadows: the role of moonlight on larval growth of inanga and other ika Jeff Shima	
1230-1330 Lunch Exhibition Hall						
NZFSS rōpū Māori AGM WG517						
12:45 – 13:15 In conversation with Dame Professor Carolyn Burns WG308						

Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Aquaculture & Fisheries	Wahapū: Transcending boundaries in estuaries	Restoration ecology, habitats and methods	Cumulative effects of stressors on aquatic ecosystems	Molecular tools to inform aquatic management	NZOAC: Ocean acidification
1330	Showcasing a comprehensive analytical approach to assess the physiological and metabolic states of abalone fishing stocks Andrea C. Alfaro	Sea to the mountains: quantifying freshwater eel and trout diet reliance on estuarine trophic subsidies from upstream migrating fish Simon Stewart	Restoration of benthic macrofauna promotes biogeochemical remediation of estuarine hostile sediments Orlando Lam-Gordillo	Predicting changes in the ecosystem service provision of estuarine bivalves in response to cumulative stressor effects Elizabeth Harrison	Point-of-need molecular detection techniques & engagement in citizen-based surveillance Jonika Edgcombe	Ocean Acidification in New Zealand: potential mitigation and adaptation Cliff Law
1345	Whitebait fishery-induced shifts in kōkopu population dynamics Ben Crichton	Understanding the consequences of sea level rise: the ecological implications of	Large bivalves as potential bioremediators of degraded soft-sediment ecosystem multifunctionality	Development of an expert driven Bayesian Network to explore the impact of multiple	Using eDNA to assess the current and historic health and biodiversity of	Evaluating Seasonal and Long-term Carbon Dynamics in the South Pacific Kim Currie

		losing intertidal habitat Vera Rullens	Natalie Prinz	stressors on estuarine ecosystems Grady Petersen	lakes in Aotearoa Susie Wood	
1400	Northland Marine Research Centre discharge consent monitoring: Benthic and sediment survey results Nichola Salmond	Using simplified bio-physical numerical modelling to manage the effects of nutrients in estuaries: case studies from Tauranga Harbour. Karin Bryan	Co-design of an innovative urban shellfish restoration project Marcus Cameron	A systematic review and meta-analysis of the cumulative effects of multiple stressors on marine bivalves Lolita Rynkowski	The use of molecular tools in aquaculture Emily Frost	Ocean acidification modifies the impact of warming on estuarine sediments by enhancing the benthic microbial loop, recycling dissolved inorganic nitrogen, and reducing dissolved organic carbon export to the ocean Michelle Simone
1415	Population genomics studies of <i>Perna canaliculus</i> at Te Oneroa-a-Tohe/Ninety Mile Beach and Cook Strait Roberto Parada	Use of a multi-metric macroalgal index to document severe eutrophication in a New Zealand estuary Leigh Stevens	Shell be right: Assessing the use of mussel shells as a benthic substrate to aid restoration Emilee Benjamin	Understanding the impact of multiple stressors on cultural and ecological value in a harbour ecosystem Darren Parsons	Filter no more: A modified plankton sampler for rapid isolation of eDNA data Xavier Pochon	Ocean acidification impacts sperm swimming performance and pH _i in the New Zealand sea urchin <i>Evechinus chloroticus</i> Mary Sewell
1430	Characterising selected response mechanisms of juvenile geoduck (<i>Panopea zelandica</i>) following acute thermal shock Shaneel Sharma	100 years of declining estuarine health: why a change in management approach is required Hannah Jones	The mystery of the missing molluscs: Unravelling mussel restoration and recovery Trevyn Toone	Effect-directed analysis of chemical contaminants from a rural and urban catchments Michael Stewart	Reconstructing historical multi-trophic level responses in Lake Pounui using sedimentary environmental DNA Georgia Thomson-Laing	Ocean Acidification Research for Sustainability (OARS): equipping the global community with the resources necessary to manage the impacts of ocean acidification Kim Currie
1445		Estuaries, no one's and everyone's business - an online hub to support action Helen Kettles	When the wild things aren't: using timelapse photography to determine the best time of year for restoring mussel reefs Al Alder	The role of small and medium-sized pelagic fish in the Hauraki Gulf ecosystem, with special focus on their importance to seabirds Matt Pinkerton	Can environmental DNA solve the braided river sampling conundrum to better inform management? Inge Martens	
1500-1530: Tea & Coffee Exhibition Hall						
Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Marine Megafauna	Wahapū: Transcending boundaries in estuaries	Science, management, conservation and policy	Cumulative effects of stressors on aquatic ecosystems	Molecular tools to inform aquatic management	Aquatic plants
1530	Potential effects of climate change on New Zealand marine mammals: a review Hannah Hendriks	A socio-ecological appraisal of perceived risks associated with mangrove (Manawa) management in Aotearoa New Zealand Carolyn Lundquist	Methods for reconstructing historic estuarine trophic condition: A case study in the New River Estuary John Zeldis	Effects of marine construction on marine organisms Jenni Stanley	Monitoring the Southern Ocean through marine sponge bycatch specimens as natural eDNA samplers Sadie Mills	Large-scale sea urchin removal as a tool for restoring kelp forests in northeastern New Zealand Kelsey Miller
1545	Beneath the Waves – Acoustic monitoring of Hector's dolphin Deanna Clement	Taura kuku: prioritising mātauranga Māori to create biodegradable mussel spat settlement lines for shellfish restoration in Ōhiwa Harbour Kura Paul-Burke	Evidence of Rebound Effect in New Zealand MPAs: Unintended Consequences of Spatial Management Measures. Tai Lohrer	Conservation of deep-water corals in the face of multiple stressors in the New Zealand region Fabrice Stephenson	Identifying and prioritizing gaps in Aotearoa's genetic reference libraries Shaun Wilkinson	Potential implications of phlorotannin concentration on kelp detrital palatability by <i>Perna canaliculus</i> in inner and outer kelp forest communities Gretchen McCarthy

