**Presenters:**

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| **Title/Name** | **Title & Affiliation** | **Presentation Title** | **Profile** |  |
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| Dr Scott Larnard | Chief Scientist, Freshwater, and Estuaries, NIWA | State of our Lakes and Freshwater | Scott Larned is NIWA’s Chief Scientist for Freshwater. Scott leads a team of over 200 scientists and technicians in providing science to support freshwater policy and management in NZ. In addition to his Chief Scientist duties, Scott is an aquatic ecologist and his current research focuses on the effects of land use on ecosystem health. | A picture containing outdoor, person  Description automatically generated |
| Dr Susie Wood | Freshwater Scientist, Cawthron Institute, Nelson | Our Lake Health, Past, Present & Future | Susie is a freshwater scientist and molecular ecologist based at the Cawthron Institute in Nelson, Aotearoa-New Zealand. Her research is multidisciplinary and integrative, with the overarching goal of improving knowledge on freshwater ecosystems. It spans three broad areas: (i) toxic cyanobacteria dynamics in freshwater systems (both planktonic in lakes and benthic in rivers), (ii) the development and application of molecular techniques to monitor and understand aquatic systems, and (iii) integrating cutting edge techniques with more traditional paleolimnological approaches to guide future lake management and restoration. | A close-up of a person smiling  Description automatically generated |
| Dr Marcus Vandergoes | Paleoecologist, Climate and Environmental Change, GNS | Co-author for above paper | Marcus is a paleoecologist based at GNS Science, Lower Hutt, Aotearoa-New Zealand. His research focuses on reconstructing historic and prehistoric environmental change through the analysis of sediment cores taken from lakes and wetlands. This work allows insight into how ecosystems and environments have responded to climate change, landscape evolution and human impact. His research interests include: (i) reconstructing high-resolution records of climate and environmental change to provide a context for understanding current and future change, (ii) defining pre-human ecological baseline conditions from lakes to guide restoration and conservation, and (iii) developing and integrating quantitative methods in environmental and paleoclimate research. | Image of Marcus Vandergoes |
|  |  |  | Susie and Marcus are the programme leaders of the MBIE funded project ‘Our lakes’ health: past, present, future’ (www.lakes380.com). The programme team is obtaining a nationwide overview of health for about 10% of lakes in Aotearoa-New Zealand. A combination of paleo environmental and limnological approaches are used including sediment coring, novel proxy analyses (environmental DNA, high-resolution sediment core scanning), geochronology and mātauranga Māori (indigenous knowledge) to reconstruct water quality and lake health over the past 1,000 years and provide a richer understanding of the value of lakes in Aotearoa-New Zealand. |  |
| Chris McBride | LimnoTrack | Lake Rotorua Status | To be provided |  |
| Dr Grant Tempero | Research Fellow, University of Waikato | Co-author for above paper | Grant is interested in many aspects of biological research including ecology, physiology, and animal behaviour. Grant’s research interests mainly focus on applied aspects such as invasive species, ecological restoration, and toxicology.  Grant’s current research areas include determination of phytoplankton nutrient limitation in Lake Rotorua. Monitoring of sediment aluminium concentrations and potential aluminium toxicity associated with alum dosing of the Rotorua Lakes. Development of novel invasive fish monitoring systems using scent detection dogs and the use of scent detection dogs in the conservation of short-tailed bat habitat.  I am also part of the [LERNZ](https://www.lernz.co.nz/) research group. | Grant Tempero |
| Eugene Berryman-Kamp | Director Te Mana o Te Wai Implementation Partnership, Ministry for the Environment | Te Mana O Te Wai and its Implementation | To be provided | Eugene Berryman-Kamp |
| Nicki Douglas | Environmental Manager, Te Arawa Lakes Trust | The Lens of Te Arawa (Vision and How to Get There) | To be provided |  |
| Dr Stewart Ledgard | Principal Scientist, Ag Research | Implications of Climate Change Policy and Reduction of Greenhouse Gas Emissions on Dairy Farms for Nitrogen Loses to Water | Stewart’s research focus is the management of resource use and environmental impacts of pastoral farming systems. During the past decade this has involved application of Life Cycle Assessment across a range of New Zealand agricultural systems and products. |  |
| Dr Tina Bayer | Environment Canterbury | Managing lakes in the Canterbury High Country | Tina has worked at Environment Canterbury as a lake and freshwater scientist for 5 years. Previously Tina studied climate change effects on large subalpine lakes in the South Island and worked in Sweden modelling lake carbon dynamics. |  |
