



Te Hunga Takutai o Aotearoa

**NEW ZEALAND
COASTAL SOCIETY**

2023 Conference

The Winds (and Waves) of Change
Ka huri te Hau, ka huri te Tai

21–24 November, Wellington



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Welcome

Welcome to the 2023 New Zealand Coastal Society Conference, themed 'The Winds (and Waves) of Change | Ka huri te Hau, ka huri te Tai'. This theme is intended to generate discussion around changes in coastal management across in New Zealand, both currently and into the future. With Wellington being home to central government, we can expect many of these changes in terms of our response mechanisms and legislative guidance for coastal management issues to be directed from the windy city. Our executive committee is excited to bring the annual conference back to Wellington, as the first NZCS gathering was held here 31 years ago in 1992.

The 2023 conference presents us with an opportunity to learn about the latest research, discuss lessons learnt, and contemplate the changes and challenges in front of us from work being undertaken around the motu. Over the duration of the conference, we'll hear from a range of speakers on topics that further our understanding of Aotearoa's coastal environment. We'll also spend an afternoon visiting Wellington's beautiful harbour environment and visiting NIWA's research institute at Greta Point. Our hope is that you'll take some practical learnings from the conference and reconnect with your New Zealand Coastal Society peers.

We'd like to thank the local organising committee, led by Sam Morgan, for making this conference happen. Like last year, we have elected to utilise a digital conference handbook – if you prefer a hard copy we encourage you to print it and bring it with you. All conference information can also be found on our 2023 Conference website.

Noho ora mai

Amy and Colin

New Zealand Coastal Society Co-Chairs



Wi-Fi connection details

Network: Rydges Guest

Password: Wellington



Property rights

Administering the Land Transfer Act 2017 and Cadastral Survey Act 2002, under which land title is guaranteed and property boundaries are defined, and maintaining the ownership register and survey records.

Māori Crown relations

Improving Toitū Te Whenua's role in the Māori Crown relationship by honouring Treaty settlement commitments, building enduring relationships and lifting capability to engage and partner with Māori.

Land

Providing confidence in our property rights system through the management of survey and title transactions, setting rating valuation standards and recording the physical features of our environment to provide up-to-date maps and information.

Support for emergency services

Supporting the work of our country's emergency services by making available copies of maps and charts to operational teams engaged in search and rescue, civil defence and emergency response work.

Regulatory systems

Exercising our role as stewards of key regulatory functions, administering 15 Acts, helping determine Aotearoa New Zealand's electoral boundaries, administering the rules for overseas investment and naming geographical features and places.

Geographic, geospatial and property information

Collecting, managing and releasing information to produce datasets, topographic maps and nautical charts for Aotearoa New Zealand, some Pacific Islands and the Ross Sea region of Antarctica.

Sea

Surveying our oceans and providing nautical charts and publications to ensure the safety of people at sea.

Data

Making our location-based information easy to find, share and use, providing a location-based reference system to enable accurate positioning of land and sea features and providing access to up-to-date land and seabed data.