1600	Stable isotope analysis to investigate foraging ecology: A case study of Hector's and Māui dolphins Courtney Ogilvy	Mātauranga Māori Waimā Waitai Waiora - Practical Implementation of Mana Enhancing Partnerships Anahita Djamali; Chantez Connor-Kingi	Protecting Coastal Wetlands Using Freshwater Policy: Does This Work? Pete Wilson; Ray Chang	Identifying control points of freshwater contaminants in agricultural catchment: insight from isotopes and SWAT catchment model Meti Yulianti	Sampling for shortjaw kokopu in the Waikato and Bay of Plenty: use of spotlighting and eDNA Laura Francis	A new method to determine dispersal kernels for stream algae using drifting lake algae Daniel Zamorano
1615	Transferability of species distribution models for Hector's dolphins (<i>Cephalorhynchus hectori</i>): Preliminary results Steph Bennington	Genetics & Speciation Species identification for a crustose calcifying red algal community that induces <i>Acropora surculosa</i> Mari Deinhart	Developing technical guidance for marine offsetting and compensation in NZ coastal environment Megan Oliver; Pete Wilson	Resolving 500 years of anthropogenic impacts in Rototoa Rose Gregersen	Biodiversity and biosecurity Characterising New Zealand's river fish flow-response guilds: unraveling the concept of 'flow niche' Ignacio Reyes Sainz	The effect of local adult algal cover on large brown algal recruitment and the response of their germlings to multiple coastal stressors Dan Crossett
1630	Human – leopard seal cohabitation in an urban environment – human attitudes and seal behavior Giverny Forbes	Extinction Driven Evolution of Endemic New Zealand Sea Anemones Jasper Vining	Rethinking research excellence and impact in marine science Rebecca Jarvis	Microbiota Do cyanobacterial blooms occur naturally in dune lakes? Caitlin Wheeler	Prolific invasive species not impacted by warming Brandy Biggar	Understanding drivers of kelp distribution and loss to inform kelp forest restoration in New Zealand Dallas Lafont
1645	Parāoa of the South Pacific: new perspectives on connectivity among sperm whale populations William Rayment	Population connectivity of the New Zealand green-lipped mussel, <i>Perna canaliculus</i> (Gmelin, 1791), in the Te Moana-a-Toi/Bay of Plenty Michael John Mendiola	Geospatial information for local and regional marine spatial planning. Daniel Breen		Model-based bioregions description of seabird assemblages off East Australia Nicholas Winterle Daudt	Unravelling the role of kelp forests in coastal carbon sequestration Caitlin Blain
1700	Insights from three decades of monitoring the recovery of tohorā nō Aotearoa – New Zealand southern right whales – a climate change sentinel Rochelle Constantine		Open marine geospatial data and Benthic Terrain Models for New Zealand: DOC Te Papa Atawhai geospatial data release Enrique Pardo		Establishing a health baseline for pipi (<i>Paphies australis</i>) to identify factors contributing to declining health Joanne Howells	
1715 - 1815	Poster Session Drinks & Nibbles Exhibition Hall					
1815 - 1915	Student Event Exhibition Hall					

