



FOREST ECOSYSTEM SERVICES FORUM

Planted forests, climate change, water and people connections

Speakers and session chairs



Hemi Rolleston Hemi.Rolleston@scionresearch.com

Hemi is General Manager of Te Ao Māori and Science Services at Scion. He joined Scion in February 2019 after 5 years at Callaghan Innovation where he commenced as the inaugural General Manager Māori Economy and lead significant change for the organisation's engagement with the Māori economy, including a number of key initiatives such as the successful Māori Food Collective Nuku ki te Puku, Āmua Ao (Māori students to Stanford) and Matariki X. He was also the Interim Chief Executive for nine months and led the organisation successfully through a key period of change. Prior to joining Scion, Hemi was General Manager of Sectors leading a team of 50 to support New Zealand business on their innovation journey.

Before his time at Callaghan Innovation, Hemi spent seven years as the Inaugural Chief Executive of Te Awanui Huka Pak, a 100% Māori owned kiwifruit company in Mount Maunganui with investment across the entire kiwifruit value chain.

Hemi is a former Director of the Rotorua Lakes Council entity Grow Rotorua and Priority One in Tauranga. He is currently a Director on Ngāti Whakaue Assets Trust and Ngamanawa Inc who have significant investments in Forestry. Hemi is born and bred in Rotorua and is Ngāti Whakaue through both his parents and also has Ngāiterangi and Ngāti Ranginui whakapapa. Hemi holds a Business Management Degree and Post Graduate Māori through Waikato University and has undertaken the Kelloggs Rural Leaders Programme through Lincoln as well as completing three leadership programs through Stanford University.



Dr Tara Strand tara.strand@scionresearch.com

Tara is Scion's new General Manager for Forests and Landscapes. This impact area covers forests predominantly planted for permanent forest purposes.

Before her GM role, Tara led high impact research in rural fire and biosecurity. Her strategic thinking and drive to co-design research and translate science into information and tools for use by stakeholders and the public, led to her involvement with the Biological Heritage Challenge as a member of the Interim Science Leadership Group and co-lead of the Ngā Rākau Taketake Tools for management of kauri dieback and myrtle rust.

Tara has been a contributing author on the Guidelines for National Greenhouse Emissions: Wetlands for the Intergovernmental Panel on Climate Change (IPCC). Early in her PhD, she participated on an AmeriFlux study tracking CO₂ flux on a conifer covered mountain slope that was later attacked by the mountain pine beetle changing the sequestering capability of the forest. Tara also had the pleasure of participating in the first unofficial and official International Land Ecosystem Atmosphere Processes Study (iLEAPS).



Dr Tim Payn tim.payn@scionresearch.com

Tim has a degree in soil science and chemistry from Bangor in Wales and a Ph.D. in Forestry from Canterbury on the magnesium nutrition of *Pinus radiata*. His Ph.D. was sponsored by Tasman Forestry, FRI, the New Zealand Forest Site Management Cooperative, and the University of Canterbury. Since completing his Ph.D. he has worked at Scion, where he is currently a Principal Scientist.

He has worked on a wide range of research projects such as developing nutrition decision support systems, spatial modelling of forest productivity as related to the environment, the development of criteria and indicators of sustainable forest management, and helped establish FSC certification activities within New Zealand. He has developed and led a number of environmental forestry related research programmes and since 2008 has been closely involved with climate change related activities in New Zealand.

He is a member of MPI's Research Innovation and Technology Transfer Working Group, and is a committee member of the New Zealand Climate Change Centre. In 2009 with colleagues from France, Portugal, the UK, and Australia he established a four year collaborative programme 'TRANZFOR – forests and climate change' to encourage science exchanges between Europe and New Zealand and Australia. To date more than 50 exchanges have occurred. He is a full member of the NZIF and has been involved since he was a student.



Professor Meine van Noordwijk - M.vanNoordwijk@cgiar.org

Meine is a Distinguished Research Fellow at the World Agroforestry Centre. He joined the organization in 1993. For many years Dr van Noordwijk guided the global integration of the Centre's science and co-led ICRAF's global research program on environmental services. He has published on issues across a wide range of scales, from roots interacting with soil to global environmental policies and their national implementation. He also is professor of agroforestry at Wageningen

University, The Netherlands. From 2002 to 2008 he was Regional Coordinator for Southeast Asia. Before joining the Centre, Meine was a senior research officer in the Root Ecology Section at the DLO Institute for Soil Fertility Research in Haren, the Netherlands, concentrating on models of the relationships between soil fertility, nutrient use efficiency and root development of crops and trees. He also worked for two years as a lecturer in botany and ecology at the University of Juba in Sudan. Meine has a PhD in Agricultural Science from the University of Wageningen, the Netherlands and an MSc in Biology from the Rijksuniversiteit Utrecht, the Netherlands.