| William Anaru | Biosecurity Manager, Te Arawa Lakes Trust | Catfishkilla Programme – Rotorua Lakes | To be provided | Diving into mātauranga Māori to find an 800-year-old solution for  70-year-old problem | Stuff.co.nz |
| Paul Champion | Principal Scientist - Freshwater Ecology, NIWA, Hamilton | What Plants are in Our Lakes? | Paul specialises in biosecurity and plant ecology, especially in wet habitats. Focus research areas include assessment of weed potential, aquatic weed management and, most recently, developing a strategy for the conservation for freshwater-dependent plants. Paul joined NIWA in 1994. He previously worked with MAF coordinating eradication programs for nationally important weeds. |  |
| Dr Deborah Hofstra | Principal Scientist, and Programme Leader Freshwater Biosecurity | Aquatic plant control research | Deborah is a freshwater scientist with a background in plant biology, ecology and genetics.  Deborah specialises in freshwater biosecurity, leading research that focuses on the management of aquatic plants, including the control of invasive species and the restoration of native plants.  Her research has been instrumental in providing new control methods for invasive weeds using biodegradable benthic barriers, aquatic herbicides and the assessment of biological control tools.  She provides advice to management agencies to support their biosecurity goals, including a strategic approach to invasive species management, and the design and implementation of weed eradication or control plans that support native biota.  Deborah has a special interest in the conservation of native flora and fauna which can be better protected through understanding the consequences of aquatic weed invasions and management actions. | A person smiling for the camera  Description automatically generated with medium confidence |
| Tracey Burton | Manager Biosecurity and Biodiversity, LINZ | Reducing the Impacts of Aquatic Weed in South Island Lakes: Experience from Other Lake Environments | I work to protect our environment by overseeing biosecurity control programs and protecting biodiversity values on crown land for future generations. This work spans both terrestrial and aquatic domains. | Tracey Burton |
| Mary de Winton | Freshwater Ecologist, Group Manager Aquatic Plants Group | Submerged Plant Indicators Reflect Lake Interventions? | Mary is based at NIWA in Hamilton and is manager of the Aquatic Plant Group. She is a freshwater ecologist with over 30 years’ research experience on submerged vegetation management. During this time Mary has worked on (and within) over 155 New Zealand lakes. A key focus of Mary’s research is the management of aquatic plants within the wider framework of freshwater biosecurity.  Mary frequently provides operational management advice to agencies including the Toitū Te Whenua LINZ Annual Control Works Programme for aquatic weeds. She also leads field work to assess the ecological condition of lakes for monitoring and management purposes. | A picture containing outdoor, person, tree, grass  Description automatically generated |
| NIWA Team |  | Being Prepared for Whole Lake Treatment – What Needs to be Done to Meet Different Outcomes? |  |  |
| Dr Cindy Baker | Principal Scientist – Freshwater Fish | Novel Approaches to Control Catfish |  | Dr. Cindy Baker – The Kudos Science Trust |
| Dr Cindy Baker | Principal Scientist – Freshwater Fish | e-DNA - What do we Want to Know? |  |  |
| Helen Creagh | Rotorua Catchments Manager, Bay of Plenty Regional Council | Te Arawa Lakes Programme Achievements and Future | Scott Kusabs and Helen Creagh are employed by Toi Moana (Bay of Plenty Regional Council) to lead the implementation of projects within the Rotorua Te Arawa Lakes Programme. Projects aimed at maintaining and improving water quality across the Te Arawa Lakes, but particularly on four lakes (Rotorua, Rotoiti, Rotoehu and Ōkāreka). The Programme is a partnership between Te Arawa Lakes Trust, Rotorua Lakes Council and Toi Moana and has had significant Crown and Council investment since its inception in 2005 with the signing of Te Arawa’s Treaty of Waitangi Settlement. The projects aim to reduce nutrient footprints to those lakes and the effects of land use on those lakes. |  |
| Scott Kusabs | Land Management Team Leader, Bay of Plenty Regional Council | Co-author for above paper | Refer above |  |
| James Dare | Environmental Scientist, Bay of Plenty Regional Council | Towards the Lake Tarawera NPS FW- Policy Document | James is a water quality scientist at Bay of Plenty Regional Council who oversees a diverse range of projects, including monitoring water quality and cyanobacteria within the Rotorua Te Arawa Lakes.  He has previously worked Environment Southland, the Ministry of Fisheries, and NIWA, and is currently studying part-time towards a PhD in environmental science at the University of Waikato. In his spare time, James teaches Kung fu, enjoys home brewing and playing hockey, as well as spending time with his wife and two young daughters. | James Dare |
