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Ngā Mātāpono e Rua: Stories of co-creation for bicultural spatial governance in Aotearoa New Zealand

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Abstract

This article shares lessons for spatial governance in Aotearoa New Zealand in the context of the Treaty of Waitangi. It reports on research into co-creation pathways that supported bicultural spatial governance inclusive of whānau and local communities in the Waimakariri and Rotorua Districts. In alignment with three Treaty principles, local tikanga, unique to the two places, informed the methodological framework for bicultural spatial governance. Despite some commonalities, the two case studies reveal distinctive perspectives that resonate differently across Aotearoa New Zealand, underscoring the importance of co-creation for biculturalism. We consider the implications for biculturalism across a range of spatial contexts and for debates about decolonising governance.

KEYWORDS

bicultural, co-creation, mātauranga Māori, partnerships, place-based, spatial governance

1 | WHAKAURUNGA: INTRODUCTION

This research was conceptualised collaboratively at Te Ao Mārama, a beautiful building that dances with nature, on the northeast side of the Ilam campus of the University of Canterbury. Our work aims to challenge current approaches in Aotearoa New Zealand, guided by the Treaty of Waitangi (henceforth referred to as the Treaty)

as an ontological framework for bicultural spatial governance research, education, and practice. In this article, spatial governance refers to deliberative systems and processes which impact upon social and spatial outcomes, including environmental management, town planning, urban design and city-making practices (Donahue, Zeckhauser, & Breyer, 2011). A genuine bicultural approach will focus on delivering spatial governance processes and outcomes that align with the perspectives,

values and knowledge of both Treaty partners, both Tangata Whenua and Tangata Tiriti (Catton, 2008; O'Sullivan, 2006; Ritchie, 1992; Walker, 1990).

The paper examines two case-studies, from different parts of the country. In partnership with Ngāi Tūāhuriri representatives in the Waimakariri District and with Ngāti Whakaue and Te Arawa in Rotorua, work was undertaken to co-create spatial tools that would support bicultural spatial governance led by tangata whenua. Spatial tools refer to map-based interfaces, where geographical, place-based knowledge and narratives relevant to communities are made accessible so as to support spatial governance decision-making. Tribal knowledge, distinctive to the two places, was guided by kaupapa Māori and action research, and articulated through the He Awa Whiria (Braided Rivers) framework (Macfarlane, Macfarlane, & Gillon, 2015). Mātauranga Māori, traditional Māori Indigenous knowledge, in tandem with Western knowledge in the spatial governance arena structured the co-creation processes. The respective stories of co-creation have an integrity of their own, and reiterate the potential and the richness that reside within ancestral lands and knowledge systems.

The two case studies reveal unique tribal, cultural, historical, and political landscapes, with distinctive paradigms and perspectives that resonate differently across Aotearoa New Zealand. In the Ngāi Tūāhuriri takiwā (tribal area), there is an emphasis on supporting social, economic and environmental revitalisation. For Ngāti Whakaue, the aspiration is to enhance intergenerational learning and encourage community engagement in urban regeneration and environmental revitalisation processes. While there are some cultural commonalities across the case studies, there are also distinctly held perceptions and understandings. In debates about decolonising spatial governance, recognising these varied contexts is critical. We therefore argue for place-based, bicultural approaches to co-creating spatial governance with tangata whenua and place. We draw upon Cresswell's (2015) definition of place as a space where people have created meanings or to which they have attached meanings in some way.

This research is relevant in a multitude of contexts, encompassing urban, peri-urban and rural communities that face rapid spatial, environmental, and socio-economic transformation (Falconer, 2015). Ongoing rapid transformation, led by neoliberal pressures, exacerbates socio-spatial inequalities for community and local ecological systems (Bargh, 2007b; McIntosh & Mulholand, 2011; Reid, Varona, Fisher, & Smith, 2016; Yates, 2019b). These outcomes call for place-based approaches that recognise the diversity of places, indigeneity, and meanings, with the potential to enrich spatial governance and improve socio-ecological equity and diversity.

Contemporary spatial governance in Aotearoa New Zealand includes processes such as environmental planning, resource management and urban expansion (Howden-Chapman, Early, & Ombler, 2017). Currently, spatial governance faces challenges in terms of its alignment to the Treaty principles, specifically those of partnership, protection, and participation (Crocker et al., 2011; Mulholand & Tawhai, 2010; O'Sullivan, 2006; Tawhai & Gray-Sharp, 2013). Moreover, there are also legal obligations under specific settlement Acts; for instance, the Ngāi Tahu Claims Settlement Act 1998 explicitly states that the Crown is required to cooperate with tangata whenua (Fisher, 2020). In order to bring such principles to life in spatial governance, planning and decision-making need to incorporate Māori perspectives and knowledge, in an ethical and authentic manner.