As many of the bottlenecks to agroforestry are in the policy domain, quantification of positive and negative tree-soil-crop interactions has been a basis for forms of 'negotiation support' that increased recognition and opportunities for farmer-led development pathways, with agility sustained.



Professor Irena Creed - irena.creed@usask.ca

Irena is an ecosystem scientist. She works closely with her diverse and active research groups to develop conceptual models, and to develop the scientific and practical tools needed to challenge these models and to determine the consequences of human modification on Earth.

Irena's research group, together with collaborators from government, industry and an international network of scientists, study the impacts of global change (climate change, atmospheric pollution, and land use/land cover change) on ecosystem structure, function and services. She works at multiple scales, investigating how hydrology influences ecological and physiological processes in terrestrial (forest, agriculture) and aquatic ecosystems (streams, wetlands, lakes, rivers). She uses contemporary techniques, including satellite- and ground-based measurements, field and laboratory experimental manipulations, and statistical and mathematical models to develop a predictive understanding of global change effects on ecosystem hydrological and biogeochemical processes and their ecological endpoints. Her group focuses research on two major watershed ecosystems: the Saskatchewan River basin that drains into Lake Winnipeg and eventually to the Arctic Ocean; and the Great Lakes-St Lawrence River basin that serves as the major hydrologic corridor to move water to the Atlantic Ocean. She also works closely with government and industry partners to translate scientific findings into policy and management relevant tools.



Dr Gregory Valatin - gregory.valatin@forestresearch.gov.uk

Gregory leads economic research at Forest Research (UK). His research interests include forestry and climate change economics and cost-effectiveness analysis, payments for ecosystem services, behavioural economics and policy nudges. He was lead author of the woodlands and economics chapters of the UK National Ecosystem Assessment, and the main author of the supporting analysis on valuing the ecosystem services of woodlands. He initiated a proposal for a new COST Action ('PESFOR-W') aimed at improving Europe's capacity to use Payments for Ecosystem Services to achieve water policy objectives through incentives for planting woodlands to reduce agricultural diffuse pollution to watercourses. The topic has generated wide interest and, as at Feb 2017, it has participants from 36 countries, and interest of several international organisations.

The speakers will provide new insights about how researchers, industries, national and local governments and civil society can work together to maintain and enhance natural capital productivity of forest and water resources while sustaining the flow of ecosystem services (e.g. timber, fibre, food, carbon sequestration, and cultural services) to society. Participants will be able to take home useful insights from the speakers' state of the art knowledge and practical understanding of the relationships between forests, climate change, water and people how these connections would be used to inform policy and investment decisions.



Dr Peter Clinton - peter.clinton@scionresearch.com

Peter is the Science leader for the Forest Systems team at Scion. He has nearly 30 years' experience as a forest ecologist specialising in maintaining the productive capacity of commercial forests. He is one of New Zealand's leading experts in sustainable forest management with more than 100 published papers to his credit. He now leads the Scion and Industry funded Resilient Forests research programme which has the goal of greatly enhancing the long-term productivity, socio-economic benefits and resilience of production forests so as to support New Zealand's transition to a low-carbon bio-economy and meet New Zealand's carbon emission reduction goals. His expertise extends to production ecology, tree nutrition, biogeochemistry, soil organic matter and plant soil microbe interactions.



Tina Porou - tina@poipoia.co.nz

Tina is of Ngāti Porou, Ngāti Tuwharetoa, Ngai Tāmanuhiri and Ngāti Rakaipaaka descent and founded Poipoia, a kaupapa Māori company committed to providing environmental services to iwi, the public and private sector. These services are derived from the holistic principles of kaitiakitanga.

Tina has worked as an environmental planner and a tangata whenua advocate in the natural resource management space for over 20 years on projects that have included developing papakainga houses for social well-being, facilitating environmental restoration programmes, engaging in national policy interventions on water, climate change and biodiversity while working with iwi and councils to enable stronger decision sharing relationships. Tina has specific experience in the areas of water allocation and quality, geothermal development and cultural impact assessments.

This broad range of work provided a strong platform for sustainable development approaches, all from a tangata whenua perspective. Tina held the role of the Head of Sustainability at Contact Energy which provided deep experience in corporate responsibility and the operationalisation of these ideals in a commercial space and more broader assisting Māori businesses delve deeper into their own kaitiakitanga aspirations.

Tina has international experience speaking in a range of spaces on natural resource management including the UN in Rome, representing Iwi at COP21 in Paris and presenting at the Din'e Reservation in New Mexico.