DAY THREE: WEDNESDAY 23 November							
Venue	WG306						
0700 – 1730	Registration						
Venue	Exhibition Hall						
0700 – 0800	Arrival Tea & Coffee						
Venue	WG403 (overflow WG126)						
0800 – 0830	Welcome & Housekeeping						
Keynote Speakers							
0830	<i>Matauranga : An Intergenerational Taonga</i> Moana Tamaariki-Pohe						
0915	<i>A metamorphosis from an applied ecologist into a Translational ecologist</i> Jon Harding						
1000-1030: Morning Tea Exhibition Hall							
Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803	WG609
Session	Aquaculture & Fisheries	Restoration Ecology, Habitats and Methods	The Firth of Thames and Hauraki Gulf	Micro-plastics	Climate Change	The Moana project	Te Hau o te Whau - Mana whenua, community and local government partnerships to restore the vitality of the Whau (West Auckland) waterways and catchment
1030	Pressures of the global skillet: ecophysiological responses of cultured New Zealand (NZ) Pacific oysters (<i>Crassostrea gigas</i>) to thermal stress Mena Welford	Restorative Marine Ecotourism – Why couple marine ecotourism and ecological restoration? Eliana Ferretti	Waihou Estuary, the link between the Hauraki Plains and the Gulf Stephen Hunt	Cumulative effects of microplastics and nitrogen loading on microphytobenthos and sediment-dwelling infauna Saskia Foreman	Trends in coastal marine heatwaves across seasons and bioregions and a case study of ecological impacts in southern New Zealand Shinae Montie	Assimilation of fishing vessel-derived observations into an operational ocean forecast system Joao Marcos C Azevedo de Souza	Virginia Baker; Robin Taua-Gordon; Josie Wall; Carla Gee; Pamela Gill; Hamish Allen; James Ataria; Louis Tremblay; Amanda Hookham

1045	Kaimoana chemistry: lipids of New Zealand shellfish in a traditional Māori diet Ioan Fuller	Ecosystem Restoration: Monitoring the road to success Sophie Roberts	Unravelling water and nutrient pathways into rivers discharging into the Firth of Thames Roland Stenger	Real-world impacts of microplastic pollution on seafloor ecosystem function Samantha Ladewig	Smelt diet composition across salinity gradients in coastal Rēkohu lakes Grace Fortune-Kelly	Modelling the connectivity and genetic structure of blackfoot pāua populations at the national scale Romain Chaput
1100	The great 2021-22 whitebaiter count David West	Water races – flow conveyance pathways or ecological habitats? Laura Drummond	An assessment of the subtidal sedimentary environment and biogeochemistry of the Tikapa Moana-o-Hauraki Firth of Thames Scott Nodder	Controls on transport and retention of microplastics in streams Nadia Dikareva	Subtropical sea urchin poses novel threat to diverse rock wall assemblages in northern New Zealand Celia Balemi	Genetic and particle modelling approaches to assessing population connectivity in a deep sea lobster Aimee van der Reis
1115	The dynamics of toheroa recruitment and implications for aquaculture Marieka van der Lee	Can peak run-off control structures help to reduce contaminants entering Waituna Lagoon? Katie Collins	Hauraki freshwater-marine water quality issues and impacts Sandy Elliott	A bold new purpose for an old method: using kick-netting in freshwater microplastic research Aidan Mora-Teddy	A novel static-dynamic conservation planning framework to manage range shifting of multi-taxon functional groups. Katie Cook	A climatological baseline of the Bay of Plenty hydrodynamics Mireya Montaño
1130	Te Taonga o Te Akau Roa: Mitimiti toheroa surveys and development of kaitiaki hapū monitoring programme Phil Ross	In-stream habitat unit additions: if you build it, will they stay? Issie Barrett	Modelling biogenic habitat spatial distributions for marine spatial planning in the Hauraki Gulf Marine Park Matthew Bennion	Disentangling the influence of microplastics and their chemical additives on a model freshwater detritivore system Kevin Simon	Gauging support for biogeographical patterns in parasites of cartilaginous fish Thomas Morris	Tracking the source of mussel spat for aquaculture using shell microchemistry Wenjie Wu