Despite legal provisions and scholarly contributions that support a Treaty approach (Matunga, 2000; McHugh, 1991; Mutu, 2019; Tawhai & Gray-Sharp, 2013), there are still critical gaps affecting Māori communities in spatial justice (Bargh, 2016; Boulton & Gifford, 2011; Waa, Pearson, & Ryks, 2017). Failure by government institutions to recognise mātauranga Māori often impedes the formation and maintenance of Treaty partnerships and, as a result, collaborations with communities can be harmed. Such failures suggests that mātauranga Māori and Māori voices are not adequately valued, which compromises the integrity of the whole governance system. This has implications for all New Zealanders in terms of equity and diversity. Generations of Māori communities, activists, and scholars have led multiple movements in the quest to open pathways for greater inclusivity and equity in governance systems (see, e.g., Apiti, 2017; Harris, 2004; Lee-Morgan & Hutchings, 2016; Macfarlane & Macfarlane, 2018; Pihama, 2010; Smith, 1999; Thompson-Fawcett & Freeman 2006). Acknowledging these struggles over many decades, our research promotes a Treaty approach for restoration, equity and power-sharing in spatial justice.

In accordance with the Resource Management Act 1991 (RMA) and the Local Government Act 2002 (LGA), government agencies are required to take the Treaty into account in decision-making processes (Kapua, 2007; Palmer, 2018; Pirsoul & Armoudian, 2019; Whangapirita, Awatere, & Nikora, 2003). However, rather than collaborating with tangata whenua, these agencies have traditionally favoured procedural approaches that end at the point of consultation, rather than fostering true discussion and collaboration (Howard-Wagner, Bargh, & Altamirano-Jiménez, 2018). These approaches to spatial governance often result in limited or superficial recognition of mātauranga Māori and place-based cultural knowledge. In essence, consideration of the principles of

the Treaty remains, for the most part, tokenistic and undervalued in spatial governance (Matunga, 2013; Ryks, Howden-Chapman, Robson, Stuart, & Waa, 2014). This leads to critical inequities that limit everyday governance, and which threaten revitalisation and reclamation initiatives led by Māori communities.

As a foundation for exploring these issues, the next section reviews the practice of biculturalism in spatial governance. We then describe the methodology used in this research—Ngā Mātāpono e rua, stories of co-creation for bicultural spatial governance—in Section 3. In alignment with three Treaty principles, local tikanga, unique to the two places, guided the development of a methodological framework for bicultural spatial governance. Section 4 presents the results, E rua ngā kete mātauranga, in the form of two baskets of knowledge, from Tūāhiwi in the Waimakariri District and Ōhinemutu village in Rotorua, respectively. The two case studies reveal distinctive perspectives that resonate differently across Aotearoa New Zealand, which underlines the critical importance of co-creation for biculturalism. The last section discusses the research and practice implications for spatial governance, highlighting key points for biculturalism in varied contexts of decolonisation. The article closes with a brief conclusion.

2 | TIKANGA RUA BICULTURALISM IN SPATIAL GOVERNANCE

In this section, we review biculturalism in spatial governance, acknowledging the past and considering how it should influence current practices and tools. Biculturalism has been an evolving socio-political learning process over many generations of civic and political commitment to the Treaty (Mulholland & Tawhai, 2010; Orange, 2021; Tawhai & Gray-Sharp, 2013; Te Heuheu Tukino VIII et al., 2017). The social movements of the 1960s and 1970s pressured the Crown to establish the Waitangi Tribunal in 1975, leading to various Treaty settlements across the country. Despite significant gains, settlement processes have also highlighted further injustices and added complexities (Belgrave, 2014; Gibbs, 2006; Ruru & Kohu-Morris, 2020; Wynyard, 2019). The relationship between self-determination and biculturalism remains contentious. As outlined by O'Sullivan (2006), biculturalism is a key dimension of an authentic Treaty partnership. Others have argued that contemporary politics, policy, and public debates should move beyond biculturalism towards a partnership approach that enables tino rangatiratanga (self-determination and autonomy) to flourish (Durie, 1998). To that end, biculturalism is a crucial component that must underpin research, education,

and practices in spatial governance, as it does in the wider public and science sectors (Rauika Māngai, 2020).

Numerous tools, frameworks, and approaches created by Māori and kaupapa-led collaborations have contributed to biculturalism in governance systems. In addition, several generations of Māori leaders have strongly advocated for the inclusion of mātauranga Māori in diverse domains of spatial governance, such as resource management, planning processes, and cultural monitoring (Awatere, Harmsworth, Rolleston, & Pauling, 2013; Harmsworth, 2005; Macfarlane et al., 2015; Macfarlane & Macfarlane, 2019; Rauika Māngai, 2020). Yet, until this point, spatial governance has favoured engagement practices and tools that seriously limit biculturalism. Socio-technical barriers, institutional bureaucracy, and technocratic, procedural approaches to governance are all premised on Western paradigms. Iwi management plans are the primary planning tool used by Māori, however their effectiveness is variable and questionable (Jefferies, Payne, & Ngaia, 2004). The resistance led by Māori mentioned earlier has spanned many fronts, including the sciences, humanities, and a range of other disciplines (Jackson, 2020; Kiddle, Stewart, & O'Brien 2018; Macfarlane & Macfarlane, 2018; Matunga, 2013; Rauika Māngai, 2020; Walker, 2016). As articulated by Sir Mason Durie in 2020 (see: Rauika Māngai, 2020, p. 23), the integration of two bodies of knowledge requires the creation of a shared space within which cultural divides are able to be bridged. Authentic biculturalism is therefore an expression of tino rangatiratanga, as it offers supportive pathways to transform and revitalise governance systems (Consedine & Consedine, 2012; Durie, 1998; Huambachano, 2018).

