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# Restoring the Mauri of Coastal Dune Lake Ecosystems:

The case study of Lake Waiorongomai, Ōtaki

Aotearoa / New Zealand

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Restoring the Mauri of Coastal Dune Lake Ecosystems:  
The case study of Lake Waiorongomai, Ōtaki,  
Aotearoa / New Zealand

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# Abstract

This doctoral thesis documents and analyses a six-year, hapū-led, iwi-and community-supported, kaupapa-Māori-based (Māori-cultural-values-based) project that resulted in the transformative change of a dune lake ecosystem (which included people i.e., a whānau Māori ecosystem).

Lake Waiorongomai, just north of Ōtaki, is a culturally-significant ancestral landscape and wāhi tapu (sacred site) for local whānau (extended families), hapū (sub-tribes) and iwi (tribes). The mana (prestige), mauri (life force) and ecological wellbeing of this wāhi tapu was diminished as a result of forest clearance, hydrological modification of the lake catchment, and the effects of pastoral farming activities. Attempts over the last three decades to bring Māori land owners and hapū members together to re-instate the mana and mauri of the dune lake ecosystem met with limited success. This thesis documents and seeks to better understand: (i) the conditions that gave rise to a successful restoration project; and (ii) the factors that empowered this hapū-led project.

The study shows that conditions that contributed to a successful project involved: (i) collective land owner, local hapū and iwi support; (ii) a kaupapa Māori approach; (iii) project activities guided by the expression of rangatiratanga (sovereignty) and the contributions of a kaitiaki team who were appointed by hapū members; and (iv) the engagement of a kaupapa Māori researcher to support the hapū initiative and their revitalisation aspirations.

Transformative change in this case study was change that had positive effects on physical, cultural, social, psychological and spiritual wellbeing. In the Lake Waiorongomai restoration project, the outcomes that had positive effects for the whānau

Māori ecosystem include, but are not limited to: (i) fencing the lake with a 50m riparian margin; (ii) fencing the Waiorongomai Stream with a 10m riparian margin; (iii) community involvement in planting more than 3000 native plants, translocating over 1000 harakeke (swamp flax), and trapping over 100 pests (including stoats and ferrets); and (iv) reconnection of whānau and hapū members to the lake, through regular wānanga and ongoing restoration activities such as winter planting days. The habitat within the lake and surrounding wetlands provided opportunities to observe amongst other things threatened species such as the tiny button daisy, raoriki (swamp buttercup), fennel-leaved pond weed, matuku (bittern), kotuku ngutupapa (royal spoonbill), kotuku (white heron), parera (grey ducks), weweia (dab chicks) and pūweto (spotless crane). The improvement in the wellbeing of two species, inanga (whitebait) and watercress, over the course of the study is of particular note, since these species hold customary value for whānau and hapū.

A central focus of this research is the relationship that ecological wellbeing and whānau, hapū, iwi wellbeing are inextricably linked. In summary, this hapū-led, community supported project took initial, confident steps in reclaiming, reframing and re-instating the mana and mauri of this whānau Māori ecosystem.

This thesis argues that transformative changes were generated by empowering factors that were closely linked with: (i) the creation of a project space that allowed the free expression of kaupapa and tikanga (customs) in a socially and culturally mediated journey; (ii) whānau and hapū members' expressions of kaupapa and tikanga that enhanced the success of this project; (iii) contributions of iwi members, councils and the wider community; (iv) the sharing and developing of mātauranga (knowledge) including through the involvement of learning institutes (e.g. whare wānanga, kura kaupapa, kōhanga reo and university students); and (v) a synthesis of Māori and

Western restoration and research methods (including ecological monitoring). These empowering factors assisted in affirming to local hapū members that their expressions of kaupapa and tikanga were crucial in generating initial lake ecosystem wellbeing improvements including the enhancement of mauri.

Two key lessons can be drawn from the role of these various factors in transformative change. First, no individual contribution was enough to ensure the success of the restoration. However, when a safe kaupapa and tikanga space was created for the inclusion of all contributors, the total effect was more than the sum of the individual parts (i.e., a synergistic outcome resulted). Second, the results indicate that it is highly unlikely that a Western methodological approach on its own would have been as successful in achieving a project outcome of this kind. A comparison of the key characteristics of kaupapa Māori and action research showed that a kaupapa Māori research methodology was the most appropriate for this case study. As such, this thesis may enhance current action research theory and method by showing how it could be responsive to cultural values, knowledge, customs and language in a real-world, wicked problem context of this kind.

In documenting and exploring the various conditions and factors that made this restoration project possible, this thesis provides environmental planners and policy makers a real-world window into how transformative and progressive community-ecosystem outcomes can be achieved in a Māori cultural context through the use of a kaupapa Māori approach.

# **Dedication**

I dedicate this doctoral thesis to the whānau, hapū and iwi of

Lake Waiorongomai.