| Gemma Moleta | Senior Planner, Bay of Plenty Regional Council | Co-author for paper above | Gemma grew up on a cropping farm in the Horowhenua region and studied Resource and Environmental Planning at Massey University Palmerston North.  She started her career at Harrison Grierson Consultants in Auckland working in both policy and consenting before starting at Bay of Plenty Regional Council in 2014 in the Water Policy team.  She was involved in the Rotorua Nutrient Management Plan Change (PC 10) and currently works in the team tasked with implementing the National Policy Statement for Freshwater Management. |  |
| Dr Paul White | Senior Groundwater Scientist/ Chair Taupo Lakes and Waterways Group | Lake Taupo: Water Quality Issues and Catchment Management | Paul uses 3D geological modelling for defining and assessing groundwater systems, and his knowledge and research is used by regional councils and resource managers for groundwater allocation and lake-water quality protection, including two large, long-term community-based programmes in the Taupo and Rotorua catchments.  He is a past President of the New Zealand Hydrological Society and a Royal Society of New Zealand Councillor representing Earth Sciences. He actively contributes to New Zealand’s science sector through science society leadership, community outreach and teaching on a range of training courses. |  |
| **Day Two: 11 November 2022** | | | | |
| Professor David Hamilton | Director, Australian Rivers Institute | Climate Crisis – How will our Lakes be Affected | David Hamilton is the Deputy Director and a Professor in the Australian Rivers Institute, Griffith University. He has held positions in Environmental Engineering at the University of Western Australia and Biological Sciences at the University of Waikato in New Zealand. He was appointed as the inaugural Bay of Plenty Regional Council Chair in Lake Restoration at the University of Waikato in 2002 and held this position for 15 years, until his current appointment. His research has involved testing and modelling of lake restoration actions and more generally, documenting the restoration and recovery of freshwater ecosystems. In recent years he has been closely involved in management and policy implementation for freshwater ecosystems, holding appointments with the Ministry for the Environment (NZ) and advisory roles for regional councils and industry groups in New Zealand and Australia. He is editor-in-chief of the scientific journal Inland Waters and an Associate Editor of Hydrobiologia and Aquatic Ecology. | Photo of Professor David Hamilton |
| Associate Professor Deniz Ozkundakci | Bay of Plenty Regional Council Chair in Lake and Freshwater Science, University of Waikato | Building Lake Resilience for the Future | Deniz holds the position of Toihuarewa – Waimāori Bay of Plenty Regional Council Chair in Lake and Fresh Water Science by Toi Moana Bay of Plenty Regional Council and The University of Waikato. He is a freshwater ecologist with research interests that intersect the areas of freshwater ecology, aquatic biodiversity, and water quality, with a strong focus on providing knowledge and solutions to assist environmental managers, kaitiaki, and stakeholders in reaching achievable restoration and management outcomes. I firmly believe that an evidence-based understanding of fundamental mechanisms that shape ecosystem structure and function is crucial to inform the development of aquatic restoration and management tools that deliver intended objectives. | Deniz Özkundakci |
| Dr Tanira Kingi | Te Arawa Primary Sector | Climate Change: the NPS - FW and Land Use Change: A Te Arawa Perspective | Tanira grew up on the shores of Lake Rotorua in Ohinemutu and worked in Rotorua’s forestry and horticultural industries in the late 1970s and 1980s. He is an agricultural economist with over 30yrs experience across New Zealand’s primary industry sectors and has held positions as a senior scientist and science strategist with Scion and AgResearch; and as a research scientist with Massey University in agricultural systems and management. In 2010 Tanira was instrumental in establishing the Lake Rotorua Primary Producers Collective and chaired the collective through its negotiations with BoPRC over Plan Change 10. He also chaired the Lake Rotorua Stakeholder Advisory Group in the development of the Integrated Framework and is the chair of Te Arawa Arataua (TAPS), also established in 2010. He is currently a research consultant and science advisor to MPI and MfE, an Emeritus Scientist (Scion), a Climate Change Commissioner, and holds a number of directorships in the agricultural sector including Landcorp Farming (Pamu). He also a director on a number of Māori land authorities including Whakaue Farming Ltd and Te Arawa Management Ltd. Tanira has a PhD in agricultural economics and development (Australian National University), and an MAppSc (Hons) in agricultural systems management (Massey University). He is affiliated to Ngati Whakaue, Ngati Rangitihi, Te Arawa, Ngati Awa |  |