Frameworks such as Vision Mātauranga, He Awa Whiria, and Mauri Ora advocate for the articulation of bicultural perspectives, as well as negotiation, mediation, and collaboration (Macfarlane et al., 2015; Rauika Māngai, 2020; Yates, 2019a). The underlying distinctions between mātauranga Māori and Western science are retained, together with their individual integrity, uniqueness, and validity. Mātauranga Māori is an evolving body of knowledge that is holistic in its foundations, whereas Western science favours a siloed view of knowledge and understanding (Rauika Māngai, 2020). Indigenous communities globally, including Māori, have challenged this singular, siloed perspective in an attempt to disrupt the status quo (Howitt, 2020; Leeuw & Hunt, 2018; Smith et al., 2019).

Vision Mātauranga, for example, promotes biculturalism by enabling mutual accountability in research, learning and collaboration in spatial governance (Macfarlane & Macfarlane, 2018; Rauika Māngai, 2020). Te Tihi o Te Maunga illustrates Vision Mātauranga (Rauika Māngai, 2020, p. 28) by focusing on the importance of Māori leadership and ensuring that benefits will

accrue for Māori in research endeavours. Vision Mātauranga further exemplifies meaningful engagement with the Treaty principles to ensure that mātauranga Māori is embedded in spatial governance. Such an approach can be used by Māori to ensure increased accountability from governmental authorities to Māori (Rauika Māngai, 2020). Moreover, this approach can raise awareness amongst wider audiences on opportunities for more equitable and inclusive spatial governance.

Contemporary examples that have incorporated mātauranga Māori in spatial governance include the Te Arawa partnership, as well as various adoptions of Mana Whakahono ā Rohe across the country (Ministry for the Environment, 2021a, 2021b; Te Tatau o Te Arawa & Rotorua Lakes Council, 2015a, 2015b). Additionally, there are kaupapa Māori approaches that aim to guide planning and design processes, in order to promote inclusivity of urban systems and to strengthen governance systems. The incorporation of the Te Aranga Design principles in the Auckland Design Manual are a good example of this (Hoskins et al., 2008; Paul, 2017). Kā Huru Manu, the Ngāi Tahu Atlas, is another example of how wider public awareness about place-based knowledge can be enhanced (Ngāi Tahu, 2020).

The diverse array of co-governance and co-design experimentations across the country could bridge the divide between the Treaty partners (Fisher & Parsons, 2020; Harris, 2015; Maxwell, Awatere, Ratana, Davies, & Taiapa, 2020; Pirsoul & Armoudian, 2019). Recognising opportunities for co-governance remains key. More broadly, critical engagements with the Treaty principles can direct, assess, and support collaboration, and raise critical public awareness (Bargh, 2016; Belgrave, 2014; O'Sullivan, 2006). The Treaty principles can be applied in evaluating Māori measures of excellence, impact and success in the public domain, including in spatial governance (Kake & Paul, 2018; Lee-Morgan & Hutchings, 2016; Rauika Māngai, 2020; Thompson-Fawcett, Kitson, & Barry, 2019). Mechanisms that enable equitable and inclusive decision-making are crucial to fostering authentic Treaty engagement in spatial governance.

3 | NGĀ MĀTAPONO E RUA: STORIES OF CO-CREATION FOR BICULTURAL SPATIAL GOVERNANCE

This section presents the research methodology and discusses key connections between existing literature and the co-created methodological interface. Indigenous ontology recognises the collective nature of humans and

environments within spiritual and temporal realms and their influence in creative processes (Hunt, 2014; Peyrefitte, 2019; Randerson & Yates, 2016; Sundberg, 2014). Considering ethics and justice in spatial governance, practices of care can enhance place-based knowledge systems, which is increasingly relevant in the context of geography and place (Carter & SMPIS, 2019; Puig de la Bellacasa, 2017). In te ao Māori, cultural values such as kotahitanga (coming together), āko (reciprocity of learning), whanaungatanga (relationships), and manaakitanga (the ethic of care) are interrelated and can enhance collective learning and co-creation (Pihama, 2010; Smith, 2015; Smith et al., 2019).