1145	Feeding ecology of toheroa and implications for aquaculture Ethan Russell	25 years of the Whatawhata Integrated Catchment Management (ICM) Project Andrew Hughes	Factors controlling acidification and hypoxia in a deep, nutrient-enriched estuarine embayment: Firth of Thames/Tika pa Moana-o-Hauraki John Zeldis	Marine Megafauna First survival rate estimates for New Zealand sea lion (<i>Phocarctos hookeri</i>) in Otago, mainland New Zealand Moss Thompson	Carbon sequestration via Aotearoa's estuarine environments: Implications for green house gas budgets Richard Bulmer	Mātauranga informed marine planning - Whakatōhea Moana Plan Kimberley Maxwell	
1200	Transgenerational plasticity in broodstock ova fatty acid profile in Giant Kokopu <i>Galaxias argenteus</i> Helen Hoang	Measuring the ecological value of stream diversions; lessons learned from consenting and construction of large infrastructure and land development projects Duncan Law	The Wairoa Estuary and Tamaki Strait (WETS) model for catchment to sea evaluation of fine-sediment transport, fate and effects Zhonghou Xu	Effects of mussel farming on Hector's dolphins (<i>Cephalorhynchus hectori</i>) in Banks Peninsula; an ecosystem perspective Jesu Valdes	Warming and imidacloprid pulses determine macroinvertebrate community dynamics in experimental streams Christoph Matthaei	Te Tiro Moana ("Eyes on the Ocean"): Observations of Aotearoa's Ocean Past and Present to Understand Our Changing Seas Julie Jakoboski	

1215		Environmental Monitoring and Reporting	Phytoplankton biomass dynamics at a Firth of Thames site. Water column stratification and its influence on satellite net primary productivity Mark Gall		Carbon dioxide enrichment, heatwaves, flow variability and fine sediment impact stream invertebrate communities and a native fish (<i>Gobiomorphus breviceps</i>) Julia Hunn	Crowd-sourced temperature data reveal the depth structure and physical drivers of an extreme marine heatwave along the West Coast, South Island, New Zealand Robert Smith	
1230-1330: Lunch Exhibition Hall							
1245 – 1330 AGM - NZFSS WG308							

NZMSS Council Lunch Off Site

Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Biodiversity and biosecurity	Restoration Ecology, Habitats and Methods	Integrated freshwater-marine water quality modelling	Biogeochemistry: sediment and nutrients	Ika: ecology and physiology	Mussels et al.
1330	Understanding the Distribution & Dispersal of Environmental DNA across Temporal-Spatial Gradients for Marine Biosecurity Surveillance Applications Michelle Sriver	The need for an evidence-based approach to fish passage remediation in New Zealand Paul Franklin	Dispersion and retention of drifting plastics in a well-mixed estuary from observations and numerical simulations Zheng Chen	Unvegetated estuarine sediment: the forgotten blue carbon Jack Hamilton	Understanding the sublethal effects of nitrate pollution on Upland bully in Canterbury, New Zealand Charlie Barker	First evidence of predation of threatened freshwater mussels (<i>Echyridella</i> spp.) in New Zealand: implications for an imperilled invertebrate Bridgette Farnworth
1345	Pest Alert Tool for screening metabarcoding data and informing biosecurity managers on the presence of unwanted species Anastasija Zaiko	Creating habitat in degraded waterways: the Cashmere Stream restoration case study Belinda Margetts	Coupled biophysical modelling of the Hauraki Gulf system Helen Macdonald	Unearthing the drivers of organic matter degradation in mangrove soils of the Bay of Plenty and Coromandel regions Timothy Thomson	Where are the fish? An assessment of īnanga populations across the South Island's lowland lakes. Christopher Meijer	Hydrology and invasive aquatic plants may mediate freshwater mussel density and population size structure in Karāpiro: implications for reservoir management Tom Moore
1400	A decline in the fish communities of braided river hāpua Jarred Arthur	Ōtākaro - Avon River Corridor: regenerating life into the red zone Katie Noakes	SWAT modelling for the Hauraki Gulf catchment Linh Hoang	Teamwork or next-door neighbours? – Fauna-interaction effects on redox fluctuations and biogeochemical processes in coastal marine sediments Ines Bartl	Understanding environmental drivers of glass eel recruitment in the Rangitāiki River Siobhan Nuri	Mussel haemolymph characterisation following bacterial administration via immersion and injection: Important knowledge for future challenges Ella Alfaro Campbell; Elizabeth S.J. Hardiman