Tina holds board governance positions on the Lake Taupo Forest Trust, Ngāti Porou Forests, Tātau Tātau o te Wairoa Commercial Board and is based in Wellington. Poipoia has a small team of experienced iwi practitioners and technicians in the field of resource management from across the regions. Tina's broad experience in working with hapū, whānau and iwi has provided her with a multi layered approach to natural resource management that provides unique perspectives to address environmental challenges.



Dr Alison Collins Alison.Collins@mfe.govt.nz

Alison is Departmental Chief Science Advisor, Kaitohutohu Mātanga Pūtaiao Matua, Ministry for the Environment – Manatū Mō Te Taiao. Alison, intrigued from an early age about how the world works, studied soil science and geomorphology. Seeing many different soils and landscapes became a passion and took her on a journey from the UK, around Europe and into Mississippi, US before landing almost 15 years ago in Aotearoa New Zealand.

Alison spent 12 years working for Manaaki Whenua - Landcare Research, leading a portfolio of science around ecosystems, soils, land use and informatics. During her time with Manaaki Whenua, Alison worked with regional councils and central government agencies to understand and prioritise their science needs. She also worked with the science community to find ways in which to facilitate better uptake and use of science. In this capacity, she established and became director of a centre for integrating data and science-based tools, facilitating clear and engaging communication.

Alison joined MfE in August 2017 as Departmental Chief Science Advisor. Still passionate about enabling wise use of science, her role is focused on ensuring 'valued and trusted science for environmental stewardship'. On a day-to-day basis, this means translating complex science, helping to navigating the science system so decision-makers can better access and use the excellent research being done and building capability at the science to policy interface.



Debbie Ward – debbie.ward@mpi.govt.nz

Debbie is Director of Business and Spatial Intelligence at Te Uru Rākau.

Debbie has a Bachelor of Business Studies (Hons), an Executive Masters in Public Administration, and more than 30 years' experience in business management across a range of sectors.

- Her previous roles include MPI's director of security and privacy, and manager of IT performance and risk at Inland Revenue.
- As the director of business and spatial intelligence, Debbie is responsible for managing across branch services including administrative support, corporate communications, business planning and reporting, event management, and project management office services.
- She also manages the spatial intelligence team that supports not only Te Uru Rākau but MPI as a whole.



Professor Alan Renwick - alan.renwick@lincoln.ac.nz

Alan has been Professor of Agriculture Economics at Lincoln University since November 2015. Prior to moving to New Zealand, he worked in academic institutions in England, Scotland and Ireland. A focus of his work has been the impact of agricultural, environmental and trade policies on the economics of land use.

Recently a key focus of his work has been on the economics of existing and novel land uses in New Zealand and the processes involved in land-use transformation and adaptation to climate change. This has involved working in the Our Land and Water and Deep South National Science Challenges as well as a SLMACC project examining the potential viability of low emission alternatives for land that is currently used for livestock.



Steven Carden – c/o fenwickm@landcorp.co.nz

Steve has been Chief Executive of Pāmu since 2013, where he has led a transformational strategic change in the company.

Under Steve's leadership, Pāmu has refocused not just on maximising returns on farm, but also adding value beyond the farm gate to ensure Pāmu captures more of the upside of its production, for the benefit of its New Zealand shareholders.

Steve has driven the company to focus intensively on the negative impacts on the environment of Pāmu's farming operations, and has led the sector with initiatives such as stopping the use of PKE on Pāmu farms, and the formation of an external Environment Reference Group, to help guide the company's on-farm decisions.

In 2017 Steve was awarded a Health and Safety Leadership Award following his leadership of a complete change to the health and safety approach at Pāmu. He was instrumental in the formation of the Pāmu Academy, a joint venture company targeting a new approach to health and safety leadership, pioneered at Pāmu under Steve's leadership.

Steve has also been instrumental in ensuring ongoing innovation at Pāmu and through associated companies FarmIQ (30% owned by Pāmu), and Spring Sheep Milk Co (a 50/50 JV) – both companies are at the forefront of leading innovation in the agriculture sector.

Before joining Pāmu, Steven was General Manager of PGG Wrightson Seeds Australia from 2010. Steven began at PGG Wrightson in 2008 as Group Manager of Business Development, serving also on the NZTE Beachheads Advisory Board.

From 2003 to 2008, he worked at McKinsey & Company, a global management consulting firm, in New York and Auckland advising companies throughout North America, Europe and Australia.

Steve was General Manager of New Zealand's first internet retailing company, FlyingPig and he founded the First Foundation in 1998, a program that helps talented but financially disadvantaged secondary school students successfully complete university through workplace scholarships.