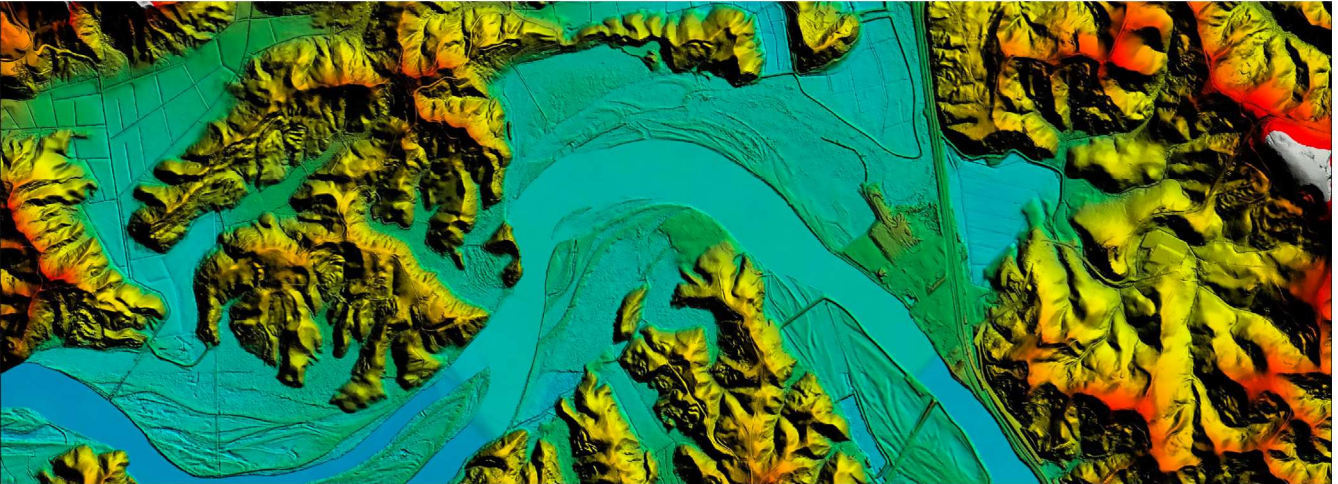
Crown property

Managing around 2 million hectares of Crown land, river and lake beds, high country pastoral leases and Crown forestry licences on land held for Treaty settlements.

Overseas investment

Acting as regulator under the Overseas Investment Act 2005 to help realise the benefits of overseas investment while protecting New Zealand's sensitive land and assets.

Our work around the coast



Three-dimensional rendering of LiDAR data gathered on the Waikato coastline.

The coastal environment has an important place in our culture and society. From aquaculture and gathering seafood to shipping and recreation, the coast forms an integral part of who we are as Kiwis. Sixty-five percent of New Zealanders live within 5km of the sea and much of our major infrastructure and assets are close to the coast.

The coast can also be a hazardous place where offshore events like tsunamis and rising sea levels due to climate change will be most keenly felt, needing careful planning to reduce the risk of disaster.

Our island nation depends on the sea for trade. More than \$85 billion in goods each year are transported by ship, accounting for around 87% of the total value of exports and 80% of imports. Safety of navigation is therefore critical to the New Zealand economy.

LINZ is responsible for on-going maintenance of publicly available core geographic information that supports the constitutional framework, national security and emergency services responses. Our reference datums enable consistent spatial planning across Aotearoa. We are also responsible for mapping the seafloor to update nautical charts, ensuring safe navigation and the protection of the marine environment.

Our vision is to map and enable access to seamless land and sea data from the peak of Aoraki Mt. Cook to the edge of our continental shelf. Our presentations at 2023 New Zealand Coastal Society Conference focus on the technical challenges involved in this work and the importance of partnership and collaboration in data collection and building a full understanding of our coastline.

New Zealand Coastal Society

Who are we?

NZCS members represent a wide range of coastal science, engineering, management and planning disciplines. They are employed in the engineering and environmental consulting sectors, in local, regional and central government, in research institutes, in the tertiary education sector, and in schools.

NZCS is a technical group of Engineering New Zealand. The multi-disciplinary nature of coastal management in New Zealand means many of our members are from areas other than engineering. There are no entry criteria for our society and we welcome membership enquiries from anyone with an interest in the coast.

Our Mission

To take a leading role in facilitating robust discussion and nationally-coordinated interactions to better manage and learn about our coastal and marine environment.

Our Vision

Sustainable management of New Zealand's coastal and marine environment underpinned by sound science, engineering and policy practice, comprehensive monitoring, involved communities and effective national networks.

Our Values

The NZCS will promote this vision by being: professional, communicative, apolitical and responsible. The NZCS will work supportively with others with common interests.

What we do

- Support you with first class professional development and networking opportunities at regional seminars and events.
- Hold an annual conference where more than 130 local and international experts across a range of coastal management disciplines gather to share their knowledge and experience. We also host the bi-annual Australasian Coasts and Ports Conference.
- Keep you informed with current research and best practice through our premier journal (*Coastal News*) published three times a year.
- Recognise your achievements in research or advocacy on coastal issues through a series of awards and prizes.
- Further your professional development with a scholarship to support research projects.
- Keep you informed of upcoming events, news and job opportunities in our regular email digest.
- Support your career progression by publishing your work (e.g. books, best practice guides, educational material).