1415	Gastropod Lumping, Splitting and Kelp-rafting in the Southern Ocean Hamish Spencer	When good riparian planting goes bad: observations of actual and potential issues in urban Auckland Jasmine Dungey	Estimating the scale of reduction in catchment loads of nitrogen, phosphorus, sediment and E. coli needed to achieve numeric objectives, and hence a state of hauora that gives effect to Te Mana o Te Wai in rivers, lakes and estuaries of Murihiku Southland Ned Norton	The clues in the sand – sediment biogenic structure provides insight into benthic species and ecosystem functioning Stefano Schenone	What the Shell: Skeletal mineralogy of the New Zealand Spiny Rock Lobster (<i>Jasus edwardsii</i>) Aaron Conroy	Factors affecting wild mussel recruitment Mikaela Abayakoon-Stanborough
1430	Developing a national taxonomic resource tool for soft sediment estuarine and coastal benthic macroinvertebrate identification Sadie Mills	What's the best way to measure stream shade? Kit Rutherford	Coupled land-freshwater-marine modelling: what detail do we need to answer management questions? Sandy Elliott	Stuck in the mud: Variations in intertidal seagrass and unvegetated sediment primary production across a sand-mud gradient. Georgina Flowers	Time-series analysis of otolith microchemistry to ascertain early life habitat interaction dynamics in New Zealand snapper (<i>Chrysophrys auratus</i>) Harrison Raby	Marine heatwave tolerance in the mussel <i>Perna canaliculus</i> – a meta-study Norman Ragg
1445	Age structure of a breeding population of red-eared sliders in northern New Zealand Nicholas Ling	A Comparison of Mahurangi Riparian Surveys Colleen Brent	Oceanography Residence and flushing time in a shallow tidal inlet: Otago Harbour Remy Zyngfogel	The elephant in the room: The ignored actors of sediment biogeochemistry Alessandra Vallim Lima	Big fish have big mouths: The size of a snapper's mouth determines its importance as a predator of sea urchins Jessica Marinovich	The central carbon metabolism as a measure of heat stress response and recovery in green-lipped mussels Leonie Venter
1500			Variations in water column properties in a temperate fiord – insights from a 15 year timeseries of temperature and salinity in Doubtful Sound Claire Shellem	Estimating the supply and movement of particulate organic carbon in the deep ocean: methods, uncertainties, present-day patterns, recent changes and future projections Matt Pinkerton	Decay of parasite community similarity with host phylogenetic and geographic distances among deep-sea fish (grenadiers) Xuhong Chai	Pathogenicity and virulence of bacterial strains associated with summer mortality in marine mussels (<i>Perna canaliculus</i>) Awanis Azizan

1515		<p>The Firth of Thames and Hauraki Gulf</p> <p>Using marine reserves to assess the status of crayfish/koura <i>Jasus edwardsii</i> populations in the Hauraki Gulf, northeastern New Zealand. Hayley Nessia</p>	<p>Future changes to oceanic volume and temperature transports around Australia and New Zealand using New Zealand's Earth System Model. Liv Cornelissen</p>	<p>Suspended sediment loads under future climate scenarios for New Zealand Andrew Neverman</p>	<p>Unlocking fine-scale habitat interaction information from continuous elemental profiles of otoliths; a novel analytical approach Armagan Sabetian</p>		
<p>1530-1600: Afternoon Tea Exhibition Hall</p>							
Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803	WG609
Session	Aquatic Plants	The Firth of Thames and Hauraki Gulf	Species Interactions	Biogeochemistry: sediment and nutrients	Biotechnology	Mussels et al.	NEMS periphyton, macroinvertebrate and electric fishing workshop Megha Sethi
1600	<p>The use of passive acoustic monitoring in assessing kelp forest recovery Craig Radford</p>	<p>An update on the State of the Environment Monitoring in the Firth of Thames Christopher Eager</p>	<p>Multi-species Feeding Aggregations Revealed Through Artificial Intelligence Audited Drone Imagery Athena Brown</p>	<p>Wild Fires: Their effects on suspended sediment, nutrients and trace elements in catchment waterways Jenny Webster-Brown</p>	<p>Robotic Tools: Beyond The Machine Philip Solaris</p>	<p>Physiological response of adult NZ green-lipped mussel, <i>Perna canaliculus</i>, to simulated chronic ocean acidification exposure using a metabolomics approach. Jenn Jury</p>	