| Dr Moritz Lehmann | Senior Scientist, Xerra Earth Observation Institute Adjunct  Senior Research Fellow, The University of Waikato | "From satellites to Communities: Effective Tools for Monitoring Cyanobacteria Levels in the Rotorua Lakes" | My work focuses on remote sensing and modelling technologies to address water quality issues in lakes and the coastal ocean. I have a PhD in oceanography from Dalhousie University, Canada, and worked in both research and consulting until I relocated with my family to New Zealand in 2014.  As a senior research fellow at the University of Waikato, I developed new methods for satellite-based monitoring of lake water quality and applied these to over 1400 New Zealand lakes. Since September 2018, I have been a Senior Scientist with Xerra, where my work includes operationalisation of satellite data products for the monitoring of aquatic environments and the analysis of maritime ship traffic for biosecurity and fisheries applications.  I work from home in Raglan. I enjoy New Zealand’s perennial summer (compared with Canadian climes), and practice horsemanship and longboard surfing. | A person smiling for the camera  Description automatically generated with medium confidence |
| Hon David Parker | Minister for the Environment |  |  | David Parker |
| Jason Wilson | Deputy Director General Te Uru Rakau/NZ Forest Service | Managing our Plantation Forests to Reduce Environmental Impacts | Jason Wilson is the Deputy Director-General at Te Uru Rākau – New Zealand Forest Service, Ministry for Primary Industries (MPI), appointed in August 2021.  Jason joined MPI in 2020 as Director of Sector Investment, Te Uru Rākau – New Zealand Forest Service. In this role he led work on strengthening the forestry and wood processing supply chain, and on the Forestry and Wood Products Industry Transformation Plan.  Jason’s experience in the timber industry began with selling prefabricated solutions to builders in the 1990’s. He went on to hold senior leadership roles with several wood product manufacturers and distributors, including in areas of strategic development.  With over 25 years of experience across the forestry and wood processing sector in Australia and New Zealand, Jason brings strong industry experience to the challenges and opportunities ahead. | A person wearing a suit and tie  Description automatically generated with medium confidence |
| Jeff Tombleson | Director, Jeff Tombleson & Associates Ltd | Carbon forestry- Can Carbon Forestry Contribute to Catchment Restoration | To be provided | Jeff Tombleson |
| Gebiaw Avele | PhD Research Fellow, Australian Rivers Institute, Griffith University, Australia | Modelling the Effects of Forestry on the Water Quality of Lake Okareka | Gebiaw Ayele is a hydrologist with experience in remote sensing hydrology and background knowledge of hydraulics and water resources. Gebiaw is currently a PhD Research Fellow at Griffith University. Griffith University International Postgraduate Research Scholarship funded his PhD and Horn of Africa Regional Environment Centre and Network and International Water Management Institute (IWMI) supported his postgraduate MSc degrees. Gebiaw’s research areas focused on modelling land use and climate change impact studies, watershed management and tracing the history of changes in lake water quality, sediment dynamics, and remote sensing in hydrology. Gebiaw has an interest for innovative research directions in paleohydrology and modelling spatiotemporal changes in the quality of lakes and inland waters. | Gebiaw Teshome Ayele |
| Dr MS Srinivasan | Principal Scientist, Groundwater Hydrology, NIWA | Planted Forests and Water Yield in New Zealand's Hydrological Landscape | To be provided |  |
| Dr Jen Owens | Scion | Forests and Water Quality | To be provided |  |
| Dr David Palmer | Senior Spatial Analyst, Scion | Right Tree Right Place - What to Consider When Establishing New Forests | To be provided | Profile photo of David Palmer |
| Dr Tim Payn | Principal Scientist, Sion | Co-author for paper above | Dr Tim Payn comes from a background in soil science and has specialised interest in forest nutrition management. He is heavily involved in global efforts to support sustainable forest management. Tim currently chairs the 12 Country Montreal Process Technical Advisory Committee which steers policy aimed at defining and measuring sustainable practice |  |
| John Walsh | Director Readiness and Response Services, MPI | Update on Biosecurity Bill | More than 15 years public affairs and communications experience. Held senior corporate and agency roles with significant work in primary, energy, natural resource, technology, and public sectors.  Specialties: Stakeholder and community relations, reputation management, marketing communications. | John Walsh |