Referring to Arnstein's ladder approach (Arnstein, 1969), there are different levels of engagement between government and communities, with consultation being the most used and superficial way to engage with communities. Contemporary co-design, co-governance and co-management practices demonstrate various interfaces that seek to expand participatory and collaborative planning, with a deeper degree of contribution from communities. In the context of Aotearoa New Zealand, it is relevant to articulate Māori and Western knowledge streams (Pirsoul & Armoudian, 2019; Ruru & Kohu-Morris, 2020; Wheen & Hayward, 2016). Co-design was introduced in information and technology in the 1990s, with a rapid uptake in architecture, design, and media (Kofinas, 2009; Sanders & Stappers, 2014; Somerville & Nino, 2007). Co-governance has been trialled in diverse geographic contexts, including Aotearoa New Zealand (Harris, 2015; Maxwell et al., 2020). As a set of practices, co-creation can serve Indigenous ontologies and place-based values in spatial governance (Bhalla, 2011; Deak & Bucht, 2011). In turn, co-creation can unsettle the status quo of neoliberal governance (Howitt, 2020; Kimmerer, 2013; Leeuw & Hunt, 2018), and activate equity and inclusivity pathways in spatial governance.

Our range of positionalities and perspectives in this research was enriched by a diverse research team, inclusive of people from varied walks of life, cultural backgrounds and disciplinary lenses. Enhanced by mātauranga Māori, our cohort included both Māori and Pākehā/Tau-iwi researchers. Mātauranga Māori and the instantiation of manaakitanga and whanaungatanga supported the development of a culturally safe environment where interdisciplinary and collaborative approaches emerged, enhancing our collective learning capability.

As depicted in Figure 1, He Awa Whiria (Macfarlane et al., 2015) structured the methodological interface to enable local tikanga, and manaakitanga and whanaungatanga networks unique to the two places, to articulate with kaupapa Māori and action research (green). The respective stories of

co-creation have an integrity of their own; the braiding of Ngāi Tūāhuriri knowledge and Western science (purple) is separate from the braiding of Ngāti Whakaue knowledge and Western science (pink). The research approach enabled two unique sets of collaborative practices to flourish.

Seeking to embody the Treaty principles of partnership, protection, and participation in spatial governance research, the methodological interface was co-created with the research partners, Ngāi Tūāhuriri in the Waimakariri District and Ngāti Whakaue in Rotorua. In alignment with kaupapa Māori, Western participatory research methods can be used to facilitate transformative learning within communities, while building collaborative capability (Ratuva, 2016; Reason & Bradbury, 2012; Rowell, 2017). In both case studies, the co-creation processes centred on the following principles:

1. Kaupapa Māori led practices of care and ethics, to ensure the integrity of diverse ways of knowing (manaakitanga);
2. Guided by mātauranga Māori, to ensure the inclusion of place-based knowledge systems (whanaungatanga);
3. The Treaty principles of partnership, protection, and participation provide an ontological framework to guide and assess co-creation processes and outcomes.

Partnership means power sharing and respectful relationships (Ruru & Kohu-Morris, 2020). Protection means that both streams of knowledge should preserve their integrity and uphold the status and value of mātauranga Māori (Awatere, 2012; Bargh, 2016; Durie, 1998). Participation means that the voices of both partners should be heard to contribute equitably (Ryks et al., 2014).

Recognising the diversity of contexts across Aotearoa New Zealand, a collaborative case study approach was adopted. Led by Māori, in accordance with Vision Mātauranga, “Māori aspirations, values, resources, people and knowledge networks were prioritised” (Rauika Māngai, 2020, p. 48). The research activities aimed to enhance multiple understandings of whanaungatanga (relationships) and manaakitanga (the ethic of care) (Pihama, 2010; Smith, 2015; Smith et al., 2019) as key dimensions to guide, nurture and measure the success of living collaborations for bicultural spatial governance.

The partnership with Ngāi Tūāhuriri is based in the Waimakariri District and focuses on the Tūāhuriri tākiwa, which extends from Hurunui River in the north to the Hakatere River in the south, and westward to the



FIGURE 1 Co-created methodological interface, structured by He Awa Whiria, and combining two independent streams of mātauranga Māori and Western science

main divide of the Southern Alps. At the heart of the Māori Reserve (MR873), Tuahiwi epitomises spatial governance issues arising since the Canterbury Purchase in the 1840s (Fisher, 2020). Changes to land use rights and subdivision in the late 1960s subjected Ngāi Tūāhuriri to various zoning limitations imposed by government institutions. Coloniality and neoliberal approaches continue to disrupt the connections between whānau and ancestral land, facilitated by policies such as the Public Works Act (Marr & New Zealand Waitangi Tribunal Division, 1997). Under the Canterbury Earthquake Recovery Act 2011, the Waimakariri District Plan was revised, giving greater recognition to kāinga nohoanga (places of residence) and mahinga kai (food cultivation and gathering places) for manawhenua (Kenney & Phibbs, 2015; Phibbs, Kenney, & Solomon, 2015; Tau et al., 2016). Collectively held land remains under-used from the perspective of whānau due to the lack of effective and transparent management structures (Pauling & Te Rūnanga o Ngāi Tahu., 2007; Te Aika, 2014). For the sustainable development of their land, Ngāi Tūāhuriri prioritises tools and processes with the capability to reconnect whānau currently living away from their ancestral land (Tau, 2003).

