

Centre for Sustainability



Newsletter 14 – November 2023

The Centre for Sustainability is a University of Otago premier research centre with an international reputation for its innovative interdisciplinary research on local and global sustainability challenges. We collaborate closely with communities, iwi, industry and government agencies and form teams with other researchers from across New Zealand and internationally to generate high-quality research.

CONTACT INFORMATION

Centre for Sustainability | University of Otago
PO Box 56 | Dunedin 9054 | New Zealand

Telephone: 64 3 479 5220

Email: centre-sustainability@otago.ac.nz
Website: otago.ac.nz/centre-sustainability

 facebook.com/otago-centreforsustainability



“Interdisciplinary research on sustainability challenges”

Research on risk of major quakes in central New Zealand study awarded \$12.67m funding

Congratulations to Research Associate Professor Caroline Orchiston who is co-lead on a successful Endeavour programme, investigating earthquake risk and community resilience in central Aotearoa.

Co-PI Associate Professor Jamie Howarth says the “Central Aotearoa sits in a zone of complex faulting, known as the ‘transition zone’ because it marks the transition between our two largest plate boundary faults—the Hikurangi Subduction Zone and the Alpine Fault. There’s a high likelihood—75 percent chance—of a magnitude 8 earthquake on the Alpine Fault in the next 50 years”. A shake of this size could significantly change the state of stress in the transition zone, potentially triggering decades of more large quakes.

As part of the project, researchers will investigate the pattern and frequency of previous large earthquake sequences, using new lake sediment records that reveal earthquake activity up to 10,000 years in the past. This data will help develop computer simulations of earthquake processes, which may dramatically improve our ability to forecast future quake sequences and understand the hazard they present to people and communities.



In reference to the many hazards and climate change, Caroline observed that “communities in central Aotearoa are already facing many challenges in dealing with multi-hazard risks.” This project aims to increase awareness and preparedness for potential future catastrophic earthquakes by closely collaborating with iwi and communities in the Transition Zone.

Part of the funding will support a new 3-year postdoctoral fellowship at the Centre, which is an exciting opportunity to grow our research team. The PhD scholarship will target community and iwi resilience and sustainability planning as part of this research.

The programme includes researchers from the School of Geography, Victoria University of Wellington, GNS Science, University of Canterbury, Massey University, NIWA and Market Economics.

Director's Notes



As we come into spring, change and opportunity continues to come to the Centre. We farewelled Nicki Topliss, who retired from the University after many years of amazing service. Her deep knowledge and unwavering support of our postgraduate students and staff will be greatly missed. We celebrated Merata Kawharu who received the Supervisor of the Year award for Humanities. We also farewelled the BEATS team as their research programme finished, also saying goodbye to Margaretha Situmorang after her successful PhD defence. In April & May Janet travelled to Europe to promote her book "Culture & Sustainability". In November, Cilla is journeying to Antarctica as a mentor for the Homeward Bound Women in Science programme. The Centre had funding success with a new five-year Endeavour programme, focussed on community and iwi resilience to earthquake sequences in central Aotearoa.

As we hurtle towards the summer break after a very busy year, I'd like to share a whakatauki to help us all go gently on ourselves and those around us during the holidays - *He aroha whakatō, he aroha putamai* - If kindness is sown, then kindness is received.

Noho ora mai,
Caroline

Merata Kawharu was honoured as the Supervisor of the Year for Humanities

This wonderful achievement reflects Merata's unwavering commitment to her taura, and her dedication to supporting them to achieve their full potential. Most of her students are based in their kainga communities away from campus, which takes extra support and whanaungatanga to care for them and their research kaupapa. Whakamihi, Merata, congratulations from all of us.