1615	Restoring Aotearoa's seagrass meadows Dana Clark	How do mangroves influence sediment transport? An idealized model study on varying river flows and winds. Hemanth Vundavilli	Mussel farm motels – which fish seek refuge in Coromandel mussel farms? Lucy Underwood	Using suspended sediment metrics to indicate faecal contamination in river stormflows and their coastal plumes Mark Gall	Gemcitabine-fucoxanthin combination effects in human pancreatic cancer cells Kelvin Wang	The growth of the mussel <i>Perna canaliculus</i> and the kelp <i>Ecklonia radiata</i> in co-culture mesocosm Fiona MacKechnie
1630	Host density drives microbiome diversity patterns in southern bull kelp William Pearman	The role of animals in nitrogen processing across the continental shelf of the Hauraki Gulf Jenny Hillman	The effect of adult cockles, <i>Austrovenus stutchburyi</i> , on sediment transport and properties Li Hao Yeoh	Identifying the limiting nutrients in ponds Abigail Kuranchie	Climate Change	Disappearing spat on New Zealand's Greenshell™ mussel (<i>Perna canaliculus</i>) farms; magnitude, causes, and possible solutions Brad Skelton
					Establishing a Blue Carbon Methodology for New Zealand Phoebe Stewart-Sinclair	
1645	Challenges of controlling the invasive freshwater weed, <i>Cabomba caroliniana</i> in Aotearoa New Zealand – a case study. Kathy Walls	Firth of Thames microplankton interactions with decadal-scale nutrient enrichment Karl Safi	He whakarauora tuaki: understanding adult sheltering of juvenile <i>Austrovenus stutchburyi</i> and how these findings can be applied to conservation and management strategies Katie Fenton		Food for Thought: Investigating the impacts of feeding regime on the growth and survival of a locally invasive cheilostome bryozoan, Watersipora subatra Tyler Feary	Itaconate, an ancient signalling molecule in marine molluscs? The dilemma of the double-edged sword Tim Young

DAY FOUR: THURSDAY 24 November						
Venue	WG 306					
0700 - 1730	Registration					
Venue	Exhibition Hall					
0700 - 0800	Arrival Tea & Coffee					
Venue	WG403 (overflow WG126)					
0800 – 0830	Welcome & Housekeeping					
Keynote Speakers						
0830	<i>Te Pae Tawhiti: (Re)Indigenising aquatic science in Aotearoa</i> Tara McAllister					
0915	<i>Origins, Evolution and Outlook for Aquatic Science in Aotearoa</i> Andrew Jeffs					
1000-1030: Morning Tea Exhibition Hall						
Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Mātauranga Māori	Environment monitoring and national reporting	Biodiversity and biosecurity	Ika: ecology and physiology	Trophic dynamics	Species interactions
1030	Applying a Māori stellar/lunar approach to exploring Māori astronomical knowledge in relation to the localized environmental management of wai within the Tuawhenua. Neihana Matamua	Searching for answers in the mud – unearthing the history of lakes in Aotearoa, New Zealand Marcus Vandergoes	Integrating the interactive: accounting for multiple interactive stressors in marine spatial planning – a case study on the Chatham Rise Tom Brough	Too big! An approach for assessing atutahi (īnanga) spawning habitat in massive rivers Hannah Rainforth	The importance of marine subsidies from diadromous fish in the diet of short-finned eel and brown trout in the Ōreti River Tyler Kleyzen	Invasion of non-native frog could disrupt pond systems Brittany Earl