In Rotorua, in partnership with Te Tatau o Te Arawa (Te Tatau) and Ngāti Whakaue, the research focused on Ōhinemutu village. A number of key tourist attractions in the city—Te Papaouru Marae, Tūnohopū Marae and Saint Faith's church, along with the geothermal pools—are located in Ōhinemutu (Miller, 2018; Stafford, 2002; Tapsell, 2017). The people of Ōhinemutu hold invaluable place-based knowledge which is key for the future development of the village. In the context of spatial governance, governmental authorities have dismissed their perspectives and aspirations in the past, and privileged neoliberal approaches to urban development and tourism, with negative impacts for the community (Te Awakotuku, 1981). To address population growth, central government has prioritised urban intensification in Rotorua (Rotorua Lakes Council, 2017), with \$40 million allocated to support urban regeneration along the lakefront neighbouring Ōhinemutu. In 2018, the Rotorua Lakes Council appointed a planning consultant to work in collaboration with the Ōhinemutu Development Working Group (ŌDWG), to help develop a plan for the urban and environmental revitalisation of Ōhinemutu (Isthmus, 2018; Te Arawa whānui, 2020). To address such collaborative demands, Te Tatau and Ngāti Whakaue aim to support the Ōhinemutu whānau to share place-based knowledge that can support tribal representatives in spatial governance.

4 | E RUA NGĀ KETE MĀTAURANGA: TWO BASKETS OF KNOWLEDGE

The key research findings are presented as two baskets of knowledge. The first kete of knowledge focuses on Tūāhuriri takiwā in the Waimakariri District and the second focuses on Ōhinemutu village in Rotorua. In both case studies, the kete include partnership models and two distinctive web-based, open source spatial tools aligned with tangata whenua aspirations. Although functional, these spatial tools are currently prototypes, early models which continue to be developed by the communities. Focused on the stories of co-creation in each case study, this section recognises the distinctiveness of each context in terms of its place-based spatial governance and organisational networks.

4.1 | Tūāhuriri

The partnership was tailored by Māori advisors and researchers, following the direction of Ngāi Tūāhuriri leaders in Christchurch. Initially, we were mandated to work with Mahaanui Kurataiao Ltd (MKT), a “charitable resource and environmental management advisory company that assists the six Papatipu Rūnanga in the recognition and protection of tāngata whenua values in the takiwā” (MKT, 2021). The work with MKT focused on the identification of Ngāi Tūāhuriri resources and initiatives in land management in the Waimakariri District. Following this, MKT identified Hautū Holdings, a consultancy located in Tuahiwi with expertise and experience in land management, as a tangata whenua partner. Whakapapa and organisational connections were integral in building this partnership with Hautū Holdings.

Although the collaboration was based in the Waimakariri District, Hautū Holdings envisioned the geographic focus to encompass Māori ancestral land that had been alienated beyond the Tuahiwi community. Focused on the vision of Ngāi Tūāhuriri, the key aim in co-creating the spatial tool was to support whānau in varied processes for the socio-economic and environmental revitalisation of Māori land reserves in the Ngāi Tūāhuriri takiwā (Jolly, 2013). In the context of the Waimakariri and Canterbury region, true partnerships between councils and government authorities and manawhenua are limited to date.

The following quote from the Hautū Holdings partner, when describing our partnership in a conference in 2020, highlights the importance of building collaborative capability to deliver genuine outcomes and processes for Māori.

“Partnerships and participation are often tokenistic, because authorities predetermine decisions before engaging with whānau ... in contrast, our partnership was valuable because it enabled Mātauranga Ngāi Tūāhuriri to lead the co-creation process. It was manawhenua tailored, manawhenua driven, and partner supported. It was a two way communication, we felt heard in representing the aspirations of the whānau and rūnanga in a spatial tool. On the other hand, we could back up our mahi with the research to deliver a tool, also technologically, aligned with the aspirations of the whānau”. (Hautū Holdings partner, when describing our partnership in a conference, in 2020).

The Ngāi Tūāhuriri spatial tool aims to support transparency and accountability in land management processes involving multiple land owners. End-users include Ngāi Tūāhuriri, service providers and other organisations assisting Ngāi Tūāhuriri with land revitalisation. The tool enables Ngāi Tūāhuriri to situate narratives in specific geographic locations, through particular points in time, creating an inventory of connections to the land. Narratives refer to historical, traditional, scientific and lived accounts of how people and land interacted throughout generations. Their aspiration was to create a shared database that connects whānau to potential land revitalisation projects that offer significant opportunities to improve planning and spatial governance (Figure 2). The tool was also intended to enable land owners access to relevant information to remove potential barriers that keep Ngāi Tūāhuriri from accessing their land dividends.