Centre updates

Guide for communities that are facing disruptions to their environment, livelihoods and/or wellbeing

Merata Kawharu & Janet Stephenson were involved in helping to develop the Guide that is relevant to everyone but is particularly designed to help communities to develop positive visions for change, transform unfair systems, draw on diverse strengths and worldviews, and come together to solve problems in ways that work better for everyone. With vision and leadership, disruptive changes can become just transitions. See it online: <https://www.mbie.govt.nz/business-and-employment/economic-development/just-transition/just-transitions-guide> or download the PDF: [A guide to just transitions | He puka arataki whakawhitinga tika \[PDF, 36 MB\]](#)

BEATS Team

The BEATS research project ended on the 30th of September, and they have left us to begin exciting new projects. The team have been with us in the Centre for the last three years. We will miss them and wish them all the best for the future.



Student Updates

Congratulations to **ANGELLA NDAKA** who won the Cultural Leadership Category at the Women In AI APAC award ceremony which took place in Sydney in June.

Congratulations and well done to Angella and **MARGARETHA SITUMORANG** submitted their theses this year, Margaretha in May and Angella in June. Staff and students joined them when they walked over to the graduate office and then on to the Quad to ring the bell.



Welcomes and Farewells

New Faces

NEGIN IMANI joined us in June as a part-time Research Fellow. Negin is the Science Leader of NZ's 'National Science Challenge Science for Technological Innovation', researching in the field of Biomimetic buildings for climate change adaptation. Negin is also a lecturer in Built Environment at Open Polytechnic of New Zealand and a TEDx speaker. She is the founder of Biomimicry New Zealand representing New Zealand in the Biomimicry Institute global network. Her research interests include biomimetic energy-efficient and ecologically sustainable building design with a focus on thermal regulation, and optimal internal comfort for human wellbeing and productivity. Negin's research has investigated the application of thermal regulation strategies found in animals and plants to create low energy buildings. She has taught across architectural technology and building science courses in New Zealand since 2017 and has a professional association with national and international architectural practices. Negin hopes that her time here with us will lead to a long association with the Centre.



Visitors

JESSICA HENRY joined us in August, she is a Senior Engagement Advisor for the Ministry for the Environment and has been involved in establishing the Engagement Hub at MfE. Jessica received an MfE Chief Executive Scholarship, which gave her a ten-week secondment to enhance her learning and she chose to spend her time with us at the Centre, due to its reputation for excellence in engagement. Originally from Auckland, Jessica now lives in Ōtepoti Dunedin with her husband and son and is rapidly turning their small urban backyard into a permaculture haven. Read more about Jessica's project here <https://www.otago.ac.nz/otagobulletin/news/engagement-focus-of-secondment-to-centre-for-sustainability>

Jessica thanked all of us at the Centre for being so welcoming, and mentioned how much she had enjoyed having the opportunity to learn so much while she was with us. She has returned to her role at MfE.



HONORARY PROF JAMES HIGHAM

James has been granted an Honorary Professor role with the University of Otago and will be based here at the Centre for Sustainability when he is in New Zealand twice a year. An Honorary Professor title is a distinguished position approved by the Vice Chancellor and awarded to people who are undertaking activities which provide a significant ongoing contribution of benefit to the University, and to recognise the importance of the continuing relationship between the appointee and the University.

James has recently taken up a position as Distinguished Professor at Griffith University having spent most of his academic career at Otago University based in the Department of Tourism. James has a strong research interest in sustainable tourism and has a long association with our Centre including co-supervision of postgrad students and as a research affiliate for many years. His nomination as an Honorary Professor was a joint proposal by the Department of Tourism and the Centre for Sustainability. The honorary position will allow continuation of existing and on-going collaborations with staff in both units which will be facilitated by his two annual visits.

New Students

CAELAN CHURCH'S PhD focusses on opportunities for national guidance on natural hazard management during RMA reform. New Zealand has long been exposed to a variety of natural hazards. Caelan's research will examine the role of 'national guidance documents' in informing natural hazard planning decisions, as well as encouraging effective and consistent hazard planning outcomes across New Zealand's local authorities. Caelan has a BA in Geography and a Master of Planning (MPlan). Throughout his studies, he has put his planning skills into practice by working in Otago's freshwater and environmental planning space. In his spare time, he enjoys hiking, fishing, kickboxing, and Brazilian Jiu-Jitsu.



ZION DAVIS joined us in July his Master of Sustainable Business looks at sustainable and just transitions to green energy within Southland, New Zealand – How is green hydrogen seen in this transition.