Sally Strang - SStrang@hnrq.com

Sally is Environmental Manager for Hancock Forest Management (NZ) Ltd. Sally has worked in the forest industry for 20 years in environmental roles. Sally is responsible for managing environmental compliance and stewardship programmes for approximately 227,000ha of plantation forest managed by Hancock Forest Management in NZ.

Sally is Chairperson of the Forest Owners Association Resources and Environment Committee, was a member of the stakeholder working group that developed the National Environmental Standard for Plantation Forestry and is a board member of NZ Forest Certification Association (the National Governing Body for PEFC in NZ).



Dr Richard T Yao – Richard.Yao@scionresearch.com

Richard is an environmental economist at Scion. His main research area is the assessment of the social, environmental and economic values provided by New Zealand's natural resources.

Richard completed a PhD in Environmental Economics and an MSc in Agricultural Economics. He has worked at Scion for twelve years as a research economist on the assessment of ecosystem services (e.g. timber, food, carbon, recreation, improved water quality, water regulation and biodiversity) and natural resource management. He has applied his key areas of expertise – econometrics, environmental economics and ecosystem services assessment – to New Zealand environmental, land use, freshwater and marine resources management. This research area includes accounting for both market (provisioning) and non-market (regulating, cultural) values in policy and investment decision making.

In 2012, Richard led the development of the annual Forest Ecosystem Services Forum that brings together government agencies, businesses, academics, researchers and user groups to discuss issues and developments in ecosystem services research and links to local, national and international policies. He also served as co-chair of the Oceania Ecosystem Services Forum in Christchurch, New Zealand in September 2019. He also served in the executive committee of the New Zealand Agricultural and Resource Economics Society from 2014 to 2018. He currently leads the Economics and Decision Support research theme of the Marine Biosecurity Toolbox programme (2020-2024) which aims to assess the economic, environmental and social impacts of the innovative biosecurity protection measures being developed by the programme.



Dr MS Srinivasan - ms.srinivasan@niwa.co.nz

MS is the Principal Scientist Catchment Hydrology at the National Institute of Water and Atmospheric Research Ltd., Christchurch, New Zealand. MS is the Programme Manager for the New Zealand government funded programme, Irrigation Insight. He has been leading a team of weather forecasters, climate and social scientists, hydrologists, economists and communication experts in addressing the wicked problem of water management in NZ dairy farms and the design and uptake of irrigation scheduling tools by farmers. He works closely

with farmers and other stakeholders such as regulators, representatives from primary sector groups, and regional and central government policy-makers).

MS has been employing co-innovation principles in his stakeholder and end-user engagements to co-define the challenges, co-identify the values, barriers to change, and co-develop an enabling environment where solutions are owned and sustained by all end-users and stakeholders.



Blair Dickie - Blair.Dickie@waikatoregion.govt.nz

Blair has been involved in climate change issues for over 20 years. He originally worked as a scientist before retraining in public policy and has a special interest in finding successful solutions to climate change issues, particularly the links between water management, renewable energy and climate change. Blair is currently employed to provide resource management advice to Waikato Regional Council helping Waikato communities to reduce their impacts on the climate and sustainably adapt to the opportunities and constraints of an increasingly

climate-influenced environment. He also chairs the Upper North Island Strategic Alliance, Climate Change Officers Group and is the Resource Management Law Association's Climate Change Knowledge Hub Leader.



Dean Satchell – deans@nrc.govt.nz

Dean has been involved with afforestation for over two decades and specialises in forest establishment and high value species selection for site. He has a master's degree in forestry science and is a past president of the New Zealand Farm Forestry Association. He currently works for Northland Regional Council in their erodible hill country afforestation programme.



Claire Stewart - Claire.Stewart@scionresearch.com

Claire is an Innovation Strategist who consults to a number of organisations including Scion.

A natural communicator and facilitator, Claire works with people to develop their ideas, products, services and business models. She uses Design Thinking practices to work with the people who use these products and services to understand what we know, what we don't know, spot opportunity and find the best way to effect meaningful change. This often leads to reinventing and adding to something that exists or creating something new and often innovative, always with the goal of delivering a better experience for people and planet.

Working in technology and strategic communications for over 15 years, across Australasia and the UK, allows Claire to bring a view that is both strategic and technical with a focus on driving sustainable business change.

She predominately spends her time at Cucumber, a people led technology company driving innovative and sustainable change in New Zealand's primary industries and supporting sectors. The other half of her time is spent at Scion, providing strategic consulting, programme management of Innovation Jumpstart a programme for early career scientists and market validation expertise.