| Dr Kiely McFarlane | Social Scientist, Cawthron Institute | How policies have shaped New Zealanders Relationships to Lakes | Kiely is a postdoctoral researcher at the Cawthron Institute in Nelson, New Zealand - the largest independent science organisation in New Zealand. My postdoctoral research examines the social, cultural, and political-economic histories and contemporary management of lakes in New Zealand, as part of a large interdisciplinary project that seeks to reconstruct the environmental history of 10% of New Zealand's lakes (see https://lakes380.com/). I am also involved in several projects for the New Zealand Bioheritage National Science Challenge that explore alternative pathways to ecosystem regeneration. | Kiely McFarlane |
| Dr Charlotte Sunde | Social Scientist, Policy and Planning, Cawthron Institute | Co-author for above paper | Charlotte Šunde is a Social Scientist in the Coastal and Freshwater Group at Cawthron. She is interested in building effective cross-cultural relationships between indigenous peoples and western-trained scientists and resource managers. Charlotte has worked with communities, councils, and iwi in many parts of New Zealand.  Charlotte’s work has included studying co-management between iwi and government agencies; experimenting with novel forms of environmental education such as using creative arts; critiquing valuation frameworks to incorporate a wider diversity of values in decision making; and exploring complex systems and ecosystem-based management. Charlotte draws from philosophical traditions in the humanities, theoretical framings in the social science | Charlotte Šunde |
| Dr Lisa Pearson | Land & Water Science, Invercargill | LandscapeDNA: Physiographic Approach to land and water management | Lisa is an Earth and Environmental Scientist with Land and Water Science in Invercargill. She has over 15 years' experience in land and freshwater research and management. She has worked in both the academic and regional council science sectors, and in collaboration with the National Science Challenge – Our Land and Water. She was the lead scientist on the development of the LandscapeDNA website which helps landowners to reduce their impact on water quality. Lisa has extensive knowledge and experience in physiographic application, soils, nutrient management, catchment modelling, and GIS mapping. Lisa holds a Doctorate in Philosophy and Masters in Science (1st class Hons) in Geochemistry from the University of Waikato. Her academic research focused on lake nutrient dynamics and sediment geochemistry. She also has a Bachelor in Science in Earth Sciences. |  |
| Dr Troy Baisden | University of Auckland & Affiliate Motu | Land and Water Interactions in the Rotorua Lakes Catchments | Troy's background and ongoing work connect many institutions, including previously work as a Research Leader in Manaaki Whenua Landcare Research, a Head of Department in GNS Science's National Isotope Centre, and a Professor at the University of Waikato. To accelerate focussed and transdisciplinary research responding to urgent environmental issues, he is now affiliated with the think tank Motu Economic and Public Policy Research, a Principle Investigator and leader in Te Pūnaha Matatini Centre of Research Excellence in Complexity, and an Honorary Professor at the University of Auckland. He also works through his boutique research company Biogeosci.nz, advising influential research, consultancy and startups. Committee/Professional groups/Services: Co-President – New Zealand Association of Scientists (http://www.scientists.org.nz) Member of MBIE's Te Ara Paerangi Future Pathways Reference Group | Photo of Professor Troy Baisden |
| Stavros Michael | Infrastructure and Environmental Solutions, Deputy Chief Executive, Rotorua Lakes Council | Impacts of Urban Environments on Lake Water Quality | DCE INFRASTRUCTURE & ENVIRONMENT and PRIMARY CDEM CONTROLLER  Key Elements of role;   * Apply executive leadership to Council’s activities with primary focus on the development and monitoring of the Council’s long-term Infrastructure and Environmental strategies and ensuring Council’s engineering services operational performance. * Lead the development and delivery of 30-year infrastructure strategy, the strategic asset management planning and the delivery of operational and capital programmes related to infrastructure and environmental improvement. * Represent the district in complex programmes in partnership with Iwi/mana whenua, the Ministries for the Environment, of Health, Transport, NEMA and the Bay of Plenty Regional Council towards achieving significant improvements to the water quality of the region and especially the lakes. * Lead the development of innovative sewerage and water reticulation and treatment schemes for both the urban and the rural/lakes communities. * Lead the city’s negotiations with the New Zealand Transport Agency to develop, consult and implement effective regional transport corridor plans and to support the local and regional economic and social development. * Lead the District’s Civil Defence structure as the Primary Local Controller through the development, amongst other, of hazardscape, risk reduction and asset design, effective readiness and response planning and the development of community resiliency. | cid:674739580065094272922501 |