Management Committee

The Management Committee is responsible for the policy and administration of the New Zealand Coastal Society. The committee members are elected each year at the AGM, held at the Society's annual conference.

Chair(s)	Amy Robinson and Colin Whittaker
Deputy Chair	Sam Morgan
Treasurer	Michael Allis
Deputy Treasurer	Ryan Abrey
Professional Development Coordinator	Sam Morgan
Regional Coordinators	Ana Serrano and Ryan Abrey
Coastal News and Special Publication Coordinators	Connon Andrews and Ana Serrano
University & Education Coordinator	Sarah McSweeney
Awards and Scholarships Coordinators	Bryony Miller
Central Government Liaison	Jenni Fitzgerald
Komiti Māori	Shari Gallop and Bryony Miller
NZCS Administrator/Coordinator	Renee Coutts and Belen Rada
Special Projects Coordinator	Michael Allis
Coastal News Editor	Charles Hendtlass

Conference Organising Committee

Sam Morgan (Chair)	WSP
Isabelle Farley	WSP
Amanda Riddle	WSP
Shannon Watson	GHD
Greta Stuthridge	Jacobs
Joe Prebble	GNS Science
Michael Paine	Tonkin + Taylor
Holly Blakely	Tonkin + Taylor
Verity Taylor	Tonkin + Taylor

Navigate Climate Challenges

with us

- **Comprehensive Risk Assessments:** Evaluate all risks including direct, indirect, cascading, compounding and transition.
- **Cultural Sensitivity:** Aligned with Te Tiriti, a true partnership approach and incorporation of Te Ao Māori worldview.
- **Multi-disciplinary Expertise:** Assess impacts, including coastal/sea-level rise, flood hazard and incorporation of social, cultural and environmental outcomes.
- **Resilience Integration:** Seamlessly incorporate resilience into decision making.
- **Collaborative Engagement:** Customised communication and partnerships supported by visualisations.
- **Robust Approach:** Aligned with international and national guidance.
- **Climate-related Risk Disclosure Reporting:** Align with TCFD, XRB, FMA guidance.
- **Dynamic Adaptation:** Develop flexible adaptation options and pathways in the face of uncertainties.
- **Climate Roadmaps:** Development of strategies, action plans aligned with organisational needs.

Partner with us for a resilient future



Cushla Loomb [Business Director – Climate Resilience](#) ▶ cushla.loomb@beca.com



Mike Allis [Senior Associate – Coastal Engineering, Resilience & Adaptation](#) ▶ mike.allis@beca.com



Laura Robichaux [Senior Associate – Civil Engineering](#) ▶ laura.robichaux@beca.com



Sustainable solutions for complex coastal challenges

www.tonkintaylor.co.nz

 Tonkin+Taylor

COASTAL

We have the skills and knowledge to support our clients to consider te ao Māori and mātauranga in creating coastal solutions.

We offer holistic support and solutions incorporating best-practice and innovative thinking.

Services we provide:

- Climate change adaptation and resilience strategies
- Ki uta ki tai: Mountains to the sea connection
- Coastal hazards
- Coastal geomorphology and coastal processes
- Coastal wetlands and blue carbon
- Resource consents and data acquisition

Get in touch with our team!