Drawing on a repository of multiple data sources, including those of government, the tool can support communication between multiple groups and organisations.

According to Hautū Holdings, the tool offers “a self-determination land management platform” to guide future developments. As such, Ngāi Tūāhuriri intends to work with MKT and other regional tribal authorities in order to extend the potential utility of this resource more broadly.

4.2 | Ōhinemutu

The pathway for the Te Tatau partnership was formed through whakapapa, as a research leader of our team affiliates to Te Arawa and Ngāti Whakaue. This activated a chain of connections, transmitted with trust, from the start of the project. In Rotorua, Te Tatau o Te Arawa is a mandated pan-tribal authority, with 40 elected representatives across the tribal territory. These representatives have been doing ground-breaking mahi (work) to advance meaningful partnerships and governance processes in the region. Te Tatau is involved in deliberative processes with regional and local councils, representing the perspectives, aspirations and values of tangata whenua in strategic development, educational and cultural initiatives. Te Tatau formed an innovative partnership with Rotorua Lakes Council in 2015, referred to as the Te Arawa Partnership. Given this strategic positioning of Te Tatau, the research partnership was a natural alignment to deliver research outcomes reflecting the views and aspirations of tangata whenua. Te Tatau is a resourceful organisation with active networks of mātauranga Māori and connections with whānau. Te Tatau was the facilitator and coordinator of relationships with Ngāti Whakaue and Ōhinemutu whānau, enabling the partnership with ŌDWG for the co-creation of the tool (Figure 3). The aspiration was to start the co-creation in Ōhinemutu village, the ancestral whenua and traditional papakāinga (communal Māori land, village).

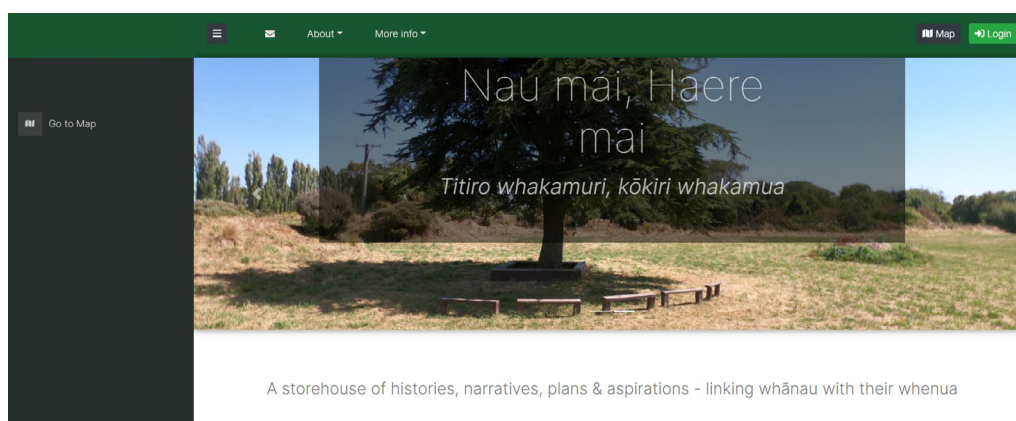


FIGURE 2 Preliminary front page of the Ngāi Tūāhuriri tool

“For Te Tatau and Ōhinemutu, [it] was important to understand the level of trust, and that the foundation of trust within the relationships allowed us the way through carrying out the research with the needs of the community and whānau, to deliver outcomes that both meets the objectives of the research and the Iwi and the whānau aspirations.” (Te Tatau partner, in a conference presentation in 2020).

In this remark, the Te Tatau representative alludes to the relevance of trust in enabling research with meaningful outcomes for the community. The research pathways in Rotorua were shaped and activated by processes of trust. This enabled the formation of a team connected to other teams, with a mandate to represent tangata whenua across a multitude of governance matters. This organisational connectivity and capability was operationalised through trust:

“[I] just want to emphasise that trust grounds how this research came to be. It inspired this mahi. We engaged the whole team on board to follow mātauranga Māori lenses in the project, [and] it was very important that the research team understood whānau views and aspirations. Our view across Te Tatau, Ngāti Whakaue and Ōhinemutu is that there is manaaki and aroha between all parties involved in the research. It is beautiful – [we] all in the same waka, in a friendly environment. Nobody in the team is afraid to ask anything, and [we] learn things together.” (Ngāti Whakaue representative, in a conference presentation in

2020, when describing the co-creation process).