1045	Seabirds as Tohu of Ocean State Sarah Rewi	Quality not quantity: lessons learnt while collecting high frequency nitrate concentration data around New Zealand Alex Vincent	Fico.... what? A not-so-new Alien is beginning to raise concerns. Paul Wolf	Diet of rainbow trout (Oncorhynchus mykiss) from Kai Iwi Lakes, Northland, New Zealand. Claire Heyns; Tanya Cook	Braided river food webs and trophic dynamics across a complex landscape. Holly Harris	How freshwater macroinvertebrate communities change within a summer sampling season and with different collection methods Nicole Squires
1100	Pātangaroa: Co-developing management strategies for the eleven-armed starfish outbreak in Ōhiwa Harbour. Megan Ranapia	Deriving alert levels for cyanobacteria from in situ phycocyanin and chlorophyll a measurement at shallow polymictic lakes Mafalda Baptista	What are we doing in the deep: mapping and classifying deeper reef ecosystems of New Zealand Mathilde Richer de Forges	Effects of environmental and behavioural factors on New Zealand fish swimming performance and upstream passage success Rachel Crawford	UN Decade of Ocean Science in Aotearoa New Zealand and the Pacific Aotearoa New Zealand and UN Decade of Ocean Science Silke Bieda, Romeo Tevaga	Investigating the impacts of seasonality on size-based ecosystem models Samik Datta
1115	Mātauranga Māori used to lead the transdisciplinary knowledge systems approach informing co-management practices of Tuangi populations in Ōhiwa harbour Kiri Reihana	The freshwater NEMS macroinvertebrate experience Karen Shearer	Development of a seafloor model of disturbance impacts on benthic structure in the Hawke's Bay Carolyn Lundquist	Reservoirs facilitate colonization of river catchments by invasive fish through provision of pelagic larval rearing habitat. Gerry Closs	The UNESCO Aotearoa Youth Leaders and the UN Ocean Decade Aimee Clark; Adriana Bird	Changing intra- and inter-specific interactions across sedimentary and environmental stress gradients Emily Douglas
1130	Wairarapa Moana Restoration Plan – weaving Mātauranga and mana whenua values with ecological outcomes. Rachel Griffiths	Monitoring to detect changes in river water quality Rich McDowell	Prioritising multiple objectives in marine spatial planning for Aotearoa New Zealand Tamlin Jefferson	Fish Communities in Stormwater Wetlands Clinton Webb	Subsistence and artisanal fisheries in the Pacific Islands: A case study from Mitiaro, Cook Islands Antony Vavia	How marine food webs respond to change - should we be including parasites? Jerusha Bennett
1145	A virtual reality experience that weaves Mātauranga Māori with biophysical sciences Mckayla Holloway	A monitoring and reporting framework for marine reserves in Aotearoa New Zealand Monique Ladds	Understanding ecological histories of trout introductions to New Zealand lakes using sediment core environmental DNA David Kelly	Flicking the switch; genetic regulation of sex change in the New Zealand spotty wrasse (Notolabrus celidotus) Simon Muncaster	Beyond species and ecosystems: Ethnobiobiodiversity based freshwater biomonitoring in Melanesia Bindiya Rashni	The host with the most: host use and partitioning among parasitic sympatric New Zealand freshwater mussel species (Unionida: Hyriidae: Echyridella) Michele Melchior

1200	Watercourse Assessments: The Weaving of Knowledge Systems for a Thriving Environment Riaki Ruru; Chloe Price	Monitoring for the future: Integrating Structure-from-Motion photogrammetry into the benthic monitoring toolkit. Arie Spyksma	What we do in the shallows: developing a habitat classification system for NZ Greig Funnell	Oceanic predation of migrating longfin eels Paul Franklin	Qi no tu i baba ni qwali (living down by the river): Impacts of flooding and mining on ecosystems and livelihoods Rufino Varea	Unravelling the trophic interaction between a parasitic barnacle (Anelasma squalicola) and its host Southern lanternshark (Etmopterus granulosus) using stable isotopes Amandine Sabadel
1215	Experiences in the application of mātauranga Māori and science in freshwater management Kathryn Gale	Eye on Lakes - How do nutrients and light impact the ability to detect cyanobacteria using satellites? Laura Kelly	Cumulative effects of stressors on aquatic ecosystems Evaluating the impacts of fishing on reef ecosystem health across a large environmental gradient Ohad Peleg		Transdisciplinary framework for sustainable ocean development in the Pacific Payal Maharaj	
1230-1330: Lunch Exhibition Hall						
1245 - 1330 AGM - NZMSS WG308						