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Wednesday 22 November			
11:30 – 12:15	Registration & Coffee		
12:15 – 12:45	Mihi Whakatau – Welcome and Conference Opening NZCS Conference Chair, Sam Morgan		
12:45 – 1.30	Lunch		
SESSION 2 	Engineering and Shoreline Management Space 1 Morgan Harvie	Coastal Hazards Space 2 Emily Lane	Planning and Policy Grand Space Jenni Fitzgerald
1:30 - 1:50	Hypsometric and Geometric Controls on Hydrodynamics, Tidal Asymmetry, and Sediment Connectivity in Shallow Estuarine Systems Dr Peter de Ruiter - SLR Consulting	Bay of plenty regional coastal inundation hazard assessment Dr Cyprien Bosserelle - National Institute of Water & Atmospheric Research Ltd	Scale and EBM: Navigating mismatches between socio-ecological systems Elizabeth Macpherson - University of Auckland
1:50 - 2:10	Pakawau Coastal Protection – The Case for Hard Protection and Social Justice Gary Teear - OCEL – Offshore & Coastal Engineering Ltd.	Modelling cascading tsunami inundation impacts relative to projected sea level rise from a Tonga-Kermadec Arc eruption in the Bay of Plenty, New Zealand Zoë Bowbrick - University of Portsmouth National Institute of Water & Atmospheric Research Ltd (VIDEO)	Designing Law and Policy for Marine Ecosystems Associate Professor Elizabeth Macpherson - University of Canterbury
2:10 - 2:30	Te Ara Tupua – No ordinary shared path: An innovative approach to coastal resilience Michael Paine - Tonkin + Taylor	When do we leave? Modelling the impact of erosion on the north Auckland coastal cliff-top property market Sophie Kolston - University of Auckland	Benthic Terrain Modelling Across the Hauraki Gulf: Habitat Identification and Human Impacts Dr Sam Davidson Ocean Sediments – National Institute of Water & Atmospheric Research Ltd
2:30 – 3.15	Afternoon Tea		
3:15 – 4:00	Keynote Gemma Greenshields <i>Living and engaging through adaptation</i>		
SESSION 3	Engineering and Shoreline Management Space 1 Mike Allis	Physical Processes Space 2 Ben Tuckey	Resilience and Adaptation to Change Grand Space Emma Ryan

4:00 – 4:20	BlueFloat Energy and the Offshore Winds of Change Tom Young - BlueFloat Energy	Eddy-driven cross-shelf exchange in the East Auckland Current system Dr. Rafael Santana - National Institute of Water & Atmospheric Research Ltd	Regenerative tourism and coastal social-ecological resilience: the case of tōtaranui/queen charlotte sound Fenjie Qi - Massey University
4:20 – 4:40	Understanding the dynamics of an ebb tide delta to assess the feasibility of a greenfield port Andrew Brown - Tonkin + Taylor Ltd	Impact-based coastal flood thresholds and high-quality tide gauge datasets for risk assessments Ben Hague - Australian Bureau of Meteorology	Co-designing research for environmental, social, and cultural benefit: tātaihia te parataiao o te wahapū – hokianga harbour sedimentation project Dr Kyle Bland - GNS Science
4:40 – 5:00	Engineering and Shoreline Management, Planning for a resilient future Chris Fleury - Westlock Concrete Solutions	Sediment dynamics in the Hokianga Harbour tidal estuary Dr Karsten F. Kroeger - GNS Science	How might the iconic nelson boulder bank be affected by climate change? Dr Chris Cameron - Pattle Delamore Partners
5.30 – 7.30	NZCS/PIANC Young Professionals Networking (Foxglove, Queens Wharf)		



Bought to you by:

Thursday 23 November

Eric Verstappen Young Professional Breakfast (Two Grey – 2 Grey Street, Wellington)

7:30 – 8:45

Bought to you by: **Jacobs** Challenging today.
Reinventing tomorrow.

8:00 – 8:55

Registration and Tea Coffee

9:00 – 9:45

Keynote

Dr Dan Hikuroa

Integration of Mātauranga Māori and Western Science

SESSION 4

Engineering and Shoreline Management
Space 1
Dylan Barnfield

Physical Processes
Space 2
Megan Oliver

Planning and Policy
Grand Space
Shari Gallop

9:50 – 10.10

Ōpōtiki Harbour Development- Construction Challenges at the end of a Sand Spit
Grant Pearce - Tonkin + Taylor

Stormy weather: the response and resilience of a rapidly subsiding New Zealand mangrove-forest to an extreme storm-tide event
Dr Andrew Swales - National Institute of Water & Atmospheric Research Ltd

Dynamic Adaptation Pathway Planning for operational resilience of Devonport Naval Base
Laura Robichaux - BECA
**Come from resilience and adaption to change*

10.10 – 10.30

Coastal erosion management for ECMT at Ōtamarākau, Bay of Plenty
Dr Michael Allis - Beca Ltd

Wave set-up in constricted estuaries
Dr Christo Rautenbach - National Institute of Water & Atmospheric Research Ltd.