“For Ngāti Whakaue and Ōhinemutu whānau, the spatial tool that was initially conceptualised with one specific purpose [...] has now morphed into a process, not just the tool. This can enable council to have a better understanding of the Ōhinemutu rohe and the kōrero, and get them to value the mātauranga Māori at the same level as the mātauranga Pākehā. That was the start, but it has morphed into other views. I have heard others saying that this could act like a puna kōrero for Ngāti Whakaue and Ōhinemutu. I also heard in the whānau that this tool can serve to record all the kōrero and have all the different perspectives, from kaumātua, koeke, all the way through our rangatahi, tamariki, and mokopuna. This could be a tool that can hold our whakapapa at some stage ... The meaning of this tool for Ngāti Whakaue and Ōhinemutu is still being thrown around places in the co-creation process. He wānanga tōku. We are still considering, evolving.” (Ngāti Whakaue representative, in a conference presentation in 2020, when describing the spatial tool).

“From Te Tatau's perspective, there are several benefits and outcomes of the co-creation process: collaborative capacity with the research team and the whānau, everyone working together and the trust we built

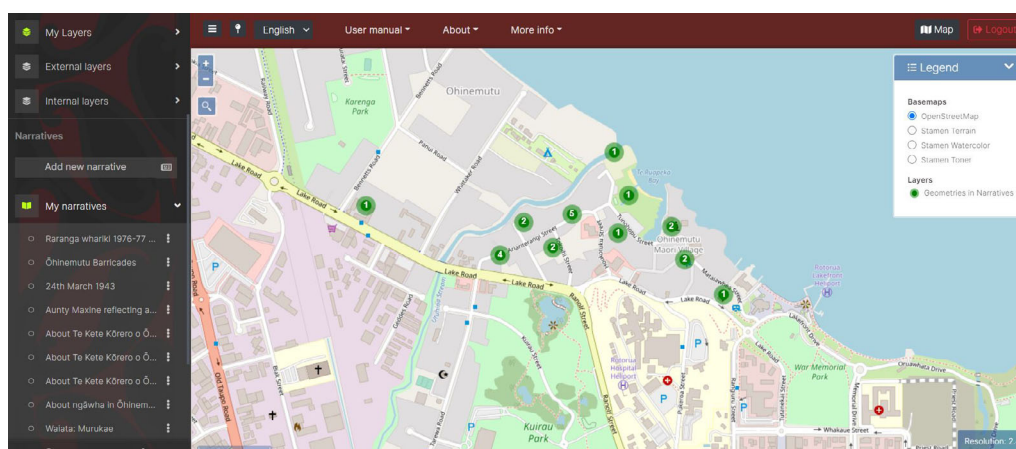


FIGURE 3 Preliminary page of Te Kete Kōrero o Ōhinemutu tool

together, [which] is never going away. Sometimes this was challenging because someone recently [got] involved from the whānau, who would come into the kōrero and ask the same questions—about data sovereignty, ethics, and the trust we had in place to manage this project. This required extra facilitation capability and working through the same kōrero, as a place of trust. Another benefit is that we now have a platform, the tool itself, which the whānau can continue to develop and use for future generations.” (Te Tatau partner, in a conference presentation in 2020, reflecting on some of the key challenges of co-creation processes).

The spatial tool operates at multiple levels. At the whānau level, Ngāti Whakaue members can share their kōrero, pictures or media amongst their whānau. At the Koromatua hapū level, there is another layer of security and sharing capabilities. Cultural and historical narratives, along with place-based lived experiences can also be shared by individuals or groups to Koromatua or to a public level. These narratives focus on the relationships between the Ōhinemutu community, the geothermal phenomena, and the land. A group of kaitiaki assesses the suitability of submitted narratives and assigns them to an appropriate level of access. The partners have stated that they will continue working beyond the initial aims of the project to advance this kaupapa to share it with wider whānau.

“We will continue to work to make the tool easy to use, because it is only valuable if it is used by the whānau. The kōrero is the value, not the tool by itself. We have a tool with complete functionality but we are still working in the co-creation process to bring it to life. [This includes] the pepeha activities to gather the narratives and launch it in Ōhinemutu, and potentially with use to other tribal authorities across Te Arawa. This is likely to require a team within Te Arawa to study potential pan-tribal adaptations of the tool and co-creative processes.” (Ngāti Whakaue representative, in a conference presentation in 2020, when describing the spatial tool).

Te Tatau has supported ŌWDG to establish a new governance structure, the Ōhinemutu Incorporated Society, to manage the tool and the co-creation processes with whānau.

We now examine the implications of this work for education and practice in spatial governance, broadening the discussion to consider the decolonisation of spatial governance.

5 | DISCUSSION: IMPLICATIONS FOR SPATIAL GOVERNANCE

Current decision making in spatial planning and resource management in Aotearoa New Zealand has been criticised for following a tired path of consultation by government institutions and local authorities (Jackson, 2020). The communities involved in the case studies in this research have repeatedly been subjected to top-town impositions. We therefore support place-based, flax-roots tools and research approaches to enable communities to lead spatial planning initiatives. Key outcomes for both research collaborations reported upon here include the co-creation of bicultural spatial tools and collaborative practices, as these serve to build capability in cultural mapping, spatial governance, and decolonising geographies (Apiti, 2017; Cameron, de Leeuw, & Desbiens, 2014; Desbiens & Rivard, 2014).