Venue	WG403	WA220	WG308	WG126	WG404	WG801, 802, 803
Session	Mātauranga Māori	Education and outreach	Biodiversity and biosecurity	Marine geological processes	UN Decade of Ocean Science in Aotearoa New Zealand and the Pacific	Environmental indicators
1330	Emerging themes and attributes in freshwater cultural monitoring in Aotearoa New Zealand Roland Eveleens	Environmental documentaries, public opinion, and proposed solutions to commercial fishing: Mapping the 'Seaspiracy effect' Caitlin Henneker	Trophic manipulation as a tool for exotic fish control in Lake Tomarata Ebrahim Hussain	Looking beyond the nautical chart: delving into existing hydrographic data to better understand our coastal areas Emily Tidey	Developing a Melanesian Biomonitoring Program Using Banks Peninsula as a Test System. Michael Maniel Angus McIntosh Jon Harding	Copper and zinc - updating and implementing water quality guidelines for Aotearoa New Zealand Jennifer Gadd
1345	Distribution and habitat for Kākahi (Echrydella menziesii – freshwater mussels) in the South Island Channell Thoms	Discovering coastal connections: bringing catchment education to the classroom Rob Lewis	Distribution Patterns of Shelf Bryozoans around Southern Aotearoa New Zealand Abigail Smith	The footprint of ship anchoring on the seafloor Sally Watson	A baseline study of Fiji's small-scale lobster fishery using value chain analysis and size at maturity thresholds Epeli Loganimoce	Stream temperature dynamics in an urbanising catchment, Hamilton, Aotearoa New Zealand. Lucy McKergow
1400	An artful weaving of Kāi Tahu mātauraka, lake science, local history and place names through documentary storytelling Susie Wood	Innovatively filling a gap: a community science project steps up to research South Taranaki's subtidal reefs. Karen Pratt	Uncertainty in ensemble models of New Zealand freshwater fish trends Richard White	How does large scale seafloor erosion occur? Seeking the answer in AUV data from Kaikōura Canyon Joshu Mountjoy	Indigenous and Local Knowledge of Pacific Island Fishers – a pillar for conservation in Pacific Ocean science Salanieta Kitolelei	Escherichia coli impacts on water is higher from sheep than dairy cow grazed pasture Richard Muirhead
1415		Communicating modelling assessment results for setting contaminant load limits Kalyan Chakravarthy	NIWA Invertebrate Collection – A nationally significant collection for our marine specimens and their biodiversity data Sadie Mills	Morphological changes in gravel dunes under multi-directional near-bottom tidal current conditions Marta Ribo Gene	Presence and abundance of microplastics in edible freshwater mussel (Batissa violacea) on Fiji's main island of Viti Levu Andrew Paris	Faecal source tracking and the identification of naturalised Escherichia to assist with establishing water quality and faecal contamination levels Megan Devane

1430		Continuing the legacy of Sir Peter Blake Thomas Morris	Environmental DNA reveals biogeographical patterns of non-indigenous moana species across Aotearoa New Zealand's North coast Ulla von Ammon	Seafloor pockmarks on the Chatham Rise and their possible link to a release of geologic CO2 Ingo Pecher	100% of the World Ocean floor mapped by 2030 - The Nippon Foundation/GEBCO Seabed 2030 project Kevin Mackay	Macrofossil and pollen subfossil indicators of historical regime shifts in shallow lakes Marc Schallenberg
1445		Barriers and Drivers to Participation in Urban Waterway Restoration Activities: A National Perspective Lynette McLeod	Translocation of native freshwater species: what you need to know Marine Richarson	Ika: Ecology and Physiology Interspecific variation in inner ear hair cell organisation of sharks Craig Radford	Elasmobranchs of the Dreketi River and Estuary Andrew Paris	
1500				The impact of a Southern Ocean cyclonic eddy on mesopelagic micronekton Alice Della Penna		
1515-1545: Afternoon Tea Exhibition Hall						

Closing session	
Venue	WG403 (WG 126 overflow)
1545 - 1700	Closing & NZMSS Award
1900 – 2300 Conference Dinner & Awards Ceremony Grand Millennium Hotel Auckland	