Waikato Regional Seascape Study within the Coastal Marine Area
Julia Wick - Boffa Miskell Ltd

10:30 – 10.50

Mapping New Zealand 2025 – Coastal Mapping filling in the missing piece
Graeme Blick - Toitū Te Whenua Land Information New Zealand
**From data collection monitoring and mapping stream*

Coastal Receiving Environment Scenario Tool (CREST)
Ben Tuckey - DHI

Urban Form & Flood Resilience: Balancing Flood Adaptation and Climate Change Mitigation Strategies in Coastal Cities
Dr Sara Shabahang - Beca Ltd.

10.50 – 11.20

Morning Tea


SESSION 5


Working with Nature
Space 1
Alison Clarke


Data Collection, Monitoring and Mapping
Space 2
Sam Olufson

Resilience and Adaptation to Change
Grand Space
Laura Robichaux

11.20 – 11.40	Work that nature does for people: applying the ecosystem service concept to coastal and estuarine environmental management Dr Drew Lohrer - National Institute of Water & Atmospheric Research Ltd	Post Cyclone Gabrielle Hydrographic Survey Response Hayes Ballantyne - Discovery Marine Ltd	Marlborough sounds future access study Courtney McCrostie - Stantec
11.40 – 12.00	Nature-based solutions in Fiji: Waikalou development Cole Burmester - Beca Ltd	Littorally Joining Land and Sea Jennifer Coppola - Toitū Te Whenua Land Information New Zealand	Costing coastal adaptation options: not 'who pays', but 'what do they cost'? Dr Chris Cameron - Pattle Delamore Partner
12.00 – 12.20	Nature's Armour: Exploring a Green Solution for Wave Overtopping Holly Blakely - University of Auckland Tonkin + Taylor	A cost-effective telemetered system for continuous monitoring of bed elevation, water level and waves in estuaries Dr Iain MacDonald - National Institute of Water & Atmospheric Research Ltd	Auckland transport's adaptation and resilience work progress Ashishika Sharma - Auckland Transport
12.20 – 12.40	Adapting Coastal Hazard Management: Exploring Nature-Based Approaches and Conservation Benefits Dr Teresa Konlechn Name er - University of Otago	Accurate and Repeatable Bathymetry Mapping for Enhanced Understanding of Coastal Physical Processes and Natural Cycles Jimmy Van der Pauw - Discovery Marine Ltd	Engaging to adapt: a discussion on retreat Monique Eade - Jacobs
12.40 – 2.00	Lunch / Poster Session / AGM		
	<p>Poster Presentations</p> <p>Kate Clark: How will earthquakes move Aotearoa New Zealand's coastlines? Early progress toward a nationwide probabilistic coastal coseismic displacement hazard model</p> <p>Laura Robichaux: Measuring Vulnerability for Adaptation: Approaches and Challenges</p> <p>Don Neale: DOC Marine Reserve Ranger network – Connect with us on projects and opportunities!</p> <p>Dr. R. Paul Wolf: A glimpse into an indicator (Capitella spp.) species with a complex</p> <p>Dr. R. Paul Wolf: What Lives In and On the Shell of Pāua? Infestation and Epibionts on Haliotis iris from Kaikōura</p> <p>Dr. R. Paul Wolf: Passive Migration of Abalone Offspring Through Utilisation of Water Turbulences by Juveniles of Haliotis iris</p> <p>Anne-Fleur van Leeuwen: Understanding the temporal and spatial extent of the river plumes and their biochemical properties within the Kaipara Moana</p> <p>Yelana Greig: The Impacts of Introduced Dune-Building Vegetation and Variability in Marine-Fluvial Processes on Estuary Mouth Dynamics</p> <p>Dr William Power: Agent models of tsunami evacuation behaviour to improve planning and preparedness</p> <p>Louis Alexander: The dietary preferences and feeding ecology of greenbone (Odax pullus)</p> <p>Alfredo Jaramillo-Velez: Monitoring rockfalls and landslides from coastal cliffs: can citizen science play a role?</p> <p>Connor McKeown: Sharing the ecotone: Preserving the intertidal zone for human and more than human</p>		