AIGGAN TAMENE KITILA is working on a PhD funded by QuakeCoRE, investigating workplace safety and earthquake resilience. Aiggan was born and raised in Ethiopia. He has a passion for academia and research, and ventured across different African countries, serving as a lecturer and researcher, gaining a deep understanding of the continent's diverse public health challenges. His educational journey began with an undergraduate degree in Public Health. Building upon that knowledge, he pursued a Master of Public Health with a specialization in Occupational and Environmental Health. Alongside his academic pursuits, Aiggan enjoys the rhythms of Ethio-Jazz and Reggae.



CAROLINE ROWE'S PhD focusses on the impact of communication and engagement of the AF8 Alpine Fault earthquake sciences and preparedness project. The study will look at how effective the science communication and engagement has been with emergency management and partner agencies as they seek to prepare themselves and support their communities in building resilience ahead of an Alpine Fault earthquake. Caroline has returned to study after a career in communications and stakeholder engagement, most of which has been spent in the health and local government sectors. During that time, she supported several emergency responses to disasters including the Canterbury and Kaikōura Earthquakes.



CHERI VAN SCHRAVENDIJK-GOODMAN'S

PhD looks at unlocking the past wetland-scapes of the lower Waikato River system and the potential implications for future wetland restoration in Te Puuaha community. Cheri is a mother of 3 and stepmum to 2 beautiful 'bigger kids' who have made her even happier as 'Nahna' to 3 mokopuna (and one on the way). Along with hubby, Dan, she is co-owner of a small environmentally focused Waikato-based company called 'Swamp Frog', with teams working in arboriculture, gardening and maintenance, wetland restoration and environmental research.



KATHRYN WRIGHT'S PhD will focus on rural community connections, and resilience.

Kathryn is an NZAC (New Zealand Association of Counsellors) counsellor that specialises in rural mental health. She has bachelor's degrees in psychology, sociology, counselling, and a Master of Professional Practice degree in counselling which centred upon research on why young rural men tend to not seek help for mental health issues. She is also a Youth Mental Health First Aid instructor and is on the Community Health Council for Te Whatu Ora Southern. She lives on a deer farm in Te Anau, Southland with her husband and daughter.

Kathryn has only just joined us and she has kicked off the start of her PhD in style by winning a Rural Womens' business award!! She is also a recipient of a University of Otago Māori Doctoral Scholarship. Congratulations Kathryn <https://ruralwomennz.nz/winners2023/>



Departures

After 14 years at the Centre, we farewelled **NICKI TOPLISS** when she retired in September. When asked to tell us something about her time here at the Centre and what lies ahead for her in the future this is what Nicki had to say:

“I started working at the Centre for Agriculture, Food and Environment (CSAFE) as it was known then, in November 2009. It was a bustling place with co-directors Hugh Campbell and Henrik Moller and a host of researchers – Janet Stephenson, Chris Rosin, Marion Johnson, Corey Bragg, Paul Stock, Solis Norton, to name a few. The 8-10 postgrads were a tight knit group, and I was warmly welcomed into the CSAFE whanau.

Just before I arrived the group had recently expanded from two villas in Montgomery Ave into a third villa at 547 Castle Street. The Centre now had a seminar room with a large tearoom and kitchen to house the growing numbers. Surrounding the three buildings was a well-tended garden full of climbing roses, established trees and a couple of picnic tables. Morning tea was a regular event and students, or staff often used the kitchen to whip up a batch of scones or fresh bread. I was very content with my move from the Med School to this warm, friendly place filled with students from around the world and interesting projects being discussed along the hallway.

Since those days the Centre has moved premises twice – first to temporary accommodation next door and finally to our current premises in 2015. The move to the new centre gave us all a chance to spread out. I even got my own sunny office. The rooms were comfortable and light, the plantings quickly grew, and our courtyard became a popular place to gather on warm days for morning tea or lunch. Throughout these years, however, it was always the people rather than the place which kept me here.