Our research builds upon contemporary practices aimed at improving spatial planning and resource management outcomes for Māori. Current tools tend to be generic and broad scale, with data and information sourced primarily from government institutions. There is a lack of opportunities for tribal authorities and local communities to share place-based perspectives and knowledge to improve the management of ancestral lands and cultural landscapes. We argue that socio-ecological justice is compromised under the current top-down regime. We therefore build on a range of national and international scholarship and decolonisation initiatives led by Indigenous communities that seek to unsettle the status quo of spatial governance, and to reclaim and assert Indigenous geographies (Charpleix, 2018; Hakopa, 2011; Howitt, 2020; Leeuw & Hunt, 2018).

The researchers in this work focus on the currency of mātauranga as held in the geographies and whakapapa of whānau and communities. As Hakopa & Jackson (2017, p. 3) explain, “Our ancestors have been compiling maps using oral methods of their ancestral territories since they arrived on these shores of Aotearoa and Te Waipounamu. The backbone of mapping ancestral territories are the stories that connect them to their cultural landscapes.” In this cultural mapping grounded in mātauranga Māori, whakapapa and whanaungatanga, along with appropriate technology, have been central to enabling whānau to gather and validate narratives.

A range of functionalities have been incorporated into the two operational spatial tools, which can continue to be co-created by the communities. These prototypes allowed both communities to access multiple geospatial datasets available in the public domain, and to share cultural narratives amongst whānau and the wider public. Both prototypes are equipped with managed levels of access and security, which was critical for issues of tribal sovereignty, data management and the sharing of knowledge (Bargh, 2007a). Both tools have been co-created to meet the aspirations of the communities involved, and are functional to varying degrees. In Tuahiwi, the tool is used on a daily basis to manage and plan projects on ancestral lands. There are intentions by the community to develop cultural layers specific to their needs and to create “add-ons” for enhanced functionalities, particularly in relation to land use analysis and business partner reporting systems. In Ōhinemutu, the focus has been on populating the tool, recording cultural narratives using video, text and photographs. Uptake of the Ōhinemutu tool by tribal members beyond the wider research team has yet to occur. It has been identified that training is a prerequisite for greater uptake and to reach a critical mass of narratives, which will in turn create greater interest and use. Both prototypes have been developed using open source software, which allows the tool to be adapted for other places to meet the diverse community aspirations. Future research in this area should focus on partnerships embedded in local organisation networks and encourage longitudinal inter-organisational co-creation processes. Such approaches should include place-based pathways and frameworks to co-create and assess bicultural spatial governance in different geographies in alignment with diverse spatial governance paradigms.

Our findings have implications for research, policy and practice in spatial governance, including the need to promote Indigenous and local ways of knowing. Co-creation methodologies and place-based approaches enable knowledge making for the improvement of spatial governance (Consedine & Consedine, 2012; Elkington et al., 2020; Gibbs, 2006). This research contributes to decolonising, indigenising, and grass-roots approaches to spatial governance, while expanding the debate on the potential of co-creation methodologies to improve equity and diversity in governance systems. Policy settings that promote place-based solutions developed by communities using their own frameworks and tools will be more socially and ecologically enduring. Recommendations for future research include the development of additional functionalities of the current prototypes and community partner aspirations, and creating training opportunities and initiatives to support the production of narratives that enable community participation and Māori

leadership in spatial governance. There are opportunities for a generic code, with the key functionalities of both tools, to provide a starting point for other communities to drive the co-creation of place-based spatial governance processes.

6 | CONCLUSION

This research explored co-creation approaches to spatial governance in two places in Aotearoa New Zealand: Tuahiwi and Ōhinemutu. Web-based tools, grounded in te ao Māori, were co-created and trialled within the communities as functioning prototypes that can continue to evolve. These tools were able to be used by whānau to gather and share multiple stories of place, so as to meet their collective aspirations. These narratives can be presented through traditional, contemporary and mixed media, and included historical accounts, lived experiences and scientific reports. He Awa Whiria fostered the articulation of kaupapa Māori and action research for an authentic bicultural approach. In the Waimakariri District, the community focus is to improve the management and revitalisation of collectively held land. This addresses a desire of tribal members wanting to return home or to contribute to their ancestral land. In Rotorua, the tool is assisting the Ōhinemutu whānau in the design and development of the village, which supports the community in the face of surrounding urban pressures. The tools from both places give life to the aspirations of Vision Mātauranga and the Treaty principles of partnership, protection, and participation in spatial governance.

“He moana pukepuke e kengia e te waka: A choppy sea can be navigated by canoe.”

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