SESSION 6 	Dynamic Adaptation Pathway planning Space 1 Amy Robinson	Coastal Ecology Space 2 Dan Ahern	Resilience and Adaptation to Change Grand Space Chair TBC
2.00 – 2.20	Dynamic Adaptive Pathways planning in a shrinking adaptation space- lessons learned. Dr Judy - Te Herenga Waka, Victoria University of Wellington	Traditional management of coastal creatures in Aotearoa Dr Vanessa Taikato - Tonkin + Taylor	An adaptive pathway approach to coastal flood risk management: ministry of education coastal flood risk project Amanda Riddle and Isabelle Farley - WSP
2.20 – 2.40	Riding the DAPP wave – a stocktake of Dynamic Adaptation Pathways Planning along NZ’s coasts Dr Lisa Marquardt - Pattle Delamore Partners Limited	Marine heatwaves devastate <i>Durvillaea</i> bull kelp beds Don Nea - Department of Conservation Te Papa Atawhai	Resilience scoring tools for coastal environments Dr Chris Cameron - Pattle Delamore Partners
2.40 – 3.00	Dynamic Adaptive Pathways Planning: “What is good for everyone is not always good for Māori but what is good for Māori is good for everyone” Dr Shari Gallop - Pattle Delamore Partners Limited	Mudcrete reclamation and potential copper leaching into westhaven marina Ray Chang and Farza Fezi - Beca Ltd	When the ‘short term’ storm happens in the very short term Kate MacDonald - Jacobs
3.00 – 3.20	Transforming coastal lowland systems threatened by sea-level rise into prosperous communities using agent-based modelling, serious games and virtual policy simulations Dr Andrew Allison - National Institute of Water & Atmospheric Research Ltd	Fico.... what? A not-so-new Alien is beginning to raise concerns. Dr R. Paul Wolf - Ocean Wolf (VIDEO)	Coastal adaptation planning in Ōtautahi Christchurch: key steps and lessons learnt. Sarah Pahlen and Mr Tom Simons-Smith - Christchurch City Council
3.20 – 3.50	Afternoon Tea		
SESSION 7	Coastal Hazards Space 1 Derek Todd	Physical Processes Space 2 Andrew Swales	Resilience and Adaptation to Change Grand Space Dr Sarah McSweeney (TBC)
3.50 – 4.10	Regional specific impacts based warnings for coastal weather events Celeste Davies-Calway - Waikato Regional Council	Ensemble modelling of storm surge from ex-tropical Cyclone Gabrielle Dr Emily Lane - National Institute of Water & Atmospheric Research Ltd	Coastal community engagement in the mission to map the seabed by year 2030 Belen Jimenez - National Institute of Water & Atmospheric Research Ltd. Seabed2030
4.10 – 4.30	Analysing coastal flooding uncertainties with global sensitivity: insights from Orewa beach, Aotearoa New Zealand Charline Dalinghaus - The University of Auckland	Speeding up tsunami inundation forecasting with machine learning Dr Aditya Gusman - GNS Science New Zealand	Experimental spaces: connecting diverse skills and knowledges to better understand and address social vulnerability to coastal climate change. Dr Danielle Johnson - National Institute of Water & Atmospheric Research Ltd