## Ngā mihi

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## Abbreviations

<b>DoC</b>	Department of Conservation
<b>GWRC</b>	Greater Wellington Regional Council
<b>KCDC</b>	Kāpiti Coast District Council
<b>LWRP</b>	Lake Waiorongomai Restoration Project
<b>MBIE</b>	Ministry of Business, Innovation and Employment
<b>MTM</b>	Manaaki Taha Moana
<b>NHoO</b>	Ngā Hapū o Ōtaki
<b>NLC OMB</b>	Native Land Court Otaki Minute Book
<b>Taiao Raukawa</b>	Te Reo a Taiao Raukawa Environmental Research Unit
<b>Te Rito</b>	Te Kura Kaupapa Māori o Te Rito
<b>Whakatupuranga Rua Mano</b>	Te Kura-ā-Iwi o Whakatupuranga Rua Mano

## Glossary

<b>Atua</b>	God/s, deities
<b>Aotearoa</b>	New Zealand
<b>Harakeke</b>	Flax plant ( <i>Phormium tenax</i> )
<b>Hapū</b>	Sub-tribe, clan
<b>Hikoi</b>	Walk
<b>Hīnaki</b>	Eel trap
<b>Hui</b>	Meeting, gather
<b>Io</b>	Supreme god/deity
<b>Io Matua Kore</b>	Io-the-parentless-one, one of the names for the supreme deity, Io
<b>Iwi</b>	Tribe, nation
<b>Kaiako</b>	Teacher
<b>Kaimoana</b>	Food of the sea
<b>Kaitiaki</b>	Guardian, caretaker
<b>Kaitiakitanga</b>	Guardianship, stewardship
<b>Kanohi ki te kanohi</b>	Face to face
<b>Kapowai</b>	Dragon fly
<b>Karakia</b>	Prayer/s
<b>Kaumātua</b>	Elder/s
<b>Kaupapa</b>	Values, strategy, purpose
<b>Kaupapa tuku iho</b>	Values passed down from our ancestors
<b>Kawa</b>	Protocol
<b>Kawenata</b>	Covenant
<b>Kete</b>	Bag, basket
<b>Koha</b>	Gift
<b>Kōrero</b>	Speak, narrative
<b>Kotahitanga</b>	Unity, togetherness, collective action
<b>Koura</b>	Freshwater crayfish

<b>Kuia</b>	Female elder
<b>Kura</b>	School
<b>Kura kaupapa</b>	Māori medium schools
<b>Mahinga kai</b>	Cultivation, food gather place
<b>Mahi</b>	Work, job, labour
<b>Mana</b>	Prestige, integrity, charisma
<b>Mana whenua</b>	Trusteeship of land
<b>Manaakitanga</b>	Hospitality, generosity
<b>Marae</b>	Meeting place, building of tribe/sub-tribe, village
<b>Mātauranga</b>	Knowledge, information, education
<b>Māori</b>	Ordinary, native people of New Zealand
<b>Mauri</b>	Life force
<b>Mihi</b>	Acknowledge, thank
<b>Mihimihi</b>	Introductory speech
<b>Moana</b>	Sea
<b>Ngā Hapū o Ōtaki</b>	The sub-tribes of Ōtaki
<b>Ngahere</b>	Forest
<b>Pā</b>	Village, occupation site
<b>Papatūānuku</b>	Earth mother
<b>Papakāinga</b>	Original home, home base
<b>Pākehā</b>	Non-Māori, European
<b>Pūtaiao</b>	Science
<b>Pūkenga</b>	Scholars
<b>Pūkengatanga</b>	Teaching, learning, educating
<b>Rahui</b>	No take, quarantine
<b>Rangatira</b>	Chief, leader/s, of high rank
<b>Rangatiratanga</b>	Sovereignty
<b>Ranginui</b>	Sky father
<b>Rohe</b>	Territory

<b>Rohe moana</b>	Coastal area	
<b>Tainui</b>	Ancestral canoe of Waikato	
<b>Tamariki</b>	Children	
<b>Tangata whenua</b>	People of the land, indigenous people	
<b>Tapu</b>	Sacred	
<b>Taonga</b>	Treasure	
<b>Te Aro-nui</b>	The realm perceived by human senses	
<b>Te Ao Māori</b>	Māori worldview	
<b>Te Ao Marama</b>	The natural world	
<b>Te Ao Tua-ātea</b>	The spiritual realm of Io Matua Kore	
<b>Te kete aronui</b>	The basket of life's knowledge	
<b>Te kete tuatea</b>	The basket of ancestral knowledge	
<b>Te kete tuauri</b>	The basket of sacred knowledge	
<b>Te reo Māori</b>	The Māori language	
<b>Te whānau ā Ranginui rāua ko Papatūānuku</b>	father and earth mother	The extended family of sky
<b>Tikanga</b>	Custom, practice, protocol	
<b>Tino rangatiratanga</b>	Absolute sovereignty	
<b>Tohunga</b>	Priest, spiritual expert	
<b>Tohu</b>	Sign	
<b>Tono</b>	To request, bid	
<b>Tua-uri</b>	The realm of mauri	
<b>Tuna</b>	Eel	
<b>Tūpuna</b>	Ancestor/s	
<b>Ūkaipōtanga</b>	To return home/source	
<b>Wāhi tapu</b>	Sacred site	
<b>Wairua</b>	Spirit, soul	
<b>Wairuatanga</b>	Spirituality	
<b>Waka</b>	Canoe	

<b>Wananga</b>	Learning, workshop, seminar
<b>Whakanoa</b>	Free from sacredness, to make ordinary
<b>Whakapapa</b>	Genealogy
<b>Whakatauki</b>	Proverb
<b>Whakatupu mātauranga</b>	Knowledge development
<b>Whānau</b>	Family, extended family
<b>Whānaunga</b>	Relation
<b>Whanaungatanga</b>	Kin ship, family relationships
<b>Whare wānanga</b>	Place of higher learning, university
<b>Whenua</b>	Ground, country, placenta

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