I have been fortunate to meet so many really, lovely young people over the years. I followed them on their postgrad journey, and eventually their new lives beyond Otago. It has been one of the most rewarding aspects of the job and the part I will miss the most.



The staff have also been a varied crew who have come and gone and occasionally returned. It was always great to welcome former CSAFERS back to morning tea or a sabbatical.

The Centre's extended whanau also played a big role in our lives – from our regular overseas visitors, Advisory Board members and colleagues across campus. The Centre is a richer place for their contribution.

I suppose I should mention the work... good variety, regular changes (thanks to University processes) but best of all – I could leave it behind when I walked out the door allowing me to focus on the most important people in my life – my family. Retirement is not the end of the road for me – it is the start of an open highway and I'm really looking forward to the drive.”

We wish Nicki all the best for a happy retirement and whatever the future brings.

Publications

Mandic S, Sandretto S, Hopkins D, Wilson G, Kidd G, García Bengoechea E. School choice, distance to school and travel to school patterns among adolescents. *Journal of Transport & Health*, 2023; 33:101704. DOI: <https://doi.org/10.1016/j.jth.2023.101704>

Purdie, J. (2022). Modelling climate change impacts on inflows, lake storage and spill in snow-fed hydroelectric power catchments, Southern Alps, New Zealand. *Journal of Hydrology (NZ)*, 61 (2): 151-178.

Abbott, M. & Stephenson, J. (2023). Using Mapping to support Collaborative Climate Adaptation. Research Summary for the South Dunedin Future Programme. Centre for Sustainability, University of Otago. <https://ourarchive.otago.ac.nz/handle/10523/16057>

Harrison, S., Macmillan, A., Bond, S., & Stephenson, J. (2023). Participatory modelling for local and regional collaboration on climate change adaptation and health. *The Journal of Climate Change and Health*, 100235. <https://www.sciencedirect.com/science/article/pii/S2667278223000354>

Thompson L, Doogan HM, Thompson C, Wehi PM, Johnson SJ. (2023). Are there differences in behaviour between the two colour morphs of the mountain stone wētā, *Hemideina māori*? *New Zealand Journal of Zoology*, p.1-17. <https://doi.org/10.1080/03014223.2023.2249408>

Virens, A. (2023). Plants out of place: How appreciation of weeds unsettles nature in New Zealand. *New Zealand Geographer*, 79(2), 65–74. <https://doi.org/10.1111/nzg.1236474>

Wehi PM, Rogers KM, Jowett T, Sabadel AJM. (2023). Interpreting past trophic ecology of a threatened species, kea (*Nestor notabilis*), from museum specimens. *Journal of Animal Ecology* 92: 273-284. <https://doi.org/10.1111/1365-2656.13742>

REPORTS

Purdie, J (2022) Probable Maximum Flood under climate change – a review. Report written for Meridian Energy Ltd, 41pp.

Janet Stephenson, Merata Kawharu, Sophie Bond, Gradon Diprose and members of Rereatukahia Marae Komiti, Maketu Iwi Collective, Te Kaahui o Rauru, Kati Huirapa ki Puketeraki and Aukaha (2023). Adaptation by Mana Whenua: initiatives, challenges and working with councils. A report from the Innovations for Climate Adaptation research project, Deep South National Science Challenge. Centre for Sustainability, University of Otago. <https://ourarchive.otago.ac.nz/handle/10523/16245>

Just Transitions Aotearoa Group. 2023. “A Guide to Just Transitions for Communities in Aotearoa New Zealand,” Motu Economic and Public Policy Research, Wellington. <https://www.mbie.govt.nz/business-and-employment/economic-development/just-transition/just-transitions-guide/>

RECENT HIGH PROFILE MEDIA REPORTS

Finding the good life in a finite world - 'Post-Growth' author Tim Jackson, features Director of the Centre For Sustainability, Caroline Orchiston, Country Director British Council New Zealand and the Pacific, Natasha Beckman, and Tim Jackson, at the New Zealand International Science Festival, 2023. <https://www.stuff.co.nz/environment/climate-news/132535407/finding-the-good-life-in-a-finite-world--postgrowth-author-tim-jackson>