4.30 – 4.50	Compound flooding in Porangahau, Hawke's Bay due to the ex-Tropical Cyclone Gabrielle Dr Zhonghou Xu - National Institute of Water & Atmospheric Research Ltd	Understanding coastal hazards in tropical and temperate environments Dr Dougal Greer - eCoast	Using a web-based risk platform, the resilience explorer, to prioritise a programme of climate adaptation planning in the far north Mitchell Anderson - Adapterra Ltd (for Far North District Council)
6.00 – 7.00	Pre-Dinner Drinks (Rydges Hotel)		
7.00 - Late	Conference Dinner (Rydges Hotel) <div style="text-align: right;">Bought to you by: </div>		

Time	Friday 24 November		
8:00 – 8:55	Registration & Coffee		
9:00 – 9:55am	<p style="text-align: center;">PANEL SESSION</p> <p style="text-align: center;">Thresholds, triggers and signals: Implementing adaptation plans</p> <p style="text-align: center;">Panel members: Third Panellist TBC – Thames Coromandel District Council; Monique Eade - Jacobs (Previously Hurunui District Council) and Tom Bowen - Horizons Regional Council</p> <p style="text-align: center;">Facilitated by: Nikki Williams</p> <p style="text-align: right;">Sponsored by:  Tonkin+Taylor</p>		
SESSION 8 (1)	Data Collection, Monitoring and Mapping Space 1 Chair TBC	Coastal Ecology Space 2 Don Neale	NIWA Field Trip
10:00 – 10:20	A new wave monitoring network for Canterbury: development and applications Dr Sarah McSweeney - University of Canterbury	Developing guidance for marine offsetting and compensation in NZ Megan Oliver - Greater Wellington Regional Council	
10:20 – 10:40	XblocPlus and earthquakes – multi modal revetment design Verity Taylor - Tonkin + Taylor Te Ara Tupua Alliance <u>*From engineering and shoreline management stream</u>	The Search for Replacement Crayfish Habitat Daniel Ahern - SLR Consulting	
10:40 – 11:00	Coordinated approach to mapping Aotearoa’s seafloor Stuart Caie - Toitū Te Whenua Land Information New Zealand	Ecological Processes Involved in Sustainably Managing Finfish Aquaculture Dr Jack O’Carroll - SLR Consulting	
11:00 – 11:30	NIWA & ‘Project Reef’ Combining resources and knowledge a multibeam mapping 250 km route track captures an extensive mosaic of sub-tidal reefs “worthy of careful management” Karen Pratt - Project Reef South Taranaki	Interacting stressors erodes ecological resilience in coastal ecosystems Professor Conrad Pilditch - University of Waikato	



Ocean Wolf

the science behind your project

Ocean Wolf is a marine science agency focusing on the taxonomy, ontogeny and reproductive biology of marine invertebrates.

Ocean Wolf's mission is to provide and advocate a more accurate and reliable science and service for Taxonomy, Aquaculture, Biosecurity and Shoreline protection.

Our education and experience allow us to correctly and cost-efficiently apply Taxonomic tools. Our knowledge of reproductive biology, recruitment, settlement, and ontogeny in marine invertebrates enables us to assist in matters of Ecosystem recovery, Aquaculture nursery and husbandry management.

With our broad national and international network, Ocean Wolf is able to provide Aotearoa, New Zealand, with the expertise to become a world leader in Biosecurity and Aquaculture and recognize the unique Biodiversity at our doorstep.

Let's bring our country forward, increase our sustainability and make our economy more resilient by advocating for correct science.

Don't hesitate to contact us; we would love to meet and discuss your marine science project!

Dr. R. Paul Wolf, Founder

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www.ocean-wolf.com



Keynote Speakers

Gemma Greenshields

Technical Principle - Community Engagement
WSP

Gemma's an award-winning engagement specialist who is passionate about enabling people to get involved in shaping their place through inclusive engagement. With over 15 years' experience she has worked on one of the largest infrastructure projects in New Zealand's history with the Stronger Christchurch Infrastructure Rebuild Team following the Canterbury earthquakes. Passionate about our changing futures, she had the privilege of working on the coastal adaptation and climate change project -Whakahekerau - Rakiātea Rautaki Tai St Clair to St Kilda Coastal Plan which won the NZPI Nancy Northcroft Supreme award, the NZPI Best Practice Consultation and Public Participation processes as well as the IAP2 (International Association of Public Participation) Australasian Core Value Awards Project of the year and the IAP2 Planning Category. Gemma has a passion for creating robust engagement strategies and strongly believes better project outcomes are achieved by working together.

