Associate Professor Chris North Oranga | Health



Minimizing (Negative) Impact

Globally the vast majority of people live in urban settings with few opportunities for immersion in the natural or "more than human" world. Chris's hope is that more people are able to experience the joy of drinking freshwater from a stream, the changing landscapes across seasons, and all of the other amazing gifts that nature provides. In this pursuit, Chris has a long-standing focus on environmental education and outreach with an aim of enhancing tiakitanga (sustainability) and manaakitanga (empowering

About Chris

- PhD in Outdoor and Environmental Education
- Founder of Leave No
 Trace New Zealand, 2008
- Education Outdoors New Zealand, Board Member
- Chief Instructor Flying Geckos Climbing Club



people) so that people and nature can come together in a way that supports the flourishing of both. With this aim, there's an intentional blending across his research, teaching, and service to ensure that a legacy of love and care for the environment is passed on to the next generation.

"There's a riddle in there somewhere...what gets bigger the less you have? A lot of my work has looked at ways to have as little environmental impact as possible--to let nature live and thrive without humans introducing harmful waste or destroying flora and fauna."



A photo from the Flying Geckos 2023

A photo from the Flying Geckos 2023 climbing camp (Chris is the Chief Instructor)

In 2008, Chris founded the Aotearoa New Zealand chapter of Leave No Trace. Leave No Trace is an international non-profit organisation that aims to provide education and motivation to the public to engage with natural and cultural heritage sites in a way that minimises human impact. The organisation touts that people who complete Leave No Trace training are five times more likely to protect nature, whether that's through disposing of waste properly, respecting wildlife, and leaving nature as it is found. As part of Leave No Trace's Research Team, Chris's work supports understanding the reach and impact of its education and outreach programs. Chris has led the adaptation of Leave No Trace curriculum to the Aotearoa New Zealand context, running training with the country's largest providers, such as Outward Bound and Polytechnic instructors, to address the issues most relevant in our context, such as biosecurity threats.

Relatedly, Chris has researched and developed curriculum for teacher education that supports quality outdoor learning opportunities. This results in educators feeling more confident and willing to take students into nature. As a capacity-building tool this enhances Chris's reach, and in turn, impact.

Research Impact

The issue: As a critical consciousness rises globally around the impact humans have on the environment there are clear tensions over how to be most sustainable. As humans we invariably influence the natural world around us; there are no entirely innocent actions that don't have some effect on our environments. Therefore, a fundamental point for reflection is on how to purposefully act and forge a pathway forward that best sustains the health and sustainability of the environment as a whole. Chris's teaching and research engage with this critical question.



Chris (left) with UC colleague Senior Lecturer Toni Torepe (right) and summit of Aoraki (background)

The research: A good example of a current research project funded by the Tūpiki Trust focuses on human waste in natural environments. The project is a collaboration between the New Zealand Alpine Club, Te Rūnanga o Arowhenua, and Leave No Trace. It brings together mātauranga Māori and mountaineers' perspectives to consider the challenge of disposing human waste in mountain settings. The first phase was engaging with mana whenua (local custodians) to discuss the tapu (sacred elements) of Aoraki Mt Cook, the tikanga (customs) and kawa (protocols) for managing para (waste). Secondly, mountaineers were engaged to explore their motivations, current practices, and knowledge of Māori values. Lastly, the groups were brought together (4 mountaineers and 4 from mana whenua) for shared experiences mountaineering and engaging in tikanga Māori, which in turn will support development of improved waste disposal in the mountains.

The impact: Currently there are toilets on Aoraki Mt Cook, with a substantial amount of money and carbon emissions expended to remove waste annually. This research will result in a viable approach for changed behaviours and kawa with the least impact that can be scaled to other areas of Aotearoa New Zealand and around the world. Impact measures include changed behaviours, with more mountaineers carrying out their waste, changed standards with toilets on mountains removed, and greater integration of tikanga Māori in developing and modifying policies for natural environments. Through reach and dissemination of project outcomes, Chris hopes that more people critically reflect on the big and small ways in which their behaviours can enhance our relationship with the planet.