Gemma brings a lived experience to her work having to leave her home due to liquefaction issues in the 2011 Christchurch Earthquake. Going through a managed retreat has provided Gemma with insight and empathy with communities facing future natural hazard challenges.

Dr Dan Hikuroa

Associate Professor

The University of Auckland / Waipapa Taumata Rau

Associate Professor Dan Hikuroa (Ngāti Maniapoto, Waikato-Tainui, Ngaati Whanaunga) employs earth systems and environmental humanities approaches in his work at Waipapa Taumata Rau the University of Auckland. Dan is an established world expert on weaving Indigenous knowledge and science to realise the dreams of the communities he works with.

Dan is UNESCO New Zealand Culture Commissioner, AGU Council member, has key roles within New Zealand's science research sector and is re-imagining and remembering relationships with te taiao - our environment. Dan is spearheading alternative ways of assessing sustainability, including weaving Indigenous knowledge and epistemologies with science and into legislation, assessment frameworks and decision-support tools.

In his keynote Dan will share experiences of how Indigenous knowledge of natural hazards helped Māori communities adapt to changes in the environment.



NIWA

Taihoro Nukurangi

NEW ZEALAND'S EXPERTS ON CLIMATE FRESHWATER & MARINE SCIENCE

Guiding our future

Field Trips

Field Trip 1 - NIWA

Venture over to NIWA's research institute at Greta Point where we will be shown around the facilities and have a sneak peek into the day-to-day workings of NIWA. This will include a visit to NIWA's supercomputer, boarding of the Ikatere vessel, exploration of the marine invertebrates collection, and demonstration and discussion on numerous other measurement and modelling techniques. Whether you are intrigued by the supercomputer's power or are just keen to jump aboard one of NIWA's vessels, this trip has something for everyone.

Important Information

- Please collect your packed lunch from the Rydges (TBC) and meet the tour busses in the outside the Rydges at 9am.
- Field trips (and the conference) will conclude back at the Rydges by 1:00 pm.
- Please wear comfortable walking shoes and bring warm clothing and rain protection. The field trip will still run if the weather is marginal. Please bring water and sun protection (hat, sunscreen) for fine weather (here's hoping!).

Field Trip 2 - Wellington Harbour by Boat (Limit 60)

Experience the heart of Wellington's iconic harbour with by boat. Explore the city's unique infrastructure, from the bustling ferry terminal to the innovative waterfront developments. We'll cruise past the stunning Matiu/Somes Island, home to native wildlife and rich Maori history. Along the way, enjoy the cool sea breeze and maybe a chance to see wildlife in the water. This is a journey that showcases the best of Wellington Harbor's past and present, with stories and sights that will leave you captivated.

Important Information

- Please collect your packed lunch from the Rydges (TBC) and meet the tour busses in the outside the Rydges at 9am.
- Field trips (and the conference) will conclude back at the Rydges by 1:00 pm.
- Please bring warm clothing, sun and rain protection. The field trip will still run if the weather is marginal.
- Please note: no high heels or stilettos to be worn on the boat please



eCoast
eTakutai

HOLISTIC APPROACH INNOVATIVE METHODS SUSTAINABLE SOLUTIONS

MOHIO - AUAHA - TAUTOKO
UNDERSTAND - INNOVATE - SUSTAIN

Collaborating to provide comprehensive sustainable solutions.

- Coastal and Civil Engineers
- Coastal Hazard Experts
- Numerical Modellers
- World Leading Surf Scientists
- Marine and Freshwater Ecologists
- Tsunami Specialists
- Shoreline Management and Climate Change Adaptation Strategies
- Monitoring and Bio-Statistics
- Catchment & Freshwater Systems
- Surveying, Diving and Instrumentation
- Expert Witness Evidence